Tissue Cells Feel and Respond to the Stiffness of Their S

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Citation Report

#	Article	IF	CITATIONS
3	Hierarchies of Extracellular Matrix and Mineral Organization in Bone of the Craniofacial Complex and Skeleton. Cells Tissues Organs, 2005, 181, 176-188.	1.3	86
4	Exploring and Engineering the Cell Surface Interface. Science, 2005, 310, 1135-1138.	6.0	2,383
5	Viscoelastic properties of individual glial cells and neurons in the CNS. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17759-17764.	3.3	473
6	Tailoring the morphology of emulsion-templated porous polymers. Soft Matter, 2006, 2, 608.	1.2	179
7	Combining cell therapy and nanotechnology. Expert Opinion on Biological Therapy, 2006, 6, 971-981.	1.4	13
8	Accessibility to the Fibronectin Synergy Site in a 3D Matrix Regulates Engagement of $\hat{l}\pm 5\hat{l}^2$ 1 versus $\hat{l}\pm v\hat{l}^2$ 3 Integrin Receptors. Cell Communication and Adhesion, 2006, 13, 267-277.	1.0	40
9	Polypyrrole-based conducting polymers and interactions with biological tissues. Journal of the Royal Society Interface, 2006, 3, 741-752.	1.5	426
10	Matrices with Compliance Comparable to that of Brain Tissue Select Neuronal over Glial Growth in Mixed Cortical Cultures. Biophysical Journal, 2006, 90, 3012-3018.	0.2	659
11	Microfabricated three-dimensional environments for single cell studies. Biointerphases, 2006, 1, P1-P4.	0.6	37
12	Lateral Membrane Waves Constitute a Universal Dynamic Pattern of Motile Cells. Physical Review Letters, 2006, 97, 038102.	2.9	142
13	Fabrication of Interdigitated Micropatterns of Self-Assembled Polymer Nanofilms Containing Cell-Adhesive Materials. Langmuir, 2006, 22, 2738-2746.	1.6	37
14	Mechano-morphological studies of aligned nanofibrous scaffolds of polycaprolactone fabricated by electrospinning. Journal of Biomaterials Science, Polymer Edition, 2006, 17, 969-984.	1.9	169
15	Cytoskeletal Tension Regulates Both Expression and Degradation of h2-Calponin in Lung Alveolar Cellsâ€. Biochemistry, 2006, 45, 15670-15683.	1.2	40
16	A Pericellular Collagenase Directs the 3-Dimensional Development of White Adipose Tissue. Cell, 2006, 125, 577-591.	13.5	351
17	Matrix Elasticity Directs Stem Cell Lineage Specification. Cell, 2006, 126, 677-689.	13.5	11,769
18	ZOning out Tight Junctions. Cell, 2006, 126, 647-649.	13.5	34
19	Matrix Control of Stem Cell Fate. Cell, 2006, 126, 645-647.	13.5	258
20	Follow Your Nose: Axon Pathfinding in Olfactory Map Formation. Cell, 2006, 127, 881-884.	13.5	13

#	Article	IF	Citations
21	A Role for p130Cas in Mechanotransduction. Cell, 2006, 127, 879-881.	13.5	37
22	Adhesions that mediate invasion. International Journal of Biochemistry and Cell Biology, 2006, 38, 1875-1892.	1.2	102
23	Recent developments in superhydrophobic surfaces and their relevance to marine fouling: a review. Biofouling, 2006, 22, 339-360.	0.8	1,028
24	Modulating Extracellular Matrix at Interfaces of Polymeric Materials. Advances in Polymer Science, 2006, , 63-93.	0.4	36
25	Observing cell response to biomaterials. Materials Today, 2006, 9, 34-43.	8.3	39
26	Fast and slow dynamics of the cytoskeleton. Nature Materials, 2006, 5, 636-640.	13.3	279
27	Local force and geometry sensing regulate cell functions. Nature Reviews Molecular Cell Biology, 2006, 7, 265-275.	16.1	2,034
28	Adaptations of nanoscale viruses and other protein cages for medical applications. Nanomedicine: Nanotechnology, Biology, and Medicine, 2006, 2, 137-149.	1.7	140
29	Schwarz meets Schwann: Design and fabrication of biomorphic and durataxic tissue engineering scaffolds. Medical Image Analysis, 2006, 10, 693-712.	7.0	255
30	Cellular and Matrix Mechanics of Bioartificial Tissues During Continuous Cyclic Stretch. Annals of Biomedical Engineering, 2006, 34, 1678-1690.	1.3	44
31	Bioactive Hydrogel Substrates: Probing Leukocyte Receptor–Ligand Interactions in Parallel Plate Flow Chamber Studies. Annals of Biomedical Engineering, 2006, 34, 1705-1711.	1.3	22
32	Understanding Effects of Matrix Protease and Matrix Organization on Directional Persistence and Translational Speed in Three-Dimensional Cell Migration. Annals of Biomedical Engineering, 2006, 35, 91-100.	1.3	54
33	Collective effects in cellular structure formation mediated by compliant environments: A Monte Carlo study. Acta Biomaterialia, 2006, 2, 253-265.	4.1	24
34	The use of poly(ethylene glycol) hydrogels to investigate the impact of ECM chemistry and mechanics on smooth muscle cells. Biomaterials, 2006, 27, 4881-4893.	5.7	318
35	Recent developments in the properties and applications of polyelectrolyte multilayers. Current Opinion in Colloid and Interface Science, 2006, 11, 324-329.	3.4	111
36	Enhancing osseointegration using surface-modified titanium implants. Jom, 2006, 58, 71-76.	0.9	52
37	Adhesion-mediated mechanosensitivity: a time to experiment, and a time to theorize. Current Opinion in Cell Biology, 2006, 18, 472-481.	2.6	350
38	Sensitivity of alveolar macrophages to substrate mechanical and adhesive properties. Cytoskeleton, 2006, 63, 321-340.	4.4	111

#	Article	IF	Citations
39	Synthetic Design. American Biology Teacher, 2006, 68, 113-117.	0.1	0
41	Biology Today. American Biology Teacher, 2006, 68, 113-117.	0.1	0
42	Indentation micromechanics of three-dimensional fibrin/collagen biomaterial scaffolds. Journal of Materials Research, 2006, 21, 2023-2034.	1.2	9
43	Tissue Assembly Guided via Substrate Biophysics: Applications to Hepatocellular Engineering. , 2006, 102, 1-46.		9
44	Rheological characterization of biocompatible associative polymer hydrogels with crystalline and amorphous endblocks. Journal of Materials Research, 2006, 21, 2118-2125.	1.2	25
45	Identification of a Stage-Specific Permissive In Vitro Culture Environment for Follicle Growth and Oocyte Development 1. Biology of Reproduction, 2006, 75, 916-923.	1.2	234
46	The Sampling Position Within, Not the Undulating Geometry of, Fingertip Skin Microstructure May Amplify the Sensation of Edges. , 0 , , .		2
47	Active Elasticity of Gels with Contractile Cells. Physical Review Letters, 2006, 97, 128103.	2.9	49
49	Rigidity-driven growth and migration of epithelial cells on microstructured anisotropic substrates. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8281-8286.	3.3	341
50	Differences in Chlamydia trachomatis Serovar E Growth Rate in Polarized Endometrial and Endocervical Epithelial Cells Grown in Three-Dimensional Culture. Infection and Immunity, 2007, 75, 553-564.	1.0	35
51	RPTPÎ \pm is required for rigidity-dependent inhibition of extension and differentiation of hippocampal neurons. Journal of Cell Science, 2007, 120, 3895-3904.	1.2	94
52	A new microrheometric approach reveals individual and cooperative roles for TGFâ€Î²1 and ILâ€1β in fibroblastâ€mediated stiffening of collagen gels. FASEB Journal, 2007, 21, 2064-2073.	0.2	52
53	Coupling biochemistry and mechanics in cell adhesion: a model for inhomogeneous stress fiber contraction. New Journal of Physics, 2007, 9, 425-425.	1.2	92
54	Smooth muscle cell rigidity and extracellular matrix organization influence endothelial cell spreading and adhesion formation in coculture. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H1978-H1986.	1.5	28
55	Septal-lateral annnular cinching perturbs basal left ventricular transmural strainsâ~†. European Journal of Cardio-thoracic Surgery, 2007, 31, 423-429.	0.6	10
56	Matrix Effects. , 2007, , 297-308.		3
57	Nanotechnology as an Adjunct Tool for Transplanting Engineered Cells and Tissues. Current Molecular Medicine, 2007, 7, 609-618.	0.6	18
58	Gradients of Stiffness Guide Neurite Growth in 3D Collagen Gels. , 2007, , 113.		1

#	Article	IF	Citations
59	Mechanical Properties of the Chick Embryo Spinal Cord., 2007,, 621.		0
60	Assessment of a Bovine Co-culture, Scaffold-Free Method for Growing Meniscus-Shaped Constructs. Tissue Engineering, 2007, 13, 2195-2205.	4.9	103
61	Engineering the Follicle Microenvironment. Seminars in Reproductive Medicine, 2007, 25, 287-299.	0.5	112
62	Quantitative Measurements of Integrinâ€Mediated Adhesion to Extracellular Matrix. Methods in Enzymology, 2007, 426, 1-25.	0.4	39
63	Microfabricated Silicone Elastomeric Post Arrays for Measuring Traction Forces of Adherent Cells. Methods in Cell Biology, 2007, 83, 313-328.	0.5	87
64	Active self-polarization of contractile cells in asymmetrically shaped domains. Physical Review E, 2007, 76, 021905.	0.8	35
65	Stress fluctuations and motion of cytoskeletal-bound markers. Physical Review E, 2007, 76, 011918.	0.8	89
66	Molecular Engineering of Cellular Environments: Cell Adhesion to Nanoâ€Digital Surfaces. Methods in Cell Biology, 2007, 83, 89-111.	0.5	98
67	Micropatterned silicone elastomer substrates for high resolution analysis of cellular force patterns. Review of Scientific Instruments, 2007, 78, 034301.	0.6	80
68	p66Shc mediates anoikis through RhoA. Journal of Cell Biology, 2007, 179, 23-31.	2.3	64
69	Cell Response and Tissue Scaffold Triggers Investigated by Scanning Probe Recognition Microscopy. Materials Research Society Symposia Proceedings, 2007, 1019, .	0.1	0
70	Retrograde Fluxes of Focal Adhesion Proteins in Response to Cell Migration and Mechanical Signals. Molecular Biology of the Cell, 2007, 18, 4519-4527.	0.9	89
71	Increased stiffness of the rat liver precedes matrix deposition: implications for fibrosis. American Journal of Physiology - Renal Physiology, 2007, 293, G1147-G1154.	1.6	472
72	Structural basis of filamin A functions. Journal of Cell Biology, 2007, 179, 1011-1025.	2.3	250
73	Antiadhesive effect of fibrinogen: a safeguard for thrombus stability. Blood, 2007, 109, 1541-1549.	0.6	41
74	Focal Adhesions: Self-Assembling Nanoscale Mechanochemical Machines that Control Cell Function. , 0, , 321-335.		0
75	Hypertonic saline reverses stiffness in a Sprague–Dawley rat model of acute intestinal edema, leading to improved intestinal function. Critical Care Medicine, 2007, 35, 538-543.	0.4	28
76	Preparation of two-directional gradient surfaces for the analysis of cell-surface interactions. , 2007,		2

#	Article	IF	Citations
77	Altered Myocardial Shear Strains Are Associated With Chronic Ischemic Mitral Regurgitation. Annals of Thoracic Surgery, 2007, 83, 47-54.	0.7	1
78	Alterations in Lateral Left Ventricular Wall Transmural Strains During Acute Circumflex and Anterior Descending Coronary Occlusion. Annals of Thoracic Surgery, 2007, 84, 51-60.	0.7	4
79	Modeling Tissue Morphogenesis and Cancer in 3D. Cell, 2007, 130, 601-610.	13.5	1,557
80	Nonequilibrium Mechanics of Active Cytoskeletal Networks. Science, 2007, 315, 370-373.	6.0	787
81	The rigidity in fibrin gels as a contributing factor to the dynamics of in vitro vascular cord formation. Microvascular Research, 2007, 73, 182-190.	1.1	31
82	Overexpression of Carcinoma and Embryonic Cytotrophoblast Cell-Specific Mig-7 Induces Invasion and Vessel-Like Structure Formation. American Journal of Pathology, 2007, 170, 1763-1780.	1.9	32
83	Soft matters in cell adhesion: rigidity sensing on soft elastic substrates. Soft Matter, 2007, 3, 263-266.	1.2	66
84	Wound Repair. , 2007, , 1149-1166.		4
85	Soft biological materials and their impact on cell function. Soft Matter, 2007, 3, 299-306.	1.2	731
86	Dynamics of the Self-Assembly of Complex Cellular Aggregates on Micromolded Nonadhesive Hydrogels. Tissue Engineering, 2007, 13, 2087-2094.	4.9	200
87	Vertically Aligned Carbon Nanofiber Architecture as a Multifunctional 3-D Neural Electrical Interface. IEEE Transactions on Biomedical Engineering, 2007, 54, 1121-1128.	2.5	133
88	From scrawny to brawny: the quest for neomusculogenesis; smart surfaces and scaffolds for muscle tissue engineering. Expert Review of Medical Devices, 2007, 4, 709-728.	1.4	12
89	Stiffening of Soft Polyelectrolyte Architectures by Multilayer Capping Evidenced by Viscoelastic Analysis of AFM Indentation Measurements. Journal of Physical Chemistry C, 2007, 111, 8299-8306.	1.5	58
90	A High-Throughput Soft Agar Assay for Identification of Anticancer Compound. Journal of Biomolecular Screening, 2007, 12, 938-945.	2.6	38
91	Cellular chemomechanics at interfaces: sensing, integration and response. Soft Matter, 2007, 3, 307.	1.2	114
92	Direct patterning of composite biocompatible microstructures using microfluidics. Lab on A Chip, 2007, 7, 574.	3.1	64
93	Cell morphology and migration linked to substrate rigidity. Soft Matter, 2007, 3, 1285.	1.2	58
94	Mimicking Cellular Environments by Nanostructured Soft Interfaces. Nano Letters, 2007, 7, 1413-1418.	4.5	130

#	Article	IF	CITATIONS
95	Use of a Genetically Engineered Protein for the Design of a Multivalent MRI Contrast Agent. Bioconjugate Chemistry, 2007, 18, 1697-1700.	1.8	25
96	Counterions and Water in Polyelectrolyte Multilayers:Â A Tale of Two Polycations. Langmuir, 2007, 23, 896-901.	1.6	100
97	Characterization of Photo-Cross-Linked Oligo[poly(ethylene glycol) fumarate] Hydrogels for Cartilage Tissue Engineering. Biomacromolecules, 2007, 8, 1702-1709.	2.6	88
98	Construction of Viscoelastic Biocompatible Films via the Layer-by-Layer Assembly of Hyaluronan and Phosphorylcholine-Modified Chitosan. Biomacromolecules, 2007, 8, 3169-3176.	2.6	51
99	Nanoscale Cell Adhesion Ligand Presentation Regulates Nonviral Gene Delivery and Expression. Nano Letters, 2007, 7, 161-166.	4.5	80
100	Mechanotransduction of cardiomyocytes interacting with a thin membrane transducer. Journal of Micromechanics and Microengineering, 2007, 17, 1162-1167.	1.5	9
101	Variably Elastic Hydrogel Patterned via Capillary Action in Microchannels. Langmuir, 2007, 23, 1483-1488.	1.6	13
102	Biomaterials Approach to Expand and Direct Differentiation of Stem Cells. Molecular Therapy, 2007, 15, 467-480.	3.7	263
103	Noninvasive Assessment of Collagen Gel Microstructure and Mechanics Using Multiphoton Microscopy. Biophysical Journal, 2007, 92, 2212-2222.	0.2	321
104	Forced Unfolding of Coiled-Coils in Fibrinogen by Single-Molecule AFM. Biophysical Journal, 2007, 92, L39-L41.	0.2	134
105	Fibroblast Adaptation and Stiffness Matching to Soft Elastic Substrates. Biophysical Journal, 2007, 93, 4453-4461.	0.2	885
106	Mechanics of Single Cells: Rheology, Time Dependence, and Fluctuations. Biophysical Journal, 2007, 93, 3703-3713.	0.2	94
107	Phase Transitions of the Coupled Membrane-Cytoskeleton Modify Cellular Shape. Biophysical Journal, 2007, 93, 3798-3810.	0.2	104
108	Mechanotransduction, asthma and airway smooth muscle. Drug Discovery Today: Disease Models, 2007, 4, 131-137.	1.2	15
109	Chemical and Physical Regulation of Stem Cells and Progenitor Cells: Potential for Cardiovascular Tissue Engineering, 2007, 13, 1809-1823.	4.9	35
110	Magnetic Tweezers in Cell Biology. Methods in Cell Biology, 2007, 83, 473-493.	0.5	135
111	TERMIS-EU Meeting Abstracts London, UK September 4–7, 2007. Tissue Engineering, 2007, 13, 1633-1778.	4.9	1
112	A model for the contractility of the cytoskeleton including the effects of stress-fibre formation and dissociation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 787-815.	1.0	93

#	Article	IF	CITATIONS
113	Cell Sensing and Response to Micro- and Nanostructured Surfaces Produced by Chemical and Topographic Patterning. Tissue Engineering, 2007, 13, 1879-1891.	4.9	495
114	FAK-Mediated Mechanotransduction in Skeletal Regeneration. PLoS ONE, 2007, 2, e390.	1.1	70
115	Direct Measurement of Mechanical and Adhesive Properties of Living Cells Using Surface Forces Apparatus. Australian Journal of Chemistry, 2007, 60, 638.	0.5	3
116	Non-invasive Optical Biosensor for Probing Cell Signaling. Sensors, 2007, 7, 2316-2329.	2.1	76
118	Biomechanical properties of intermediate filaments: from tissues to single filaments and back. BioEssays, 2007, 29, 26-35.	1.2	105
119	Preparation and cell compatibility evaluation of chitosan/collagen composite scaffolds using amino acids as crosslinking bridges. Journal of Applied Polymer Science, 2007, 105, 1774-1785.	1.3	59
120	Biomaterials for Tissue Engineering. Advanced Engineering Materials, 2007, 9, 1051-1060.	1.6	64
121	Polyelectrolyteâ€Clayâ€Protein Layer Films on Microfluidic PDMS Bioreactor Surfaces for Primary Murine Bone Marrow Culture. Advanced Functional Materials, 2007, 17, 2701-2709.	7.8	50
122	Coating of Human Mesenchymal Cells in 3D Culture with Bioinorganic Nanoparticles Promotes Osteoblastic Differentiation and Gene Transfection. Advanced Materials, 2007, 19, 2236-2240.	11.1	57
123	Using Lessons from Cellular and Molecular Structures for Future Materials. Advanced Materials, 2007, 19, 3761-3770.	11.1	43
124	Simplifying the extracellular matrix for 3-D cell culture and tissue engineering: A pragmatic approach. Journal of Cellular Biochemistry, 2007, 101, 1370-1383.	1.2	129
125	Soft substrate induces apoptosis by the disturbance of Ca2+ homeostasis in renal epithelial LLC-PK1 cells. Journal of Cellular Physiology, 2007, 212, 401-410.	2.0	12
126	Transforming growth factor- \hat{l}^2 and substrate stiffness regulate portal fibroblast activation in culture. Hepatology, 2007, 46, 1246-1256.	3.6	295
127	Enhanced neurite growth from mammalian neurons in three-dimensional salmon fibrin gels. Biomaterials, 2007, 28, 2097-2108.	5.7	82
128	RGDâ€"Functionalized polymer brushes as substrates for the integrin specific adhesion of human umbilical vein endothelial cells. Biomaterials, 2007, 28, 2536-2546.	5.7	252
129	Bioengineering skin using mechanisms of regeneration and repair. Biomaterials, 2007, 28, 5100-5113.	5.7	200
130	The effect of endogenous overexpression of hyaluronan synthases on material, morphological, and biochemical properties of uncrosslinked collagen biomaterials. Biomaterials, 2007, 28, 5509-5517.	5.7	5
131	Fabrication methods of an engineered microenvironment for analysis of cell–biomaterial interactions. Biomaterials, 2007, 28, 126-133.	5.7	111

#	Article	IF	CITATIONS
132	Cell adaptation to a physiologically relevant ECM mimic with different viscoelastic properties. Biomaterials, 2007, 28, 671-679.	5.7	331
133	Influence of the physical properties of two-dimensional polyester substrates on the growth of normal human urothelial and urinary smooth muscle cells in vitro. Biomaterials, 2007, 28, 2264-2274.	5.7	60
134	Physical properties of alginate hydrogels and their effects on in vitro follicle development. Biomaterials, 2007, 28, 4439-4448.	5.7	292
135	A new and evolving paradigm for biocompatibility. Journal of Tissue Engineering and Regenerative Medicine, 2007, 1, 110-119.	1.3	79
136	Viscoelasticity of Hyaluronan and Nonhyaluronan Based Vocal Fold Injectables: Implications for Mucosal Versus Muscle Use. Laryngoscope, 2007, 117, 516-521.	1.1	80
137	Nanomechanical analysis of cells from cancer patients. Nature Nanotechnology, 2007, 2, 780-783.	15.6	1,650
138	Elastic clues in cancer detection. Nature Nanotechnology, 2007, 2, 748-749.	15.6	165
139	Dynamics of cell orientation. Nature Physics, 2007, 3, 655-659.	6.5	210
140	Microenvironmental regulation of biomacromolecular therapies. Nature Reviews Drug Discovery, 2007, 6, 455-463.	21.5	134
141	Formation and Function of the Myofibroblast during Tissue Repair. Journal of Investigative Dermatology, 2007, 127, 526-537.	0.3	1,277
142	Tissue Engineering for Cutaneous Wounds. Journal of Investigative Dermatology, 2007, 127, 1018-1029.	0.3	436
143	Mechanotransduction of keratinocytes in culture and in the epidermis. European Journal of Cell Biology, 2007, 86, 807-816.	1.6	73
144	Nanostructured Biocomposite Scaffolds Based on Collagen Coelectrospun with Nanohydroxyapatite. Biomacromolecules, 2007, 8, 631-637.	2.6	241
145	Matrices and scaffolds for DNA delivery in tissue engineering. Advanced Drug Delivery Reviews, 2007, 59, 292-307.	6.6	241
146	Three-dimensional microenvironments modulate fibroblast signaling responsesa~†. Advanced Drug Delivery Reviews, 2007, 59, 1293-1298.	6.6	112
147	Fibroblast mechanics in 3D collagen matricesâ~†. Advanced Drug Delivery Reviews, 2007, 59, 1299-1305.	6.6	161
148	Cell responses to the mechanochemical microenvironmentâ€"Implications for regenerative medicine and drug deliveryâ⁻†. Advanced Drug Delivery Reviews, 2007, 59, 1329-1339.	6.6	351
149	Enhancing sealing of fetal membrane defects using tissue engineered native amniotic scaffolds in the rabbit model. American Journal of Obstetrics and Gynecology, 2007, 196, 263.e1-263.e7.	0.7	37

#	Article	IF	CITATIONS
150	The emergence of ECM mechanics and cytoskeletal tension as important regulators of cell function. Cell Biochemistry and Biophysics, 2007, 47, 300-320.	0.9	169
151	Synthesis and characterization of segmented poly(esterurethane urea) elastomers for bone tissue engineering. Acta Biomaterialia, 2007, 3, 475-484.	4.1	93
152	Rational design of hydrogels for tissue engineering: Impact of physical factors on cell behavior. Biomaterials, 2007, 28, 134-146.	5.7	425
153	Fluorescent resonance energy transfer: A tool for probing molecular cell–biomaterial interactions in three dimensions. Biomaterials, 2007, 28, 2424-2437.	5.7	79
154	The interplay between chemistry and mechanics in the transduction of a mechanical signal into a biochemical function. Physics of Life Reviews, 2007, 4, 157-188.	1.5	19
155	Theoretical analysis of the adaptive contractile behaviour of a single cardiomyocyte cultured on elastic substrates with varying stiffness. Journal of Theoretical Biology, 2008, 255, 92-105.	0.8	23
156	Cells anchored upon a thin organic film with different nano-mechanical properties. Applied Surface Science, 2008, 255, 301-303.	3.1	5
157	The effects of matrix stiffness and RhoA on the phenotypic plasticity of smooth muscle cells in a 3-D biosynthetic hydrogel system. Biomaterials, 2008, 29, 2597-2607.	5.7	195
158	In vitro chondrogenic differentiation of human mesenchymal stem cells in collagen microspheres: Influence of cell seeding density and collagen concentration. Biomaterials, 2008, 29, 3201-3212.	5.7	182
159	Probing mechanical properties of fully hydrated gels and biological tissues. Journal of Biomechanics, 2008, 41, 3285-3289.	0.9	87
160	Photo-crosslinked poly(É>-caprolactone fumarate) networks: Roles of crystallinity and crosslinking density in determining mechanical properties. Polymer, 2008, 49, 5692-5699.	1.8	98
161	Size Distribution and Molecular Associations of Plasma Fibronectin and Fibronectin Crosslinked by TransglutaminaseÂ2. Protein Journal, 2008, 27, 223-233.	0.7	47
162	Rheological behavior of mammalian cells. Cellular and Molecular Life Sciences, 2008, 65, 3592-3605.	2.4	38
163	Vascular Adaptation and Mechanical Homeostasis at Tissue, Cellular, and Sub-cellular Levels. Cell Biochemistry and Biophysics, 2008, 50, 53-78.	0.9	346
164	Calponin in Non-Muscle Cells. Cell Biochemistry and Biophysics, 2008, 52, 139-148.	0.9	55
165	Patterning Cell and Tissue Function. Cellular and Molecular Bioengineering, 2008, 1, 15-23.	1.0	24
166	A Balance of Substrate Mechanics and Matrix Chemistry Regulates Endothelial Cell Network Assembly. Cellular and Molecular Bioengineering, 2008, 1, 122-132.	1.0	154
167	Scaffolding in tissue engineering: general approaches and tissue-specific considerations. European Spine Journal, 2008, 17, 467-479.	1.0	1,208

#	Article	IF	CITATIONS
168	Mechanics of mesenchymal contribution to clefting force in branching morphogenesis. Biomechanics and Modeling in Mechanobiology, 2008, 7, 417-426.	1.4	26
169	Residual Stress Patterns Affect Cell Distributions on Injection-Molded Poly-l-Lactide Substrate. Annals of Biomedical Engineering, 2008, 36, 513-521.	1.3	8
170	Functional Modulation of ES-Derived Hepatocyte Lineage Cells via Substrate Compliance Alteration. Annals of Biomedical Engineering, 2008, 36, 865-876.	1.3	30
171	Over-Expression of Alpha-Actinin with a GFP Fusion Protein is Sufficient to Increase Whole-Cell Stiffness in Human Osteoblasts. Annals of Biomedical Engineering, 2008, 36, 1605-1614.	1.3	8
172	Effect of Sustained Tension on Bladder Smooth Muscle Cells in Three-Dimensional Culture. Annals of Biomedical Engineering, 2008, 36, 1744-1751.	1.3	24
173	Extracellular matrix control of mammary gland morphogenesis and tumorigenesis: insights from imaging. Histochemistry and Cell Biology, 2008, 130, 1105-18.	0.8	142
174	Probing cellular microenvironments and tissue remodeling by atomic force microscopy. Pflugers Archiv European Journal of Physiology, 2008, 456, 29-49.	1.3	80
175	Cell adhesion to agrin presented as a nanopatterned substrate is consistent with an interaction with the extracellular matrix and not transmembrane adhesion molecules. BMC Cell Biology, 2008, 9, 64.	3.0	26
176	Surface protein patterns govern morphology, proliferation, and expression of cellular markers but have no effect on physiological properties of cortical precursor cells. Journal of Neuroscience Research, 2008, 86, 2363-2375.	1.3	13
177	Living microlens arrays. Cytoskeleton, 2008, 65, 762-767.	4.4	7
178	Cellular nonmuscle myosins NMHCâ€IIA and NMHCâ€IIB and vertebrate heart looping. Developmental Dynamics, 2008, 237, 3577-3590.	0.8	29
179	Kinetic and mechanical analysis of live tube morphogenesis. Developmental Dynamics, 2008, 237, 2874-2888.	0.8	37
180	Fibroin/collagen hybrid hydrogels with crosslinking method: Preparation, properties, and cytocompatibility. Journal of Biomedical Materials Research - Part A, 2008, 84A, 198-207.	2.1	88
181	Influence of macromer molecular weight and chemistry on poly(βâ€amino ester) network properties and initial cell interactions. Journal of Biomedical Materials Research - Part A, 2008, 85A, 731-741.	2.1	49
182	Differentiation stage alters matrix control of stem cells. Journal of Biomedical Materials Research - Part A, 2008, 85A, 145-156.	2.1	85
183	Nanopatterning of fibronectin and the influence of integrin clustering on endothelial cell spreading and proliferation. Journal of Biomedical Materials Research - Part A, 2008, 87A, 176-195.	2.1	47
184	The role of matrix stiffness in regulating cell behavior. Hepatology, 2008, 47, 1394-1400.	3.6	879
185	A perfusable 3D cell–matrix tissue culture chamber for in situ evaluation of nanoparticle vehicle penetration and transport. Biotechnology and Bioengineering, 2008, 99, 1490-1501.	1.7	74

#	Article	IF	CITATIONS
186	Biomimetic macroporous hydrogel scaffolds in a highâ€throughput screening format for cellâ€based assays. Biotechnology Progress, 2008, 24, 1373-1383.	1.3	29
187	DNAâ€Coated AFM Cantilevers for the Investigation of Cell Adhesion and the Patterning of Live Cells. Angewandte Chemie - International Edition, 2008, 47, 8473-8477.	7.2	57
188	Polyelectrolyte Multilayer Films of Controlled Stiffness Modulate Myoblast Cell Differentiation. Advanced Functional Materials, 2008, 18, 1378-1389.	7.8	238
189	Neural Networks Grown on Organic Semiconductors. Advanced Functional Materials, 2008, 18, 1751-1756.	7.8	64
190	Interaction Between Human Osteoblast Cells and Inorganic Two-Dimensional Scaffolds Based on Multiwalled Carbon Nanotubes: A Quantitative AFM Study. Advanced Functional Materials, 2008, 18, 3765-3771.	7.8	35
191	Optically Responsive and Mechanically Tunable Colloidâ€Inâ€Liquid Crystal Gels that Support Growth of Fibroblasts. Advanced Materials, 2008, 20, 4804-4809.	11.1	40
193	Durotaxis as an elastic stability phenomenon. Journal of Biomechanics, 2008, 41, 1289-1294.	0.9	48
194	Modulating the mechanical properties of self-assembled peptide hydrogels via native chemical ligation. Biomaterials, 2008, 29, 2143-2151.	5.7	136
195	Three-dimensional extracellular matrix-directed cardioprogenitor differentiation: Systematic modulation of a synthetic cell-responsive PEG-hydrogel. Biomaterials, 2008, 29, 2757-2766.	5.7	294
196	Engineered extracellular matrices with cleavable crosslinkers for cell expansion and easy cell recovery. Biomaterials, 2008, 29, 4521-4531.	5.7	94
197	Controlling poly(\hat{l}^2 -amino ester) network properties through macromer branching. Acta Biomaterialia, 2008, 4, 207-217.	4.1	41
198	Modeling mechanosensing and its effect on the migration and proliferation of adherent cells. Acta Biomaterialia, 2008, 4, 613-621.	4.1	87
199	Osteoblast response to biomimetically altered titanium surfaces. Acta Biomaterialia, 2008, 4, 1985-1995.	4.1	52
200	Study of substrate topographical effects on epithelial cell behavior using etched alpha-particle tracks on PADC films. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 3247-3256.	0.6	3
201	Solution of the nonlinear elasticity imaging inverse problem: the compressible case. Inverse Problems, 2008, 24, 045010.	1.0	102
202	Mediation, Modulation, and Consequences of Membrane-Cytoskeleton Interactions. Annual Review of Biophysics, 2008, 37, 65-95.	4.5	307
203	Microscopic mechanics of biomolecules in living cells. Scientific Modeling and Simulation SMNS, 2008, 15, 339-362.	0.8	9
204	Laminin and biomimetic extracellular elasticity enhance functional differentiation in mammary epithelia. EMBO Journal, 2008, 27, 2829-2838.	3.5	161

#	Article	IF	CITATIONS
205	Cell and biomolecular mechanics in silico. Nature Materials, 2008, 7, 15-23.	13.3	103
206	The adult human brain in preclinical drug development. Nature Reviews Drug Discovery, 2008, 7, 659-666.	21.5	108
207	In Vitro Expansion of Immature Melanoblasts and their Ability to Repopulate Melanocyte Stem Cells in the Hair Follicle. Journal of Investigative Dermatology, 2008, 128, 408-420.	0.3	33
208	Cell differentiation through tissue elasticity-coupled, myosin-driven remodeling. Current Opinion in Cell Biology, 2008, 20, 609-615.	2.6	87
209	Contractile forces in tumor cell migration. European Journal of Cell Biology, 2008, 87, 669-676.	1.6	154
210	Rheology. Current Biology, 2008, 18, R639-R641.	1.8	28
211	Self-Organized Podosomes Are Dynamic Mechanosensors. Current Biology, 2008, 18, 1288-1294.	1.8	130
212	Adipose stem cells for intervertebral disc regeneration: current status and concepts for the future. Journal of Cellular and Molecular Medicine, 2008, 12, 2205-2216.	1.6	83
213	Cytoskeletal mechanics in airway smooth muscle cells. Respiratory Physiology and Neurobiology, 2008, 163, 25-32.	0.7	16
214	The genesis of retinal architecture: An emerging role for mechanical interactions?. Progress in Retinal and Eye Research, 2008, 27, 260-283.	7.3	35
215	Growth control by intracellular tension and extracellular stiffness. Trends in Cell Biology, 2008, 18, 347-352.	3.6	227
216	Biofunctionalization of Biomaterials for Accelerated in Situ Endothelialization: A Review. Biomacromolecules, 2008, 9, 2969-2979.	2.6	319
217	Mechanical regulation of cell adhesion. Soft Matter, 2008, 4, 1373.	1.2	26
218	Propagation of Mechanical Stress through the Actin Cytoskeleton toward Focal Adhesions: Model and Experiment. Biophysical Journal, 2008, 94, 1470-1482.	0.2	92
219	High Resolution Traction Force Microscopy Based on Experimental and Computational Advances. Biophysical Journal, 2008, 94, 207-220.	0.2	514
220	Mechanical Forces Induced by the Transendothelial Migration of Human Neutrophils. Biophysical Journal, 2008, 95, 1428-1438.	0.2	101
221	The Stochastic Dynamics of Filopodial Growth. Biophysical Journal, 2008, 94, 3839-3852.	0.2	92
222	Do Cells Sense Stress or Strain? Measurement of Cellular Orientation Can Provide a Clue. Biophysical Journal, 2008, 94, L29-L31.	0.2	75

#	Article	IF	CITATIONS
223	Two Characteristic Regimes in Frequency-Dependent Dynamic Reorientation of Fibroblasts on Cyclically Stretched Substrates. Biophysical Journal, 2008, 95, 3470-3478.	0.2	221
224	Substrate Modulus Directs Neural Stem Cell Behavior. Biophysical Journal, 2008, 95, 4426-4438.	0.2	947
225	Filamentous Network Mechanics and Active Contractility Determine Cell and Tissue Shape. Biophysical Journal, 2008, 95, 3488-3496.	0.2	131
226	Cell Culture Models in Microfluidic Systems. Annual Review of Analytical Chemistry, 2008, 1, 423-449.	2.8	300
227	Engineering microenvironments to control stem cell fate and function. Stembook, 2008, , .	0.3	13
228	AFM-based analysis of human metastatic cancer cells. Nanotechnology, 2008, 19, 384003.	1.3	329
229	Dynamics of wormlike and glassy wormlike chains. Soft Matter, 2008, 4, 2323.	1.2	28
230	The effect of geometry on three-dimensional tissue growth. Journal of the Royal Society Interface, 2008, 5, 1173-1180.	1.5	413
231	3-D Tissue Culture Systems for the Evaluation and Optimization of Nanoparticle-Based Drug Carriers. Bioconjugate Chemistry, 2008, 19, 1951-1959.	1.8	215
232	Three-dimensional neural constructs: a novel platform for neurophysiological investigation. Journal of Neural Engineering, 2008, 5, 333-341.	1.8	108
233	Traction forces and rigidity sensing regulate cell functions. Soft Matter, 2008, 4, 1836.	1.2	335
234	Evaluating Drug Efficacy and Toxicology in Three Dimensions: Using Synthetic Extracellular Matrices in Drug Discovery. Accounts of Chemical Research, 2008, 41, 139-148.	7.6	157
235	Assay to mechanically tune and optically probe fibrillar fibronectin conformations from fully relaxed to breakage. Matrix Biology, 2008, 27, 451-461.	1.5	103
236	Cell Delivery Mechanisms for Tissue Repair. Cell Stem Cell, 2008, 2, 205-213.	5.2	316
237	Recent advances in single-asperity nanotribology. Journal Physics D: Applied Physics, 2008, 41, 123001.	1.3	388
238	Three-Dimensional Cell Culture Matrices: State of the Art. Tissue Engineering - Part B: Reviews, 2008, 14, 61-86.	2.5	895
239	Mechanically Tunable Thin Films of Photosensitive Artificial Proteins:  Preparation and Characterization by Nanoindentation. Macromolecules, 2008, 41, 1839-1845.	2,2	40
240	Breaching the basement membrane: who, when and how?. Trends in Cell Biology, 2008, 18, 560-574.	3.6	387

#	Article	IF	CITATIONS
241	Nuclear Shape, Mechanics, and Mechanotransduction. Circulation Research, 2008, 102, 1307-1318.	2.0	596
242	Universality in cell mechanics. Soft Matter, 2008, 4, 1750.	1.2	116
243	Fibronectin in aging extracellular matrix fibrils is progressively unfolded by cells and elicits an enhanced rigidity response. Faraday Discussions, 2008, 139, 229.	1.6	92
244	Correlations between structure, material properties and bioproperties in self-assembled \hat{l}^2 -hairpin peptide hydrogels. Faraday Discussions, 2008, 139, 251.	1.6	115
245	Nonlinear mechanics of entangled F-actin solutions. Soft Matter, 2008, 4, 1675.	1.2	54
246	Modular self-assembling biomaterials for directing cellular responses. Soft Matter, 2008, 4, 2310.	1.2	60
247	High molecular weight bile acid and ricinoleic acid-based copolyesters via entropy-driven ring-opening metathesis polymerisation. Chemical Communications, 2008, , 1674.	2.2	41
248	Physical Interpretation of the Maximum Receptorâ^Ligand Bond Spacing to Ensure Cell Adhesion in Ligand-Coated Substrates. Langmuir, 2008, 24, 5644-5646.	1.6	12
249	Chapter 12 Methods for Studying Mechanical Control of Angiogenesis by the Cytoskeleton and Extracellular Matrix. Methods in Enzymology, 2008, 443, 227-259.	0.4	8
250	Substrata Mechanical Stiffness Can Regulate Adhesion of Viable Bacteria. Biomacromolecules, 2008, 9, 1571-1578.	2.6	200
251	Induction of Cell Polarization and Migration by a Gradient of Nanoscale Variations in Adhesive Ligand Spacing. Nano Letters, 2008, 8, 2063-2069.	4.5	292
252	Protection of Sensors for Biological Applications by Photoinitiated Chemical Vapor Deposition of Hydrogel Thin Films. Biomacromolecules, 2008, 9, 2857-2862.	2.6	59
253	Modulation of Spreading, Proliferation, and Differentiation of Human Mesenchymal Stem Cells on Gelatin-Immobilized Poly(<scp>l</scp> -lactide- <i>co</i> - Ϊμ-caprolactone) Substrates. Biomacromolecules, 2008, 9, 1772-1781.	2.6	89
254	Branched Organs: Mechanics of Morphogenesis by Multiple Mechanisms. Current Topics in Developmental Biology, 2008, 81, 249-268.	1.0	15
255	Lifetime and Strength of Adhesive Molecular Bond Clusters between Elastic Media. Langmuir, 2008, 24, 1262-1270.	1.6	101
256	Technique of Surface Modification of a Cell-Adhesion-Resistant Hydrogel by a Cell-Adhesion-Available Inorganic Microarray. Biomacromolecules, 2008, 9, 2569-2572.	2.6	52
257	Photo-Cross-Linked Hybrid Polymer Networks Consisting of Poly(propylene fumarate) and Poly(caprolactone fumarate): Controlled Physical Properties and Regulated Bone and Nerve Cell Responses. Biomacromolecules, 2008, 9, 1229-1241.	2.6	98
258	The Muscle Stem Cell Niche: Regulation of Satellite Cells During Regeneration. Tissue Engineering - Part B: Reviews, 2008, 14, 419-431.	2.5	86

#	Article	IF	CITATIONS
259	Biomimetic Carbohydrate Substrates of Tunable Properties Using Immobilized Dextran Hydrogels. Biomacromolecules, 2008, 9, 2315-2321.	2.6	20
260	Cell adaptive response to extracellular matrix density is controlled by ICAP-1–dependent β1-integrin affinity. Journal of Cell Biology, 2008, 180, 427-441.	2.3	88
261	Physical model for membrane protrusions during spreading. Physical Biology, 2008, 5, 036009.	0.8	15
262	Manufacture of degradable polymeric scaffolds for bone regeneration. Biomedical Materials (Bristol), 2008, 3, 022001.	1.7	67
263	Soft Substrate Up-regulates the Interaction of STIM1 with Store-operated Ca ²⁺ Channels That Lead to Normal Epithelial Cell Apoptosis. Molecular Biology of the Cell, 2008, 19, 2220-2230.	0.9	35
264	Embryonic cardiomyocytes beat best on a matrix with heart-like elasticity: scar-like rigidity inhibits beating. Journal of Cell Science, 2008, 121, 3794-3802.	1.2	773
265	Natural-based multilayer films for biomedical applications. , 2008, , 231-259.		1
266	Mitral Valvular Interstitial Cells Demonstrate Regional, Adhesional, and Synthetic Heterogeneity. Cells Tissues Organs, 2008, 187, 113-122.	1.3	26
267	Electrospinning of natural proteins for tissue engineering scaffolding., 2008,, 446-482.		2
268	Paxillin-dependent stimulation of microtubule catastrophes at focal adhesion sites. Journal of Cell Science, 2008, 121, 196-204.	1.2	89
269	Directing osteogenic and myogenic differentiation of MSCs: interplay of stiffness and adhesive ligand presentation. American Journal of Physiology - Cell Physiology, 2008, 295, C1037-C1044.	2.1	458
270	Role of the Endothelium during Tumor Cell Metastasis: Is the Endothelium a Barrier or a Promoter for Cell Invasion and Metastasis?. Journal of Biophysics, 2008, 2008, 1-13.	0.8	62
271	Engineering a clinically-useful matrix for cell therapy. Organogenesis, 2008, 4, 42-47.	0.4	101
272	Modeling and simulation of chemomechanics at the cell-matrix interface. Cell Adhesion and Migration, 2008, 2, 83-94.	1.1	11
273	On the Scientific and Technological Importance of Nanotribology. , 2008, , .		1
274	Mechanotransduction – a field pulling together?. Journal of Cell Science, 2008, 121, 3285-3292.	1.2	448
275	Directional control of cell motility through focal adhesion positioning and spatial control of Rac activation. FASEB Journal, 2008, 22, 1649-1659.	0.2	140
276	Role of H2-calponin in Regulating Macrophage Motility and Phagocytosis. Journal of Biological Chemistry, 2008, 283, 25887-25899.	1.6	59

#	Article	IF	CITATIONS
277	The transglutaminase 2 gene (TGM2), a potential molecular marker for chemotherapeutic drug sensitivity, is epigenetically silenced in breast cancer. Carcinogenesis, 2008, 29, 510-518.	1.3	92
278	Collagen Fibril Flow and Tissue Translocation Coupled to Fibroblast Migration in 3D Collagen Matrices. Molecular Biology of the Cell, 2008, 19, 2051-2058.	0.9	75
279	Mechanotransduction and anoikis: Death and the homeless cell. Cell Cycle, 2008, 7, 2462-2465.	1.3	23
280	Mechanosensing machinery for cells under low substratum rigidity. American Journal of Physiology - Cell Physiology, 2008, 295, C1579-C1589.	2.1	68
281	Fibronectin fibrillogenesis regulates three-dimensional neovessel formation. Genes and Development, 2008, 22, 1231-1243.	2.7	179
282	A microfluidic platform for studying the effects of small temperature gradients in an incubator environment. Biomicrofluidics, 2008, 2, 34106.	1.2	24
283	Modulus-dependent macrophage adhesion and behavior. Journal of Biomaterials Science, Polymer Edition, 2008, 19, 1363-1382.	1.9	87
284	Rapid signal transduction in living cells is a unique feature of mechanotransduction. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6626-6631.	3.3	383
285	Measurement Techniques for Cellular Biomechanics <i>In Vitro</i> . Experimental Biology and Medicine, 2008, 233, 792-809.	1.1	107
286	Bioactive Composite Materials for Bone Tissue Engineering Scaffolds. , 2008, , 279-311.		4
287	Gel Point Determination of Biopolymer Based Semi-IPN Hydrogels. AIP Conference Proceedings, 2008, , .	0.3	0
288	Matrix Elasticity, Cytoskeletal Tension, and TGF- \hat{l}^2 : The Insoluble and Soluble Meet. Science Signaling, 2008, 1, pe13.	1.6	159
289	Dynamical theory of active cellular response to external stress. Physical Review E, 2008, 78, 031923.	0.8	59
290	Magnetic microposts for mechanical stimulation of biological cells: Fabrication, characterization, and analysis. Review of Scientific Instruments, 2008, 79, 044302.	0.6	61
291	Influence of finite thickness and stiffness on cellular adhesion-induced deformation of compliant substrata. Physical Review E, 2008, 78, 041923.	0.8	107
292	Cell viability viscoelastic measurement in a rheometer used to stress and engineer tissues at low sonic frequencies. Journal of the Acoustical Society of America, 2008, 124, 2330-2339.	0.5	10
294	Strategies and Applications for Incorporating Physical and Chemical Signal Gradients in Tissue Engineering. Tissue Engineering - Part B: Reviews, 2008, 14, 341-366.	2.5	170
295	Cellular responses to novel, micropatterned biomaterials. Pure and Applied Chemistry, 2008, 80, 2479-2487.	0.9	39

#	Article	IF	CITATIONS
296	Cell Matrix Adhesion in Three Dimensions. , 0, , 135-149.		0
298	Scaffold Stiffness Influences Cell Behavior: Opportunities for Skeletal Tissue Engineering. The Open Orthopaedics Journal, 2008, 2, 103-109.	0.1	170
299	Substrate Rigidity Modulates Cell–Matrix Interactions and Protein Expression in Human Trabecular Meshwork Cells. , 2008, 49, 262.		99
300	The Role of Tissue Engineering in Articular Cartilage Repair and Regeneration. Critical Reviews in Biomedical Engineering, 2009, 37, 1-57.	0.5	355
302	Protein Conformational Change. , 0, , 269-285.		0
303	Translating Mechanical Force into Discrete Biochemical Signal Changes. , 0, , 286-338.		0
304	Recent Patents on Polymeric Scaffolds for Tissue Engineering. Recent Patents on Biomedical Engineering, 2009, 2, 65-72.	0.5	3
305	Cell Guidance by 3D-Gradients in Hydrogel Matrices: Importance for Biomedical Applications. Materials, 2009, 2, 1058-1083.	1.3	42
306	Tubulin Tyrosination Is Required for the Proper Organization and Pathfinding of the Growth Cone. PLoS ONE, 2009, 4, e5405.	1.1	60
307	Rapid Activation of Rac GTPase in Living Cells by Force Is Independent of Src. PLoS ONE, 2009, 4, e7886.	1.1	73
308	Cellular Mechanotransduction: Interactions with the Extracellular Matrix., 0,, 120-160.		1
309	Nonlinear elasticity of stiff biopolymers connected by flexible linkers. Physical Review E, 2009, 79, 041928.	0.8	75
310	In vivo nanomechanical imaging of blood-vessel tissues directly in living mammals using atomic force microscopy. Applied Physics Letters, 2009, 95, 013704.	1.5	38
311	Three-Dimensional Synthetic Niche Components to Control Germ Cell Proliferation. Tissue Engineering - Part A, 2009, 15, 255-262.	1.6	26
312	High-throughput indentational elasticity measurements of hydrogel extracellular matrix substrates. Applied Physics Letters, 2009, 95, 063701.	1.5	8
313	Simulation of elastic wave scattering in cells and tissues at the microscopic level. Journal of the Acoustical Society of America, 2009, 125, 1751-1767.	0.5	23
314	Electrospun PCL in Vitro: a Microstructural Basis for Mechanical Property Changes. Journal of Biomaterials Science, Polymer Edition, 2009, 20, 467-481.	1.9	62
315	Amplification of Tension in Branched Macromolecules. Physical Review Letters, 2009, 102, 148301.	2.9	47

#	Article	IF	CITATIONS
316	High-Resolution Probing of Cellular Force Transmission. Physical Review Letters, 2009, 102, 168102.	2.9	82
317	Single-cell response to stiffness exhibits muscle-like behavior. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18243-18248.	3.3	202
318	Two-component protein-engineered physical hydrogels for cell encapsulation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22067-22072.	3.3	311
319	Quantitative Investigations of Nanoscale Elasticity of Nanofibrillar Matrices. Materials Research Society Symposia Proceedings, 2009, 1240, 1.	0.1	1
320	Mechanically Induced Reactive Gliosis Causes ATP-Mediated Alterations in Astrocyte Stiffness. Journal of Neurotrauma, 2009, 26, 789-797.	1.7	56
321	Mechanical tension contributes to clustering of neurotransmitter vesicles at presynaptic terminals. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 12611-12616.	3.3	149
322	Quantifying cellular traction forces in three dimensions. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22108-22113.	3.3	251
323	Effect of Scaffold Stiffness on Myoblast Differentiation. Tissue Engineering - Part A, 2009, 15, 935-944.	1.6	119
324	Effects of Reconstituted Collagen Matrix on Fates of Mouse Embryonic Stem Cells Before and After Induction for Chondrogenic Differentiation. Tissue Engineering - Part A, 2009, 15, 3071-3085.	1.6	19
325	Reconstruction of an <i>In Vitro</i> Tissue-Specific Microenvironment to Rejuvenate Synovium-Derived Stem Cells for Cartilage Tissue Engineering. Tissue Engineering - Part A, 2009, 15, 3809-3821.	1.6	99
326	Integration column: Artificial ECM: expanding the cell biology toolbox in 3D. Integrative Biology (United Kingdom), 2009, 1, 235.	0.6	70
327	MECHANICS, BIOLOGY AND MEDICINE AND THE CHALLENGES OF METAMECHANICS: A PERSONAL REFLECTION. Journal of Mechanics in Medicine and Biology, 2009, 09, 141-160.	0.3	2
328	Topography of Extracellular Matrix Mediates Vascular Morphogenesis and Migration Speeds in Angiogenesis. PLoS Computational Biology, 2009, 5, e1000445.	1.5	190
329	Plectin contributes to mechanical properties of living cells. American Journal of Physiology - Cell Physiology, 2009, 296, C868-C877.	2.1	45
330	Integrin Clustering Is Driven by Mechanical Resistance from the Glycocalyx and the Substrate. PLoS Computational Biology, 2009, 5, e1000604.	1.5	217
331	Filamin A–β1 Integrin Complex Tunes Epithelial Cell Response to Matrix Tension. Molecular Biology of the Cell, 2009, 20, 3224-3238.	0.9	103
332	The Mechanical Rigidity of the Extracellular Matrix Regulates the Structure, Motility, and Proliferation of Glioma Cells. Cancer Research, 2009, 69, 4167-4174.	0.4	782
333	The Mouse Follicle Microenvironment Regulates Antrum Formation and Steroid Production: Alterations in Gene Expression Profiles1. Biology of Reproduction, 2009, 80, 432-439.	1.2	98

#	ARTICLE	IF	CITATIONS
334	Nanomechanics of Surface Modified Nanohydroxyapatite Particulates Used in Biomaterials. Journal of Engineering Mechanics - ASCE, 2009, 135, 468-478.	1.6	28
335	Current tissue engineering and novel therapeutic approaches to axonal regeneration following spinal cord injury using polymer scaffolds. Respiratory Physiology and Neurobiology, 2009, 169, 183-199.	0.7	161
336	Tumor suppressor protein SMAR1 modulates the roughness of cell surface: combined AFM and SEM study. BMC Cancer, 2009, 9, 350.	1.1	50
337	Staged stromal extracellular 3D matrices differentially regulate breast cancer cell responses through PI3K and beta1-integrins. BMC Cancer, 2009, 9, 94.	1.1	85
338	A role of myocardial stiffness in cellâ€based cardiac repair: a hypothesis. Journal of Cellular and Molecular Medicine, 2009, 13, 660-663.	1.6	13
339	Local Cortical Tension by Myosin II Guides 3D Endothelial Cell Branching. Current Biology, 2009, 19, 260-265.	1.8	172
340	Conformational Changes and Signaling in Cell and Matrix Physics. Current Biology, 2009, 19, R781-R789.	1.8	79
341	Freeze-dried acellular dermal matrix graft: Effects of rehydration on physical, chemical, and mechanical properties. Dental Materials, 2009, 25, 1109-1115.	1.6	53
342	Soft materials to treat central nervous system injuries: Evaluation of the suitability of non-mammalian fibrin gels. Biochimica Et Biophysica Acta - Molecular Cell Research, 2009, 1793, 924-930.	1.9	45
343	Cytoskeletal control of growth and cell fate switching. Current Opinion in Cell Biology, 2009, 21, 864-870.	2.6	189
344	Capturing Complex Protein Gradients on Biomimetic Hydrogels for Cellâ€Based Assays. Advanced Functional Materials, 2009, 19, 3411-3419.	7.8	60
345	Designer Biomaterials for Nanomedicine. Advanced Functional Materials, 2009, 19, 3843-3854.	7.8	219
346	Nanomaterials for Neural Interfaces. Advanced Materials, 2009, 21, 3970-4004.	11.1	460
347	Mapping the Interactions among Biomaterials, Adsorbed Proteins, and Human Embryonic Stem Cells. Advanced Materials, 2009, 21, 2781-2786.	11.1	67
348	Controlled Growth Factor Delivery for Tissue Engineering. Advanced Materials, 2009, 21, 3269-3285.	11.1	365
349	A Versatile Synthetic Extracellular Matrix Mimic via Thiolâ€Norbornene Photopolymerization. Advanced Materials, 2009, 21, 5005-5010.	11.1	578
351	The hard life of soft cells. Cytoskeleton, 2009, 66, 597-605.	4.4	150
352	A versatile mesoindentation system to evaluate the micromechanical properties of soft, hydrated substrates on a cellular scale. Journal of Biomedical Materials Research - Part A, 2009, 90A, 1206-1217.	2.1	23

#	ARTICLE	IF	CITATIONS
353	Geometry and force control of cell function. Journal of Cellular Biochemistry, 2009, 108, 1047-1058.	1.2	57
354	Substrate rigidity regulates Ca ²⁺ oscillation via RhoA pathway in stem cells. Journal of Cellular Physiology, 2009, 218, 285-293.	2.0	128
355	Rheological Properties of Crossâ€Linked Hyaluronan–Gelatin Hydrogels for Tissue Engineering. Macromolecular Bioscience, 2009, 9, 20-28.	2.1	210
356	Hybrid Multicomponent Hydrogels for Tissue Engineering. Macromolecular Bioscience, 2009, 9, 140-156.	2.1	266
357	Silicate Crossâ€Linked Bioâ€Nanocomposite Hydrogels from PEO and Chitosan. Macromolecular Bioscience, 2009, 9, 1028-1035.	2.1	46
358	Measuring microenvironment mechanical stress of rat liver during diethylnitrosamine induced hepatocarcinogenesis by atomic force microscope. Microscopy Research and Technique, 2009, 72, 672-678.	1.2	21
359	Engineering Substrate Topography at the Micro―and Nanoscale to Control Cell Function. Angewandte Chemie - International Edition, 2009, 48, 5406-5415.	7.2	1,109
360	Neurite growth in 3D collagen gels with gradients of mechanical properties. Biotechnology and Bioengineering, 2009, 102, 632-643.	1.7	165
361	Dynamic culture of dropletâ€confined cell arrays. Biotechnology Progress, 2010, 26, 220-231.	1.3	6
362	Probing the influence of myelin and glia on the tensile properties of the spinal cord. Biomechanics and Modeling in Mechanobiology, 2009, 8, 311-321.	1.4	56
363	Osteogenic Effects of Rest Inserted and Continuous Cyclic Tensile Strain on hASC Lines with Disparate Osteodifferentiation Capabilities. Annals of Biomedical Engineering, 2009, 37, 955-965.	1.3	60
364	Differential effects of exogenous and endogenous hyaluronan on contraction and strength of collagen gels. Acta Biomaterialia, 2009, 5, 1019-1026.	4.1	18
365	Self-Assembling Biomaterials. Acta Biomaterialia, 2009, 5, 803-804.	4.1	1
366	Development of porous PEG hydrogels that enable efficient, uniform cell-seeding and permit early neural process extension. Acta Biomaterialia, 2009, 5, 1884-1897.	4.1	95
367	The covalent attachment of adhesion molecules to silicone membranes for cell stretching applications. Biomaterials, 2009, 30, 1781-1789.	5.7	114
368	Biocompatibility of amphiphilic diblock copolypeptide hydrogels in the central nervous system. Biomaterials, 2009, 30, 2881-2898.	5.7	128
369	The induction of cell alignment by covalently immobilized gradients of the 6th Ig-like domain of cell adhesion molecule L1 in 3D-fibrin matrices. Biomaterials, 2009, 30, 4503-4512.	5.7	29
370	Influence of micro-well biomimetic topography on intestinal epithelial Caco-2 cell phenotype. Biomaterials, 2009, 30, 6825-6834.	5.7	81

#	Article	IF	CITATIONS
371	Mechanical properties of the extracellular matrix alter expression of smooth muscle protein LPP and its partner palladin; relationship to early atherosclerosis and vascular injury. Journal of Muscle Research and Cell Motility, 2009, 30, 41-55.	0.9	24
372	Attachment and response of human fibroblast and breast cancer cells to three dimensional silicon microstructures of different geometries. Biomedical Microdevices, 2009, 11, 429-441.	1.4	37
373	Cytoskeletal role in differential adhesion patterns of normal fibroblasts and breast cancer cells inside silicon microenvironments. Biomedical Microdevices, 2009, 11, 585-595.	1.4	42
374	Three-dimensional context regulation of metastasis. Clinical and Experimental Metastasis, 2009, 26, 35-49.	1.7	285
375	Multilayer coatings on biomaterials for control of MG-63 osteoblast adhesion and growth. Journal of Materials Science: Materials in Medicine, 2009, 20, 897-907.	1.7	31
376	The Role of Vinculin in the Regulation of the Mechanical Properties of Cells. Cell Biochemistry and Biophysics, 2009, 53, 115-126.	0.9	117
377	The Potential of MEMS for Advancing Experiments and Modeling in Cell Mechanics. Experimental Mechanics, 2009, 49, 105-124.	1.1	59
378	Protein Mechanics: A New Frontier in Biomechanics. Experimental Mechanics, 2009, 49, 153-164.	1.1	25
379	Cell orientation on a stripe-micropatterned surface. Science Bulletin, 2009, 54, 3154-3159.	1.7	35
380	Critical stresses for cancer cell detachment in microchannels. European Biophysics Journal, 2009, 38, 1035-1047.	1.2	38
381	Traction patterns of tumor cells. Journal of Mathematical Biology, 2009, 58, 163-181.	0.8	59
382	Cell Adhesion and Spreading Affect Adipogenesis from Embryonic Stem Cells: The Role of Calreticulin. Stem Cells, 2009, 27, 2092-2102.	1.4	23
383	Close dependence of fibroblast proliferation on collagen scaffold matrix stiffness. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 77-84.	1.3	253
384	Interface integration of layered collagen scaffolds with defined matrix stiffness: implications for sheet-based tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 230-241.	1.3	26
385	EDTA enhances high-throughput two-dimensional bioprinting by inhibiting salt scaling and cell aggregation at the nozzle surface. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 260-268.	1.3	29
386	A hybrid total internal reflection fluorescence and optical tweezers microscope to study cell adhesion and membrane protein dynamics of single living cells. Journal of Microscopy, 2009, 233, 84-92.	0.8	12
387	Force probing surfaces of living cells to molecular resolution. Nature Chemical Biology, 2009, 5, 383-390.	3.9	430
388	Physical approaches to biomaterial design. Nature Materials, 2009, 8, 15-23.	13.3	1,266

#	Article	IF	CITATIONS
389	Spotlight on hydrogels. Nature Materials, 2009, 8, 451-453.	13.3	211
390	Directing cell motions on micropatterned ratchets. Nature Physics, 2009, 5, 606-612.	6.5	281
391	A tense situation: forcing tumour progression. Nature Reviews Cancer, 2009, 9, 108-122.	12.8	1,636
392	Environmental sensing through focal adhesions. Nature Reviews Molecular Cell Biology, 2009, 10, 21-33.	16.1	2,205
393	Co-assembling peptides as defined matrices for endothelial cells. Biomaterials, 2009, 30, 2400-2410.	5.7	201
394	Differentiation of bone marrow-derived mesenchymal stem cells into multi-layered epidermis-like cells in 3D organotypic coculture. Biomaterials, 2009, 30, 3251-3258.	5.7	47
395	Physical properties of ion beam treated electrospun poly(vinyl alcohol) nanofibers. European Polymer Journal, 2009, 45, 1349-1358.	2.6	37
396	Cell adhesion over two distinct surfaces varied with chemical and mechanical properties. Thin Solid Films, 2009, 517, 5386-5389.	0.8	5
397	Permeability evaluation of 45S5 Bioglass®-based scaffolds for bone tissue engineering. Journal of Biomechanics, 2009, 42, 257-260.	0.9	117
398	Endothelial actin and cell stiffness is modulated by substrate stiffness in 2D and 3D. Journal of Biomechanics, 2009, 42, 1114-1119.	0.9	202
399	Biodegradable comb-dendritic tri-block copolymers consisting of poly(ethylene glycol) and poly(l-lactide): Synthesis, characterizations, and regulation of surface morphology and cell responses. Polymer, 2009, 50, 2775-2785.	1.8	31
400	Continuum modeling of forces in growing viscoelastic cytoskeletal networks. Journal of Theoretical Biology, 2009, 256, 596-606.	0.8	14
401	Establishment of a three-dimensional culture and mechanical loading system for skeletal myoblasts. Cell Biology International, 2009, 33, 192-198.	1.4	12
402	In vitro analog of human bone marrow from 3D scaffolds with biomimetic inverted colloidal crystal geometry. Biomaterials, 2009, 30, 1071-1079.	5.7	127
403	Modulation of hepatocyte phenotype in vitro via chemomechanical tuning of polyelectrolyte multilayers. Biomaterials, 2009, 30, 1113-1120.	5.7	84
404	The relationship between the mechanical properties and cell behaviour on PLGA and PCL scaffolds for bladder tissue engineering. Biomaterials, 2009, 30, 1321-1328.	5.7	195
405	Regulation of cellular morphology using temperature-responsive hydrogel for integrin-mediated mechanical force stimulation. Biomaterials, 2009, 30, 1421-1427.	5.7	33
406	The roles of matrix polymer crystallinity and hydroxyapatite nanoparticles in modulating material properties of photo-crosslinked composites and bone marrow stromal cell responses. Biomaterials, 2009, 30, 3359-3370.	5.7	58

#	Article	IF	CITATIONS
407	The use of three-dimensional nanostructures to instruct cells to produce extracellular matrix for regenerative medicine strategies. Biomaterials, 2009, 30, 4665-4675.	5.7	62
408	A star-PEG–heparin hydrogel platform to aid cell replacement therapies for neurodegenerative diseases. Biomaterials, 2009, 30, 5049-5060.	5.7	272
409	The treatment of collagen fibrils by tissue transglutaminase to promote vascular smooth muscle cell contractile signaling. Biomaterials, 2009, 30, 5486-5496.	5.7	48
410	Reversible mitotic and metabolic inhibition following the encapsulation of fibroblasts in alginate hydrogels. Biomaterials, 2009, 30, 6435-6443.	5.7	41
411	Surface elasticity and charge concentration-dependent endothelial cell attachment to copolymer polyelectrolyte hydrogel. Acta Biomaterialia, 2009, 5, 144-151.	4.1	25
412	Photo-crosslinked poly(ε-caprolactone fumarate) networks for guided peripheral nerve regeneration: Material properties and preliminary biological evaluations. Acta Biomaterialia, 2009, 5, 1531-1542.	4.1	93
413	Surface modifications of photocrosslinked biodegradable elastomers and their influence on smooth muscle cell adhesion and proliferation. Acta Biomaterialia, 2009, 5, 2429-2440.	4.1	20
414	The impact of environmental changes upon the microrheological response of adherent cells. European Physical Journal E, 2009, 30, 127-34.	0.7	9
415	On diamond surface properties and interactions with neurons. European Physical Journal E, 2009, 30, 149-56.	0.7	31
416	An alginate hydrogel matrix for the localised delivery of a fibroblast/keratinocyte co ulture. Biotechnology Journal, 2009, 4, 730-737.	1.8	60
417	Folding, Self-Assembly, and Bulk Material Properties of a <i>De Novo</i> Designed Three-Stranded β-Sheet Hydrogel. Biomacromolecules, 2009, 10, 1295-1304.	2.6	82
418	Electrospun materials as potential platforms for bone tissue engineering. Advanced Drug Delivery Reviews, 2009, 61, 1065-1083.	6.6	438
419	Structural Analysis and Mechanical Characterization of Hyaluronic Acid-Based Doubly Cross-Linked Networks. Macromolecules, 2009, 42, 537-546.	2.2	112
420	De Novo Design of Saccharideâ^'Peptide Hydrogels as Synthetic Scaffolds for Tailored Cell Responses. Journal of the American Chemical Society, 2009, 131, 17638-17646.	6.6	64
421	Variation of Polyelectrolyte Film Stiffness by Photo-Cross-Linking: A New Way To Control Cell Adhesion. Langmuir, 2009, 25, 3556-3563.	1.6	77
422	Microfabricated Electrospun Collagen Membranes for 3-D Cancer Models and Drug Screening Applications. Biomacromolecules, 2009, 10, 2019-2032.	2.6	65
423	Interplay between Covalent and Physical Interactions within Environment Sensitive Hydrogels. Biomacromolecules, 2009, 10, 1090-1099.	2.6	48
424	Cyclical Cell Stretching of Skin-Derived Fibroblasts Downregulates Connective Tissue Growth Factor (CTGF) Production. Connective Tissue Research, 2009, 50, 323-329.	1.1	21

#	Article	IF	CITATIONS
425	Amphiphilic Block Copolymer Films: Phase Transition, Stabilization, and Nanoscale Templates. Macromolecules, 2009, 42, 1017-1023.	2.2	21
426	Impact of Polymer-Bound Iodine on Fibronectin Adsorption and Osteoblast Cell Morphology in Radiopaque Medical Polymers: Tyrosine-Derived Polycarbonate Blends as a Model System. Biomacromolecules, 2009, 10, 2418-2426.	2.6	31
427	Surface-Initiated ATRP Modification of Tissue Culture Substrates: Poly(glycerol monomethacrylate) as an Antifouling Surface. Biomacromolecules, 2009, 10, 3130-3140.	2.6	41
428	Synthesis and Characterization of Elastinâ^'Mimetic Hybrid Polymers with Multiblock, Alternating Molecular Architecture and Elastomeric Properties. Macromolecules, 2009, 42, 2532-2541.	2.2	78
429	Fractional derivative models for ultrasonic characterization of polymer and breast tissue viscoelasticity. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2009, 56, 715-726.	1.7	48
430	Synthesis and Characterization of Macroporous Thermosensitive Hydrogels from Recombinant Elastin-Like Polymers. Biomacromolecules, 2009, 10, 3015-3022.	2.6	84
431	Tunable Layer-by-Layer Polyelectrolyte Platforms for Comparative Cell Assays. Biomacromolecules, 2009, 10, 2254-2260.	2.6	26
432	Effects of Supported Lipid Monolayer Fluidity on the Adhesion of Hematopoietic Progenitor Cell Lines to Fibronectin-Derived Peptide Ligands for $\hat{l}\pm5\hat{l}^21$ and $\hat{l}\pm4\hat{l}^21$ Integrins. Langmuir, 2009, 25, 2994-3002.	1.6	19
433	Physics puzzles on membrane domains posed by cell biology. Soft Matter, 2009, 5, 2841.	1.2	45
434	Defects in cell spreading and ERK1/2 activation in fibroblasts with lamin A/C mutations. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2009, 1792, 810-821.	1.8	39
435	Comparing the mechanical influence of vinculin, focal adhesion kinase and p53 in mouse embryonic fibroblasts. Biochemical and Biophysical Research Communications, 2009, 379, 799-801.	1.0	15
436	Collagen type V modulates fibroblast behavior dependent on substrate stiffness. Biochemical and Biophysical Research Communications, 2009, 380, 425-429.	1.0	34
437	Cell stiffness, contractile stress and the role of extracellular matrix. Biochemical and Biophysical Research Communications, 2009, 382, 697-703.	1.0	67
438	Control of Stem Cell Fate by Physical Interactions with the Extracellular Matrix. Cell Stem Cell, 2009, 5, 17-26.	5.2	1,669
439	Determining the mechanical properties of human corneal basement membranes with atomic force microscopy. Journal of Structural Biology, 2009, 167, 19-24.	1.3	179
440	The elastic modulus of Matrigelâ,,¢ as determined by atomic force microscopy. Journal of Structural Biology, 2009, 167, 216-219.	1.3	222
441	Endothelial cell adhesion, signaling, and morphogenesis in fibroblast-derived matrix. Matrix Biology, 2009, 28, 273-283.	1.5	79
442	Myofibroblasts work best under stress. Journal of Bodywork and Movement Therapies, 2009, 13, 121-127.	0.5	60

#	Article	IF	CITATIONS
443	Growth Factors, Matrices, and Forces Combine and Control Stem Cells. Science, 2009, 324, 1673-1677.	6.0	2,351
444	Multi-scale mechanics from molecules to morphogenesis. International Journal of Biochemistry and Cell Biology, 2009, 41, 2147-2162.	1.2	66
445	Post-traumatic pseudolipomas $\hat{a} \in \hat{a}$ a review and postulated mechanisms of their development. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2009, 62, 737-741.	0.5	15
446	Rigidity-Dependent Cross Talk between Integrin and Cadherin Signaling. Biophysical Journal, 2009, 96, L39-L41.	0.2	59
447	Filamin A Is Essential for Active Cell Stiffening but not Passive Stiffening under External Force. Biophysical Journal, 2009, 96, 4326-4335.	0.2	98
448	Topography and Nanomechanics of Live Neuronal Growth Cones Analyzed by Atomic Force Microscopy. Biophysical Journal, 2009, 96, 5060-5072.	0.2	74
449	Absence of Filamin A Prevents Cells from Responding to Stiffness Gradients on Gels Coated with Collagen but not Fibronectin. Biophysical Journal, 2009, 96, 5095-5102.	0.2	112
450	Substrate Topography Induces a Crossover from 2D to 3D Behavior in Fibroblast Migration. Biophysical Journal, 2009, 97, 357-368.	0.2	177
451	Extracellular Matrix Stiffness and Architecture Govern Intracellular Rheology in Cancer. Biophysical Journal, 2009, 97, 1013-1021.	0.2	174
452	Tuning the Elastic Modulus of Hydrated Collagen Fibrils. Biophysical Journal, 2009, 97, 2985-2992.	0.2	143
453	Impact of Order and Disorder in RGD Nanopatterns on Cell Adhesion. Nano Letters, 2009, 9, 1111-1116.	4.5	501
454	Stimuli-Sensitive Xanthan Derivatives/N-Isopropylacrylamide Hydrogels: Influence of Cross-Linking Agent on Interpenetrating Polymer Network Properties. Biomacromolecules, 2009, 10, 1911-1922.	2.6	56
455	Polymer Hydrogels to Enable New Medical Therapies. Springer Series on Chemical Sensors and Biosensors, 2009, , 249-266.	0.5	3
456	Spatiotemporal Analysis of Cell Response to a Rigidity Gradient: A Quantitative Study Using Multiple Optical Tweezers. Biophysical Journal, 2009, 96, 238-247.	0.2	54
457	Characterization of Matrigel interfaces during defined human embryonic stem cell culture. Biointerphases, 2009, 4, 69-79.	0.6	71
458	Cell Mechanics: Dissecting the Physical Responses of Cells to Force. Annual Review of Biomedical Engineering, 2009, 11, 259-288.	5.7	277
459	Particle-Tracking Microrheology of Living Cells: Principles and Applications. Annual Review of Biophysics, 2009, 38, 301-326.	4.5	559
460	Guiding Axons in the Central Nervous System: A Tissue Engineering Approach. Tissue Engineering - Part B: Reviews, 2009, 15, 291-305.	2.5	30

#	Article	IF	Citations
461	Chapter 1 Focal Adhesions: New Angles on an Old Structure. International Review of Cell and Molecular Biology, 2009, 277, 1-65.	1.6	71
462	Scientific Modeling and Simulations. Lecture Notes in Computational Science and Engineering, 2009, , .	0.1	8
463	Study of cellular behaviors on concave and convex microstructures fabricated from elastic PDMS membranes. Lab on A Chip, 2009, 9, 2043.	3.1	120
464	Simultaneous generation of chemical concentration and mechanical shear stress gradients using microfluidic osmotic flow comparable to interstitial flow. Lab on A Chip, 2009, 9, 2194.	3.1	72
465	Conducting bio-materials based on gellan gum hydrogels. Soft Matter, 2009, 5, 3430.	1.2	88
466	Engineering the CNS stem cell microenvironment. Regenerative Medicine, 2009, 4, 865-877.	0.8	31
467	Surface Topography Induces Fibroblast Adhesion on Intrinsically Nonadhesive Poly(ethylene glycol) Substrates. Biomacromolecules, 2009, 10, 2795-2801.	2.6	97
468	Navigating ECM Barriers at the Invasive Front: The Cancer Cell–Stroma Interface. Annual Review of Cell and Developmental Biology, 2009, 25, 567-595.	4.0	172
469	Material properties from acoustic radiation force step response. Journal of the Acoustical Society of America, 2009, 125, 2928.	0.5	27
470	Electrochemically Controlled Swelling and Mechanical Properties of a Polymer Nanocomposite. ACS Nano, 2009, 3, 2207-2216.	7.3	128
471	Microfluidics as a functional tool for cell mechanics. Biomicrofluidics, 2009, 3, 012006.	1.2	90
472	The mechanical integrin cycle. Journal of Cell Science, 2009, 122, 179-186.	1.2	267
473	Hydrophilic elastomeric biomaterials based on resilin-like polypeptides. Soft Matter, 2009, 5, 3412.	1.2	124
474	Substrate topography shapes cell function. Soft Matter, 2009, 5, 4072.	1.2	134
475	Adhesion of membranes via receptor–ligand complexes: Domain formation, binding cooperativity, and active processes. Soft Matter, 2009, 5, 3213.	1.2	92
476	Crosslinking of cell-derived 3D scaffolds up-regulates the stretching and unfolding of new extracellular matrix assembled by reseeded cells. Integrative Biology (United Kingdom), 2009, 1, 635.	0.6	58
477	Motor-induced sliding of microtubule and actin bundles. Physical Chemistry Chemical Physics, 2009, 11, 4821.	1.3	40
478	Passive and active single-cell biomechanics: a new perspective in cancer diagnosis. Soft Matter, 2009, 5, 2171.	1.2	37

#	Article	IF	CITATIONS
479	A simple lift-off-based patterning method for micro- and nanostructuring of functional substrates for cell culture. Journal of Micromechanics and Microengineering, 2009, 19, 115028.	1.5	19
480	A photo-modulatable material for probing cellular responses to substrate rigidity. Soft Matter, 2009, 5, 1918.	1.2	103
481	Perturbation of single hematopoietic stem cell fates in artificial niches. Integrative Biology (United) Tj ETQq0 0 0	rgBT/Ove	rlock 10 Tf 50 170
482	Dynamic cell behavior on synthetic hydrogels with different charge densities. Soft Matter, 2009, 5, 1804.	1.2	56
483	The impact of aging and gender on brain viscoelasticity. NeuroImage, 2009, 46, 652-657.	2.1	345
484	Stretched Extracellular Matrix Proteins Turn Fouling and Are Functionally Rescued by the Chaperones Albumin and Casein. Nano Letters, 2009, 9, 4158-4167.	4.5	42
485	Simple Agaroseâ^'Chitosan Gel Composite System for Enhanced Neuronal Growth in Three Dimensions. Biomacromolecules, 2009, 10, 2954-2959.	2.6	97
486	La matriz extracelular: morfologÃa, función y biotensegridad (parte I). Revista Espanola De Patologia, 2009, 42, 249-261.	0.6	10
487	Extracellular matrix and tissue engineering applications. Journal of Materials Chemistry, 2009, 19, 5474.	6.7	62
488	Signal co-operation between integrins and other receptor systems. Biochemical Journal, 2009, 418, 491-506.	1.7	273
489	Biomechanics of the CNS., 2009, , 173-213.		6
490	Designing materials to direct stem-cell fate. Nature, 2009, 462, 433-441.	13.7	1,276
491	Mechanically Activated Integrin Switch Controls \hat{l}_{\pm} ₅ \hat{l}^2 ₁ Function. Science, 2009, 323, 642-644.	6.0	637
492	Selective Detection of Live Pathogens via Surface-Confined Electric Field Perturbation on Interdigitated Silicon Transducers. Analytical Chemistry, 2009, 81, 3830-3835.	3.2	33
493	Multiscale Mechanics of Fibrin Polymer: Gel Stretching with Protein Unfolding and Loss of Water. Science, 2009, 325, 741-744.	6.0	346
494	Calcification by Valve Interstitial Cells Is Regulated by the Stiffness of the Extracellular Matrix. Arteriosclerosis, Thrombosis, and Vascular Biology, 2009, 29, 936-942.	1.1	294
495	Tensegrity-guided self assembly: from molecules to living cells. Soft Matter, 2009, 5, 1137-1145.	1,2	62
496	Modulating the Gelation Properties of Self-Assembling Peptide Amphiphiles. ACS Nano, 2009, 3, 3447-3454.	7.3	86

#	ARTICLE	IF	CITATIONS
497	A mathematical approach to bone tissue engineering. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 2055-2078.	1.6	40
498	Neutrophil morphology and migration are affected by substrate elasticity. Blood, 2009, 114, 1387-1395.	0.6	169
499	Cryogels as Matrices for Cell Separation and Cell Cultivation. , 2009, , 363-404.		3
500	Simulation of the contractile response of cells on an array of micro-posts. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 3477-3497.	1.6	80
501	The Coupled Influences of Substrate Stiffness and Cell Spreading Area on Traction Force. , 2009, , .		0
502	Local Histogram Analysis: Detecting Cell-Microstructure Interactions on Combinatorial Biomaterial Libraries. Combinatorial Chemistry and High Throughput Screening, 2009, 12, 626-633.	0.6	6
503	Improving islet transplantation: a road map for a widespread application for the cure of persons with type I diabetes. Current Opinion in Organ Transplantation, 2009, 14, 683-687.	0.8	31
504	From Nanotechnology to Nanomedicine: Applications to Cancer Research. Current Molecular Medicine, 2010, 10, 640-652.	0.6	148
505	Mesenchymal Stem Cells in Cartilage Repair: State of the Art and Methods to monitor Cell Growth, Differentiation and Cartilage Regeneration. Current Medicinal Chemistry, 2010, 17, 2274-2291.	1.2	43
506	Factors that Control the Circulation Time of Nanoparticles in Blood: Challenges, Solutions and Future Prospects. Current Pharmaceutical Design, 2010, 16, 2298-2307.	0.9	451
507	Hyaluronic acid for the treatment of vocal fold scars. Current Opinion in Otolaryngology and Head and Neck Surgery, 2010, 18, 498-502.	0.8	38
508	Whole cell mechanics of contractile fibroblasts: relations between effective cellular and extracellular matrix moduli. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 635-654.	1.6	41
509	Mechanical Regulation of Actin Network Dynamics in Migrating Cells. Journal of Biomechanical Science and Engineering, 2010, 5, 186-207.	0.1	9
511	Scanning probe recognition microscopy investigation of neural cell prosthetic properties. International Journal of Nanomanufacturing, 2010, 6, 279.	0.3	2
512	Biomaterials for stem cell differentiation. Journal of Materials Chemistry, 2010, 20, 8832.	6.7	46
513	The biophysics of neuronal growth. Reports on Progress in Physics, 2010, 73, 094601.	8.1	131
514	LbL Films as Reservoirs for Bioactive Molecules. Advances in Polymer Science, 2010, , 135-161.	0.4	34
515	Shrunk to nano: The secrete language of mechanical communication. , 2010, , .		2

#	ARTICLE	IF	CITATIONS
516	Designing Three-Dimensional Materials at the Interface to Biology. Advances in Polymer Science, 2010 , , $163-192$.	0.4	9
517	Fluidic applications for atomic force microscopy (AFM) with microcantilever sensors. Experiments in Fluids, 2010, 48, 721-736.	1.1	29
518	In the middle of it all: Mutual mechanical regulation between the nucleus and the cytoskeleton. Journal of Biomechanics, 2010, 43, 2-8.	0.9	54
519	The biomechanical integrin. Journal of Biomechanics, 2010, 43, 38-44.	0.9	80
520	Intrinsic extracellular matrix properties regulate stem cell differentiation. Journal of Biomechanics, 2010, 43, 55-62.	0.9	697
521	Encapsulation of fibroblasts causes accelerated alginate hydrogel degradation. Acta Biomaterialia, 2010, 6, 3649-3656.	4.1	101
522	Geometric microenvironment directs cell morphology on topographically patterned hydrogel substrates. Acta Biomaterialia, 2010, 6, 3514-3523.	4.1	42
523	Reduced hydraulic permeability of three-dimensional collagen scaffolds attenuates gel contraction and promotes the growth and differentiation of mesenchymal stem cells. Acta Biomaterialia, 2010, 6, 3978-3987.	4.1	76
524	The effect of matrix stiffness on mesenchymal stem cell differentiation in a 3D thixotropic gel. Biomaterials, 2010, 31, 385-391.	5.7	354
525	Concentrated collagen hydrogels as dermal substitutes. Biomaterials, 2010, 31, 481-490.	5.7	171
526	The relationship between fibroblast growth and the dynamic stiffnesses of a DNA crosslinked hydrogel. Biomaterials, 2010, 31, 1199-1212.	5.7	66
527	The use of thermal printing to control the properties of calcium phosphate deposits. Biomaterials, 2010, 31, 6386-6393.	5.7	36
528	Bioengineered 3D platform to explore cell–ECM interactions and drug resistance of epithelial ovarian cancer cells. Biomaterials, 2010, 31, 8494-8506.	5.7	533
529	The role of stiffness of gelatin–hydroxyphenylpropionic acid hydrogels formed by enzyme-mediated crosslinking on the differentiation of human mesenchymal stem cell. Biomaterials, 2010, 31, 8608-8616.	5.7	182
530	Polysaccharide-based polyelectrolyte multilayers. Current Opinion in Colloid and Interface Science, 2010, 15, 417-426.	3.4	164
531	Chemical power for microscopic robots in capillaries. Nanomedicine: Nanotechnology, Biology, and Medicine, 2010, 6, 298-317.	1.7	29
532	Boundary Stiffness Regulates Fibroblast Behavior in Collagen Gels. Annals of Biomedical Engineering, 2010, 38, 658-673.	1.3	38
533	Numerical Modeling of Long Bone Adaptation due to Mechanical Loading: Correlation with Experiments. Annals of Biomedical Engineering, 2010, 38, 594-604.	1.3	37

#	Article	IF	CITATIONS
534	Mechanical Interactions of Mouse Mammary Gland Cells with Collagen in a Three-Dimensional Construct. Annals of Biomedical Engineering, 2010, 38, 2485-2498.	1.3	12
535	Microfluidic Platforms for Studies of Angiogenesis, Cell Migration, and Cell–Cell Interactions. Annals of Biomedical Engineering, 2010, 38, 1164-1177.	1.3	140
536	Increased poly(dimethylsiloxane) stiffness improves viability and morphology of mouse fibroblast cells. Biochip Journal, 2010, 4, 230-236.	2.5	93
537	Microfabricated substrates as a tool to study cell mechanotransduction. Medical and Biological Engineering and Computing, 2010, 48, 965-976.	1.6	62
538	Flexible and stretchable micro-electrodes for in vitro and in vivo neural interfaces. Medical and Biological Engineering and Computing, 2010, 48, 945-954.	1.6	226
539	On the Modelling of Biological Patterns withÂMechanochemical Models: Insights from Analysis andÂComputation. Bulletin of Mathematical Biology, 2010, 72, 400-431.	0.9	13
540	Cytoskeletal Disassembly and Cell Rounding Promotes Adipogenesis from ES Cells. Stem Cell Reviews and Reports, 2010, 6, 74-85.	5.6	42
541	Stress Response by Bone Cells and Implications on Microgravity Environment. Clinical Reviews in Bone and Mineral Metabolism, 2010, 8, 179-188.	1.3	1
542	Air–Liquid Interface Culture of Nasal Epithelial Cells on Denuded Amniotic Membranes. Cellular and Molecular Bioengineering, 2010, 3, 307-318.	1.0	6
543	Stem cell plasticity, osteogenic differentiation and the third dimension. Journal of Materials Science: Materials in Medicine, 2010, 21, 999-1004.	1.7	15
544	A micro-channel-well system for culture and differentiation of embryonic stem cells on different types of substrate. Biomedical Microdevices, 2010, 12, 505-511.	1.4	18
545	Adhesion and proliferation of skeletal muscle cells on single layer poly(lactic acid) ultra-thin films. Biomedical Microdevices, 2010, 12, 809-819.	1.4	48
546	Unique biomechanical interactions between myeloma cells and bone marrow stroma cells. Progress in Biophysics and Molecular Biology, 2010, 103, 148-156.	1.4	15
547	Physico-mechanical aspects of extracellular matrix influences on tumorigenic behaviors. Seminars in Cancer Biology, 2010, 20, 139-145.	4.3	108
548	RNA: state memory and mediator of cellular phenotype. Trends in Cell Biology, 2010, 20, 311-318.	3.6	62
549	Actin Crosslinkers: Repairing theÂSense of Touch. Current Biology, 2010, 20, R895-R896.	1.8	2
550	Sensing substrate rigidity by mechanosensitive ion channels with stress fibers and focal adhesions. Current Opinion in Cell Biology, 2010, 22, 669-676.	2.6	131
551	Extracellular matrix effect on RhoA signaling modulation in vascular smooth muscle cells. Experimental Cell Research, 2010, 316, 2833-2848.	1.2	27

#	Article	IF	CITATIONS
552	Vascular endothelial growth factor and substrate mechanics regulate <i>in vitro</i> tubulogenesis of endothelial progenitor cells. Journal of Cellular and Molecular Medicine, 2010, 14, 2436-2447.	1.6	124
553	Biomimetic gradient hydrogels for tissue engineering. Canadian Journal of Chemical Engineering, 2010, 88, 899-911.	0.9	218
554	The kinetics of forceâ€induced cell reorganization depend on microtubules and actin. Cytoskeleton, 2010, 67, 241-250.	1.0	31
555	Surface chemistry and polymer film thickness effects on endothelial cell adhesion and proliferation. Journal of Biomedical Materials Research - Part A, 2010, 94A, 640-648.	2.1	28
556	The effect of an electrically conductive carbon nanotube/collagen composite on neurite outgrowth of PC12 cells. Journal of Biomedical Materials Research - Part A, 2010, 95A, 510-517.	2.1	73
557	Stiffness of the substrate influences the phenotype of embryonic chicken cardiac myocytes. Journal of Biomedical Materials Research - Part A, 2010, 95A, 1261-1269.	2.1	95
558	Acellular dermal matrix graft: Synergistic effect of rehydration and natural crosslinking on mechanical properties. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 95B, 276-282.	1.6	28
559	Using surface plasmon resonance imaging to probe dynamic interactions between cells and extracellular matrix. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2010, 77A, 895-903.	1.1	40
560	Adhesion and Mechanical Properties of PNIPAM Microgel Films and Their Potential Use as Switchable Cell Culture Substrates. Advanced Functional Materials, 2010, 20, 3235-3243.	7.8	329
561	A General Approach for Patterning Multiple Types of Cells Using Holey PDMS Membranes and Microfluidic Channels. Advanced Functional Materials, 2010, 20, 3715-3720.	7.8	57
562	Controlling Stem Cell Fate with Material Design. Advanced Materials, 2010, 22, 175-189.	11.1	215
563	Multiple Functionalities of Polyelectrolyte Multilayer Films: New Biomedical Applications. Advanced Materials, 2010, 22, 441-467.	11.1	656
564	Elastic Fully Threeâ€dimensional Microstructure Scaffolds for Cell Force Measurements. Advanced Materials, 2010, 22, 868-871.	11.1	177
565	Engineering the Extracellular Environment: Strategies for Building 2D and 3D Cellular Structures. Advanced Materials, 2010, 22, 5443-5462.	11.1	147
566	A rotating bed system bioreactor enables cultivation of primary osteoblasts on wellâ€characterized sponceram® regarding structural and flow properties. Biotechnology Progress, 2010, 26, 671-678.	1.3	11
567	Cell adhesion on ligand gradient substrates: A thermodynamic study. Biotechnology and Bioengineering, 2010, 105, 172-183.	1.7	6
568	Mechanical stiffness of liver tissues in relation to integrin \hat{l}^21 expression may influence the development of hepatic cirrhosis and hepatocellular carcinoma. Journal of Surgical Oncology, 2010, 102, 482-489.	0.8	62
569	Biomimetic Principles in Polymer and Material Science. Macromolecular Chemistry and Physics, 2010, 211, 166-170.	1.1	46

#	Article	IF	CITATIONS
570	Combining mechanical and optical approaches to dissect cellular mechanobiology. Journal of Biomechanics, 2010, 43, 45-54.	0.9	36
571	The myofibroblast: Paradigm for a mechanically active cell. Journal of Biomechanics, 2010, 43, 146-155.	0.9	544
572	Mechanical difference between white and gray matter in the rat cerebellum measured by scanning force microscopy. Journal of Biomechanics, 2010, 43, 2986-2992.	0.9	221
573	Biodegradable polymer matrix nanocomposites for tissue engineering: A review. Polymer Degradation and Stability, 2010, 95, 2126-2146.	2.7	823
574	Poly(É>-caprolactone) acrylates synthesized using a facile method for fabricating networks to achieve controllable physicochemical properties and tunable cell responses. Polymer, 2010, 51, 164-177.	1.8	77
575	Formation of silicone elastomer networks films with gradients in modulus. Polymer, 2010, 51, 763-773.	1.8	29
576	A theoretical model for tissue growth in confined geometries. Journal of the Mechanics and Physics of Solids, 2010, 58, 1073-1087.	2.3	42
577	Production of free standing composite membranes or of patterned films after sol–gel reactions in an exponential layer-by-layer architecture. Materials Science and Engineering C, 2010, 30, 1291-1297.	3.8	9
578	Injectable biodegradable hydrogels with tunable mechanical properties for the stimulation of neurogenesic differentiation of human mesenchymal stem cells in 3D culture. Biomaterials, 2010, 31, 1148-1157.	5.7	234
579	Probing cellular mechanobiology in three-dimensional culture with collagen–agarose matrices. Biomaterials, 2010, 31, 1875-1884.	5.7	277
580	Tuning the mechanical properties of bioreducible multilayer films for improved cell adhesion and transfection activity. Biomaterials, 2010, 31, 7167-7174.	5.7	51
581	Biochemical and biomechanical gradients for directed bone marrow stromal cell differentiation toward tendon and bone. Biomaterials, 2010, 31, 7695-7704.	5.7	137
582	Dense type I collagen matrices that support cellular remodeling and microfabrication for studies of tumor angiogenesis and vasculogenesis in vitro. Biomaterials, 2010, 31, 8596-8607.	5.7	306
583	In situ thermal gelling polypeptide for chondrocytes 3D culture. Biomaterials, 2010, 31, 9266-9272.	5.7	92
584	Pluripotent stem cell derived hepatocyte like cells and their potential in toxicity screening. Toxicology, 2010, 278, 250-255.	2.0	72
585	Effect of chitosan scaffold microstructure on mesenchymal stem cell chondrogenesis. Acta Biomaterialia, 2010, 6, 1430-1436.	4.1	91
586	On the biomechanical function of scaffolds for engineering load-bearing soft tissues. Acta Biomaterialia, 2010, 6, 2365-2381.	4.1	118
587	Influence of cell-adhesive peptide ligands on poly(ethylene glycol) hydrogel physical, mechanical and transport properties. Acta Biomaterialia, 2010, 6, 3404-3414.	4.1	68

#	Article	IF	CITATIONS
588	In situ elasticity modulation with dynamic substrates to direct cell phenotype. Biomaterials, 2010, 31, 1-8.	5.7	386
589	Nanotopography-induced changes in focal adhesions, cytoskeletal organization, and mechanical properties of human mesenchymal stem cells. Biomaterials, 2010, 31, 1299-1306.	5.7	618
590	The regulation of stem cell differentiation by cell-cell contact on micropatterned material surfaces. Biomaterials, 2010, 31, 2470-2476.	5.7	296
591	Red blood cell membrane grafting of multi-functional hyperbranched polyglycerols. Biomaterials, 2010, 31, 4167-4178.	5.7	79
592	Poly(ethylene glycol)-grafted poly(propylene fumarate) networks and parabolic dependence of MC3T3 cell behavior on the network composition. Biomaterials, 2010, 31, 4457-4466.	5.7	43
593	Pore size variable type I collagen gels and their interaction with glioma cells. Biomaterials, 2010, 31, 5678-5688.	5.7	186
594	Biomimetic hybrid scaffolds for engineering human tooth-ligament interfaces. Biomaterials, 2010, 31, 5945-5952.	5.7	185
595	The control of stem cell morphology and differentiation by hydrogel surface wrinkles. Biomaterials, 2010, 31, 6511-6518.	5.7	193
596	Modular enzymatically crosslinked protein polymer hydrogels for in situ gelation. Biomaterials, 2010, 31, 7288-7297.	5.7	92
597	Parabolic dependence of material properties and cell behavior on the composition of polymer networks via simultaneously controlling crosslinking density andÂcrystallinity. Biomaterials, 2010, 31, 7423-7434.	5.7	54
598	Synergic effects of crypt-like topography and ECM proteins on intestinal cell behavior in collagen based membranes. Biomaterials, 2010, 31, 7586-7598.	5.7	56
599	A hydrophobic perfluoropolyether elastomer as a patternable biomaterial for cell culture and tissue engineering. Biomaterials, 2010, 31, 8583-8595.	5.7	28
600	From surfactant adsorption kinetics to asymmetric nanomembrane mechanics: Pendant drop experiments with subphase exchange. Advances in Colloid and Interface Science, 2010, 161, 29-47.	7.0	43
601	Mechanotransduction: a major regulator of homeostasis and development. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2010, 2, 625-639.	6.6	50
602	Surface association and the MreB cytoskeleton regulate pilus production, localization and function in Pseudomonas aeruginosa. Molecular Microbiology, 2010, 76, 1411-1426.	1.2	88
603	Cell mechanics and the cytoskeleton. Nature, 2010, 463, 485-492.	13.7	2,243
604	Material properties of the cell dictate stress-induced spreading and differentiation in embryonic stemÂcells. Nature Materials, 2010, 9, 82-88.	13.3	506
605	Harnessing traction-mediated manipulation of the cell/matrix interface to control stem-cell fate. Nature Materials, 2010, 9, 518-526.	13.3	1,319

#	ARTICLE	IF	CITATIONS
606	Mechanical regulation of cell function with geometrically modulated elastomeric substrates. Nature Methods, 2010, 7, 733-736.	9.0	944
607	Measurement of mechanical tractions exerted by cells in three-dimensional matrices. Nature Methods, 2010, 7, 969-971.	9.0	534
608	Optimal matrix rigidity for stress-fibre polarization in stem cells. Nature Physics, 2010, 6, 468-473.	6.5	335
609	Cell adhesion: integrating cytoskeletal dynamics and cellular tension. Nature Reviews Molecular Cell Biology, 2010, 11, 633-643.	16.1	1,665
610	Cardiac myocyte force development during differentiation and maturation. Annals of the New York Academy of Sciences, 2010, 1188, 121-127.	1.8	94
611	Effects of surface properties and bioactivation of biomaterials on endothelial cells. Frontiers in Bioscience - Scholar, 2010, S2, 239-255.	0.8	23
612	Biophysical Cueing and Vascular Endothelial Cell Behavior. Materials, 2010, 3, 1620-1639.	1.3	47
613	Polymers for Fabricating Nerve Conduits. International Journal of Polymer Science, 2010, 2010, 1-20.	1.2	50
614	Breakdown of cell-collagen networks through collagen remodeling. Biorheology, 2010, 47, 277-295.	1.2	30
615	Soft Matrices Suppress Cooperative Behaviors among Receptor-Ligand Bonds in Cell Adhesion. PLoS ONE, 2010, 5, e12342.	1.1	43
616	Soft Substrates Promote Homogeneous Self-Renewal of Embryonic Stem Cells via Downregulating Cell-Matrix Tractions. PLoS ONE, 2010, 5, e15655.	1.1	286
617	Endothelial vascular smooth muscle cell coculture assay for high throughput screening assays to identify antiangiogenic and other therapeutic molecules. International Journal of High Throughput Screening, 2010, 2010, 171.	0.5	55
618	The myofibroblast in connective tissue repair and regeneration. , 2010, , 39-80.		10
619	Nano-topography sensing by osteoclasts. Journal of Cell Science, 2010, 123, 1503-1510.	1.2	95
620	Differential Effects of Caldesmon on the Intermediate Conformational States of Polymerizing Actin. Journal of Biological Chemistry, 2010, 285, 71-79.	1.6	16
621	Vinculin potentiates E-cadherin mechanosensing and is recruited to actin-anchored sites within adherens junctions in a myosin ll–dependent manner. Journal of Cell Biology, 2010, 189, 1107-1115.	2.3	569
622	Immunologically Active Biomaterials for Cancer Therapy. Current Topics in Microbiology and Immunology, 2010, 344, 279-297.	0.7	11
623	Online Monitoring of the Mechanical Behavior of Collagen Hydrogels: Influence of Corneal Fibroblasts on Elastic Modulus. Tissue Engineering - Part C: Methods, 2010, 16, 319-327.	1.1	38

#	Article	IF	Citations
624	Selective and uncoupled role of substrate elasticity in the regulation of replication and transcription in epithelial cells. Journal of Cell Science, 2010, 123, 29-39.	1.2	75
625	Cytoskeleton reorganization of spreading cellsÂon micro-patterned islands: a functional model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 2629-2652.	1.6	28
626	Studying the Effects of Matrix Stiffness on Cellular Function using Acrylamide-based Hydrogels. Journal of Visualized Experiments, 2010, , .	0.2	53
627	A simple indentation device for measuring micrometer-scale tissue stiffness. Journal of Physics Condensed Matter, 2010, 22, 194120.	0.7	102
628	Force-induced destabilization of focal adhesions at defined integrin spacings on nanostructured surfaces. Physical Review E, 2010, 81, 051914.	0.8	14
629	Matrix elasticity, cytoskeletal forces and physics of the nucleus: how deeply do cells †feel†outside and in?. Journal of Cell Science, 2010, 123, 297-308.	1.2	349
630	Neurons sense nanoscale roughness with nanometer sensitivity. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6264-6269.	3.3	225
631	Implementation of Specific Bioconjugation in Polystyreneâ€ <i>block</i> â€poly(<i>tert</i> â€butyl) Tj ETQq1	1 0.784314	rgBT /Overlo
632	Integrins stimulate E-cadherin-mediated intercellular adhesion by regulating Src-kinase activation and actomyosin contractility. Journal of Cell Science, 2010, 123, 712-722.	1.2	130
633	Nanostructured Materials for Skeletal Repair. Macromolecular Symposia, 2010, 294, 109-119.	0.4	5
634	Bioprinted Nanoparticles for Tissue Engineering Applications. Tissue Engineering - Part C: Methods, 2010, 16, 631-642.	1.1	57
635	Dispersion and Shear Modulus Measurements of Porcine Liver. Ultrasonic Imaging, 2010, 32, 255-266.	1.4	23
636	Real-time single-cell response to stiffness. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16518-16523.	3.3	116
637	Traction forces exerted by epithelial cell sheets. Journal of Physics Condensed Matter, 2010, 22, 194119.	0.7	110
638	Intercellular mechanotransduction during multicellular morphodynamics. Journal of the Royal Society Interface, 2010, 7, S341-50.	1.5	18
639	Matrix Architecture Dictates Three-Dimensional Migration Modes of Human Macrophages: Differential Involvement of Proteases and Podosome-Like Structures. Journal of Immunology, 2010, 184, 1049-1061.	0.4	309
640	A new lock-step mechanism of matrix remodelling based on subcellular contractile events. Journal of Cell Science, 2010, 123, 1751-1760.	1.2	105
641	Lateral shear forces applied to cells with single elastic micropillars to influence focal adhesion dynamics. Journal of Physics Condensed Matter, 2010, 22, 194108.	0.7	14

#	Article	IF	CITATIONS
642	Reinforcement of a Porous Collagen Scaffold with Surface-Activated PLA Fibers. Journal of Biomaterials Science, Polymer Edition, 2010, 21, 963-977.	1.9	19
643	Matrix modulation of compensatory lung regrowth and progenitor cell proliferation in mice. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2010, 298, L158-L168.	1.3	47
644	Three-Dimensional Culture of Human Embryonic Stem Cell Derived Hepatic Endoderm and Its Role in Bioartificial Liver Construction. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-12.	3.0	31
645	Frequency- and Temperature-Dependent Rheological Properties of an Amphiphilic Block Co-polymer in Water and Including Cell-Culture Media. Journal of Biomaterials Science, Polymer Edition, 2010, 21, 253-269.	1.9	20
646	Young's modulus of collagen at slow displacement rates. Bio-Medical Materials and Engineering, 2010, 20, 361-369.	0.4	19
647	Effects of Matrix Composition, Microstructure, and Viscoelasticity on the Behaviors of Vocal Fold Fibroblasts Cultured in Three-Dimensional Hydrogel Networks. Tissue Engineering - Part A, 2010, 16, 1247-1261.	1.6	48
648	Effect of Dynamic Stiffness of the Substrates on Neurite Outgrowth by Using a DNA-Crosslinked Hydrogel. Tissue Engineering - Part A, 2010, 16, 1873-1889.	1.6	68
649	A mechanical model of actin stress fiber formation and substrate elasticity sensing in adherent cells. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7757-7762.	3.3	210
650	Developing targeted biocomposites in tissue engineering and regenerative medicine., 2010,, 573-592.		0
651	Micro-Engineered Sythetical Extrocellular Metrix for Stem Cell Differentiation Study., 2010,,.		O
652	Continuous depth-sensing nano-mechanical characterization of living, fixed and dehydrated cells attached on a glass substrate. Nanotechnology, 2010, 21, 285704.	1.3	7
653	Inelastic mechanics of sticky biopolymer networks. New Journal of Physics, 2010, 12, 053024.	1.2	42
654	Optimization of traction force microscopy for micron-sized focal adhesions. Journal of Physics Condensed Matter, 2010, 22, 194104.	0.7	48
655	Human Endometrial Stromal Cell Rho GTPases Have Opposing Roles in Regulating Focal Adhesion Turnover and Embryo Invasion In Vitro1. Biology of Reproduction, 2010, 83, 75-82.	1.2	63
656	High-Content Drug Screening with Engineered Musculoskeletal Tissues. Tissue Engineering - Part B: Reviews, 2010, 16, 55-64.	2.5	87
657	Nanoindentation studies on crosslinking and curing effects of PDMS. International Journal of Materials Research, 2010, 101, 1014-1023.	0.1	16
657 658	Nanoindentation studies on crosslinking and curing effects of PDMS. International Journal of Materials Research, 2010, 101, 1014-1023. Photo-Cross-Linked PDMSstar-PEG Hydrogels: Synthesis, Characterization, and Potential Application for Tissue Engineering Scaffolds. Biomacromolecules, 2010, 11, 648-656.	2.6	16

#	Article	IF	Citations
660	Integration of Biomaterials into 3D Stem Cell Microenvironments. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 45-59.	0.7	1
661	Functional Biomaterials for Controlling Stem Cell Differentiation. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 19-44.	0.7	14
662	Cellular Mechanics of Acute Leukemia and Chemotherapy. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 523-558.	0.7	0
663	Forces During Cell Adhesion and Spreading: Implications for Cellular Homeostasis. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 29-69.	0.7	14
664	The Physical Mechanical Processes that Shape Tissues in the Early Embryo. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 71-97.	0.7	1
665	The Mechanical Environment of Cells in Collagen Gel Models. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 201-245.	0.7	4
666	Nanotechnology Usages for Cellular Adhesion and Traction Forces. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 177-200.	0.7	1
667	Engineering of Multifunctional Scaffolds for Myocardial Repair Through Nanofunctionalization and Microfabrication of Novel Polymeric Biomaterials. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 187-214.	0.7	1
668	Preparation of Hydrogel Substrates with Tunable Mechanical Properties. Current Protocols in Cell Biology, 2010, 47, Unit 10.16.	2.3	676
669	Mechanosensitivity of astrocytes on optimized polyacrylamide gels analyzed by quantitative morphometry. Journal of Physics Condensed Matter, 2010, 22, 194114.	0.7	122
670	Bioactive Glass and Glass-Ceramic Scaffolds for Bone Tissue Engineering. Materials, 2010, 3, 3867-3910.	1.3	875
671	Hydrogels Based on Dual Curable Chitosan- <i>graft</i> -Polyethylene Glycol- <i>graft</i> -Methacrylate: Application to Layer-by-Layer Cell Encapsulation. ACS Applied Materials & Diterfaces, 2010, 2, 2012-2025.	4.0	37
672	Cell shape, spreading symmetry, and the polarization of stress-fibers in cells. Journal of Physics Condensed Matter, 2010, 22, 194110.	0.7	75
673	Strength Dependence of Cadherin-Mediated Adhesions. Biophysical Journal, 2010, 98, 534-542.	0.2	223
674	Cell Adhesion Strength Is Controlled by Intermolecular Spacing of Adhesion Receptors. Biophysical Journal, 2010, 98, 543-551.	0.2	187
675	Mechanical Principle of Enhancing Cell-Substrate Adhesion via Pre-Tension in the Cytoskeleton. Biophysical Journal, 2010, 98, 2154-2162.	0.2	21
676	A Model of Fibroblast Motility on Substrates with Different Rigidities. Biophysical Journal, 2010, 98, 2794-2803.	0.2	83
677	Multiscale Morphology of Organic Semiconductor Thin Films Controls the Adhesion and Viability of Human Neural Cells. Biophysical Journal, 2010, 98, 2804-2812.	0.2	50

#	Article	IF	CITATIONS
678	Mechanical Force Affects Expression of an In Vitro Metastasis-Like Phenotype in HCT-8 Cells. Biophysical Journal, 2010, 99, 2460-2469.	0.2	89
679	Restorative approaches in Parkinson's Disease: Which cell type wins the race?. Journal of the Neurological Sciences, 2010, 289, 93-103.	0.3	59
680	Nanotopography follows force in TGF-Î ² 1 stimulated epithelium. Nanotechnology, 2010, 21, 265102.	1.3	38
681	Label-Free and Non-invasive Biosensor Cellular Assays for Cell Adhesion. Journal of Adhesion Science and Technology, 2010, 24, 1011-1021.	1.4	11
682	Microfabricated Devices for Studying Cellular Biomechanics and Mechanobiology. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 145-175.	0.7	4
683	Peptide conjugate hydrogelators. Soft Matter, 2010, 6, 3707.	1.2	154
684	Two stages in three-dimensional <i>in vitro</i> growth of tissue generated by osteoblastlike cells. Biointerphases, 2010, 5, 45-52.	0.6	52
685	Effect of 3D-scaffold formation on differentiation and survival in human neural progenitor cells. BioMedical Engineering OnLine, 2010, 9, 70.	1.3	71
686	Extracellular matrix rigidity modulates neuroblastoma cell differentiation and N-myc expression. Molecular Cancer, 2010, 9, 35.	7.9	93
687	The development and validation of a lipus system with preliminary observations of ultrasonic effects on human adult stem cells. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 1977-1984.	1.7	25
688	Subtle variations in polymer chemistry modulate substrate stiffness and fibronectin activity. Soft Matter, 2010, 6, 4748.	1.2	41
689	Modular Elastic Patches: Mechanical and Biological Effects. Biomacromolecules, 2010, 11, 2230-2237.	2.6	13
690	Characterization of Collagen Fibrils Films Formed on Polydimethylsiloxane Surfaces for Microfluidic Applications. Langmuir, 2010, 26, 14111-14117.	1.6	4
691	Enhanced Cell Surface Polymer Grafting in Concentrated and Nonreactive Aqueous Polymer Solutions. Journal of the American Chemical Society, 2010, 132, 3423-3430.	6.6	60
692	3D Cell Growth and Proliferation on a RGD Functionalized Nanofibrillar Hydrogel Based on a Conformationally Restricted Residue Containing Dipeptide. ACS Applied Materials & Samp; Interfaces, 2010, 2, 2839-2848.	4.0	54
693	Distinct Cell Responses to Substrates Consisting of Poly($\hat{l}\mu$ -caprolactone) and Poly(propylene fumarate) in the Presence or Absence of Cross-Links. Biomacromolecules, 2010, 11, 2748-2759.	2.6	45
694	Electrospun nanoporous materials: Reality, potential and challenges. Materials Science and Technology, 2010, 26, 1304-1308.	0.8	17
695	Probing Cellular Traction Forces by Micropillar Arrays: Contribution of Substrate Warping to Pillar Deflection. Nano Letters, 2010, 10, 1823-1830.	4.5	153

#	Article	IF	CITATIONS
696	Combined Influence of Substrate Stiffness and Surface Topography on the Antiadhesive Properties of Acr-sP(EO- <i>stat</i> -PO) Hydrogels. Biomacromolecules, 2010, 11, 3375-3383.	2.6	22
697	Fifteen-Piconewton Force Detection from Neural Growth Cones Using Nanowire Arrays. Nano Letters, 2010, 10, 782-787.	4.5	109
698	Large Area Protein Patterning Reveals Nanoscale Control of Focal Adhesion Development. Nano Letters, 2010, 10, 686-694.	4.5	88
699	Polymeric Substrates with Tunable Elasticity and Nanoscopically Controlled Biomolecule Presentation. Langmuir, 2010, 26, 15472-15480.	1.6	75
700	Stimuli-Responsive Smart Gels Realized via Modular Protein Design. Journal of the American Chemical Society, 2010, 132, 14024-14026.	6.6	105
701	PEG-Based Hydrogels with Collagen Mimetic Peptide-Mediated and Tunable Physical Cross-Links. Biomacromolecules, 2010, 11, 2336-2344.	2.6	86
702	Cell Migration at the Interface of a Dual Chemical-Mechanical Gradient. ACS Applied Materials & Interfaces, 2010, 2, 2317-2324.	4.0	46
703	Cell Adhesion to Ordered Pores: Consequences for Cellular Elasticity. Journal of Adhesion Science and Technology, 2010, 24, 2287-2300.	1.4	13
704	Nanomechanical Properties of Thin Films of Type I Collagen Fibrils. Langmuir, 2010, 26, 3629-3636.	1.6	45
705	Self-Assembly and Tissue Fusion of Toroid-Shaped Minimal Building Units. Tissue Engineering - Part A, 2010, 16, 2051-2061.	1.6	76
706	Spontaneous and Specific Activation of Chemical Bonds in Macromolecular Fluids. Journal of the American Chemical Society, 2010, 132, 12487-12491.	6.6	26
707	Control of Integrin αIIbβ3 Outside-In Signaling and Platelet Adhesion by Sensing the Physical Properties of Fibrin(ogen) Substrates. Biochemistry, 2010, 49, 68-77.	1.2	27
708	Cell Motility and Mechanics in Three-Dimensional Collagen Matrices. Annual Review of Cell and Developmental Biology, 2010, 26, 335-361.	4.0	298
709	Behaviors of NIH-3T3 Fibroblasts on Graphene/Carbon Nanotubes: Proliferation, Focal Adhesion, and Gene Transfection Studies. ACS Nano, 2010, 4, 6587-6598.	7.3	395
710	Characterization of hydrogel microstructure using laser tweezers particle tracking and confocal reflection imaging. Journal of Physics Condensed Matter, 2010, 22, 194121.	0.7	31
711	Thickness sensing of hMSCs on collagen gel directs stem cell fate. Biochemical and Biophysical Research Communications, 2010, 401, 287-292.	1.0	74
712	Effect of collagen I and fibronectin on the adhesion, elasticity and cytoskeletal organization of prostate cancer cells. Biochemical and Biophysical Research Communications, 2010, 402, 361-366.	1.0	50
713	Nano-mechanical properties of living cells expressing constitutively active RhoA effectors. Biochemical and Biophysical Research Communications, 2010, 403, 363-367.	1.0	10

#	Article	IF	Citations
714	Restriction of Receptor Movement Alters Cellular Response: Physical Force Sensing by EphA2. Science, 2010, 327, 1380-1385.	6.0	301
715	Substrate, focal adhesions, and actin filaments: a mechanical unit with a weak spot for mechanosensitive proteins. Journal of Physics Condensed Matter, 2010, 22, 194109.	0.7	16
716	A review of tissue-engineered skin bioconstructs available for skin reconstruction. Journal of the Royal Society Interface, 2010, 7, 229-258.	1.5	567
717	Tuning Supramolecular Rigidity of Peptide Fibers through Molecular Structure. Journal of the American Chemical Society, 2010, 132, 6041-6046.	6.6	367
718	Matrix mechanics and receptor–ligand interactions in cell adhesion. Organic and Biomolecular Chemistry, 2010, 8, 299-304.	1.5	43
719	Methods to Measure the Strength of Cell Adhesion to Substrates. Journal of Adhesion Science and Technology, 2010, 24, 2027-2058.	1.4	62
720	Electrically induced contraction of C2C12 myotubes cultured on a porous membrane-based substrate with muscle tissue-like stiffness. Biomaterials, 2010, 31, 6981-6986.	5.7	60
721	MR-elastography reveals degradation of tissue integrity in multiple sclerosis. Neurolmage, 2010, 49, 2520-2525.	2.1	262
722	In Vivo Evaluation of 3-Dimensional Polycaprolactone Scaffolds for Cartilage Repair in Rabbits. American Journal of Sports Medicine, 2010, 38, 509-519.	1.9	91
723	Theoretical Concepts and Models of Cellular Mechanosensing. Methods in Cell Biology, 2010, 98, 143-175.	0.5	40
724	A Structurally Tunable DNA-Based Extracellular Matrix. Journal of the American Chemical Society, 2010, 132, 14727-14729.	6.6	51
725	Injectable solid hydrogel: mechanism of shear-thinning and immediate recovery of injectable \hat{l}^2 -hairpin peptide hydrogels. Soft Matter, 2010, 6, 5143.	1.2	298
726	Physical properties of hierarchically ordered self-assembled planar and spherical membranes. Soft Matter, 2010, 6, 1816.	1.2	53
727	Synthetic hydrogels for controlled stem cell differentiation. Soft Matter, 2010, 6, 67-81.	1.2	122
728	PREPARATION AND CHARACTERIZATION OF BIOACTIVE COMPOSITES OF PCL /BIOACTIVE FILLERS. International Journal of Modern Physics B, 2010, 24, 128-135.	1.0	2
729	Cell Migration Driven by Cooperative Substrate Deformation Patterns. Physical Review Letters, 2010, 104, 168104.	2.9	247
731	Multicomponent protein patterning of material surfaces. Journal of Materials Chemistry, 2010, 20, 7322.	6.7	55
732	A Novel Cylinder-Type Poly(L-Lactic Acid)–Collagen Hybrid Sponge for Cartilage Tissue Engineering. Tissue Engineering - Part C: Methods, 2010, 16, 329-338.	1.1	42

#	ARTICLE	IF	Citations
733	What makes cells move: requirements and obstacles for spontaneous cell motility. Molecular BioSystems, 2010, 6, 648.	2.9	51
734	Bacteria Pattern Spontaneously on Periodic Nanostructure Arrays. Nano Letters, 2010, 10, 3717-3721.	4.5	265
735	Integrated biomimetic carbon nanotube composites for in vivo systems. Nanoscale, 2010, 2, 2855.	2.8	35
736	Modulating Endochondral Ossification of Multipotent Stromal Cells for Bone Regeneration. Tissue Engineering - Part B: Reviews, 2010, 16, 385-395.	2.5	82
737	Mechanics of Molecular Bond Clusters between Elastic Media: Stochastic-Elastic Coupling in Cell-Matrix Adhesion. Biophysical Journal, 2010, 98, 728a.	0.2	0
738	Smart bioactive surfaces. Soft Matter, 2010, 6, 705-713.	1.2	72
739	Photopolymerizable nanoarray hydrogels deliver CNTF and promote differentiation of neural stem cells. Soft Matter, 2010, 6, 2208.	1.2	11
740	Cell/Material Interfaces: Influence of Surface Chemistry and Surface Topography on Cell Adhesion. Journal of Adhesion Science and Technology, 2010, 24, 831-852.	1.4	226
741	Quantification of the adhesion strength of fibroblast cells on ethylene glycol terminated self-assembled monolayers by a microfluidic shear force assay. Physical Chemistry Chemical Physics, 2010, 12, 4498.	1.3	59
742	Nucleation, growth, and hysteresis of surface creases on swelled polymer gels. Soft Matter, 2010, 6, 5807.	1.2	77
743	Polymer Gel Systems for Nerve Repair and Regeneration. ACS Symposium Series, 2010, , 43-63.	0.5	5
744	Polymer microlenses for quantifying cell sheet mechanics. Soft Matter, 2010, 6, 398-403.	1,2	8
745	How deeply cells feel: methods for thin gels. Journal of Physics Condensed Matter, 2010, 22, 194116.	0.7	264
746	Matrix density mediates polarization and lumen formation of endothelial sprouts in VEGF gradients. Lab on A Chip, 2010, 10, 3061.	3.1	124
748	Spatial organization acts on cell signaling: how physical force contributes to the development of cancer. Breast Cancer Research, 2010, 12, 308.	2.2	10
749	Mechanical Induction of Gene Expression in Connective Tissue Cells. Methods in Cell Biology, 2010, 98, 178-205.	0.5	46
750	Microtopographical Cues in 3D Attenuate Fibrotic Phenotype and Extracellular Matrix Deposition: Implications for Tissue Regeneration. Tissue Engineering - Part A, 2010, 16, 2519-2527.	1.6	48
751	Three-dimensional photopatterning of hydrogels using stereolithography for long-term cell encapsulation. Lab on A Chip, 2010, 10, 2062.	3.1	450

#	Article	IF	CITATIONS
752	Applications of Micro- and Nano-technology to Study Cell Adhesion to Material Surfaces. Journal of Adhesion Science and Technology, 2010, 24, 2127-2140.	1.4	5
753	Injectable enzymatically crosslinked hydrogel system with independent tuning of mechanical strength and gelation rate for drug delivery and tissue engineering. Journal of Materials Chemistry, 2010, 20, 5371.	6.7	86
754	Cell adhesion on nanopatterned fibronectin substrates. Soft Matter, 2010, 6, 5408.	1.2	28
755	Fabrication of micropatterns of nanoarrays on a polymeric gel surface. Nanoscale, 2010, 2, 122-127.	2.8	32
756	Mechanically tunable multiphoton fabricated protein hydrogels investigated using atomic force microscopy. Soft Matter, 2010, 6, 2842.	1.2	40
757	Effect of Matrix Elasticity on the Maintenance of the Chondrogenic Phenotype. Tissue Engineering - Part A, 2010, 16, 1281-1290.	1.6	109
758	Controlled two-photon photodegradation of PEG hydrogels to study and manipulate subcellular interactions on soft materials. Soft Matter, 2010, 6, 5100.	1.2	117
759	Tunable Mechanics of Peptide Nanofiber Gels. Langmuir, 2010, 26, 3641-3647.	1.6	197
760	Building off-the-shelf tissue-engineered composites. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 1839-1862.	1.6	29
761	Microfluidic contact printing: a versatile printing platform for patterning biomolecules on hydrogel substrates. Soft Matter, 2010, 6, 2238.	1.2	18
762	A nano-fibrous assembly of collagen–hyaluronic acid for controlling cell-adhesive properties. Soft Matter, 2010, 6, 4672.	1.2	28
763	Nanostructured interfaces with RGD arrays to control cell–matrix interaction. Soft Matter, 2010, 6, 3395.	1.2	49
764	Patterning the differentiation of C2C12 skeletal myoblasts. Integrative Biology (United Kingdom), 2011, 3, 897.	0.6	164
765	Measurement and analysis of traction force dynamics in response to vasoactive agonists. Integrative Biology (United Kingdom), 2011, 3, 663-674.	0.6	34
766	Integrin $\hat{l}\pm 3$ blockade enhances microtopographical down-regulation of $\hat{l}\pm$ -smooth muscle actin: role of microtopography in ECM regulation. Integrative Biology (United Kingdom), 2011, 3, 733.	0.6	11
767	The physics of tissue patterning and extracellular matrix organisation: how cells join forces. Soft Matter, 2011, 7, 9549.	1.2	65
768	Mechanics of cell spreading within 3D-micropatterned environments. Lab on A Chip, 2011, 11, 805-812.	3.1	76
769	Poly(vinylmethylsiloxane) Elastomer Networks as Functional Materials for Cell Adhesion and Migration Studies. Biomacromolecules, 2011, 12, 1265-1271.	2.6	17

#	ARTICLE	IF	CITATIONS
770	Tuneable mechanical properties in low molecular weight gels. Soft Matter, 2011, 7, 9721.	1.2	80
771	Elasticity of cardiac cells on the polymer substrates with different stiffness: an atomic force microscopy study. Physical Chemistry Chemical Physics, 2011, 13, 7540.	1.3	36
772	Assessing the spatial resolution of cellular rigidity sensing using a micropatterned hydrogel–photoresist composite. Lab on A Chip, 2011, 11, 3538.	3.1	17
773	Programmable microfluidic patterning of protein gradients on hydrogels. Chemical Communications, 2011, 47, 191-193.	2.2	40
774	Nonlinear viscoelasticity of adherent cells is controlled by cytoskeletal tension. Soft Matter, 2011, 7, 3127-3132.	1.2	124
775	Mechanisms and promotion of 3D neurite bridging between PHBV microspheres in a microsphere–hydrogel hybrid scaffold. Soft Matter, 2011, 7, 11372.	1.2	8
776	Polylysine-Modified PEG-Based Hydrogels to Enhance the Neuro–Electrode Interface. Journal of Biomaterials Science, Polymer Edition, 2011, 22, 611-625.	1.9	44
777	Magnetic micropillars as a tool to govern substrate deformations. Lab on A Chip, 2011, 11, 2630.	3.1	59
778	Polyelectrolyte multilayers generated in a microfluidic device with pH gradients direct adhesion and movement of cells. Lab on A Chip, 2011, 11, 3326.	3.1	38
779	How far cardiac cells can see each other mechanically. Soft Matter, 2011, 7, 6151.	1.2	67
780	Preparation of heat-induced artificial collagen gels based on collagen-mimetic dendrimers. Soft Matter, 2011, 7, 8991.	1.2	29
781	<i>In situ</i> force mapping of mammary gland transformation. Integrative Biology (United Kingdom), 2011, 3, 910-921.	0.6	242
782	Tuning PEG-DA hydrogel properties via solvent-induced phase separation (SIPS). Journal of Materials Chemistry, 2011, 21, 18776.	6.7	18
783	Scaling concepts in cell physics: paradigms for cell adhesion. Soft Matter, 2011, 7, 824-829.	1.2	9
784	Soft elastic surfaces as a platform for particle self-assembly. Soft Matter, 2011, 7, 8324.	1.2	16
785	(Micro)managing the mechanical microenvironment. Integrative Biology (United Kingdom), 2011, 3, 959.	0.6	79
786	Attachment and morphology of adipose-derived stromal cells and exposure of cell-binding domains of adsorbed proteins on various self-assembled monolayers. Soft Matter, 2011, 7, 3808.	1.2	9
787	Protein coverage on polymer nanolayers leading to mesenchymal stem cell patterning. Physical Chemistry Chemical Physics, 2011, 13, 17625.	1.3	12

#	Article	IF	CITATIONS
788	Viscoelastic response of contractile filament bundles. Physical Review E, 2011, 83, 051902.	0.8	25
789	Mechano-sensing and cell migration: a 3D model approach. Physical Biology, 2011, 8, 066008.	0.8	59
790	Artificial Niche Combining Elastomeric Substrate and Platelets Guides Vascular Differentiation of Bone Marrow Mononuclear Cells. Tissue Engineering - Part A, 2011, 17, 1979-1992.	1.6	20
791	Cell Surface Engineering with Polyelectrolyte Multilayer Thin Films. Journal of the American Chemical Society, 2011, 133, 7054-7064.	6.6	178
792	"Soft Si― Effective Stiffness of Supported Crystalline Nanomembranes. ACS Nano, 2011, 5, 5400-5407.	7.3	18
793	Indentation Versus Tensile Measurements of Young's Modulus for Soft Biological Tissues. Tissue Engineering - Part B: Reviews, 2011, 17, 155-164.	2.5	533
794	Lab-in-a-Tube: Detection of Individual Mouse Cells for Analysis in Flexible Split-Wall Microtube Resonator Sensors. Nano Letters, 2011, 11, 4037-4042.	4.5	106
795	Quantitative Evaluation of Mechanosensing of Cells on Dynamically Tunable Hydrogels. Journal of the American Chemical Society, 2011, 133, 1367-1374.	6.6	164
796	Induction of Malaria Parasite Migration by Synthetically Tunable Microenvironments. Nano Letters, 2011, 11, 4468-4474.	4.5	30
797	Design, fabrication and characterization of PCL electrospun scaffoldsâ€"a review. Journal of Materials Chemistry, 2011, 21, 9419.	6.7	499
798	Robust Method for High-Throughput Surface Patterning of Deformable Substrates. Langmuir, 2011, 27, 7349-7352.	1.6	20
799	Mechanics and electrostatics of the interactions between osteoblasts and titanium surface. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 469-482.	0.9	70
800	Fabrication of 2D protein microstructures and 3D polymer–protein hybrid microstructures by two-photon polymerization. Biofabrication, 2011, 3, 025003.	3.7	120
801	Quantification of the forces driving self-assembly of three-dimensional microtissues. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6993-6998.	3.3	78
802	Tunable Silk: Using Microfluidics to Fabricate Silk Fibers with Controllable Properties. Biomacromolecules, 2011, 12, 1504-1511.	2.6	154
803	Bond Tension in Tethered Macromolecules. Macromolecules, 2011, 44, 4520-4529.	2.2	46
804	Swelling Equilibrium of a Binary Polymer Gel. Macromolecules, 2011, 44, 981-986.	2.2	16
805	Colloidal Force Spectroscopy and Cell Biological Investigations on Biomimetic Polyelectrolyte Multilayer Coatings Composed of Chondroitin Sulfate and Heparin. Biomacromolecules, 2011, 12, 1987-1997.	2.6	24

#	ARTICLE	IF	CITATIONS
806	Imaging Techniques for Measuring the Materials Properties of Cells. Cold Spring Harbor Protocols, 2011, 2011, pdb.top107.	0.2	1
807	Sensing and Modulation of Invadopodia across a Wide Range of Rigidities. Biophysical Journal, 2011, 100, 573-582.	0.2	108
808	Cell Shape and Substrate Rigidity Both Regulate Cell Stiffness. Biophysical Journal, 2011, 100, L25-L27.	0.2	364
809	Spatiotemporal Constraints on the Force-Dependent Growth of Focal Adhesions. Biophysical Journal, 2011, 100, 2883-2893.	0.2	177
810	Rigidity Sensing Explained by Active Matter Theory. Biophysical Journal, 2011, 101, L33-L35.	0.2	42
811	Investigating Circular Dorsal Ruffles through Varying Substrate Stiffness and Mathematical Modeling. Biophysical Journal, 2011, 101, 2122-2130.	0.2	31
812	Mechanosensing Can Result from Adhesion Molecule Dynamics. Biophysical Journal, 2011, 101, L53-L55.	0.2	4
813	Identification of ETFB as a candidate protein that participates in the mechanoregulation of fibroblast cell number in collagen gel culture. Journal of Dermatological Science, 2011, 64, 119-126.	1.0	6
814	Hydrogels in Tissue Engineering. , 2011, , 9-46.		8
816	Fibroblast polarization is a matrix-rigidity-dependent process controlled by focal adhesion mechanosensing. Nature Cell Biology, 2011, 13, 1457-1465.	4.6	473
817	Whole-cell biochips for bio-sensing: integration of live cells and inanimate surfaces. Critical Reviews in Biotechnology, 2011, 31, 337-353.	5.1	45
818	Aspect Ratio Determines the Quantity of Mesoporous Silica Nanoparticle Uptake by a Small GTPase-Dependent Macropinocytosis Mechanism. ACS Nano, 2011, 5, 4434-4447.	7.3	330
819	FLIM-FRET imaging in vivo reveals 3D-environment spatially regulates RhoGTPase activity during cancer cell invasion. Small GTPases, 2011, 2, 239-244.	0.7	25
820	Isolation of Focal Adhesion Proteins for Biochemical and Proteomic Analysis. Methods in Molecular Biology, 2011, 757, 297-323.	0.4	56
821	Electromechanical Basis for the Interaction Between Osteoblasts and Negatively Charged Titanium Surface. Behavior Research Methods, 2011, 13, 199-221.	2.3	2
822	Actin cytoskeleton in myofibroblast differentiation: Ultrastructure defining form and driving function. Translational Research, 2011, 158, 181-196.	2.2	138
823	How Do Control-Based Approaches Enter into Biology?. Annual Review of Biomedical Engineering, 2011, 13, 369-396.	5.7	48
824	Nanoengineering the Heart: Conductive Scaffolds Enhance Connexin 43 Expression. Nano Letters, 2011, 11, 3643-3648.	4.5	264

#	Article	IF	CITATIONS
825	Model for in vivo progression of tumors based on co-evolving cell population and vasculature. Scientific Reports, 2011 , 1 , 31 .	1.6	17
826	Photoresponsive "Smart Template―via Host–Guest Interaction for Reversible Cell Adhesion. Macromolecules, 2011, 44, 7499-7502.	2.2	74
827	Progenitor Cell Therapy for Neurological Injury. , 2011, , .		0
828	Calcium lons to Cross-Link Supramolecular Nanofibers to Tune the Elasticity of Hydrogels over Orders of Magnitude. Langmuir, 2011, 27, 14425-14431.	1.6	56
829	Electrochemically Addressed Cross-Links in Polyelectrolyte Multilayers: Cyclic Duravoltammetry. Langmuir, 2011, 27, 9418-9424.	1.6	20
830	Correlating the Compliance and Permeability of Photo-Cross-Linked Polyelectrolyte Multilayers. Langmuir, 2011, 27, 4756-4763.	1.6	48
831	Mechanobiology of Cell-Cell and Cell-Matrix Interactions. , 2011, , .		19
832	Tools for Studying Biomechanical Interactions in Cells. , 2011, , 233-265.		5
833	Evaluation of Substrata Effect on Cell Adhesion Properties Using Freestanding Poly(l-lactic acid) Nanosheets. Langmuir, 2011, 27, 13173-13182.	1.6	53
834	Stem Cells & Degenerative Medicine. Pancreatic Islet Biology, 2011, , .	0.1	6
835	Role of mechanical factors in fate decisions of stem cells. Regenerative Medicine, 2011, 6, 229-240.	0.8	155
836	Effect of Block Copolymer Architecture on the Thermally Induced Swelling of Micelle-Containing Multilayer Thin Films. Macromolecules, 2011, 44, 7767-7774.	2.2	23
840	Engineered microenvironments for self-renewal and musculoskeletal differentiation of stem cells. Regenerative Medicine, 2011, 6, 505-524.	0.8	31
841	Dynamic molecular processes mediate cellular mechanotransduction. Nature, 2011, 475, 316-323.	13.7	839
842	Cell–Matrix Interactions in the Pathobiology of Calcific Aortic Valve Disease. Circulation Research, 2011, 108, 1510-1524.	2.0	248
843	Self-Assembling Biomaterials. , 2011, , 77-94.		2
844	Atomic Force Microscopy in Biomedical Research. Methods in Molecular Biology, 2011, , .	0.4	15
845	Fabrication and optimization of alginate hydrogel constructs for use in 3D neural cell culture. Biomedical Materials (Bristol), 2011, 6, 015002.	1.7	126

#	Article	IF	CITATIONS
846	Control of bacterial biofilm growth on surfaces by nanostructural mechanics and geometry. Nanotechnology, 2011, 22, 494007.	1.3	133
847	Cellular and Biomolecular Mechanics and Mechanobiology. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , .	0.7	8
848	Myocardial Tissue Engineering. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011 , , .	0.7	2
849	Materials as Artificial Stem Cell Microenvironments. , 2011, , 155-167.		0
850	Bacterial Retention on Superhydrophobic Titanium Surfaces Fabricated by Femtosecond Laser Ablation. Langmuir, 2011, 27, 3012-3019.	1.6	366
851	Engineered approaches to the stem cell microenvironment for cardiac tissue regeneration. Lab on A Chip, 2011, 11, 3031.	3.1	73
852	Electrical Engineering and Applied Computing. Lecture Notes in Electrical Engineering, $2011, \ldots$	0.3	10
853	Protein-Engineered Biomaterials: Synthesis and Characterization. , 2011, , 35-52.		1
854	Cancer Invasion and the Microenvironment: Plasticity and Reciprocity. Cell, 2011, 147, 992-1009.	13.5	1,669
855	Mechanical consequences of cellular force generation. Current Opinion in Solid State and Materials Science, 2011, 15, 169-176.	5.6	19
856	Atomic force microscopy and its contribution to understanding the development of the nervous system. Current Opinion in Genetics and Development, 2011, 21, 530-537.	1.5	52
857	Protein-engineered biomaterials: Nanoscale mimics of the extracellular matrix. Biochimica Et Biophysica Acta - General Subjects, 2011, 1810, 339-349.	1.1	89
858	Physical properties of mesenchymal stem cells are coordinated by the perinuclear actin cap. Biochemical and Biophysical Research Communications, 2011, 409, 1-6.	1.0	27
859	Effects of micropatterned curvature on the motility and mechanical properties of airway smooth muscle cells. Biochemical and Biophysical Research Communications, 2011, 415, 591-596.	1.0	14
860	Rapid Prototyping of Arrayed Microfluidic Systems in Polystyrene for Cell-Based Assays. Analytical Chemistry, 2011, 83, 1408-1417.	3.2	148
861	Growth factor delivery-based tissue engineering: general approaches and a review of recent developments. Journal of the Royal Society Interface, 2011, 8, 153-170.	1.5	1,150
862	Direct Comparisons of the Morphology, Migration, Cell Adhesions, and Actin Cytoskeleton of Fibroblasts in Four Different Three-Dimensional Extracellular Matrices. Tissue Engineering - Part A, 2011, 17, 713-724.	1.6	288
863	Measuring Cell Adhesion Forces: Theory and Principles. Methods in Molecular Biology, 2011, 736, 355-377.	0.4	20

#	Article	IF	CITATIONS
864	Atomic Force Microscopy in Mechanobiology: Measuring Microelastic Heterogeneity of Living Cells. Methods in Molecular Biology, 2011, 736, 303-329.	0.4	50
865	Engineering a Collagen Matrix that Replicates the Biological Properties of Native Extracellular Matrix. Journal of Biomaterials Science, Polymer Edition, 2011, 22, 1963-1982.	1.9	8
866	Cytotoxicity of Free versus Multilayered Polyelectrolytes. Biomacromolecules, 2011, 12, 4063-4070.	2.6	42
867	Cell-matrix adhesions in 3D. Matrix Biology, 2011, 30, 363-368.	1.5	200
868	Mechanical strain in actin networks regulates FilGAP and integrin binding to filamin A. Nature, 2011, 478, 260-263.	13.7	309
869	Stem Cell Differentiation Depending on Different Surfaces. Advances in Biochemical Engineering/Biotechnology, 2011, 126, 263-283.	0.6	17
870	Patterned Hydrogel Substrates for Cell Culture with Electrohydrodynamic Jet Printing. Macromolecular Bioscience, 2011, 11, 1164-1168.	2.1	74
871	Integrins: versatile receptors controlling melanocyte adhesion, migration and proliferation. Pigment Cell and Melanoma Research, 2011, 24, 282-294.	1.5	74
872	Bridging the Scales to Explore Cellular Adaptation and Remodeling. BioNanoScience, 2011, 1, 110-115.	1.5	7
873	The Mechanics of Blood Vessel Growth. , 0, , .		3
874	Adipose tissue as a stem cell source for musculoskeletal regeneration. Frontiers in Bioscience - Scholar, 2011, S3, 69-81.	0.8	47
875	Cell-Biomaterial Interactions Reproducing a Niche. , 0, , .		1
876	Cell Adhesion and Spreading on an Intrinsically Anti-Adhesive PEG Biomaterial. , 0, , .		3
877	Microstructured thin Peptide-Polymer Films that Spatially Control the Surface-Attachment of Living Cells. International Journal of Artificial Organs, 2011, 34, 210-214.	0.7	2
878	Control of Mammalian Cell Behaviour Through Mimicry of the Extracellular Matrix Environment. , 2011, , .		1
879	Bioartificial Stem Cell Niches: Engineering a Regenerative Microenvironment., 2011,, 245-256.		2
880	Cell-Biomaterial Interaction: Strategies To Mimic The Extracellular Matrix. , 2011, , .		4
881	Elasticity-Dependent Modulation of TGF- \hat{l}^2 Responses in Human Trabecular Meshwork Cells. , 2011, 52, 2889.		68

#	Article	IF	CITATIONS
882	Emerging Trends in Tissue Engineering. , 2011, , 251-263.		2
883	Substrate stiffness regulates extracellular matrix deposition by alveolar epithelial cells. Research and Reports in Biology, 2011, 2011, 1.	0.2	38
884	Cartilage Tissue Engineering: the Application of Nanomaterials and Stem Cell Technology. , $2011, , .$		6
885	Extracellular Matrix Elasticity Modulates TGF- $\hat{l}^2\hat{a}$ ("Induced p38 Activation and Myofibroblast Transdifferentiation in Human Tenon Fibroblasts. , 2011, 52, 9149.		31
886	Micro- and Nanoengineering Approaches to Control Stem Cell-Biomaterial Interactions. Journal of Functional Biomaterials, 2011, 2, 88-106.	1.8	47
887	Elastic Modulus Determination of Normal and Glaucomatous Human Trabecular Meshwork. , 2011, 52, 2147.		314
888	Cyclic Stress at mHz Frequencies Aligns Fibroblasts in Direction of Zero Strain. PLoS ONE, 2011, 6, e28963.	1.1	130
889	Robust Organizational Principles of Protrusive Biopolymer Networks in Migrating Living Cells. PLoS ONE, 2011, 6, e14471.	1.1	15
890	A Multiwell Platform for Studying Stiffness-Dependent Cell Biology. PLoS ONE, 2011, 6, e19929.	1.1	136
891	Microfabricated Physical Spatial Gradients for Investigating Cell Migration and Invasion Dynamics. PLoS ONE, 2011, 6, e20825.	1.1	71
892	Combining Dynamic Stretch and Tunable Stiffness to Probe Cell Mechanobiology In Vitro. PLoS ONE, 2011, 6, e23272.	1.1	95
893	Lung Parenchymal Mechanics. , 2011, 1, 1317-1351.		139
894	Artificial Hematopoietic Stem Cell Niche: Bioscaffolds to Microfluidics to Mathematical Simulations. Current Topics in Medicinal Chemistry, 2011, 11, 1599-1605.	1.0	4
895	Applications of Micro- and Nano-technology to Study Cell Adhesion to Material Surfaces. , 2011, , 141-154.		0
896	Substrate rigidity deforms and polarizes active gels. Europhysics Letters, 2011, 96, 28003.	0.7	41
897	Nuclear transport of the serum response factor coactivator MRTFâ€A is downregulated at tensional homeostasis. EMBO Reports, 2011, 12, 963-970.	2.0	45
898	Bone Marrow Mesenchymal Stem Cells in a Three-Dimensional Gelatin Sponge Scaffold Attenuate Inflammation, Promote Angiogenesis, and Reduce Cavity Formation in Experimental Spinal Cord Injury. Cell Transplantation, 2011, 20, 1881-1899.	1.2	140
899	Is arterial wall-strain stiffening an additional process responsible for atherosclerosis in coronary bifurcations?: an in vivo study based on dynamic CT and MRI. American Journal of Physiology - Heart and Circulatory Physiology, 2011, 301, H1097-H1106.	1.5	42

#	Article	IF	CITATIONS
900	Micro-Mechanical Characterization of Lung Tissue Using Atomic Force Microscopy. Journal of Visualized Experiments, $2011, , .$	0.2	85
901	ç°èfžãŒå¤éf¨ā«åŠã¾ã¸M力ã,'三次å…fã§å•è¦−åŒ−. Nature Digest, 2011, 8, 30-31.	0.0	0
902	Fibrin acts as biomimetic niche inducing both differentiation and stem cell marker expression of early human endothelial progenitor cells. Cell Proliferation, 2011, 44, 33-48.	2.4	86
903	Nanotechnological strategies for engineering complex tissues. Nature Nanotechnology, 2011, 6, 13-22.	15.6	1,226
904	Assaying stem cell mechanobiology on microfabricated elastomeric substrates with geometrically modulated rigidity. Nature Protocols, 2011, 6, 187-213.	5 . 5	236
905	Using patterned supported lipid membranes to investigate the role of receptor organization in intercellular signaling. Nature Protocols, 2011, 6, 523-539.	5.5	86
906	Push it, pull it. Nature, 2011, 470, 340-341.	13.7	38
907	Infarcted myocardiumâ€like stiffness contributes to endothelial progenitor lineage commitment of bone marrow mononuclear cells. Journal of Cellular and Molecular Medicine, 2011, 15, 2245-2261.	1.6	28
908	Productive tension: force-sensing and homeostasis of cell–cell junctions. Trends in Cell Biology, 2011, 21, 499-505.	3.6	131
909	Extracellular matrix determinants of proteolytic and non-proteolytic cell migration. Trends in Cell Biology, 2011, 21, 736-744.	3.6	293
910	Degradation of polysaccharide hydrogels seeded with bone marrow stromal cells. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1157-1166.	1.5	25
911	Engineering alginate for intervertebral disc repair. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1196-1205.	1.5	58
912	Modulation of the functions of osteoblast-like cells on poly(allylamine hydrochloride) and poly(acrylic acid) multilayer films. Colloids and Surfaces B: Biointerfaces, 2011, 88, 297-303.	2.5	18
913	Biomarkers for simplifying HTS 3D cell culture platforms for drug discovery: the case for cytokines. Drug Discovery Today, 2011, 16, 293-297.	3.2	40
914	Upregulation of paxillin and focal adhesion signaling follows Dystroglycan Complex deletions and promotes a hypertensive state of differentiation. European Journal of Cell Biology, 2011, 90, 249-260.	1.6	24
915	Specificities of \hat{l}^21 integrin signaling in the control of cell adhesion and adhesive strength. European Journal of Cell Biology, 2011, 90, 261-269.	1.6	14
916	Expression of keratinocyte biomarkers is governed by environmental biomechanics. European Journal of Cell Biology, 2011, 90, 1029-1040.	1.6	24
917	Hydrogel-based biomimetic environment for inÂvitro modulation of branching morphogenesis. Biomaterials, 2011, 32, 6754-6763.	5.7	61

#	Article	IF	Citations
918	MCF10A and MDA-MB-231 human breast basal epithelial cell co-culture in silicon micro-arrays. Biomaterials, 2011, 32, 7625-7632.	5 . 7	47
919	Regulation of hepatic stem/progenitor phenotype by microenvironment stiffness in hydrogel models of the human liver stem cell niche. Biomaterials, 2011, 32, 7389-7402.	5.7	94
920	Nanostructuring PEG-fibrinogen hydrogels to control cellular morphogenesis. Biomaterials, 2011, 32, 7839-7846.	5.7	38
921	Engineering vessel-like networks within multicellular fibrin-based constructs. Biomaterials, 2011, 32, 7856-7869.	5.7	177
922	Effect of cell anisotropy on differentiation of stem cells on micropatterned surfaces through the controlled single cell adhesion. Biomaterials, 2011, 32, 8048-8057.	5.7	264
923	Human cardiosphere-seeded gelatin and collagen scaffolds as cardiogenic engineered bioconstructs. Biomaterials, 2011, 32, 9271-9281.	5.7	59
924	MicroRNAs in the regulation of interfacial behaviors of MSCs cultured on microgrooved surface pattern. Biomaterials, 2011, 32, 9207-9217.	5 . 7	53
925	The effect of substrate microtopography on focal adhesion maturation and actin organization via the RhoA/ROCK pathway. Biomaterials, 2011, 32, 9568-9575.	5.7	162
926	Synergistic regulation of cell function by matrix rigidity and adhesive pattern. Biomaterials, 2011, 32, 9584-9593.	5 . 7	75
927	The influence of scaffold elasticity on germ layer specification of human embryonic stem cells. Biomaterials, 2011, 32, 9612-9621.	5.7	130
928	Actomyosin-Mediated Cellular Tension Drives Increased Tissue Stiffness and \hat{I}^2 -Catenin Activation to Induce Epidermal Hyperplasia and Tumor Growth. Cancer Cell, 2011, 19, 776-791.	7.7	477
929	Dynamics and regulation of contractile actin–myosin networks in morphogenesis. Current Opinion in Cell Biology, 2011, 23, 30-38.	2.6	121
930	Graphene for Controlled and Accelerated Osteogenic Differentiation of Human Mesenchymal Stem Cells. ACS Nano, 2011, 5, 4670-4678.	7.3	819
931	Artificial niche microarrays for probing single stem cell fate in high throughput. Nature Methods, 2011, 8, 949-955.	9.0	376
932	Polyelectrolyte Multilayers in Tissue Engineering. Tissue Engineering - Part B: Reviews, 2011, 17, 101-113.	2.5	98
933	Exploring and exploiting chemistry at the cell surface. Nature Chemistry, 2011, 3, 582-589.	6.6	282
934	Comparative study of bovine, porcine and avian collagens for the production of a tissue engineered dermis. Acta Biomaterialia, 2011, 7, 3757-3765.	4.1	82
935	Synthesis, characterization and biocompatibility of poly(2-ethyl-2-oxazoline) hydrogels. Acta Biomaterialia, 2011, 7, 4149-4159.	4.1	48

#	Article	IF	CITATIONS
936	Hydrolyzed eggshell membrane immobilized on phosphorylcholine polymer supplies extracellular matrix environment for human dermal fibroblasts. Cell and Tissue Research, 2011, 345, 177-190.	1.5	43
937	Gelation behavior of polysaccharide-based interpenetrating polymer network (IPN) hydrogels. Rheologica Acta, 2011, 50, 39-52.	1.1	17
938	Synthetic hydrogels as scaffolds for manipulating endothelium cell behaviors. Chinese Journal of Polymer Science (English Edition), 2011, 29, 23-41.	2.0	15
939	A Novel Method for Coral Explant Culture and Micropropagation. Marine Biotechnology, 2011, 13, 423-432.	1.1	31
940	Growth-induced buckling of an epithelial layer. Biomechanics and Modeling in Mechanobiology, 2011, 10, 883-900.	1.4	33
941	Mechanical stimuli differentially control stem cell behavior: morphology, proliferation, and differentiation. Biomechanics and Modeling in Mechanobiology, 2011, 10, 939-953.	1.4	191
942	Bioreactor System Using Noninvasive Imaging and Mechanical Stretch for Biomaterial Screening. Annals of Biomedical Engineering, 2011, 39, 1390-1402.	1.3	26
943	Biomechanical Forces Shape the Tumor Microenvironment. Annals of Biomedical Engineering, 2011, 39, 1379-1389.	1.3	144
944	How Matrix Properties Control the Self-Assembly and Maintenance of Tissues. Annals of Biomedical Engineering, 2011, 39, 1849-1856.	1.3	39
947	Modulus-driven differentiation of marrow stromal cells in 3D scaffolds that is independent of myosin-based cytoskeletal tension. Biomaterials, 2011, 32, 2256-2264.	5.7	113
948	The effect of matrix stiffness on the differentiation of mesenchymal stem cells in response to TGF- \hat{l}^2 . Biomaterials, 2011, 32, 3921-3930.	5.7	641
949	The Biomechanical Properties of 3d Extracellular Matrices and Embedded Cells Regulate the Invasiveness of Cancer Cells. Cell Biochemistry and Biophysics, 2011, 61, 217-236.	0.9	30
950	Effect of Surface Patterning and Presence of Collagen I on the Phenotypic Changes of Embryonic Stem Cell Derived Cardiomyocytes. Cellular and Molecular Bioengineering, 2011, 4, 56-66.	1.0	3
951	An Integrative Review of Mechanotransduction in Endothelial, Epithelial (Renal) and Dendritic Cells (Osteocytes). Cellular and Molecular Bioengineering, 2011, 4, 510-537.	1.0	58
952	Human Corneal Keratocyte Response to Micro- and Nano-Gratings on Chitosan and PDMS. Cellular and Molecular Bioengineering, 2011, 4, 399-410.	1.0	27
953	Contribution of Bone Tissue Modulus to Breast Cancer Metastasis to Bone. Cancer Microenvironment, 2011, 4, 247-259.	3.1	20
954	Filamin structure, function and mechanics: are altered filamin-mediated force responses associated with human disease?. Biophysical Reviews, 2011, 3, 15-23.	1.5	16
955	Extracellular matrix bioengineering and systems biology approaches in liver disease. Systems and Synthetic Biology, 2011, 5, 11-20.	1.0	8

#	Article	IF	CITATIONS
956	Cellular anchorage sensing and anoikis. Clinical Oncology and Cancer Research, 2011, 8, 16-20.	0.1	0
957	Functionalization of polymer multilayer thin films for novel biomedical applications. Korean Journal of Chemical Engineering, 2011, 28, 1149-1160.	1.2	22
958	Engineering cell attachments to scaffolds in cartilage tissue engineering. Jom, 2011, 63, 74-82.	0.9	41
959	Bone Structural Components Regulating Sites of Tumor Metastasis. Current Osteoporosis Reports, 2011, 9, 89-95.	1.5	20
960	Cyclic stretch increases splicing noise rate in cultured human fibroblasts. BMC Research Notes, 2011, 4, 470.	0.6	2
961	Mechanically active scaffolds from radioâ€opaque shapeâ€memory polymerâ€based composites. Polymers for Advanced Technologies, 2011, 22, 180-189.	1.6	62
962	Soft poly(<i>n</i> êbutyl acrylate) networks with tailored mechanical properties designed as substrates for <i>in vitro</i> models. Polymers for Advanced Technologies, 2011, 22, 126-132.	1.6	27
963	A proteomic approach to analysing spheroid formation of two human thyroid cell lines cultured on a random positioning machine. Proteomics, 2011, 11, 2095-2104.	1.3	61
964	Mechanisms of structure generation during plastic compression of nanofibrillar collagen hydrogel scaffolds: towards engineering of collagen. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 505-519.	1.3	31
965	Polyelectrolyte Multilayer Nanofilms Used as Thin Materials for Cell Mechanoâ€Sensitivity Studies. Macromolecular Bioscience, 2011, 11, 77-89.	2.1	42
966	Design of Polyphosphazene Hydrogels with Improved Structural Properties by Use of Starâ€Shaped Multithiol Crosslinkers. Macromolecular Bioscience, 2011, 11, 689-699.	2.1	15
967	Intracellular tension in periosteum/perichondrium cells regulates long bone growth. Journal of Orthopaedic Research, 2011, 29, 84-91.	1.2	13
968	Shear flow-induced formation of tubular cell protrusions in multiple myeloma cells. Journal of Cellular Physiology, 2011, 226, 3197-3207.	2.0	5
969	Molding Micropatterns of Elasticity on PEGâ€Based Hydrogels to Control Cell Adhesion and Migration. Advanced Engineering Materials, 2011, 13, B395.	1.6	18
970	Nanomechanical Properties of Oligo(ethylene glycol methacrylate) Polymer Brushâ€Based Biointerfaces. Advanced Engineering Materials, 2011, 13, B369.	1.6	22
971	Nanobiomaterials: State of the Art and Future Trends. Advanced Engineering Materials, 2011, 13, B197.	1.6	59
972	Twoâ€Component Polymer Scaffolds for Controlled Threeâ€Dimensional Cell Culture. Advanced Materials, 2011, 23, 1341-1345.	11.1	286
973	Block Copolymer Photonic Gel for Mechanochromic Sensing. Advanced Materials, 2011, 23, 4702-4706.	11.1	100

#	ARTICLE	IF	Citations
974	Regulation of axonal outgrowth and pathfinding by integrin–ecm interactions. Developmental Neurobiology, 2011, 71, 901-923.	1.5	211
975	Understanding osteoblast responses to stiff nanotopographies through experiments and computational simulations. Journal of Biomedical Materials Research - Part A, 2011, 97A, 375-382.	2.1	26
976	Compressive stress–strain response of covalently crosslinked oxidizedâ€alginate/Nâ€succinylâ€chitosan hydrogels. Journal of Biomedical Materials Research - Part A, 2011, 99A, 367-375.	2.1	21
977	Stiffness of photocrosslinked RGDâ€alginate gels regulates adipose progenitor cell behavior. Biotechnology and Bioengineering, 2011, 108, 1683-1692.	1.7	91
978	Acceleration of neuronal precursors differentiation induced by substrate nanotopography. Biotechnology and Bioengineering, 2011, 108, 2736-2746.	1.7	58
979	Design concepts and strategies for tissue engineering scaffolds. Biotechnology and Applied Biochemistry, 2011, 58, 423-438.	1.4	74
980	Specific adhesion of vesicles to compliant bio-adhesive substrates. International Journal of Solids and Structures, 2011, 48, 388-395.	1.3	0
981	The effect of surface energy, adsorbed RGD peptides and fibronectin on the attachment and spreading of cells on multiwalled carbon nanotube papers. Carbon, 2011, 49, 2318-2333.	5.4	13
982	Hyaluronic acid-g-poly(HEMA) copolymer with potential implications for lung tissue engineering. Carbohydrate Polymers, 2011, 85, 439-445.	5.1	20
983	Electroactive SWNT/PEGDA hybrid hydrogel coating for bio-electrode interface. Colloids and Surfaces B: Biointerfaces, 2011, 87, 273-279.	2.5	45
984	Ingrowth of human mesenchymal stem cells into porous silk particle reinforced silk composite scaffolds: An in vitro study. Acta Biomaterialia, 2011, 7, 144-151.	4.1	112
985	Microelastic properties of lung cell-derived extracellular matrix. Acta Biomaterialia, 2011, 7, 96-105.	4.1	57
986	Regulation of electrospun scaffold stiffness via coaxial core diameter. Acta Biomaterialia, 2011, 7, 1133-1139.	4.1	41
987	Exposed hydroxyapatite particles on the surface of photo-crosslinked nanocomposites for promoting MC3T3 cell proliferation and differentiation. Acta Biomaterialia, 2011, 7, 2185-2199.	4.1	53
988	Organ-derived coatings on electrospun nanofibers as ex vivo microenvironments. Biomaterials, 2011, 32, 538-546.	5.7	22
989	Critical areas of cell adhesion on micropatterned surfaces. Biomaterials, 2011, 32, 3931-3938.	5.7	99
990	The effect of biophysical attributes of the ocular trabecular meshwork associated with glaucoma on the cell response to therapeutic agents. Biomaterials, 2011, 32, 2417-2423.	5.7	73
991	Advantages of RGD peptides for directing cell association with biomaterials. Biomaterials, 2011, 32, 4205-4210.	5.7	555

#	Article	IF	CITATIONS
992	The role of substratum compliance of hydrogels on vascular endothelial cell behavior. Biomaterials, 2011, 32, 5056-5064.	5 . 7	52
993	The influence of substrate creep on mesenchymal stem cell behaviour and phenotype. Biomaterials, 2011, 32, 5979-5993.	5.7	344
994	Functional fibrils derived from the peptide TTR1-cycloRGDfK that target cell adhesion and spreading. Biomaterials, 2011, 32, 6099-6110.	5.7	29
995	Network connectivity, mechanical properties and cell adhesion for hyaluronic acid/PEG hydrogels. Biomaterials, 2011, 32, 6456-6470.	5.7	106
996	Shaky foundations of hierarchical biological materials. Nano Today, 2011, 6, 332-338.	6.2	9
997	Multiscale modeling and simulation of soft adhesion and contact of stem cells. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 180-189.	1.5	43
998	Poroviscoelastic characterization of particle-reinforced gelatin gels using indentation and homogenization. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 610-617.	1.5	38
999	Investigation of cell culture in microfluidic devices with different bi-layer substrates. Microelectronic Engineering, 2011, 88, 1693-1697.	1.1	4
1000	A model for cell motility on soft bio-adhesive substrates. Journal of Biomechanics, 2011, 44, 755-758.	0.9	7
1001	Designing polyHEMA substrates that mimic the viscoelastic response of soft tissue. Journal of Biomechanics, 2011, 44, 1491-1498.	0.9	8
1002	Influence of substrate stiffness on cell–substrate interfacial adhesion and spreading: A mechano-chemical coupling model. Journal of Colloid and Interface Science, 2011, 355, 503-508.	5.0	29
1003	Controlling the degradation rate of thermoresponsive photo-cross-linked poly(organophosphazene) hydrogels with compositions of depsipeptide and PEG chain lengths. Polymer Degradation and Stability, 2011, 96, 1261-1270.	2.7	11
1004	Methacryl-polyhedral oligomeric silsesquioxane as a crosslinker for expediting photo-crosslinking of Poly(propylene fumarate): Material properties and bone cell behavior. Polymer, 2011, 52, 2827-2839.	1.8	29
1005	Hepatic stellate cells require a stiff environment for myofibroblastic differentiation. American Journal of Physiology - Renal Physiology, 2011, 301, G110-G118.	1.6	276
1006	Acto-myosin based response to stiffness and rigidity sensing. Cell Adhesion and Migration, 2011, 5, 16-19.	1.1	45
1007	The role of nanofibrous structure in osteogenic differentiation of human mesenchymal stem cells with serial passage. Nanomedicine, 2011, 6, 961-974.	1.7	17
1008	Nematic order by elastic interactions and cellular rigidity sensing. Europhysics Letters, 2011, 93, 28007.	0.7	10
1009	Aligned, isotropic and patterned carbon nanotube substrates that control the growth and alignment of Chinese hamster ovary cells. Nanotechnology, 2011, 22, 205102.	1.3	26

#	Article	IF	Citations
1010	The emergence of sarcomeric, graded-polarity and spindle-like patterns in bundles of short cytoskeletal polymers and two opposite molecular motors. Journal of Physics Condensed Matter, 2011, 23, 374102.	0.7	10
1011	Mechanical regulation of collective cell behavior via microtopographic substrates., 2011,,.		1
1012	Modelling and simulation of substrate elasticity sensing in stem cells. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 447-458.	0.9	16
1013	Interactions between Colloids Induced by a Soft Cross-Linked Polymer Substrate. Physical Review Letters, 2011, 107, 136101.	2.9	10
1014	Cell-ECM traction force modulates endogenous tension at cell–cell contacts. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4708-4713.	3.3	448
1015	Substratum Compliance Regulates Human Trabecular Meshwork Cell Behaviors and Response to Latrunculin B., 2011, 52, 9298.		29
1016	Probing mechanical principles of focal contacts in cell–matrix adhesion with a coupled stochastic–elastic modelling framework. Journal of the Royal Society Interface, 2011, 8, 1217-1232.	1.5	85
1017	A strain-cue hypothesis for biological network formation. Journal of the Royal Society Interface, 2011, 8, 377-394.	1.5	10
1018	Outgrowth of Drug-Resistant Carcinomas Expressing Markers of Tumor Aggression after Long-term TβRÎ/II Kinase Inhibition with LY2109761. Cancer Research, 2011, 71, 2339-2349.	0.4	74
1019	Molecular Architecture and Function of Matrix Adhesions. Cold Spring Harbor Perspectives in Biology, 2011, 3, a005033-a005033.	2.3	441
1020	Pushing Back: Wound Mechanotransduction in Repair and Regeneration. Journal of Investigative Dermatology, 2011, 131, 2186-2196.	0.3	175
1021	Microtubule depolymerization induces traction force increase through two distinct pathways. Journal of Cell Science, 2011, 124, 4233-4240.	1.2	65
1022	Intelligent induction of active biosystem responses at interfaces. International Journal of Materials Research, 2011, 102, 796-808.	0.1	7
1023	Scaffolding for Three-Dimensional Embryonic Vasculogenesis. Biological and Medical Physics Series, 2011, , 49-67.	0.3	1
1024	Interdependency of cell adhesion, force generation and extracellular proteolysis in matrix remodeling. Journal of Cell Science, 2011, 124, 1857-1866.	1.2	62
1025	Stress Transmission within the Cell. , 2011, 1, 499-524.		21
1026	Does cell biology need physicists?. Physics Magazine, 0, 4, .	0.1	8
1027	Getting Physical With the Aortic Valve. Arteriosclerosis, Thrombosis, and Vascular Biology, 2011, 31, 474-475.	1.1	1

#	Article	IF	Citations
1028	Mechanical signaling through the cytoskeleton regulates cell proliferation by coordinated focal adhesion and Rho GTPase signaling. Journal of Cell Science, 2011, 124, 1195-1205.	1.2	423
1029	Regional Atherosclerotic Plaque Properties in ApoEâ€"/â€" Mice Quantified by Atomic Force, Immunofluorescence, and Light Microscopy. Journal of Vascular Research, 2011, 48, 495-504.	0.6	42
1030	Distinct ECM mechanosensing pathways regulate microtubule dynamics to control endothelial cell branching morphogenesis. Journal of Cell Biology, 2011, 192, 321-334.	2.3	100
1031	Controlling cell adhesion via replication of laser micro/nano-textured surfaces on polymers. Biofabrication, 2011, 3, 045004.	3.7	50
1032	Mammary Gland ECM Remodeling, Stiffness, and Mechanosignaling in Normal Development and Tumor Progression. Cold Spring Harbor Perspectives in Biology, 2011, 3, a003228-a003228.	2.3	373
1033	Cancer Cells Regulate Biomechanical Properties of Human Microvascular Endothelial Cells. Journal of Biological Chemistry, 2011, 286, 40025-40037.	1.6	94
1034	Matrix stiffening sensitizes epithelial cells to EGF and enables the loss of contact inhibition of proliferation. Journal of Cell Science, 2011, 124, 1280-1287.	1.2	94
1035	Experiments in Nanomechanical Properties of Live Osteoblast Cells and Cell–Biomaterial Interface. Journal of Nanotechnology in Engineering and Medicine, 2011, 2, .	0.8	16
1036	Adipose-Derived Stem Cells in Functional Bone Tissue Engineering: Lessons from Bone Mechanobiology. Tissue Engineering - Part B: Reviews, 2011, 17, 195-211.	2.5	61
1037	Engineering strategies to recapitulate epithelial morphogenesis within synthetic three-dimensional extracellular matrix with tunable mechanical properties. Physical Biology, 2011, 8, 026013.	0.8	72
1038	The Inflammation-associated Protein TSG-6 Cross-links Hyaluronan via Hyaluronan-induced TSG-6 Oligomers. Journal of Biological Chemistry, 2011, 286, 25675-25686.	1.6	119
1039	Lack of Collagen XVIII Long Isoforms Affects Kidney Podocytes, whereas the Short Form Is Needed in the Proximal Tubular Basement Membrane. Journal of Biological Chemistry, 2011, 286, 7755-7764.	1.6	38
1040	Glass-like dynamics of collective cell migration. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4714-4719.	3.3	593
1041	Biomechanics of the Sensor-Tissue Interfaceâ€"Effects of Motion, Pressure, and Design on Sensor Performance and the Foreign Body Responseâ€"Part I: Theoretical Framework. Journal of Diabetes Science and Technology, 2011, 5, 632-646.	1.3	105
1042	Biomimetic three-dimensional microenvironment for controlling stem cell fate. Interface Focus, 2011, 1, 792-803.	1.5	60
1043	Apatite Microtopographies Instruct Signaling Tapestries for Progenitor-Driven New Attachment of Teeth. Tissue Engineering - Part A, 2011, 17, 279-290.	1.6	21
1044	Cartilage tissue regeneration. , 2011, , 111-126.		1
1045	Integrin activation and internalization on soft ECM as a mechanism of induction of stem cell differentiation by ECM elasticity. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9466-9471.	3.3	302

#	Article	IF	CITATIONS
1046	lmaging molecular dynamics in vivo – from cell biology to animal models. Journal of Cell Science, 2011, 124, 2877-2890.	1.2	73
1047	Application of 3D Traction Force Microscopy to Mechanotransduction of Cell Clusters. Applied Mechanics and Materials, 0, 70, 21-27.	0.2	1
1048	Approaches to Manipulating the Dimensionality and Physicochemical Properties of Common Cellular Scaffolds. International Journal of Molecular Sciences, 2011, 12, 8596-8609.	1.8	3
1049	Crawling Cells Can Close Wounds without Purse Strings or Signaling. PLoS Computational Biology, 2011, 7, e1002007.	1.5	103
1050	Age-Related Intimal Stiffening Enhances Endothelial Permeability and Leukocyte Transmigration. Science Translational Medicine, 2011, 3, 112ra122.	5.8	324
1051	Modulating Biofunctional starPEG Heparin Hydrogels by Varying Size and Ratio of the Constituents. Polymers, 2011, 3, 602-620.	2.0	73
1052	Microenvironment Design for Stem Cell Fate Determination. Advances in Biochemical Engineering/Biotechnology, 2011, 126, 227-262.	0.6	5
1053	Substrate stiffening promotes endothelial monolayer disruption through enhanced physical forces. American Journal of Physiology - Cell Physiology, 2011, 300, C146-C154.	2.1	205
1054	Cell-Biomaterial Mechanical Interaction in the Framework of Tissue Engineering: Insights, Computational Modeling and Perspectives. International Journal of Molecular Sciences, 2011, 12, 8217-8244.	1.8	50
1055	Theoretical Model for Cellular Shapes Driven by Protrusive and Adhesive Forces. PLoS Computational Biology, 2011, 7, e1001127.	1.5	50
1056	Dynamic and structural signatures of lamellar actomyosin force generation. Molecular Biology of the Cell, 2011, 22, 1330-1339.	0.9	88
1057	The influence of negative pressure wound therapy on wound surgery. , 2012, , 84-93.		1
1058	Quantitative Descriptors for the Effect of Nature/Mechanical Properties of Solid Substrates on Fibroblast Morphology. Journal of Applied Biomaterials and Functional Materials, 2012, 10, 265-272.	0.7	3
1059	ECM stiffness primes the TGF \hat{l}^2 pathway to promote chondrocyte differentiation. Molecular Biology of the Cell, 2012, 23, 3731-3742.	0.9	173
1060	Engineering Airway Epithelium. Journal of Biomedicine and Biotechnology, 2012, 2012, 1-10.	3.0	22
1061	Overview of Micro- and Nano-Technology Tools for Stem Cell Applications: Micropatterned and Microelectronic Devices. Sensors, 2012, 12, 15947-15982.	2.1	21
1062	Improved throughput traction microscopy reveals pivotal role for matrix stiffness in fibroblast contractility and TGF-Î ² responsiveness. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2012, 303, L169-L180.	1.3	131
1063	Movable Polyrotaxane Surfaces for Modulating Cellular Adhesion via Specific RGD-Integrin Binding. Advances in Science and Technology, 0, , .	0.2	O

#	Article	IF	CITATIONS
1064	Development of Hydrogels and Biomimetic Regulators as Tissue Engineering Scaffolds. Membranes, 2012, 2, 70-90.	1.4	43
1065	A Macroporous Bioreactor Super Activated by the Recombinant Human Transforming Growth Factor-Î ² 3. Frontiers in Physiology, 2012, 3, 172.	1.3	10
1066	Biphasic Investigation of Tissue Mechanical Response During Freezing Front Propagation. Journal of Biomechanical Engineering, 2012, 134, 061005.	0.6	2
1067	Stem Cells and Extracellular Matrices. Colloquium Series on Stem Cell Biology, 2012, 1, 1-84.	0.0	2
1068	Decoupling Polymer Properties to Elucidate Mechanisms Governing Cell Behavior. Tissue Engineering - Part B: Reviews, 2012, 18, 396-404.	2.5	17
1069	The Future of Biomateriomics. Springer Series in Materials Science, 2012, , 425-430.	0.4	0
1070	Pathophysiology of ventilator-associated lung injury. Current Opinion in Anaesthesiology, 2012, 25, 123-130.	0.9	52
1071	Evidence of a large-scale mechanosensing mechanism for cellular adaptation to substrate stiffness. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6933-6938.	3.3	474
1072	Influences of surface chemistry and swelling of salt-treated polyelectrolyte multilayers on migration of smooth muscle cells. Journal of the Royal Society Interface, 2012, 9, 3455-3468.	1.5	34
1073	Evaluation of the effects of phenylalanine and carboxylate on the rheological behaviors of small molecule hydrogelators containing naphthalene. Materials Research Society Symposia Proceedings, 2012, 1418, 57.	0.1	0
1074	Thermal Properties and Crystallinity of Grafted Copolymer Networks containing a Crystallizable Poly($\hat{l}\mu$ -caprolactone) Crosslinker in an aqueous environment. Materials Research Society Symposia Proceedings, 2012, 1403, 7.	0.1	3
1075	Matrix stiffness reverses the effect of actomyosin tension on cell proliferation. Journal of Cell Science, 2012, 125, 5974-5983.	1.2	165
1077	Engineering an Integrated Cellular Interface in Three-Dimensional Hydrogel Cultures Permits Monitoring of Reciprocal Astrocyte and Neuronal Responses. Tissue Engineering - Part C: Methods, 2012, 18, 526-536.	1.1	19
1078	Fabrication of polymeric substrates with micro- and nanoscale topography bioimprinted at progressive cell morphologies. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 06F902.	0.6	5
1079	Controlling matrix stiffness and topography for the study of tumor cell migration. Cell Adhesion and Migration, 2012, 6, 274-279.	1.1	70
1080	Nucleation of Ligand-Receptor Domains in Membrane Adhesion. Physical Review Letters, 2012, 109, 258101.	2.9	56
1081	Engineering Biomaterials for Regenerative Medicine. , 2012, , .		16
1082	Poly(lactide- <i>co</i> -glycolide) porous scaffolds for tissue engineering and regenerative medicine. Interface Focus, 2012, 2, 366-377.	1.5	354

#	Article	IF	CITATIONS
1083	Directed cell growth and alignment on protein-patterned 3D hydrogels with stereolithography. Virtual and Physical Prototyping, 2012, 7, 219-228.	5.3	26
1084	Micro glass ball embedded gels to study cell mechanobiological responses to substrate curvatures. Review of Scientific Instruments, 2012, 83, 094302.	0.6	18
1085	Electrotaxis of lung cancer cells in ordered three-dimensional scaffolds. Biomicrofluidics, 2012, 6, 14102-1410214.	1.2	69
1086	Scaling of Traction Forces with the Size of Cohesive Cell Colonies. Physical Review Letters, 2012, 108, 198101.	2.9	158
1087	Stability of electrically induced-polarization in poly (L-lactic) acid for bone regeneration. Applied Physics Letters, 2012, 101, 023701.	1.5	14
1088	Contact instabilities of anisotropic and inhomogeneous soft elastic films. Physical Review E, 2012, 85, 021603.	0.8	4
1089	Mechanotransduction is enhanced by the synergistic action of heterotypic cell interactions and TGF $\hat{\mathbf{a}}\in\hat{\mathbf{l}}^21$. FASEB Journal, 2012, 26, 2522-2530.	0.2	13
1090	Cells test substrate rigidity by local contractions on submicrometer pillars. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5328-5333.	3.3	227
1091	Mesenchymal stem cell adhesion but not plasticity is affected by high substrate stiffness. Science and Technology of Advanced Materials, 2012, 13, 064205.	2.8	20
1092	Physical confinement alters tumor cell adhesion and migration phenotypes. FASEB Journal, 2012, 26, 4045-4056.	0.2	227
1094	Dual Regulation of Breast Tubulogenesis Using Extracellular Matrix Composition and Stromal Cells. Tissue Engineering - Part A, 2012, 18, 520-532.	1.6	20
1096	Matrix Stiffness: A Regulator of Cellular Behavior and Tissue Formation. , 2012, , 19-37.		57
1097	Differences in Nanoscale Elasticity of Planar and Nanofibrillar Tissue Cultures. Materials Research Society Symposia Proceedings, 2012, 1417, 69.	0.1	0
1098	The Challenges of Biological Materials. Springer Series in Materials Science, 2012, , 61-107.	0.4	0
1099	Hydrogel Networks Based on Aba Triblock Copolymers. Journal of Applied Biomaterials and Functional Materials, 2012, 10, 243-248.	0.7	5
1100	At the Start of the Sarcomere: A Previously Unrecognized Role for Myosin Chaperones and Associated Proteins during Early Myofibrillogenesis. Biochemistry Research International, 2012, 2012, 1-16.	1.5	19
1101	Substrate stiffness affects skeletal myoblast differentiation (i) in vitro (i). Science and Technology of Advanced Materials, 2012, 13, 064211.	2.8	43
1102	A secreted MMP is required for reepithelialization during wound healing. Molecular Biology of the Cell, 2012, 23, 1068-1079.	0.9	121

#	Article	IF	CITATIONS
1103	Culturing Cells on Flexible Substrates of High Refractive Indexes. Materials Research Society Symposia Proceedings, 2012, 1418, 67.	0.1	0
1104	Attenuation of Cell Mechanosensitivity in Colon Cancer Cells during In Vitro Metastasis. PLoS ONE, 2012, 7, e50443.	1.1	32
1105	Chondrocyte spheroids on microfabricated PEG hydrogel surface and their noninvasive functional monitoring. Science and Technology of Advanced Materials, 2012, 13, 064217.	2.8	16
1106	Culture on fibrin matrices maintains the colony-forming capacity and osteoblastic differentiation of mesenchymal stem cells. Biomedical Materials (Bristol), 2012, 7, 045015.	1.7	18
1107	Dynamic Mechanical Properties Control Adult Stem Cell Fate., 2012,,.		0
1108	Environmental Biomechanics Substantiated by Defined Pillar Micropatterns Govern Behavior of Human Mesenchymal Stem Cells. Cell Transplantation, 2012, 21, 2455-2469.	1.2	9
1109	Carbon Nanofiber Reinforced Polycaprolactone Fibrous Meshes by Electrostatic Co-spinning. Current Nanoscience, 2012, 8, 753-761.	0.7	6
1110	Scar Zones. Plastic and Reconstructive Surgery, 2012, 129, 1272-1276.	0.7	47
1111	Cell contraction of an elastic substrate assessed by an axisymmetric model. International Journal of Experimental and Computational Biomechanics, 2012, 2, 61.	0.4	0
1112	The Challenge and Response of Podocytes to Glomerular Hypertension. Seminars in Nephrology, 2012, 32, 327-341.	0.6	73
1113	Filamins in Mechanosensing and Signaling. Annual Review of Biophysics, 2012, 41, 227-246.	4.5	211
1114	Mechanobiology of tumor invasion: Engineering meets oncology. Critical Reviews in Oncology/Hematology, 2012, 83, 170-183.	2.0	65
1115	Enhanced osteogenic differentiation with 3D electrospun nanofibrous scaffolds. Nanomedicine, 2012, 7, 1561-1575.	1.7	36
1116	Substrate stiffness regulates cadherin-dependent collective migration through myosin-II contractility. Journal of Cell Biology, 2012, 199, 545-563.	2.3	263
1117	New materials from proteins and peptides. Current Opinion in Structural Biology, 2012, 22, 451-456.	2.6	33
1118	Crawling from soft to stiff matrix polarizes the cytoskeleton and phosphoregulates myosin-II heavy chain. Journal of Cell Biology, 2012, 199, 669-683.	2.3	249
1119	Control of stem cell fate and function by engineering physical microenvironments. Integrative Biology (United Kingdom), 2012, 4, 1008-1018.	0.6	226
1120	The mechanics behind cell polarity. Trends in Cell Biology, 2012, 22, 584-591.	3.6	81

#	Article	IF	CITATIONS
1121	Controlling Self-Renewal and Differentiation of Stem Cells via Mechanical Cues. Journal of Biomedicine and Biotechnology, 2012, 2012, 1-12.	3.0	162
1122	Quantitative Analysis of the Combined Effect of Substrate Rigidity and Topographic Guidance on Cell Morphology. IEEE Transactions on Nanobioscience, 2012, 11, 28-36.	2.2	28
1123	Cyclic mechanical stress downregulates endothelin $\hat{a} \in \mathbb{I}$ and its responsive genes independently of $(scp)^2 = 1$ in dermal fibroblasts. Experimental Dermatology, 2012, 21, 765-770.	1.4	13
1124	Tuning the Properties of Elastin Mimetic Hybrid Copolymers via a Modular Polymerization Method. Biomacromolecules, 2012, 13, 1774-1786.	2.6	32
1125	Morphogenetic fields in embryogenesis, regeneration, and cancer: Non-local control of complex patterning. BioSystems, 2012, 109, 243-261.	0.9	178
1126	Minimal model for the inelastic mechanics of biopolymer networks and cells. Physical Review E, 2012, 86, 040901.	0.8	14
1127	Bioactive polymer scaffold for fabrication of vascularized engineering tissue. Journal of Artificial Organs, 2012, 15, 215-224.	0.4	30
1128	Monolithic graphene transistor biointerface. , 2012, 2012, 5678.		0
1129	Cell confinement controls centrosome positioning and lumen initiation during epithelial morphogenesis. Journal of Cell Biology, 2012, 198, 1011-1023.	2.3	103
1130	Carbon Nanotube Reinforced Hybrid Microgels as Scaffold Materials for Cell Encapsulation. ACS Nano, 2012, 6, 362-372.	7.3	400
1131	On the influence of the architecture of poly(ethylene glycol)-based thermoresponsive polymers on cell adhesion. Biomicrofluidics, 2012, 6, 024129.	1.2	30
1132	Mechanical regulation of cellular phenotype: implications for vascular tissue regeneration. Cardiovascular Research, 2012, 95, 215-222.	1.8	26
1133	Engineered Contractile Skeletal Muscle Tissue on a Microgrooved Methacrylated Gelatin Substrate. Tissue Engineering - Part A, 2012, 18, 2453-2465.	1.6	206
1134	Designing Cell-Compatible Hydrogels for Biomedical Applications. Science, 2012, 336, 1124-1128.	6.0	1,606
1135	Epithelial machines of morphogenesis and their potential application in organ assembly and tissue engineering. Biomechanics and Modeling in Mechanobiology, 2012, 11, 1109-1121.	1.4	14
1136	Mechanical control of integrin-mediated adhesion and signaling. Current Opinion in Cell Biology, 2012, 24, 592-599.	2.6	73
1137	Cardiovascular Protection by ApoE and ApoE-HDL Linked to Suppression of ECM Gene Expression and Arterial Stiffening. Cell Reports, 2012, 2, 1259-1271.	2.9	159
1138	Tuning polycaprolactone–carbon nanotube composites for bone tissue engineering scaffolds. Materials Science and Engineering C, 2012, 32, 152-159.	3.8	82

#	Article	IF	CITATIONS
1139	The modulation of canine mesenchymal stem cells by nano-topographic cues. Experimental Cell Research, 2012, 318, 2438-2445.	1.2	22
1140	Macroporous StarPEG-Heparin Cryogels. Biomacromolecules, 2012, 13, 2349-2358.	2.6	64
1141	PDMSstar–PEG hydrogels prepared via solvent-induced phase separation (SIPS) and their potential utility as tissue engineering scaffolds. Acta Biomaterialia, 2012, 8, 4324-4333.	4.1	27
1142	Lateral Communication between Stress Fiber Sarcomeres Facilitates a Local Remodeling Response. Biophysical Journal, 2012, 103, 2082-2092.	0.2	20
1143	Mechanical Strain in Actin Networks Regulates FilGAP and Integrin Binding to Filamin A. Biophysical Journal, 2012, 102, 348a.	0.2	2
1144	Physically based principles of cell adhesion mechanosensitivity in tissues. Reports on Progress in Physics, 2012, 75, 116601.	8.1	123
1145	Dynamic Mass Redistribution Assays Decode Surface Influence on Signaling of Endogenous Purinergic P2Y Receptors. Assay and Drug Development Technologies, 2012, 10, 37-45.	0.6	20
1146	Self-assembly of nanorods on soft elastic shells. Soft Matter, 2012, 8, 6706.	1.2	6
1147	How cells feel their substrate: spontaneous symmetry breaking of active surface stresses. Soft Matter, 2012, 8, 3223.	1.2	28
1148	Multi-material bio-fabrication of hydrogel cantilevers and actuators with stereolithography. Lab on A Chip, 2012, 12, 88-98.	3.1	155
1149	Responsive culture platform to examine the influence of microenvironmental geometry on cell function in 3D. Integrative Biology (United Kingdom), 2012, 4, 1540.	0.6	47
1150	Biomaterial surface modifications can dominate cell–substrate mechanics: the impact of PDMS plasma treatment on a quantitative assay of cell stiffness. Soft Matter, 2012, 8, 673-681.	1.2	59
1151	Ordered regular pentagons for semiflexible polymers on soft elastic shells. Soft Matter, 2012, 8, 2152.	1.2	17
1152	A Mathematical Model to Study the Dynamics of Epithelial Cellular Networks. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2012, 9, 1607-1620.	1.9	7
1153	A novel technique for micro-patterning proteins and cells on polyacrylamide gels. Soft Matter, 2012, 8, 7197.	1.2	87
1154	Contractile Stresses in Cohesive Cell Layers on Finite-Thickness Substrates. Physical Review Letters, 2012, 109, 108101.	2.9	60
1155	Collagen–β-TCP conjugated PCL biocomposites for bone tissue regeneration: fabrication, physical properties, and cellular activities. Journal of Materials Chemistry, 2012, 22, 22565.	6.7	17
1156	Surface mobility regulates skeletal stem cell differentiation. Integrative Biology (United Kingdom), 2012, 4, 531.	0.6	39

#	Article	IF	CITATIONS
1157	CHAPTER 8. Hydrogels for Biomedical Applications. Monographs in Supramolecular Chemistry, 2012, , 167-209.	0.2	3
1158	Quantitative imaging and measurement of cell–substrate surface deformation by digital holography. Journal of Modern Optics, 2012, 59, 1591-1598.	0.6	14
1159	Mechanical Aspects of Lung Fibrosis. Proceedings of the American Thoracic Society, 2012, 9, 137-147.	3.5	169
1160	The mechanical memory of lung myofibroblasts. Integrative Biology (United Kingdom), 2012, 4, 410.	0.6	273
1161	Analytical theory of polymer-network-mediated interaction between colloidal particles. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10187-10192.	3.3	20
1162	Mechano-responsive hydrogels crosslinked by block copolymer micelles. Soft Matter, 2012, 8, 10233.	1.2	68
1163	Microrheology of biomaterial hydrogelators. Soft Matter, 2012, 8, 6198.	1.2	78
1164	Solvent Dependence of the Morphology of Spin-Coated Thin Films of Polydimethylsiloxane-Rich Polystyrene- <i>block</i> -Polydimethylsiloxane Copolymers. Macromolecules, 2012, 45, 5538-5545.	2.2	25
1165	Promoting Nerve Cell Functions on Hydrogels Grafted with Poly(<scp>l</scp> -lysine). Biomacromolecules, 2012, 13, 342-349.	2.6	48
1166	Mechanical control of stem cell differentiation. Regenerative Medicine, 2012, 7, 101-116.	0.8	66
1167	Fine-Tuning the Degree of Stem Cell Polarization and Alignment on Ordered Arrays of High-Aspect-Ratio Nanopillars. ACS Nano, 2012, 6, 6222-6230.	7.3	164
1168	Injectable hydrogel materials for spinal cord regeneration: a review. Biomedical Materials (Bristol), 2012, 7, 012001.	1.7	232
1169	Poly(ε-caprolactone)-Banded Spherulites and Interaction with MC3T3-E1 Cells. Langmuir, 2012, 28, 4382-4395.	1.6	33
1170	Lubricated Biodegradable Polymer Networks for Regulating Nerve Cell Behavior and Fabricating Nerve Conduits with a Compositional Gradient. Biomacromolecules, 2012, 13, 358-368.	2.6	17
1171	Photocured Biodegradable Polymer Substrates of Varying Stiffness and Microgroove Dimensions for Promoting Nerve Cell Guidance and Differentiation. Langmuir, 2012, 28, 12557-12568.	1.6	45
1172	UV-Modulated Substrate Rigidity for Multiscale Study of Mechanoresponsive Cellular Behaviors. Langmuir, 2012, 28, 10789-10796.	1.6	28
1173	A silicone-based stretchable micropost array membrane for monitoring live-cell subcellular cytoskeletal response. Lab on A Chip, 2012, 12, 731-740.	3.1	89
1174	Nanotopography Influences Adhesion, Spreading, and Self-Renewal of Human Embryonic Stem Cells. ACS Nano, 2012, 6, 4094-4103.	7.3	353

#	Article	lF	CITATIONS
1175	Studies on the Formation Mechanism and the Structure of the Anisotropic Collagen Gel Prepared by Dialysis-Induced Anisotropic Gelation. Biomacromolecules, 2012, 13, 29-39.	2.6	45
1176	Preimplantation Stress and Development. Birth Defects Research Part C: Embryo Today Reviews, 2012, 96, 299-314.	3.6	44
1177	Use of Surface Properties to Control the Growth and Differentiation of Mouse Fetal Liver Stem/Progenitor Cell Colonies. Biomacromolecules, 2012, 13, 3483-3493.	2.6	10
1178	Controlling Fibroblast Proliferation with Dimensionality-Specific Response by Stiffness of Injectable Gelatin Hydrogels. Journal of Biomaterials Science, Polymer Edition, 2012, 23, 1793-1806.	1.9	24
1179	Quantitative Evaluation of Adhesion of Osteosarcoma Cells to Hydrophobic Polymer Substrate with Tunable Elasticity. Journal of Physical Chemistry B, 2012, 116, 8024-8030.	1.2	18
1180	Engineering neural stem cell fates with hydrogel design for central nervous system regeneration. Progress in Polymer Science, 2012, 37, 1105-1129.	11.8	104
1181	Materials for neural interfaces. MRS Bulletin, 2012, 37, 557-561.	1.7	29
1182	Influence of cell spreading and contractility on stiffness measurements using AFM. Soft Matter, 2012, 8, 10464.	1.2	24
1183	Giant vesicles as cell models. Integrative Biology (United Kingdom), 2012, 4, 982.	0.6	160
1184	Degradable emulsion-templated scaffolds for tissue engineering from thiol–ene photopolymerisation. Soft Matter, 2012, 8, 10344.	1.2	100
1185	Polyacrylamide hydrogels as substrates for studying bacteria. Chemical Communications, 2012, 48, 1595-1597.	2.2	31
1186	From Mechanical Force to RhoA Activation. Biochemistry, 2012, 51, 7420-7432.	1.2	193
1187	Actin stress fibers – assembly, dynamics and biological roles. Journal of Cell Science, 2012, 125, 1855-64.	1.2	668
1188	Control of Cell Adhesion by Mechanical Reinforcement of Soft Polyelectrolyte Films with Nanoparticles. Langmuir, 2012, 28, 7249-7257.	1.6	7 5
1189	Interplay of cell adhesion matrix stiffness and cell type for non-viral gene delivery. Acta Biomaterialia, 2012, 8, 2612-2619.	4.1	18
1190	Cognitive effects of NSAIDs in cerebral ischemia: A hypothesis exploring mechanical action mediated pharmacotherapy. Medical Hypotheses, 2012, 79, 393-395.	0.8	6
1191	Factorial analysis of adaptable properties of self-assembling peptide matrix on cellular proliferation and neuronal differentiation of pluripotent embryonic carcinoma. Nanomedicine: Nanotechnology, Biology, and Medicine, 2012, 8, 748-756.	1.7	14
1192	Engineering therapies in the CNS: What works and what can be translated. Neuroscience Letters, 2012, 519, 147-154.	1.0	13

#	Article	IF	CITATIONS
1193	Cell adhesion nucleation regulated by substrate stiffness: A Monte Carlo study. Journal of Biomechanics, 2012, 45, 116-122.	0.9	35
1194	An improved texture correlation algorithm to measure substrate–cytoskeletal network strain transfer under large compressive strain. Journal of Biomechanics, 2012, 45, 76-82.	0.9	11
1195	Cell–substrate interaction with cell-membrane-stress dependent adhesion. Journal of Biomechanics, 2012, 45, 209-217.	0.9	3
1196	Influence of substrate stiffness on circulating progenitor cell fate. Journal of Biomechanics, 2012, 45, 736-744.	0.9	34
1197	Mechanical characterization of adult stem cells from bone marrow and perivascular niches. Journal of Biomechanics, 2012, 45, 1280-1287.	0.9	16
1198	AFM nano-mechanics and calcium dynamics of prostate cancer cells with distinct metastatic potential. Biochimica Et Biophysica Acta - General Subjects, 2012, 1820, 1111-1120.	1.1	76
1199	Role of nesprin-1 in nuclear deformation in endothelial cells under static and uniaxial stretching conditions. Biochemical and Biophysical Research Communications, 2012, 424, 94-99.	1.0	44
1200	The alignment and fusion assembly of adipose-derived stem cells on mechanically patterned matrices. Biomaterials, 2012, 33, 6943-6951.	5.7	141
1201	Substrate stiffness regulates the proliferation, migration, and differentiation of epidermal cells. Burns, 2012, 38, 414-420.	1.1	111
1202	Bioengineering Methods for Analysis of Cells In Vitro. Annual Review of Cell and Developmental Biology, 2012, 28, 385-410.	4.0	38
1203	Mechanical Environment Modulates Biological Properties of Oligodendrocyte Progenitor Cells. Stem Cells and Development, 2012, 21, 2905-2914.	1.1	105
1204	Developing scaffolds for tissue engineering using the Ca ²⁺ â€induced cold gelation by an experimental design approach. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2012, 100B, 2269-2278.	1.6	11
1205	Hydrogel Substrate Stiffness and Topography Interact to Induce Contact Guidance in Cardiac Fibroblasts. Macromolecular Bioscience, 2012, 12, 1342-1353.	2.1	42
1206	Smart polymers and interfaces for dynamic cell-biomaterials interactions. MRS Bulletin, 2012, 37, 836-846.	1.7	11
1207	Stiffness-controlled three-dimensional extracellular matrices for high-resolution imaging of cell behavior. Nature Protocols, 2012, 7, 2056-2066.	5. 5	178
1208	Resilin in the Engineering of Elastomeric Biomaterials. , 2012, , 105-116.		2
1211	Stiffening hydrogels to probe short- and long-term cellular responses to dynamic mechanics. Nature Communications, 2012, 3, 792.	5.8	574
1212	Chemical and physical properties of regenerative medicine materials controlling stem cell fate. Annals of Medicine, 2012, 44, 635-650.	1.5	71

#	Article	IF	CITATIONS
1213	Dynamic force-induced direct dissociation of protein complexes in a nuclear body in living cells. Nature Communications, 2012, 3, 866.	5.8	124
1214	Spinal Cord Explants Use Carbon Nanotube Interfaces To Enhance Neurite Outgrowth and To Fortify Synaptic Inputs. ACS Nano, 2012, 6, 2041-2055.	7.3	127
1215	Mechanical Interactions between Cells and Tissues. , 2012, , 201-209.		1
1216	Extracellular-matrix tethering regulates stem-cell fate. Nature Materials, 2012, 11, 642-649.	13.3	1,346
1217	Force-Induced Changes in Subnuclear Movement and Rheology. Biophysical Journal, 2012, 103, 2423-2431.	0.2	83
1218	Cell-compatible hydrogels based on a multifunctional crosslinker with tunable stiffness for tissue engineering. Journal of Materials Chemistry, 2012, 22, 23952.	6.7	38
1219	Soft Matter Models of Developing Tissues and Tumors. Science, 2012, 338, 910-917.	6.0	230
1220	Computational Mechanobiology in Cartilage and Bone Tissue Engineering: From Cell Phenotype to Tissue Structure. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2012, , 341-377.	0.7	2
1221	7.7 Biophysics of Three-Dimensional Cell Motility. , 2012, , 88-103.		0
1222	7.10 Cell-Extracellular Matrix Mechanobiology in Cancer. , 2012, , 142-167.		O
1223	7.11 Biomechanics of Cell Motility. , 2012, , 168-193.		3
1224	Biological Responses to and Toxicity of Nanoscale Implant Materials. , 2012, , 481-508.		1
1225	Quantifying Traction Stresses in Adherent Cells. Methods in Cell Biology, 2012, 110, 139-178.	0.5	55
1226	Design of Biomimetic Cell-Interactive Substrates Using Hyaluronic Acid Hydrogels with Tunable Mechanical Properties. Biomacromolecules, 2012, 13, 1818-1827.	2.6	116
1227	Cell Elasticity Determines Macrophage Function. PLoS ONE, 2012, 7, e41024.	1.1	220
1228	Controlling peptidebased hydrogelation. Materials Today, 2012, 15, 500-507.	8.3	72
1229	Sustained local delivery of bioactive nerve growth factor in the central nervous system via tunable diblock copolypeptide hydrogel depots. Biomaterials, 2012, 33, 9105-9116.	5.7	85
1230	Micro- and Macrorheology of Jellyfish Extracellular Matrix. Biophysical Journal, 2012, 102, 1-9.	0.2	68

#	Article	IF	Citations
1231	Rigidity Matching between Cells and the Extracellular Matrix Leads to the Stabilization of Cardiac Conduction. Biophysical Journal, 2012, 102, 379-387.	0.2	24
1232	Strength in the Periphery: Growth Cone Biomechanics and Substrate Rigidity Response in Peripheral and Central Nervous System Neurons. Biophysical Journal, 2012, 102, 452-460.	0.2	228
1233	A Genetic Strategy for the Dynamic and Graded Control of Cell Mechanics, Motility, and Matrix Remodeling. Biophysical Journal, 2012, 102, 434-442.	0.2	31
1234	The Influence of a Biologically Relevant Substratum Topography onÂHuman Aortic and Umbilical Vein Endothelial Cells. Biophysical Journal, 2012, 102, 1224-1233.	0.2	28
1235	Mapping Three-Dimensional Stress and Strain Fields within a Soft Hydrogel Using a Fluorescence Microscope. Biophysical Journal, 2012, 102, 2241-2250.	0.2	40
1236	E-Cadherin-Dependent Stimulation of Traction Force at Focal Adhesions via the Src and PI3K Signaling Pathways. Biophysical Journal, 2012, 103, 175-184.	0.2	48
1237	Decoupling Substrate Stiffness, Spread Area, and Micropost Density: A Close Spatial Relationship between Traction Forces and Focal Adhesions. Biophysical Journal, 2012, 103, 640-648.	0.2	176
1238	Cell Mechanics, Structure, and Function Are Regulated by the Stiffness of the Three-Dimensional Microenvironment. Biophysical Journal, 2012, 103, 1188-1197.	0.2	76
1239	Elasticity Maps of Living Neurons Measured by Combined Fluorescence and Atomic Force Microscopy. Biophysical Journal, 2012, 103, 868-877.	0.2	147
1240	Material strategies for creating artificial cell-instructive niches. Current Opinion in Biotechnology, 2012, 23, 820-825.	3.3	44
1241	Mechanoregulation of cytoskeletal dynamics by TRP channels. European Journal of Cell Biology, 2012, 91, 834-846.	1.6	52
1242	Mimicking dynamic in vivo environments with stimuli-responsive materials for cell culture. Trends in Biotechnology, 2012, 30, 426-439.	4.9	103
1243	Three-dimensional Traction Force Microscopy for Studying Cellular Interactions with Biomaterials. Procedia IUTAM, 2012, 4, 144-150.	1.2	5
1244	Influence of the microstructure and mechanical strength of nanofibers of biodegradable polymers with hydroxyapatite in stem cells growth. Electrospinning, characterization and cell viability. Polymer Degradation and Stability, 2012, 97, 2037-2051.	2.7	43
1245	Flexural mechanical properties of porcine aortic heart valve leaflets. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 13, 78-84.	1.5	15
1246	Mechanical restrictions on biological responses by adherent cells within collagen gels. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 216-226.	1.5	27
1247	Cell friction. Faraday Discussions, 2012, 156, 31.	1.6	26
1248	Self-assembled amino acids and dipeptides as noncovalent hydrogels for tissue engineering. Polymer Chemistry, 2012, 3, 18-33.	1.9	225

#	Article	IF	CITATIONS
1249	Mechanically induced deformation and strain dynamics in actin stress fibers. Communicative and Integrative Biology, 2012, 5, 627-630.	0.6	9
1250	Biomaterials for the Development of Peripheral Nerve Guidance Conduits. Tissue Engineering - Part B: Reviews, 2012, 18, 40-50.	2.5	321
1251	Atomic force microscopy – looking at mechanosensors on the cell surface. Journal of Cell Science, 2012, 125, 4189-95.	1.2	39
1252	Biodegradable nanocomposite hydrogel structures with enhanced mechanical properties prepared by photo-crosslinking solutions of poly(trimethylene carbonate)–poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlo	ck 10 Tf 5 4.1	0,622 Td (g
1253	2012. 8. 4233-4243. Biomimetic Cell Culture Proteins as Extracellular Matrices for Stem Cell Differentiation. Chemical Reviews, 2012, 112, 4507-4540.	23.0	130
1254	Covalently immobilized biomolecule gradient on hydrogel surface using a gradient generating microfluidic device for a quantitative mesenchymal stem cell study. Biomicrofluidics, 2012, 6, 024111.	1.2	34
1255	Liquid Crystalline Materials for Biological Applications. Chemistry of Materials, 2012, 24, 746-758.	3.2	153
1256	Measuring the Modulus and Reverse Percolation Transition of a Degrading Hydrogel. ACS Macro Letters, 2012, 1, 706-708.	2.3	33
1257	Tissue Engineering III: Cell - Surface Interactions for Tissue Culture. Advances in Biochemical Engineering/Biotechnology, 2012, , .	0.6	8
1258	Stem Cell-Based Toxicity Screening. Pharmaceutical Medicine, 2012, 26, 85-89.	1.0	10
1259	Fmoc-diphenylalanine hydrogels: understanding the variability in reported mechanical properties. Soft Matter, 2012, 8, 1168-1174.	1.2	155
1260	Fast-degrading elastomer enables rapid remodeling of a cell-free synthetic graft into a neoartery. Nature Medicine, 2012, 18, 1148-1153.	15.2	379
1261	Modulating cellular behaviors through surface nanoroughness. Journal of Materials Chemistry, 2012, 22, 15654.	6.7	42
1262	Degradation of Implant Materials. , 2012, , .		27
1263	Endothelial cell's biomechanical properties are regulated by invasive cancer cells. Molecular BioSystems, 2012, 8, 1639.	2.9	31
1264	United we stand $\hat{a}\in$ " integrating the actin cytoskeleton and cell $\hat{a}\in$ "matrix adhesions in cellular mechanotransduction. Journal of Cell Science, 2012, 125, 3051-60.	1.2	278
1265	The Impact of Substrate Stiffness and Mechanical Loading on Fibroblast-Induced Scaffold Remodeling. Tissue Engineering - Part A, 2012, 18, 1804-1817.	1.6	63
1266	Hyaluronic acid matrices show matrix stiffness in 2D and 3D dictates cytoskeletal order and myosin-II phosphorylation within stem cells. Integrative Biology (United Kingdom), 2012, 4, 422.	0.6	107

#	Article	IF	CITATIONS
1267	Integrin and Cell Adhesion Molecules. Methods in Molecular Biology, 2012, , .	0.4	2
1268	A three dimensional soft matter cell model for mechanotransduction. Soft Matter, 2012, 8, 5765.	1.2	18
1269	Wetting transitions of cellular aggregates induced by substrate rigidity. Soft Matter, 2012, 8, 4578.	1.2	67
1270	Coupling of Growth, Differentiation and Morphogenesis: An Integrated Approach to Design in Embryogenesis. Cellular Origin and Life in Extreme Habitats, 2012, , 385-428.	0.3	8
1271	<i>In Vitro</i> Differentiation and Mineralization of Dental Pulp Stem Cells on Enamel-Like Fluorapatite Surfaces. Tissue Engineering - Part C: Methods, 2012, 18, 821-830.	1.1	15
1272	Salt-Leached Silk Scaffolds with Tunable Mechanical Properties. Biomacromolecules, 2012, 13, 3723-3729.	2.6	88
1273	Tailoring gel modulus using dispersed nanocrystalline hydroxyapatite. Journal of Experimental Nanoscience, 2012, 7, 652-661.	1.3	10
1274	MG63 Osteoblast-Like Cells Exhibit Different Behavior when Grown on Electrospun Collagen Matrix versus Electrospun Gelatin Matrix. PLoS ONE, 2012, 7, e31200.	1.1	81
1275	Cellular Traction Stresses Increase with Increasing Metastatic Potential. PLoS ONE, 2012, 7, e32572.	1.1	328
1276	Inherent Interfacial Mechanical Gradients in 3D Hydrogels Influence Tumor Cell Behaviors. PLoS ONE, 2012, 7, e35852.	1.1	56
1277	SPARC Overexpression Inhibits Cell Proliferation in Neuroblastoma and Is Partly Mediated by Tumor Suppressor Protein PTEN and AKT. PLoS ONE, 2012, 7, e36093.	1.1	20
1278	Mechanics Regulates Fate Decisions of Human Embryonic Stem Cells. PLoS ONE, 2012, 7, e37178.	1.1	102
1279	How Linear Tension Converts to Curvature: Geometric Control of Bone Tissue Growth. PLoS ONE, 2012, 7, e36336.	1.1	169
1280	Dynamic Mechanisms of Cell Rigidity Sensing: Insights from a Computational Model of Actomyosin Networks. PLoS ONE, 2012, 7, e49174.	1.1	57
1281	Development of Polydimethylsiloxane Substrates with Tunable Elastic Modulus to Study Cell Mechanobiology in Muscle and Nerve. PLoS ONE, 2012, 7, e51499.	1.1	433
1283	Substratum Stiffness and Latrunculin B Regulate Matrix Gene and Protein Expression in Human Trabecular Meshwork Cells., 2012, 53, 952.		44
1284	2D-DIGE Proteomic Analysis of Mesenchymal Stem Cell Cultured on the Elasticity-tunable Hydrogels. Cell Structure and Function, 2012, 37, 127-139.	0.5	15
1285	Integrated Biomimemic Carbon Nanotube Composites for Biomedical Applications., 0,,.		2

#	Article	IF	CITATIONS
1286	Carbon nanotubes impregnated with subventricular zone neural progenitor cells promotes recovery from stroke. International Journal of Nanomedicine, 2012, 7, 2751.	3.3	36
1287	Synthesis and characterization of biodegradable, amorphous, soft IPNs with shapeâ€memory effect. Polymers for Advanced Technologies, 2012, 23, 382-388.	1.6	13
1288	Hyperosmolarity and hypoxia induce chondrogenesis of adipose-derived stem cells in a collagen type 2 hydrogel. Journal of Tissue Engineering and Regenerative Medicine, 2012, 6, 570-578.	1.3	21
1289	Microengineered synthetic cellular microenvironment for stem cells. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2012, 4, 414-427.	3.3	11
1290	Hydrogels and microtechnologies for engineering the cellular microenvironment. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2012, 4, 235-246.	3.3	58
1291	Characterization of Surface Properties and Cytocompatibility of Ion-etched Chitosan Films. Langmuir, 2012, 28, 7223-7232.	1.6	11
1292	High-strength silk protein scaffolds for bone repair. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7699-7704.	3.3	337
1293	A Facile Way to Tune Mechanical Properties of Artificial Elastomeric Proteins-Based Hydrogels. Langmuir, 2012, 28, 8260-8265.	1.6	43
1294	Enriching libraries of high-aspect-ratio micro- or nanostructures by rapid, low-cost, benchtop nanofabrication. Nature Protocols, 2012, 7, 311-327.	5.5	39
1295	Mechanical impulses can control metaphase progression in a mammalian cell. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7320-7325.	3.3	36
1296	The tumor microenvironment is a dominant force in multidrug resistance. Drug Resistance Updates, 2012, 15, 39-49.	6.5	361
1297	Nanofibrous Collagen Nerve Conduits for Spinal Cord Repair. Tissue Engineering - Part A, 2012, 18, 1057-1066.	1.6	121
1298	Mechanical Characterization of the Injured Spinal Cord after Lateral Spinal Hemisection Injury in the Rat. Journal of Neurotrauma, 2012, 29, 1747-1757.	1.7	41
1299	The rationale for targeting the LOX family in cancer. Nature Reviews Cancer, 2012, 12, 540-552.	12.8	464
1300	CARS and SHG microscopy to follow collagen production in living human corneal fibroblasts and mesenchymal stem cells in fibrin hydrogel 3D cultures. Journal of Raman Spectroscopy, 2012, 43, 675-680.	1,2	29
1301	An XFEMâ€based numerical strategy to model mechanical interactions between biological cells and a deformable substrate. International Journal for Numerical Methods in Engineering, 2012, 92, 238-267.	1.5	24
1302	Endothelial cell responses to micropillar substrates of varying dimensions and stiffness. Journal of Biomedical Materials Research - Part A, 2012, 100A, 1457-1466.	2.1	70
1303	The interplay between physical and chemical properties of protein films affects their bioactivity. Journal of Biomedical Materials Research - Part A, 2012, 100A, 2401-2411.	2.1	17

#	Article	IF	Citations
1304	Effect of load on the repair of osteochondral defects using a porous polymer scaffold. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2012, 100B, 2082-2089.	1.6	7
1305	AFM Characterization of Elastically Micropatterned Surfaces Fabricated by Fillâ€Molding In Capillaries (FIMIC) and Investigation of the Topographical Influence on Cell Adhesion to the Patterns. Advanced Engineering Materials, 2012, 14, B56.	1.6	12
1306	Using Mean Field Theory to Guide Biofunctional Materials Design. Advanced Functional Materials, 2012, 22, 1391-1398.	7.8	61
1307	A Versatile Synthetic Platform for a Wide Range of Functionalized Biomaterials. Advanced Functional Materials, 2012, 22, 2812-2820.	7.8	41
1308	Injectable and Biodegradable Nanohybrid Polymers with Simultaneously Enhanced Stiffness and Toughness for Bone Repair. Advanced Functional Materials, 2012, 22, 3181-3190.	7.8	30
1309	Vesicular Structures Selfâ€Assembled from Oligonucleotideâ€Polymer Hybrids: Mechanical Prevention of Bacterial Colonization Upon their Surface Tethering Through Hybridization. Advanced Functional Materials, 2012, 22, 4891-4898.	7.8	10
1310	Biodegradable Photoâ€Crosslinked Polymer Substrates with Concentric Microgrooves for Regulating MC3T3â€E1 Cell Behavior. Advanced Healthcare Materials, 2012, 1, 292-301.	3.9	38
1311	Biomimetic Delivery with Micro―and Nanoparticles. Advanced Materials, 2012, 24, 3757-3778.	11.1	145
1312	Microenvironmental Control of the Breast Cancer Cell Cycle. Anatomical Record, 2012, 295, 553-562.	0.8	15
1313	Using polymeric materials to control stem cell behavior for tissue regeneration. Birth Defects Research Part C: Embryo Today Reviews, 2012, 96, 63-81.	3.6	40
1314	Mechanical Regulation of Nuclear Structure and Function. Annual Review of Biomedical Engineering, 2012, 14, 431-455.	5.7	136
1315	Fabrication of Two-Dimensional Gradient Layer-by-Layer Films for Combinatorial Biosurface Studies. Macromolecules, 2012, 45, 5704-5711.	2.2	16
1316	Sculpting Organs: Mechanical Regulation of Tissue Development. Annual Review of Biomedical Engineering, 2012, 14, 129-154.	5.7	109
1317	Advances in Bioactive Hydrogels to Probe and Direct Cell Fate. Annual Review of Chemical and Biomolecular Engineering, 2012, 3, 421-444.	3.3	296
1318	Characterization of Methacrylated Type-I Collagen as a Dynamic, Photoactive Hydrogel. Biointerphases, 2012, 7, 25.	0.6	92
1319	Cancer-associated-fibroblasts and tumour cells: a diabolic liaison driving cancer progression. Cancer and Metastasis Reviews, 2012, 31, 195-208.	2.7	448
1320	Intracellular Mechanics and Activity of Breast Cancer Cells Correlate with Metastatic Potential. Cell Biochemistry and Biophysics, 2012, 63, 199-209.	0.9	80
1321	A Cell Culture System for the Structure and Hydrogel Properties of Basement Membranes: Application to Capillary Walls. Cellular and Molecular Bioengineering, 2012, 5, 194-204.	1.0	14

#	Article	IF	Citations
1322	Cellular Traction Force Reconstruction Based on a Self-adaptive Filtering Scheme. Cellular and Molecular Bioengineering, 2012, 5, 205-216.	1.0	19
1323	A novel nano-structured porous polycaprolactone scaffold improves hyaline cartilage repair in a rabbit model compared to a collagen type I/III scaffold: in vitro and in vivo studies. Knee Surgery, Sports Traumatology, Arthroscopy, 2012, 20, 1192-1204.	2.3	60
1324	Live en face imaging of aortic valve leaflets under mechanical stress. Biomechanics and Modeling in Mechanobiology, 2012, 11, 355-361.	1.4	14
1325	Microfluidics for Mammalian Cell Chemotaxis. Annals of Biomedical Engineering, 2012, 40, 1316-1327.	1.3	80
1326	Screening of rat mesenchymal stem cell behaviour on polydimethylsiloxane stiffness gradients. Acta Biomaterialia, 2012, 8, 519-530.	4.1	126
1327	Gel microstructure regulates proliferation and differentiation of MC3T3-E1 cells encapsulated in alginate beads. Acta Biomaterialia, 2012, 8, 1693-1702.	4.1	61
1328	Manipulating neural-stem-cell mobilization and migration in vitro. Acta Biomaterialia, 2012, 8, 2087-2095.	4.1	28
1329	Bio-hybrid organs and tissues for patient therapy: A future vision for 2030. Chemical Engineering and Processing: Process Intensification, 2012, 51, 79-87.	1.8	20
1330	Multiwall carbon nanotubes/polycaprolactone composites for bone tissue engineering application. Colloids and Surfaces B: Biointerfaces, 2012, 93, 226-234.	2.5	177
1331	Regulation of the behaviors of mesenchymal stem cells by surface nanostructured titanium. Colloids and Surfaces B: Biointerfaces, 2012, 97, 211-220.	2.5	79
1332	On a class of admissible constitutive behaviors in free-floating engineered tissues. International Journal of Non-Linear Mechanics, 2012, 47, 173-178.	1.4	11
1333	Influence of substrate rigidity on primary nucleation of cell adhesion: A thermal fluctuation model. Journal of Colloid and Interface Science, 2012, 366, 200-208.	5.0	9
1334	Cyclic stretch induces reorientation of cells in a Src family kinase- and p130Cas-dependent manner. European Journal of Cell Biology, 2012, 91, 118-128.	1.6	25
1335	Tissue engineering bone-ligament complexes using fiber-guiding scaffolds. Biomaterials, 2012, 33, 137-145.	5.7	207
1336	The control of chromosome segregation during mitosis in epithelial cells by substrate elasticity. Biomaterials, 2012, 33, 798-809.	5.7	14
1337	Inducing functional radial glia-like progenitors from cortical astrocyte cultures using micropatterned PMMA. Biomaterials, 2012, 33, 1759-1770.	5.7	56
1338	The regulation of focal adhesion complex formation and salivary gland epithelial cell organization by nanofibrous PLGA scaffolds. Biomaterials, 2012, 33, 3175-3186.	5.7	77
1339	Microfabrication of complex porous tissue engineering scaffolds using 3D projection stereolithography. Biomaterials, 2012, 33, 3824-3834.	5.7	560

#	Article	IF	CITATIONS
1340	Osteoinductive hydroxyapatite-coated titanium implants. Biomaterials, 2012, 33, 3813-3823.	5.7	155
1341	Biophysical control of invasive tumor cell behavior by extracellular matrix microarchitecture. Biomaterials, 2012, 33, 4157-4165.	5.7	159
1342	Theoretical considerations on mechanisms of harvesting cells cultured on thermoresponsive polymer brushes. Biomaterials, 2012, 33, 4975-4987.	5.7	53
1343	Engineering microscale topographies to control the cell–substrate interface. Biomaterials, 2012, 33, 5230-5246.	5.7	568
1344	Regulation of the fate of human mesenchymal stem cells by mechanical and stereo-topographical cues provided by silicon nanowires. Biomaterials, 2012, 33, 5013-5022.	5.7	95
1345	High-throughput cellular screening of engineered ECM based on combinatorial polyelectrolyte multilayer films. Biomaterials, 2012, 33, 5841-5847.	5.7	18
1346	The effect of culture conditions on the adipogenic and osteogenic inductions of mesenchymal stem cells on micropatterned surfaces. Biomaterials, 2012, 33, 6008-6019.	5.7	114
1347	The influence of substrate stiffness on the behavior and functions of Schwann cells in culture. Biomaterials, 2012, 33, 6672-6681.	5.7	130
1348	Stem cell-biomaterial interactions for regenerative medicine. Biotechnology Advances, 2012, 30, 338-351.	6.0	179
1349	Adult stem cell coatings for regenerative medicine. Materials Today, 2012, 15, 60-66.	8.3	22
1350	Riboflavin and collagen: New crosslinking methods to tailor the stiffness of hydrogels. Materials Letters, 2012, 74, 58-61.	1.3	76
1351	A spheroid-based biosensor for the label-free detection of drug-induced field potential alterations. Sensors and Actuators B: Chemical, 2012, 165, 53-58.	4.0	18
1352	Mesenchymal stem cell fate is regulated by the composition and mechanical properties of collagen–glycosaminoglycan scaffolds. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 11, 53-62.	1.5	228
1353	Addition of hyaluronic acid improves cellular infiltration and promotes early-stage chondrogenesis in a collagen-based scaffold for cartilage tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 11, 41-52.	1.5	134
1354	Dewetting of cellular monolayers. European Physical Journal E, 2012, 35, 34.	0.7	25
1355	The RhoAâ€Rokâ€myosin II pathway is involved in extracellular matrixâ€mediated regulation of prolactin signaling in mammary epithelial cells. Journal of Cellular Physiology, 2012, 227, 1553-1560.	2.0	11
1356	Controlled Cell Proliferation on an Electrochemically Engineered Collagen Scaffold. Macromolecular Bioscience, 2012, 12, 360-366.	2.1	13
1357	Designing biomaterials for in situ periodontal tissue regeneration. Biotechnology Progress, 2012, 28, 3-20.	1.3	42

#	Article	IF	Citations
1358	Proliferation of Epithelial Cells on PDMS Substrates with Micropillars Fabricated with Different Curvature Characteristics. Biointerphases, 2012, 7, 21.	0.6	10
1359	Migration of intervertebral disc cells into dense collagen scaffolds intended for functional replacement. Journal of Materials Science: Materials in Medicine, 2012, 23, 813-821.	1.7	9
1360	Pressureâ€activated microsyringe composite scaffold of poly(<scp>L</scp> â€lactic acid) and carbon nanotubes for bone tissue engineering. Journal of Applied Polymer Science, 2013, 129, 528-536.	1.3	32
1361	Effect of substrate stiffness on early human embryonic stem cell differentiation. Journal of Biological Engineering, 2013, 7, 7.	2.0	90
1362	Effect of shear stress and substrate on endothelial DAPK expression, caspase activity, and apoptosis. BMC Research Notes, 2013, 6, 10.	0.6	23
1363	PGS:Gelatin nanofibrous scaffolds with tunable mechanical andÂstructural properties for engineering cardiac tissues. Biomaterials, 2013, 34, 6355-6366.	5.7	273
1364	Mechanics in Neuronal Development and Repair. Annual Review of Biomedical Engineering, 2013, 15, 227-251.	5.7	293
1365	PEDOT:gelatin composites mediate brain endothelial cell adhesion. Journal of Materials Chemistry B, 2013, 1, 3860.	2.9	52
1366	Effect of substrate stiffness on the osteogenic differentiation of bone marrow stem cells and boneâ€derived cells. Cell Biology International, 2013, 37, 608-616.	1.4	58
1367	Microfabricated Kidney Tissue Models. , 2013, , 279-302.		0
1368	Mapping the mechanical stiffness of live cells with the scanning ion conductance microscope. Soft Matter, 2013, 9, 3230.	1,2	87
1369	Extracellular Matrix in Development. Biology of Extracellular Matrix, 2013, , .	0.3	11
1370	Tuning Molecular Adhesion via Material Anisotropy. Advanced Functional Materials, 2013, 23, 4729-4738.	7.8	11
1371	Surface engineering the cellular microenvironment via patterning and gradients. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 775-794.	2.4	45
1372	In situ mechanotransduction via vinculin regulates stem cell differentiation. Stem Cells, 2013, 31, 2467-2477.	1.4	100
1373	Corneal Regenerative Medicine. Methods in Molecular Biology, 2013, , .	0.4	7
1374	Nonlinear Strain Stiffening Is Not Sufficient to Explain How Far Cells CanÂFeel on Fibrous Protein Gels. Biophysical Journal, 2013, 105, 11-20.	0.2	112
1375	Role of the extracellular matrix in regulating stem cell fate. Nature Reviews Molecular Cell Biology, 2013, 14, 467-473.	16.1	732

#	Article	IF	CITATIONS
1376	The Origins of Diffuse Low-Grade Gliomas (DLGGs): "Functional Theory―Versus "Molecular Theory―, 2013, , 481-491.		0
1377	Biophysical Cues and Cell Behavior: The Big Impact of Little Things. Annual Review of Biomedical Engineering, 2013, 15, 155-176.	5.7	145
1378	Dynamic and reversible surface topography influences cell morphology. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2313-2321.	2.1	47
1379	A neural extracellular matrix-based method for in vitrohippocampal neuron culture and dopaminergic differentiation of neural stem cells. BMC Neuroscience, 2013, 14, 48.	0.8	12
1380	Nanocomposite hydrogels for cartilage tissue engineering: mesoporous silica nanofibers interlinked with siloxane derived polysaccharide. Journal of Materials Science: Materials in Medicine, 2013, 24, 1875-1884.	1.7	47
1381	Carbodiimide crosslinked collagen from porcine dermal matrix for high-strength tissue engineering scaffold. International Journal of Biological Macromolecules, 2013, 61, 69-74.	3.6	56
1382	Regulating tension in three-dimensional culture environments. Experimental Cell Research, 2013, 319, 2447-2459.	1.2	41
1383	Mechanobiology of bone marrow stem cells: From myosin-II forces to compliance of matrix and nucleus in cell forms and fates. Differentiation, 2013, 86, 77-86.	1.0	58
1385	Stiffness Increases Mononuclear Cell Transendothelial Migration. Cellular and Molecular Bioengineering, 2013, 6, 253-265.	1.0	15
1386	Three-Dimensional-Engineered Matrix to Study Cancer Stem Cells and Tumorsphere Formation: Effect of Matrix Modulus. Tissue Engineering - Part A, 2013, 19, 669-684.	1.6	68
1387	Chitin nanofiber micropatterned flexible substrates for tissue engineering. Journal of Materials Chemistry B, 2013, 1, 4217.	2.9	68
1388	Effects of matrix elasticity and cell density on human mesenchymal stem cells differentiation. Journal of Orthopaedic Research, 2013, 31, 1360-1365.	1.2	76
1389	Differential Effect of Curcumin on the Nanomechanics of Normal and Cancerous Mammalian Epithelial Cells. Cell Biochemistry and Biophysics, 2013, 65, 399-411.	0.9	10
1390	Enhanced Survival and Neurite Network Formation of Human Umbilical Cord Blood Neuronal Progenitors in Three-Dimensional Collagen Constructs. Journal of Molecular Neuroscience, 2013, 51, 249-261.	1.1	13
1391	Effects of PEG-Based Thermoresponsive Polymer Brushes on Fibroblast Spreading and Gene Expression. Cellular and Molecular Bioengineering, 2013, 6, 287-298.	1.0	18
1392	Endothelial Wound Recovery is Influenced by Treatment with Shear Stress, Wound Direction, and Substrate. Cellular and Molecular Bioengineering, 2013, 6, 310-325.	1.0	5
1393	Substrate Stiffness Regulates PDGF-Induced Circular Dorsal Ruffle Formation Through MLCK. Cellular and Molecular Bioengineering, 2013, 6, 138-147.	1.0	33
1394	Modulation of Nuclear Shape by Substrate Rigidity. Cellular and Molecular Bioengineering, 2013, 6, 230-238.	1.0	125

#	Article	IF	CITATIONS
1395	Right and Left Ventricular Diastolic Pressure–Volume Relations: A Comprehensive Review. Journal of Cardiovascular Translational Research, 2013, 6, 239-252.	1.1	33
1396	Microengineered tumor models: insights & Deportunities from a physical sciences-oncology perspective. Biomedical Microdevices, 2013, 15, 583-593.	1.4	35
1397	A comparison of fibrin, agarose and gellan gum hydrogels as carriers of stem cells and growth factor delivery microspheres for cartilage regeneration. Biomedical Materials (Bristol), 2013, 8, 035004.	1.7	54
1398	Tissue growth into threeâ€dimensional composite scaffolds with controlled microâ€features and nanotopographical surfaces. Journal of Biomedical Materials Research - Part A, 2013, 101, 2796-2807.	2.1	44
1399	Blood flow and arterial endothelial dysfunction: Mechanisms and implications. Comptes Rendus Physique, 2013, 14, 479-496.	0.3	33
1400	Computational Modeling in Tissue Engineering. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2013, , .	0.7	24
1401	Cell–Material Interactions Revealed Via Material Techniques of Surface Patterning. Advanced Materials, 2013, 25, 5257-5286.	11.1	424
1402	Effect of Mechanical Instability of Polymer Scaffolds on Cell Adhesion. Langmuir, 2013, 29, 11087-11092.	1.6	16
1403	Toward single cell traction microscopy within 3D collagen matrices. Experimental Cell Research, 2013, 319, 2396-2408.	1.2	78
1404	Particle tracking in living cells: a review of the mean square displacement method and beyond. Rheologica Acta, 2013, 52, 425-443.	1.1	116
1405	Beyond displays: The recent progress of liquid crystals for bio/chemical detections. Science Bulletin, 2013, 58, 2557-2562.	1.7	18
1406	Thermorheology of living cells—impact of temperature variations on cell mechanics. New Journal of Physics, 2013, 15, 045026.	1.2	50
1407	Cellâ€laden Microengineered and Mechanically Tunable Hybrid Hydrogels of Gelatin and Graphene Oxide. Advanced Materials, 2013, 25, 6385-6391.	11.1	266
1408	Quantifying Cell-to-Cell Variation in Power-Law Rheology. Biophysical Journal, 2013, 105, 1093-1102.	0.2	84
1409	Physics of adherent cells. Reviews of Modern Physics, 2013, 85, 1327-1381.	16.4	302
1410	Tailorable Cell Culture Platforms from Enzymatically Cross-Linked Multifunctional Poly(ethylene) Tj ETQq $1\ 1\ 0.78$	4314 rgB1 2.6	T/gyerlock 1
1411	Tissue-Compliant Neural Implants from Microfabricated Carbon Nanotube Multilayer Composite. ACS Nano, 2013, 7, 7619-7629.	7.3	74
1414	Guidance of Cell Migration by Substrate Dimension. Biophysical Journal, 2013, 104, 313-321.	0.2	87

#	Article	IF	CITATIONS
1415	The independent roles of mechanical, structural and adhesion characteristics of 3D hydrogels on the regulation of cancer invasion and dissemination. Biomaterials, 2013, 34, 9486-9495.	5.7	101
1416	Cellular Response to Substrate Rigidity Is Governed by Either Stress or Strain. Biophysical Journal, 2013, 104, 19-29.	0.2	112
1417	Multiscale analysis of collagen microstructure with generalized image correlation spectroscopy and the detection of tissue prestress. Biomaterials, 2013, 34, 6127-6132.	5.7	12
1418	Carbon Nanotube-Based Materialsâ€"Preparation, Biocompatibility, and Applications in Dentistry. , 2013, , 37-67.		3
1419	Tuning Cell Adhesion and Growth on Biomimetic Polyelectrolyte Multilayers by Variation of p <scp>H</scp> During Layerâ€byâ€ <scp>L</scp> ayer Assembly. Macromolecular Bioscience, 2013, 13, 1327-1338.	2.1	46
1420	Chitosan/gelatin porous scaffolds containing hyaluronic acid and heparan sulfate for neural tissue engineering. Journal of Biomaterials Science, Polymer Edition, 2013, 24, 999-1014.	1.9	62
1421	Relationships among cell morphology, intrinsic cell stiffness and cell–substrate interactions. Biomaterials, 2013, 34, 9754-9762.	5.7	44
1422	Primary cilia act as mechanosensors during bone healing around an implant. Medical Engineering and Physics, 2013, 35, 392-402.	0.8	33
1423	Assessments of injectable alginate particle-embedded fibrin hydrogels for soft tissue reconstruction. Biomedical Materials (Bristol), 2013, 8, 014105.	1.7	33
1424	Fabrication of Freestanding 1-D PDMS Microstructures Using Capillary Micromolding. Journal of Microelectromechanical Systems, 2013, 22, 992-994.	1.7	25
1425	The effect of sinusoidal AC electric stimulation of 3D PCL/CNT and PCL/ \hat{I}^2 -TCP based bio-composites on cellular activities for bone tissue regeneration. Journal of Materials Chemistry B, 2013, 1, 1439.	2.9	23
1426	To bind or not to bind. Nature, 2013, 502, 313-314.	13.7	2
1427	Interaction of focal adhesions mediated by the substrate elasticity. Soft Matter, 2013, 9, 11120.	1.2	10
1428	Plant biomechanics and mechanobiology are convergent paths to flourishing interdisciplinary research. Journal of Experimental Botany, 2013, 64, 4617-4633.	2.4	63
1429	Cell and Molecular Biology of Breast Cancer. , 2013, , .		10
1430	Nuclear Lamin-A Scales with Tissue Stiffness and Enhances Matrix-Directed Differentiation. Science, 2013, 341, 1240104.	6.0	1,595
1431	Substrate elasticity as biomechanical modulator of tissue homeostatic parameters in corneal keratinocytes. Experimental Cell Research, 2013, 319, 1889-1901.	1.2	27
1432	Physics of interactions at biological and biomaterial interfaces. Current Opinion in Colloid and Interface Science, 2013, 18, 432-439.	3.4	13

#	Article	IF	CITATIONS
1433	New Tools and New Biology: Recent Miniaturized Systems for Molecular and Cellular Biology. Molecules and Cells, 2013, 36, 485-506.	1.0	28
1434	Effect of Molecular Composition of Heparin and Cellulose Sulfate on Multilayer Formation and Cell Response. Langmuir, 2013, 29, 13853-13864.	1.6	51
1435	Local micromechanical properties of decellularized lung scaffolds measured with atomic force microscopy. Acta Biomaterialia, 2013, 9, 6852-6859.	4.1	77
1436	An iceâ€templated, linearly aligned chitosanâ€alginate scaffold for neural tissue engineering. Journal of Biomedical Materials Research - Part A, 2013, 101, 3493-3503.	2.1	91
1437	Deconstructing Dimensionality. Science, 2013, 339, 402-404.	6.0	88
1438	Microfluidic Vascular Networks for Engineered Tissues. , 2013, , 223-245.		1
1439	A phenomenological approach to modelling collective cell movement in 2D. Biomechanics and Modeling in Mechanobiology, 2013, 12, 1089-1100.	1.4	24
1440	Tropoelastin — A multifaceted naturally smart material. Advanced Drug Delivery Reviews, 2013, 65, 421-428.	6.6	66
1441	Matrix Microarchitecture and Myosin II Determine Adhesion in 3D Matrices. Current Biology, 2013, 23, 1607-1619.	1.8	76
1442	Can physics help to explain embryonic development? An overview. Orthopaedics and Traumatology: Surgery and Research, 2013, 99, S356-S365.	0.9	3
1443	Contractile Fibers and Catch-Bond Clusters: a Biological Force Sensor?. Biophysical Journal, 2013, 105, 1336-1345.	0.2	52
1444	Perfusion-decellularized pancreas as a natural 3D scaffold for pancreatic tissue and whole organ engineering. Biomaterials, 2013, 34, 6760-6772.	5.7	242
1445	Cell and tissue mechanics in cell migration. Experimental Cell Research, 2013, 319, 2418-2423.	1.2	155
1446	Artificial Antigenâ€Presenting Interfaces in the Service of Immunology. Israel Journal of Chemistry, 2013, 53, 655-669.	1.0	6
1447	Rational design of nanofiber scaffolds for orthopedic tissue repair and regeneration. Nanomedicine, 2013, 8, 1459-1481.	1.7	65
1448	Cell-Imprinted Substrates Direct the Fate of Stem Cells. ACS Nano, 2013, 7, 8379-8384.	7.3	110
1449	Probing the mechanosensitivity in cell adhesion and migration: Experiments and modeling. Acta Mechanica Sinica/Lixue Xuebao, 2013, 29, 469-484.	1.5	5
1450	Biomechanical properties and mechanobiology of the articular chondrocyte. American Journal of Physiology - Cell Physiology, 2013, 305, C1202-C1208.	2.1	75

#	Article	IF	CITATIONS
1451	Two- and three-dimensional tissue culture bioprocessing methods for soft tissue engineering. , 2013, , 34-53.		0
1452	Polysaccharideâ€Based Polyanion–Polycation–Polyanion Ternary Systems in the Concentrated Regime and Hydrogel Form. Macromolecular Chemistry and Physics, 2013, 214, 1309-1320.	1.1	14
1453	Reversing bone loss by directing mesenchymal stem cells to bone. Stem Cells, 2013, 31, 2003-2014.	1.4	79
1454	Rheological and Turbidity Study of Fibrin Hydrogels. Macromolecular Symposia, 2013, 334, 117-125.	0.4	24
1455	Photoresponsive smart template for reversible cell micropatterning. Journal of Materials Chemistry B, 2013, 1, 2013.	2.9	23
1456	A three-dimensional model for tissue deposition on complex surfaces. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 1056-1070.	0.9	62
1457	Enhanced contractility with 2-deoxy-ATP and EMD 57033 is correlated with reduced myofibril structure and twitch power in neonatal cardiomyocytes. Integrative Biology (United Kingdom), 2013, 5, 1366.	0.6	7
1458	Hyaluronan and self-assembling peptides as building blocks to reconstruct the extracellular environment in skin tissue. Biomaterials Science, 2013, 1, 952.	2.6	29
1459	Softly constrained films. Soft Matter, 2013, 9, 8121.	1.2	16
1460	Full range physiological mass transport control in 3D tissue cultures. Lab on A Chip, 2013, 13, 81-89.	3.1	112
1461	Preparation and characterization of multi-layered poly ($\hat{l}\mu$ -caprolactone)/chitosan scaffolds fabricated with a combination of melt-plotting/in situ plasma treatment and a coating method for hard tissue regeneration. Journal of Materials Chemistry B, 2013, 1, 5831.	2.9	24
1462	Mechanical reinforcement of C2-phenyl-derived hydrogels for controlled cell adhesion. Soft Matter, 2013, 9, 3750.	1.2	52
1463	Measuring the Mechanical Properties of Living Cells Using Atomic Force Microscopy. Journal of Visualized Experiments, 2013, , .	0.2	108
1464	Bio/non-bio interfaces: A straightforward method for obtaining long term PDMS/muscle cell biohybrid constructs. Colloids and Surfaces B: Biointerfaces, 2013, 105, 144-151.	2.5	31
1465	Nano-Indentation Device for Investigating the Mechanics of Compliant Materials. Experimental Mechanics, 2013, 53, 217-229.	1.1	4
1466	Monitoring degradation of matrix metalloproteinases-cleavable PEG hydrogels via multiple particle tracking microrheology. Soft Matter, 2013, 9, 1570-1579.	1.2	69
1467	Substrate stiffness affects sarcomere and costamere structure and electrophysiological function of isolated adult cardiomyocytes. Cardiovascular Pathology, 2013, 22, 219-227.	0.7	45
1468	Graphene and its derivatives for cell biotechnology. Analyst, The, 2013, 138, 72-86.	1.7	48

#	Article	IF	CITATIONS
1469	Numerical estimation of 3D mechanical forces exerted by cells on non-linear materials. Journal of Biomechanics, 2013, 46, 50-55.	0.9	11
1470	Influence of Polyelectrolyte Film Stiffness on Bacterial Growth. Biomacromolecules, 2013, 14, 520-528.	2.6	65
1471	Focal adhesion size uniquely predicts cell migration. FASEB Journal, 2013, 27, 1351-1361.	0.2	299
1472	The use of type 1 collagen scaffold containing stromal cell-derived factor-1 to create a matrix environment conducive to partial-thickness cartilage defects repair. Biomaterials, 2013, 34, 713-723.	5.7	129
1473	Formation of composite polyacrylamide and silicone substrates for independent control of stiffness and strain. Lab on A Chip, 2013, 13, 646.	3.1	49
1474	Effects of aspect ratios of stem cells on lineage commitments with and without induction media. Biomaterials, 2013, 34, 930-939.	5.7	131
1475	The influence and interactions of substrate thickness, organization and dimensionality on cell morphology and migration. Acta Biomaterialia, 2013, 9, 5502-5510.	4.1	34
1476	Murine and human pluripotent stem cell-derived cardiac bodies form contractile myocardial tissue in vitro. European Heart Journal, 2013, 34, 1134-1146.	1.0	180
1477	Human corneal endothelial cell sheets for transplantation: Thermo-responsive cell culture carriers to meet cell-specific requirements. Acta Biomaterialia, 2013, 9, 5031-5039.	4.1	37
1478	Piezoelectric Substrates Promote Neurite Growth in Rat Spinal Cord Neurons. Annals of Biomedical Engineering, 2013, 41, 112-122.	1.3	83
1479	Engineering an <i>in situ</i> crosslinkable hydrogel for enhanced remyelination. FASEB Journal, 2013, 27, 1127-1136.	0.2	46
1480	Synthesis and structure–property relationship of polyester-urethanes and their evaluation for the regeneration of contractile tissues. Reactive and Functional Polymers, 2013, 73, 1366-1376.	2.0	34
1481	Nanomechanical measurements of polyethylene glycol hydrogels using atomic force microscopy. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 18, 20-28.	1.5	64
1482	Biophysical microenvironment and 3D culture physiological relevance. Drug Discovery Today, 2013, 18, 533-540.	3.2	34
1483	Control of three-dimensional substrate stiffness to manipulate mesenchymal stem cell fate toward neuronal or glial lineages. Acta Biomaterialia, 2013, 9, 5170-5180.	4.1	166
1484	Effects of surface molecular chirality on adhesion and differentiation of stem cells. Biomaterials, 2013, 34, 9001-9009.	5.7	110
1485	Continuous gradient scaffolds for rapid screening of cell–material interactions and interfacial tissue regeneration. Acta Biomaterialia, 2013, 9, 8254-8261.	4.1	30
1486	Microfabricated devices for cell biology: all for one and one for all. Current Opinion in Cell Biology, 2013, 25, 116-124.	2.6	46

#	Article	IF	CITATIONS
1487	In vitro human periodontal ligament-like tissue formation with porous poly-l-lactide matrix. Materials Science and Engineering C, 2013, 33, 3273-3280.	3.8	11
1488	Cell Migration: Cooperation between Myosin II Isoforms in Durotaxis. Current Biology, 2013, 23, R28-R29.	1.8	6
1489	Collagen hydrogels incorporated with surface-aminated mesoporous nanobioactive glass: Improvement of physicochemical stability and mechanical properties is effective for hard tissue engineering. Acta Biomaterialia, 2013, 9, 9508-9521.	4.1	152
1490	How cells sense extracellular matrix stiffness: a material's perspective. Current Opinion in Biotechnology, 2013, 24, 948-953.	3.3	165
1491	Hierarchical micro-adaptation of biological structures by mechanical stimuli. International Journal of Solids and Structures, 2013, 50, 2353-2370.	1.3	6
1492	Extracellular matrix determinants and the regulation of cancer cell invasion stratagems. Journal of Microscopy, 2013, 251, 250-260.	0.8	81
1493	Constructing stem cell microenvironments using bioengineering approaches. Physiological Genomics, 2013, 45, 1123-1135.	1.0	43
1494	Reproductive Stem Cell Differentiation: Extracellular Matrix, Tissue Microenvironment, and Growth Factors Direct the Mesenchymal Stem Cell Lineage Commitment. Reproductive Sciences, 2013, 20, 1137-1143.	1.1	31
1495	Deformation Gradients Imprint the Direction and Speed of En Masse Fibroblast Migration for Fast Healing. Journal of Investigative Dermatology, 2013, 133, 2471-2479.	0.3	9
1496	Decoupling Cell and Matrix Mechanics in Engineered Microtissues Using Magnetically Actuated Microcantilevers. Advanced Materials, 2013, 25, 1699-1705.	11.1	89
1497	Multiarray cell stretching platform for high-magnification real-time imaging. Nanomedicine, 2013, 8, 543-553.	1.7	14
1498	Necking and failure of constrained 3D microtissues induced by cellular tension. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20923-20928.	3.3	46
1499	Defining Single Molecular Forces Required to Activate Integrin and Notch Signaling. Science, 2013, 340, 991-994.	6.0	448
1500	Intracellular delivery of polymeric nanocarriers: a matter of size, shape, charge, elasticity and surface composition. Therapeutic Delivery, 2013, 4, 705-723.	1.2	55
1501	Troubleshooting and deconvoluting label-free cell phenotypic assays in drug discovery. Journal of Pharmacological and Toxicological Methods, 2013, 67, 69-81.	0.3	35
1502	Polycaprolactone scaffolds or anisotropic particles: The initial solution temperature dependence in a gelatin particle-leaching method. Polymer, 2013, 54, 277-283.	1.8	7
1503	Confined compression of collagen hydrogels. Journal of Biomechanics, 2013, 46, 837-840.	0.9	27
1504	Research on cell behavior related to anodized and hydrothermally treated titanium surface. Applied Surface Science, 2013, 271, 1-6.	3.1	8

#	Article	IF	CITATIONS
1505	Biomechanical properties of retinal glial cells: Comparative and developmental data. Experimental Eye Research, 2013, 113, 60-65.	1.2	21
1506	Surface chemical functionalities affect the behavior of human adipose-derived stem cells in vitro. Applied Surface Science, 2013, 270, 473-479.	3.1	31
1507	Resonant waveguide grating biosensor-enabled label-free and fluorescence detection of cell adhesion. Sensors and Actuators B: Chemical, 2013, 188, 1064-1072.	4.0	10
1508	Systematic study of alginate-based microcapsules by micropipette aspiration and confocal fluorescence microscopy. Materials Science and Engineering C, 2013, 33, 4295-4304.	3.8	34
1509	Modelling the role of surface stress on the kinetics of tissue growth in confined geometries. Acta Biomaterialia, 2013, 9, 5531-5543.	4.1	59
1510	The effect of electrically charged polyion complex nanoparticle-coated surfaces on adipose-derived stromal progenitor cell behaviour. Biomaterials, 2013, 34, 9096-9102.	5.7	16
1511	Effect of RGD functionalization and stiffness modulation of polyelectrolyte multilayer films on muscle cell differentiation. Acta Biomaterialia, 2013, 9, 6468-6480.	4.1	58
1512	Adsorption state of fibronectin on poly(dimethylsiloxane) surfaces with varied stiffness can dominate adhesion density of fibroblasts. Acta Biomaterialia, 2013, 9, 5493-5501.	4.1	68
1513	Peut-on mieux comprendre le d \tilde{A} ©veloppement des embryons gr \tilde{A} ¢ce \tilde{A} la physique \hat{A} ?. Revue De Chirurgie Orthopedique Et Traumatologique, 2013, 99, S260-S270.	0.0	0
1514	Cytoskeletal tension modulates MMP-1 gene expression from tenocytes on micropillar substrates. Journal of Biomechanics, 2013, 46, 991-997.	0.9	34
1515	Correlation between cell attachment areas after 2h of culture and osteogenic differentiation activity of rat mesenchymal stem cells on hydroxyapatite substrates with various surface properties. Biochemical and Biophysical Research Communications, 2013, 430, 156-160.	1.0	4
1516	Force distribution on multiple bonds controls the kinetics of adhesion in stretched cells. Journal of Biomechanics, 2013, 46, 307-313.	0.9	10
1517	Engineering in vitro microenvironments for cell based therapies and drug discovery. Drug Discovery Today, 2013, 18, 1099-1108.	3.2	69
1518	Substrate Stiffness Regulates Cellular Uptake of Nanoparticles. Nano Letters, 2013, 13, 1611-1615.	4.5	102
1519	Architecture of the osteocyte network correlates with bone material quality. Journal of Bone and Mineral Research, 2013, 28, 1837-1845.	3.1	285
1520	Photoresponsive Polyesters for Tailorable Shape Memory Biomaterials. Macromolecules, 2013, 46, 2134-2140.	2.2	58
1521	Regulation of wound healing and organ fibrosis by toll-like receptors. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2013, 1832, 1005-1017.	1.8	118
1522	Nanomedical Devices., 2013,, 235-292.		2

#	Article	IF	CITATIONS
1523	Emergent complexity of the cytoskeleton: from single filaments to tissue. Advances in Physics, 2013, 62, 1-112.	35.9	182
1524	The Yin-Yang of Rigidity Sensing: How Forces and Mechanical Properties Regulate the Cellular Response to Materials. Annual Review of Materials Research, 2013, 43, 589-618.	4.3	106
1525	Modified gellan gum hydrogels for tissue engineering applications. Soft Matter, 2013, 9, 3705.	1.2	117
1526	Mechanosensitive TRPC1 Channels Promote Calpain Proteolysis of Talin to Regulate Spinal Axon Outgrowth. Journal of Neuroscience, 2013, 33, 273-285.	1.7	120
1527	Cellular Mechanotransduction Relies on Tension-Induced and Chaperone-Assisted Autophagy. Current Biology, 2013, 23, 430-435.	1.8	246
1528	Materiomics: An â€∢i>omics Approach to Biomaterials Research. Advanced Materials, 2013, 25, 802-824.	11.1	134
1529	Cell attachment and proliferation on high conductivity PEDOT–glycol composites produced by vapour phase polymerisation. Biomaterials Science, 2013, 1, 368-378.	2.6	31
1530	Nanostructured Surfaces of Dental Implants. International Journal of Molecular Sciences, 2013, 14, 1918-1931.	1.8	53
1531	Mapping the local elastic properties of nanostructured germanium surfaces: from nanoporous sponges to self-organized nanodots. Nanotechnology, 2013, 24, 115702.	1.3	12
1532	Synthesis of a biodegradable polymer in gas expanded solution: effect of the process on cytocompatibility. Green Chemistry, 2013, 15, 1280.	4.6	7
1533	Carcinomaâ€associated fibroblasts: Nonâ€neoplastic tumourâ€promoting mesenchymal cells. Journal of Cellular Physiology, 2013, 228, 1651-1657.	2.0	178
1534	Physical break-down of the classical view on cancer cell invasion and metastasis. European Journal of Cell Biology, 2013, 92, 89-104.	1.6	35
1535	Dynamic Manipulation of Hydrogels to Control Cell Behavior: A Review. Tissue Engineering - Part B: Reviews, 2013, 19, 455-469.	2.5	57
1536	Timeâ€dependent traction force microscopy for cancer cells as a measure of invasiveness. Cytoskeleton, 2013, 70, 201-214.	1.0	66
1537	Stiffness-mediated adhesion of cervical cancer cells to soft hydrogel films. Soft Matter, 2013, 9, 4580.	1.2	26
1538	The importance of the self-assembly process to control mechanical properties of low molecular weight hydrogels. Chemical Society Reviews, 2013, 42, 5143.	18.7	460
1539	Computer-Aided Tissue Engineering: Application to the Case of Anterior Cruciate Ligament Repair. Lecture Notes in Computational Vision and Biomechanics, 2013, , 1-44.	0.5	8
1540	Directing Chondrogenesis of Stem Cells with Specific Blends of Cellulose and Silk. Biomacromolecules, 2013, 14, 1287-1298.	2.6	55

#	Article	IF	CITATIONS
1541	Bioresponsive hydrogel scaffolding systems for 3D constructions in tissue engineering and regenerative medicine. Nanomedicine, 2013, 8, 655-668.	1.7	33
1542	Designing degradable hydrogels for orthogonal control of cell microenvironments. Chemical Society Reviews, 2013, 42, 7335-7372.	18.7	590
1543	Buckling Instability in Growing Tumor Spheroids. Physical Review Letters, 2013, 110, 158102.	2.9	54
1544	Scaffolds for bone tissue engineering: role of surface patterning on osteoblast response. RSC Advances, 2013, 3, 11073.	1.7	93
1545	Nonlinear Elasticity: From Single Chain to Networks and Gels. Macromolecules, 2013, 46, 3679-3692.	2.2	88
1546	Polymorphism and bistability in adherent cells. Soft Matter, 2013, 9, 5251.	1.2	13
1547	Cryogels for biomedical applications. Journal of Materials Chemistry B, 2013, 1, 2682.	2.9	236
1548	Interfacial study of cell adhesion to liquid crystals using widefield surface plasmon resonance microscopy. Colloids and Surfaces B: Biointerfaces, 2013, 110, 156-162.	2.5	15
1549	Tumor cell migration in complex microenvironments. Cellular and Molecular Life Sciences, 2013, 70, 1335-1356.	2.4	183
1550	Inducing Rapid Cellular Response on RGD-Binding Threaded Macromolecular Surfaces. Journal of the American Chemical Society, 2013, 135, 5513-5516.	6.6	107
1551	Colon cancer cells adopt an invasive phenotype without mesenchymal transition in 3-D but not 2-D culture upon combined stimulation with EGF and crypt growth factors. BMC Cancer, 2013, 13, 221.	1.1	20
1552	Nanotechnology to drive stem cell commitment. Nanomedicine, 2013, 8, 469-486.	1.7	29
1553	Electrochemically Controlled Stiffness of Multilayers for Manipulation of Cell Adhesion. ACS Applied Materials & Samp; Interfaces, 2013, 5, 4597-4602.	4.0	35
1554	Surface Properties and Interaction Forces of Biopolymer-Doped Conductive Polypyrrole Surfaces by Atomic Force Microscopy. Langmuir, 2013, 29, 6099-6108.	1.6	21
1555	Self-Organization and the Self-Assembling Process in Tissue Engineering. Annual Review of Biomedical Engineering, 2013, 15, 115-136.	5.7	182
1556	Defined extracellular matrix components are necessary for definitive endoderm induction. Stem Cells, 2013, 31, 2084-2094.	1.4	39
1557	Surface properties of nanostructured bio-active interfaces: impacts of surface stiffness and topography on cell–surface interactions. RSC Advances, 2013, 3, 13293.	1.7	25
1558	Tissue Engineering Scaffolds. , 2013, , 1138-1159.		9

#	Article	IF	CITATIONS
1559	Engineering the matrix microenvironment for cell delivery and engraftment for tissue repair. Current Opinion in Biotechnology, 2013, 24, 864-871.	3.3	29
1560	Hemostatic properties and the role of cell receptor recognition in human hair keratin protein hydrogels. Biomaterials, 2013, 34, 2632-2640.	5.7	101
1561	Cell–ECM Interactions and the Regulation of Epithelial Branching Morphogenesis. Biology of Extracellular Matrix, 2013, , 75-104.	0.3	1
1562	Engineered ECM Microenvironments and Their Regulation of Stem Cells. Biology of Extracellular Matrix, 2013, , 133-160.	0.3	2
1563	Synthetic biopolymer nanocomposites for tissue engineering scaffolds. Progress in Polymer Science, 2013, 38, 1487-1503.	11.8	411
1564	Migration Patterns and Cell Functions of Adipose-Derived Stromal Cells on Self-Assembled Monolayers with Different Functional Groups. Journal of Biomaterials Science, Polymer Edition, 2013, 24, 94-117.	1.9	13
1565	Geometry–Force Control of Stem Cell Fate. BioNanoScience, 2013, 3, 43-51.	1.5	23
1566	Cell-Laden Poly(É)-caprolactone)/Alginate Hybrid Scaffolds Fabricated by an Aerosol Cross-Linking Process for Obtaining Homogeneous Cell Distribution: Fabrication, Seeding Efficiency, and Cell Proliferation and Distribution. Tissue Engineering - Part C: Methods, 2013, 19, 784-793.	1.1	42
1567	Biomimetic self-assembling peptides as scaffolds for soft tissue engineering. Nanomedicine, 2013, 8, 823-847.	1.7	110
1568	Directional cell migration through cell–cell interaction on polyelectrolyte multilayers with swelling gradients. Biomaterials, 2013, 34, 975-984.	5.7	62
1569	Neurite outgrowth and synaptophysin expression of postnatal CNS neurons on GaP nanowire arrays in long-term retinal cell culture. Biomaterials, 2013, 34, 875-887.	5.7	87
1570	Investigation of microstructure, mechanical properties and cellular viability of poly(L-lactic acid) tissue engineering scaffolds prepared by different thermally induced phase separation protocols. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 17, 186-197.	1.5	32
1571	Chondrogenesis on sulfonate-coated hydrogels is regulated by their mechanical properties. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 17, 337-346.	1.5	41
1572	Poly (hydroxyethyl methacrylate-glycidyl methacrylate) films modified with different functional groups: In vitro interactions with platelets and rat stem cells. Materials Science and Engineering C, 2013, 33, 801-810.	3.8	23
1573	Thin Polymer Brush Decouples Biomaterial's Micro-/Nanotopology and Stem Cell Adhesion. Langmuir, 2013, 29, 13843-13852.	1.6	31
1574	Electrically Modulated Microtransfer Molding for Fabrication of Micropillar Arrays with Spatially Varying Heights. Langmuir, 2013, 29, 1351-1355.	1.6	26
1575	Generation of Cell-Instructive Collagen Gels through Thermodynamic Control. ACS Macro Letters, 2013, 2, 1077-1081.	2.3	8
1576	Medical applications of biopolyesters polyhydroxyalkanoates. Chinese Journal of Polymer Science (English Edition), 2013, 31, 719-736.	2.0	52

#	Article	IF	CITATIONS
1577	In vitro myoblast motility models: investigating migration dynamics for the study of skeletal muscle repair. Journal of Muscle Research and Cell Motility, 2013, 34, 333-347.	0.9	32
1578	Impact of polyelectrolytes and their corresponding multilayers to human primary endothelial cells. Journal of Biomaterials Applications, 2013, 28, 84-99.	1.2	19
1580	Matrix mechanics and regulation of the fibroblast phenotype. Periodontology 2000, 2013, 63, 14-28.	6.3	67
1581	Synthetic biopolymer/layered silicate nanocomposites for tissue engineering scaffolds. , 2013, , 548-581.		3
1582	Nanomechanics controls neuronal precursors adhesion and differentiation. Biotechnology and Bioengineering, 2013, 110, 2301-2310.	1.7	24
1583	Molecular Tension Sensors Report Forces Generated by Single Integrin Molecules in Living Cells. Nano Letters, 2013, 13, 3985-3989.	4.5	192
1584	Neuronal Differentiation of Embryonic Stem Cell Derived Neuronal Progenitors Can Be Regulated by Stretchable Conducting Polymers. Tissue Engineering - Part A, 2013, 19, 1984-1993.	1.6	20
1585	Microwell fabrication methods and applications for cellular studies. Biomedical Engineering Letters, 2013, 3, 131-137.	2.1	41
1586	Mechanical Regulation of Cellular Adhesion onto Honeycomb-Patterned Porous Scaffolds by Altering the Elasticity of Material Surfaces. Biomacromolecules, 2013, 14, 1208-1213.	2.6	53
1587	Probing the compressibility of tumor cell nuclei by combined atomic force–confocal microscopy. Physical Biology, 2013, 10, 065002.	0.8	120
1588	Evaluation of Multifunctional Polysaccharide Hydrogels with Varying Stiffness for Bone Tissue Engineering. Tissue Engineering - Part A, 2013, 19, 2452-2463.	1.6	36
1590	Numerical Characterization of Electrohydrodynamic Micro- or Nanopatterning Processes Based on a Phase-Field Formulation of Liquid Dielectrophoresis. Langmuir, 2013, 29, 4703-4714.	1.6	53
1591	Nanometric Protein-Patch Arrays on Glass and Polydimethylsiloxane for Cell Adhesion Studies. Nano Letters, 2013, 13, 3372-3378.	4.5	18
1592	Different hyaluronic acid morphology modulates primary articular chondrocyte behavior in hyaluronic acidâ€coated polycaprolactone scaffolds. Journal of Biomedical Materials Research - Part A, 2013, 101A, 518-527.	2.1	30
1593	<i>In vitro</i> evaluation of hydroxyapatite–chitosan–gelatin composite membrane in guided tissue regeneration. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1016-1025.	2.1	37
1594	Nuclear and cellular alignment of primary corneal epithelial cells on topography. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1069-1079.	2.1	22
1595	Microfluidics for Manipulating Cells. Small, 2013, 9, 9-21.	5.2	175
1596	Microfabricated Nanotopological Surfaces for Study of Adhesionâ€Dependent Cell Mechanosensitivity. Small, 2013, 9, 81-89.	5.2	26

#	Article	IF	CITATIONS
1597	Microribbonâ€Like Elastomers for Fabricating Macroporous and Highly Flexible Scaffolds that Support Cell Proliferation in 3D. Advanced Functional Materials, 2013, 23, 346-358.	7.8	59
1598	Precise Control of Cell Adhesion by Combination of Surface Chemistry and Soft Lithography. Advanced Healthcare Materials, 2013, 2, 95-108.	3.9	81
1599	Stem Cell Response to Spatially and Temporally Displayed and Reversible Surface Topography. Advanced Healthcare Materials, 2013, 2, 155-164.	3.9	81
1600	Stemâ€Cell Niche Based Comparative Analysis of Chemical and Nanoâ€mechanical Material Properties Impacting Ex Vivo Expansion and Differentiation of Hematopoietic and Mesenchymal Stem Cells. Advanced Healthcare Materials, 2013, 2, 25-42.	3.9	63
1601	Engineering the Regenerative Microenvironment with Biomaterials. Advanced Healthcare Materials, 2013, 2, 57-71.	3.9	329
1602	Substrate stiffness influences TGF- \hat{I}^21 -induced differentiation of bronchial fibroblasts into myofibroblasts in airway remodeling. Molecular Medicine Reports, 2013, 7, 419-424.	1.1	55
1603	Biofilm attachment reduction on bioinspired, dynamic, micro-wrinkling surfaces. New Journal of Physics, 2013, 15, 095018.	1.2	68
1604	ADHESIVITY OF COLON CANCER CELLS DURING <i>IN VITRO</i> METASTASIS. International Journal of Applied Mechanics, 2013, 05, 1350025.	1.3	3
1605	Predicting how cells spread and migrate. Cell Adhesion and Migration, 2013, 7, 293-296.	1.1	68
1606	Xiamenmycin Attenuates Hypertrophic Scars by Suppressing Local Inflammation and the Effects of Mechanical Stress. Journal of Investigative Dermatology, 2013, 133, 1351-1360.	0.3	48
1607	Shp2 plays a crucial role in cell structural orientation and force polarity in response to matrix rigidity. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2840-2845.	3.3	34
1608	Simulation of the Mechanical Response of Cells on Micropost Substrates. Journal of Biomechanical Engineering, 2013, 135, 101012.	0.6	14
1609	Advanced Strategies for Articular Cartilage Defect Repair. Materials, 2013, 6, 637-668.	1.3	92
1610	A Mechanical Design Principle for Tissue Structure and Function in the Airway Tree. PLoS Computational Biology, 2013, 9, e1003083.	1.5	11
1611	Responses of chromosome segregation machinery to mechanical perturbations. Biophysics (Nagoya-shi, Japan), 2013, 9, 73-78.	0.4	4
1612	Multiscale Mechanical Simulations of Cell Compacted Collagen Gels. Journal of Biomechanical Engineering, 2013, 135, 71004.	0.6	42
1613	Emerging Stem Cell Controls: Nanomaterials and Plasma Effects. Journal of Nanomaterials, 2013, 2013, 1-15.	1.5	14
1614	Controlling cell–matrix traction forces by extracellular geometry. New Journal of Physics, 2013, 15, 035015.	1.2	32

#	Article	IF	CITATIONS
1615	Elucidating Multiscale Periosteal Mechanobiology: A Key to Unlocking the Smart Properties and Regenerative Capacity of the Periosteum?. Tissue Engineering - Part B: Reviews, 2013, 19, 147-159.	2.5	63
1616	Actin depolymerization under force is governed by lysine 113:glutamic acid 195-mediated catch-slip bonds. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5022-5027.	3.3	66
1617	Mesenchymal stem cell mechanobiology and emerging experimental platforms. Journal of the Royal Society Interface, 2013, 10, 20130179.	1.5	120
1618	Regulation of Matrix Assembly through Rigidity-dependent Fibronectin Conformational Changes. Journal of Biological Chemistry, 2013, 288, 14805-14814.	1.6	46
1619	Probing multiscale mechanics of collagen with optical tweezers. Proceedings of SPIE, 2013, , .	0.8	10
1620	Rigidity sensing by stochastic sliding friction. Europhysics Letters, 2013, 104, 38003.	0.7	44
1621	Applications of nanobioceramics to healthcare technology. Nanotechnology Reviews, 2013, 2, 679-697.	2.6	10
1622	Platelet responses to dynamic biomaterial surfaces with different poly(ethylene glycol) and polyrotaxane molecular architectures constructed on gold substrates. Journal of Biomaterials Applications, 2013, 28, 544-551.	1.2	9
1623	Response of Sheep Chondrocytes to Changes in Substrate Stiffness from 2 to 20 Pa: Effect of Cell Passaging. Connective Tissue Research, 2013, 54, 159-166.	1.1	31
1624	RhoA is down-regulated at cell–cell contacts via p190RhoGAP-B in response to tensional homeostasis. Molecular Biology of the Cell, 2013, 24, 1688-1699.	0.9	27
1625	Patterning droplets with durotaxis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12541-12544.	3.3	172
1626	In vitro tumor model for evaluating the lung cancer induced tumor angiogenesis. , 2013, , .		0
1627	Dynamics of elastic interactions in soft and biological matter. Physical Review E, 2013, 87, 042703.	0.8	20
1628	Stiffness-Modulated Water Retention and Neovascularization of Dermal Fibroblast-Encapsulating Collagen Gel. Tissue Engineering - Part A, 2013, 19, 1275-1284.	1.6	15
1629	Tuning the mechanical properties of selfâ€assembled mixedâ€peptide tubes. Journal of Microscopy, 2013, 249, 165-172.	0.8	22
1630	Uniaxial cell stretching device for live-cell imaging of mechanosensitive cellular functions. Review of Scientific Instruments, 2013, 84, 114304.	0.6	58
1631	Tailored (Bio)Interfaces via Surface Initiated Polymerization: Control of Grafting Density and New Responsive Diblock Copolymer Brushes. Macromolecular Symposia, 2013, 328, 64-72.	0.4	16
1632	Patterned Threeâ€Dimensional Encapsulation of Embryonic Stem Cells using Dielectrophoresis and Stereolithography. Advanced Healthcare Materials, 2013, 2, 450-458.	3.9	46

#	Article	IF	Citations
1633	Mesenchymal stem cell durotaxis depends on substrate stiffness gradient strength. Biotechnology Journal, 2013, 8, 472-484.	1.8	219
1634	Label-free mass spectrometry exploits dozens of detected peptides to quantify lamins in wildtype and knockdown cells. Nucleus, 2013, 4, 450-459.	0.6	16
1635	Bioactive polyacrylamide hydrogels with gradients in mechanical stiffness. Biotechnology and Bioengineering, 2013, 110, 1508-1519.	1.7	26
1636	Short (15 Minutes) Bone Morphogenetic Protein-2 Treatment Stimulates Osteogenic Differentiation of Human Adipose Stem Cells Seeded on Calcium Phosphate Scaffolds In Vitro. Tissue Engineering - Part A, 2013, 19, 571-581.	1.6	37
1637	Calcium ions and osteoclastogenesis initiate the induction of bone formation by coralâ€derived macroporous constructs. Journal of Cellular and Molecular Medicine, 2013, 17, 1444-1457.	1.6	41
1638	Matrix Stiffness in Threeâ€Dimensional Systems Effects on the Behavior of C3A Cells. Artificial Organs, 2013, 37, 166-174.	1.0	21
1639	Multifunctional SilkTropoelastin Biomaterial Systems. Israel Journal of Chemistry, 2013, 53, 777-786.	1.0	14
1640	Enhanced osteogenic fate and function of MC3T3-E1 cells on nanoengineered polystyrene surfaces with nanopillar and nanopore arrays. Biofabrication, 2013, 5, 025007.	3.7	30
1641	Differential activation and inhibition of RhoA by fluid flow induced shear stress in chondrocytes. Cell Biology International, 2013, 37, 568-576.	1.4	17
1642	Metre-long cell-laden microfibres exhibit tissue morphologies and functions. Nature Materials, 2013, 12, 584-590.	13.3	725
1643	Tuning the Poisson's Ratio of Biomaterials for Investigating Cellular Response. Advanced Functional Materials, 2013, 23, 3226-3232.	7.8	99
1644	B Cell Activation Is Regulated by the Stiffness Properties of the Substrate Presenting the Antigens. Journal of Immunology, 2013, 190, 4661-4675.	0.4	100
1645	Bio-inspired soft polystyrene nanotube substrate for rapid and highly efficient breast cancer-cell capture. NPG Asia Materials, 2013, 5, e63-e63.	3.8	114
1646	High throughput screening to investigate the interaction of stem cells with their extracellular microenvironment. Organogenesis, 2013, 9, 128-142.	0.4	34
1647	Healing of a mechano-responsive material. Europhysics Letters, 2013, 104, 68005.	0.7	3
1648	AXIAL-SYMMETRIC MODELING AND KINEMATIC ANALYSIS OF SPREADING OF SPARSELY CULTURED FIBROBLASTS. Journal of Mechanics in Medicine and Biology, 2013, 13, 1350062.	0.3	0
1649	Compliance-induced adherens junction formation in epithelial cells and tissues is regulated by JNK. Journal of Cell Science, 2013, 126, 2718-29.	1.2	22
1650	Chaperone-assisted proteostasis is essential for mechanotransduction in mammalian cells. Communicative and Integrative Biology, 2013, 6, e24925.	0.6	46

#	Article	IF	CITATIONS
1651	Multidimensional traction force microscopy reveals out-of-plane rotational moments about focal adhesions. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 881-886.	3.3	239
1652	Soft substrates normalize nuclear morphology and prevent nuclear rupture in fibroblasts from a laminopathy patient with compound heterozygous LMNA mutations. Nucleus, 2013, 4, 61-73.	0.6	58
1653	Cellular Properties of Mesenchymal Cells Derived from the Decidua of Human Term Placenta and Their Applications in Regenerative Medicine., 2013,, 240-260.		1
1654	Synthetic Polymer-Network Based Materials in Stem Cell Research. , 2013, , 3-36.		0
1655	Micropatterned Model Biological Membraneson a Solid Surface. , 2013, , 855-876.		1
1656	ASB2α regulates migration of immature dendritic cells. Blood, 2013, 122, 533-541.	0.6	23
1657	Human mesenchymal stem cells differentiate to epithelial cells when cultured on thick collagen gel. Bio-Medical Materials and Engineering, 2013, 23, 143-153.	0.4	5
1658	3.導電性髯å^†åé›»æ¥μã®ãƒ—ãƒã,»ã,∙ンã,°ã•ãƒã,ã,ªå¿œç"¨. Electrochemistry, 2013, 81, 31-35.	0.6	0
1659	Traction Force Measurement During Collective Cell Migration Measured by Multichannel Micropillar Device., 2013,,.		0
1660	In Vitro Cancer Metastasis Induced by Mechanical Force. , 2013, , .		0
1661	Applications of Microfabrication and Microfluidic Techniques in Mesenchymal Stem Cell Research. , 2013, , 69-95.		0
1662	Influence of membrane cholesterol and substrate elasticity on endothelial cell spreading behavior. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1994-2004.	2.1	8
1664	The Evolution of Three-Dimensional Cell Cultures Towards Unimpeded Regenerative Medicine and Tissue Engineering. , 0, , .		5
1665	Substrates with Changing Properties for Extracellular Matrix Mimicry. , 2013, , .		0
1666	Label-Free and Noninvasive Monitoring of Cell Differentiation on Spheroid Microarray. IEICE Transactions on Electronics, 2013, E96.C, 353-357.	0.3	0
1667	Microrheological Characterization of Collagen Systems: From Molecular Solutions to Fibrillar Gels. PLoS ONE, 2013, 8, e70590.	1.1	92
1668	Monolayer Stress Microscopy: Limitations, Artifacts, and Accuracy of Recovered Intercellular Stresses. PLoS ONE, 2013, 8, e55172.	1.1	156
1669	Three-Dimensional Quantification of Cellular Traction Forces and Mechanosensing of Thin Substrata by Fourier Traction Force Microscopy. PLoS ONE, 2013, 8, e69850.	1.1	93

#	Article	IF	Citations
1670	Boron Nitride Nanotube-Mediated Stimulation of Cell Co-Culture on Micro-Engineered Hydrogels. PLoS ONE, 2013, 8, e71707.	1.1	66
1671	Rectified Cell Migration on Saw-Like Micro-Elastically Patterned Hydrogels with Asymmetric Gradient Ratchet Teeth. PLoS ONE, 2013, 8, e78067.	1.1	23
1672	Deciphering the Combinatorial Roles of Geometric, Mechanical, and Adhesion Cues in Regulation of Cell Spreading. PLoS ONE, 2013, 8, e81113.	1.1	12
1673	Stem Cells in Tissue Engineering. , 2013, , .		4
1674	Bi-Directional Signaling: Extracellular Matrix and Integrin Regulation of Breast Tumor Progression. Critical Reviews in Eukaryotic Gene Expression, 2013, 23, 139-157.	0.4	54
1675	High Resolution, Large Deformation 3D Traction Force Microscopy. PLoS ONE, 2014, 9, e90976.	1.1	71
1676	Regional Variations in the Cellular, Biochemical, and Biomechanical Characteristics of Rabbit Annulus Fibrosus. PLoS ONE, 2014, 9, e91799.	1.1	23
1677	The Focal Adhesion-Localized CdGAP Regulates Matrix Rigidity Sensing and Durotaxis. PLoS ONE, 2014, 9, e91815.	1.1	51
1678	A Cell-Regulatory Mechanism Involving Feedback between Contraction and Tissue Formation Guides Wound Healing Progression. PLoS ONE, 2014, 9, e92774.	1.1	52
1679	Rapid Patterning of 1-D Collagenous Topography as an ECM Protein Fibril Platform for Image Cytometry. PLoS ONE, 2014, 9, e93590.	1.1	25
1680	Matrix Rigidity-Modulated Cardiovascular Organoid Formation from Embryoid Bodies. PLoS ONE, 2014, 9, e94764.	1.1	62
1681	Probing Cellular Mechanoadaptation Using Cell-Substrate De-Adhesion Dynamics: Experiments and Model. PLoS ONE, 2014, 9, e106915.	1.1	12
1682	Evaluation of Gellan Gum Film Containing Virgin Coconut Oil for Transparent Dressing Materials. Advances in Biomaterials, 2014, 2014, 1-12.	0.2	23
1683	Application of Nanoscaffolds in Mesenchymal Stem Cell-Based Therapy. Advances in Regenerative Medicine, 2014, 2014, 1-14.	0.0	5
1684	Mapping the dynamics of force transduction at cell–cell junctions of epithelial clusters. ELife, 2014, 3, e03282.	2.8	99
1685	Robust and artifact-free mounting of tissue samples for atomic force microscopy. BioTechniques, 2014, 56, 40-42.	0.8	27
1686	Influence of the PDMS substrate stiffness on the adhesion of <i>Acanthamoeba castellanii</i> Beilstein Journal of Nanotechnology, 2014, 5, 1393-1398.	1.5	20
1687	Substrates coated with silver nanoparticles as a neuronal regenerative material. International Journal of Nanomedicine, 2014, 9 Suppl 1, 23.	3.3	20

#	Article	IF	CITATIONS
1688	Novel flower-shaped albumin particles as controlled-release carriers for drugs to penetrate the round-window membrane. International Journal of Nanomedicine, 2014, 9, 3193.	3.3	5
1689	Matrix stiffening in the formation of blood vessels. Advances in Regenerative Biology, 2014, 1, 25247.	0.2	31
1690	Liver Regeneration and Bioengineering. , 2014, , 391-400.		2
1691	The principles of tissue engineering and its recent advances and future prospects. Journal of the Korean Medical Association, 2014, 57, 145.	0.1	2
1692	Typical and Atypical Stem Cell Niches of the Adult Nervous System in Health and Inflammatory Brain and Spinal Cord Diseases. , 0, , .		3
1693	Neural Differentiation of Stem Cells in Biodegradable Three- Dimensional Scaffolds – A Novel Strategy for Nerve Regeneration. , 2014, , .		0
1695	Stacked stem cell sheets enhance cell-matrix interactions. Organogenesis, 2014, 10, 170-176.	0.4	16
1696	Osteogenic Commitment of Mesenchymal Stem Cells in Apatite Nanorod-Aligned Ceramics. ACS Applied Materials & Interfaces, 2014, 6, 21886-21893.	4.0	25
1697	Influence of engineered surface on cell directionality and motility. Biofabrication, 2014, 6, 015011.	3.7	24
1698	Atomic force microscopy measurements of mechanical properties of single cells patterned by microcontact printing. Advanced Robotics, 2014, 28, 449-455.	1.1	16
1699	ONE-DIMENSIONAL MODELING AND SIMULATIONS OF MIGRATION OF CULTURED FIBROBLASTS. Journal of Mechanics in Medicine and Biology, 2014, 14, 1450027.	0.3	0
1700	Laminin-111 Improves Skeletal Muscle Stem Cell Quantity and Function Following Eccentric Exercise. Stem Cells Translational Medicine, 2014, 3, 1013-1022.	1.6	32
1701	The interplay between the proteolytic, invasive, and adhesive domains of invadopodia and their roles in cancer invasion. Cell Adhesion and Migration, 2014, 8, 215-225.	1.1	59
1702	Efficient myogenic commitment of human mesenchymal stem cells on biomimetic materials replicating myoblast topography. Biotechnology Journal, 2014, 9, 1604-1612.	1.8	19
1703	Ultra-responsive soft matter from strain-stiffening hydrogels. Nature Communications, 2014, 5, 5808.	5.8	186
1704	Multistructural biomimetic substrates for controlled cellular differentiation. Nanotechnology, 2014, 25, 065102.	1.3	13
1705	Endothelial Cell Response to Chemical, Biological, and Physical Cues in Bioactive Hydrogels. Tissue Engineering - Part A, 2014, 20, 3130-3141.	1.6	23
1706	Investigation of size–dependent cell adhesion on nanostructured interfaces. Journal of Nanobiotechnology, 2014, 12, 54.	4.2	56

#	Article	IF	CITATIONS
1707	Membrane related dynamics and the formation of actin in cells growing on micro-topographies: a spatial computational model. BMC Systems Biology, 2014, 8, 106.	3.0	8
1708	Cell–Material Interactions. , 2014, , 217-251.		14
1709	How cells flow in the spreading of cellular aggregates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8055-8060.	3.3	72
1710	Soft matrix is a natural stimulator for cellular invasiveness. Molecular Biology of the Cell, 2014, 25, 457-469.	0.9	50
1711	Biomaterial nanotopography-mediated cell responses: experiment and modeling. International Journal of Smart and Nano Materials, 2014, 5, 227-256.	2.0	23
1712	Biomechanical Cell Model by Liquid-Crystal Elastomers. Journal of Engineering Mechanics - ASCE, 2014, 140, .	1.6	8
1713	Ultrastructure and growth factor content of equine platelet-rich fibrin gels. American Journal of Veterinary Research, 2014, 75, 392-401.	0.3	12
1714	Layer-by-layer films as biomaterials: bioactivity and mechanics. Journal of Biomaterials Science, Polymer Edition, 2014, 25, 1489-1501.	1.9	3
1715	Probing the biomechanical contribution of the endothelium to lymphocyte migration: diapedesis by the path of least resistance. Journal of Cell Science, 2014, 127, 3720-34.	1.2	98
1716	Endothelial monolayers and transendothelial migration depend on mechanical properties of the substrate. Cytoskeleton, 2014, 71, 695-706.	1.0	35
1717	Block copolymers for protein ordering. Journal of Applied Polymer Science, 2014, 131, .	1.3	16
1718	Mechanobiology of Ciliogenesis. BioScience, 2014, 64, 1084-1091.	2.2	9
1719	The Role Of Extracellular Matrix Elasticity and Composition In Regulating the Nucleus Pulposus Cell Phenotype in the Intervertebral Disc: A Narrative Review. Journal of Biomechanical Engineering, 2014, 136, 021010.	0.6	72
1720	A network model of correlated growth of tissue stiffening in pulmonary fibrosis. New Journal of Physics, 2014, 16, 065022.	1.2	19
1721	Impact of Dimensionality and Network Disruption on Microrheology of Cancer Cells in 3D Environments. PLoS Computational Biology, 2014, 10, e1003959.	1.5	35
1722	Modulus-dependent characteristics of Wharton's jelly mesenchymal stem cells (WJMSC) encapsulated in hydrogel microspheres. Journal of Biomaterials Science, Polymer Edition, 2014, 25, 1946-1961.	1.9	5
1723	In vitro and in vivo characterization of SU-8 flexible neuroprobe: From mechanical properties to electrophysiological recording. Sensors and Actuators A: Physical, 2014, 216, 257-265.	2.0	24
1724	Matrix density alters zyxin phosphorylation, which limits peripheral process formation and extension in endothelial cells invading 3D collagen matrices. Matrix Biology, 2014, 38, 36-47.	1.5	12

#	Article	IF	CITATIONS
1725	Preparation of a Micropatterned Rigid-Soft Composite Substrate for Probing Cellular Rigidity Sensing. Methods in Cell Biology, 2014, 121, 3-15.	0.5	10
1726	Microrobotic platform for mechanical stimulation of swimming microorganism on a chip. , 2014, , .		5
1727	Reducing the Foreign Body Reaction by Surface Modification with Collagen/Hyaluronic Acid Multilayered Films. ISRN Biomaterials, 2014, 2014, 1-8.	0.7	14
1728	Additive manufacturing of photosensitive hydrogels for tissue engineering applications. BioNanoMaterials, 2014, 15, .	1.4	76
1729	A Novel Cell Traction Force Microscopy to Study Multi-Cellular System. PLoS Computational Biology, 2014, 10, e1003631.	1.5	44
1730	Skeletal muscle tissue engineering: strategies for volumetric constructs. Frontiers in Physiology, 2014, 5, 362.	1.3	88
1731	Determination of the Reduced Creep Function of Viscoelastic Compliant Materials Using Pipette Aspiration Method. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	4
1732	Tissue Transglutaminase, Not Lysyl Oxidase, Dominates Early Calcium-Dependent Remodeling of Fibroblast-Populated Collagen Lattices. Cells Tissues Organs, 2014, 200, 104-117.	1.3	14
1733	The Use of Second Harmonic Generation to Image the Extracellular Matrix During Tumor Progression. Intravital, 2014, 3, e984509.	2.0	20
1735	A Human <i>In Vitro</i> Model That Mimics the Renal Proximal Tubule. Tissue Engineering - Part C: Methods, 2014, 20, 599-609.	1.1	24
1736	The nuclear envelope as a mechanostat: a central cog in the machinery of cell and tissue regulation?. BoneKEy Reports, 2014, 3, 562.	2.7	3
1737	Automated recognition and measurement of cell morphology on optically-induced electrokinetic patterning chip. , 2014, , .		0
1738	0.1 kilopascal difference for mechanophenotyping. Bioarchitecture, 2014, 4, 116-118.	1.5	3
1739	On-line tracking and stimulation of swimming microorganism by on-chip microrobot. , 2014, , .		0
1740	Temporal change in complex shear modulus of cells: An atomic force microscopy study. , 2014, , .		0
1741	Stochastic dynamics and mechanosensitivity of myosin II minifilaments. New Journal of Physics, 2014, 16, 093019.	1.2	12
1742	Influence of airway wall compliance on epithelial cell injury and adhesion during interfacial flows. Journal of Applied Physiology, 2014, 117, 1231-1242.	1.2	29
1743	Biocompatible Tissue Scaffold Compliance Promotes Salivary Gland Morphogenesis and Differentiation. Tissue Engineering - Part A, 2014, 20, 1632-1642.	1.6	36

#	Article	IF	CITATIONS
1744	Neurite Guidance and Three-Dimensional Confinement <i>via</i> Compliant Semiconductor Scaffolds. ACS Nano, 2014, 8, 12219-12227.	7.3	19
1745	Regulating the mechanical properties of cells using a non-UV light-addressable hydrogel patterning process. , 2014, , .		2
1746	Bending forces plastically deform growing bacterial cell walls. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5778-5783.	3.3	123
1747	Research progress in quantifying the mechanical properties of single living cells using atomic force microscopy. Science Bulletin, 2014, 59, 4020-4029.	1.7	20
1748	Filmâ€Based Implants for Supporting Neuron–Electrode Integrated Interfaces for The Brain. Advanced Functional Materials, 2014, 24, 1938-1948.	7.8	52
1749	Tunable Elastic Modulus of Nanoparticle Monolayer Films by Host–Guest Chemistry. Advanced Materials, 2014, 26, 5056-5061.	11.1	22
1750	High-throughput optical screening of cellular mechanotransduction. Nature Photonics, 2014, 8, 710-715.	15.6	36
1751	Cell morphology and focal adhesion location alters internal cell stress. Journal of the Royal Society Interface, 2014, 11, 20140885.	1.5	39
1752	Control of macrophage 3D migration: a therapeutic challenge to limit tissue infiltration. Immunological Reviews, 2014, 262, 216-231.	2.8	52
1753	Electrospun PGS:PCL Microfibers Align Human Valvular Interstitial Cells and Provide Tunable Scaffold Anisotropy. Advanced Healthcare Materials, 2014, 3, 929-939.	3.9	95
1754	Improved Chondrogenic Capacity of Collagen Hydrogel-Expanded Chondrocytes. Journal of Bone and Joint Surgery - Series A, 2014, 96, 1109-1117.	1.4	11
1755	Photoâ€crosslinkable PEGâ€Based Microribbons for Forming 3D Macroporous Scaffolds with Decoupled Niche Properties. Advanced Materials, 2014, 26, 1757-1762.	11.1	31
1756	Matrix Effects. , 2014, , 407-421.		2
1757	3D Bioelectronic Interface: Capturing Circulating Tumor Cells onto Conducting Polymerâ€Based Micro/Nanorod Arrays with Chemical and Topographical Control. Small, 2014, 10, 3012-3017.	5.2	61
1758	Mechanical signaling via nonlinear wavefront propagation in a mechanically excitable medium. Physical Review E, 2014, 89, 062709.	0.8	8
1759	Precise manipulation of cell behaviors on surfaces for construction of tissue/organs. Colloids and Surfaces B: Biointerfaces, 2014, 124, 97-110.	2.5	14
1760	Collagen-based tubular constructs for tissue engineering applications. , 2014, , 589-632.		0
1761	Tunable swelling of polyelectrolyte multilayers in cell culture media for modulating NIH-3T3 cells adhesion. Journal of Biomedical Materials Research - Part A, 2014, 102, 4071-4077.	2.1	9

#	Article	IF	CITATIONS
1762	Mechanisms of Fibrosis in IPF., 2014, , 161-205.		6
1763	Actin stress in cell reprogramming. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E5252-61.	3.3	85
1764	Oxygen Plasma Etching of Silk Fibroin Alters Surface Stiffness: A Cell-Substrate Interaction Study. Plasma Processes and Polymers, 2014, 11, 763-776.	1.6	19
1765	Transformable core–corona nanoparticles: Simultaneous change of core morphology and corona wettability in response to temperature. Colloids and Surfaces B: Biointerfaces, 2014, 123, 75-81.	2.5	5
1766	A Polymer Optoelectronic Interface Provides Visual Cues to a Blind Retina. Advanced Materials, 2014, 26, 1751-1756.	11.1	111
1767	Crosslinking of collagen scaffolds promotes blood and lymphatic vascular stability. Journal of Biomedical Materials Research - Part A, 2014, 102, 3186-3195.	2.1	51
1768	Systems Mechanobiology: Tension-Inhibited Protein Turnover Is Sufficient to Physically Control Gene Circuits. Biophysical Journal, 2014, 107, 2734-2743.	0.2	40
1769	Multiwell stiffness assay for the study of cell responsiveness to cytotoxic drugs. Biotechnology and Bioengineering, 2014, 111, 396-403.	1.7	63
1770	Mesenchymal stem cell mechanosensing in engineered fibrillar microenvironments. , 2014, , .		0
1771	A Vision-Based Micro-Newton Static Force Sensor Using a Displacement-Amplifying Compliant Mechanism (DaCM). Mechanics Based Design of Structures and Machines, 2014, 42, 193-210.	3.4	14
1772	Magnetic approaches to study collective three-dimensional cell mechanics in long-term cultures (invited). Journal of Applied Physics, 2014, 115, 172616.	1.1	14
1773	Promoting the Selection and Maintenance of Fetal Liver Stem/Progenitor Cell Colonies by Layer-by-Layer Polypeptide Tethered Supported Lipid Bilayer. ACS Applied Materials & Samp; Interfaces, 2014, 6, 20654-20663.	4.0	12
1774	Fluorinated Pickering Emulsions Impede Interfacial Transport and Form Rigid Interface for the Growth of Anchorage-Dependent Cells. ACS Applied Materials & Samp; Interfaces, 2014, 6, 21446-21453.	4.0	74
1775	Role of Suspended Fiber Structural Stiffness and Curvature on Single-Cell Migration, Nucleus Shape, and Focal-Adhesion-Cluster Length. Biophysical Journal, 2014, 107, 2604-2611.	0.2	57
1776	Fibroblasts probe substrate rigidity with filopodia extensions before occupying an area. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17176-17181.	3.3	124
1777	Quantification of the stiffness and strength of cadherin ectodomain binding with different ions. Theoretical and Applied Mechanics Letters, 2014, 4, 034001.	1.3	10
1778	Nuclear Forces and Cell Mechanosensing. Progress in Molecular Biology and Translational Science, 2014, 126, 205-215.	0.9	55
1779	Rationally Designed Dynamic Protein Hydrogels with Reversibly Tunable Mechanical Properties. Advanced Functional Materials, 2014, 24, 7310-7317.	7.8	73

#	Article	IF	CITATIONS
1780	Nanotemplated polyelectrolyte films as porous biomolecular delivery systems. Biomatter, 2014, 4, e28823.	2.6	16
1781	Rapid disorganization of mechanically interacting systems of mammary acini. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 658-663.	3.3	139
1782	Cell Models Adapted to Real-Time Imaging of the Cytoskeleton Dynamics in Altered Gravity. Microgravity Science and Technology, 2014, 26, 257-270.	0.7	0
1783	Preparation of topographically modified poly(L-lactic acid)-b-Poly(É>-caprolactone)-b-poly(L-lactic acid) tri-block copolymer film surfaces and its blood compatibility. Macromolecular Research, 2014, 22, 1229-1237.	1.0	11
1784	Chapter 11: Surface Structure of Nanocomposites and Its Properties: A Practical Example. Frontiers in Nanobiomedical Research, 2014, , 473-515.	0.1	2
1785	Effects of Cell Density on Mechanical Properties of Alginate Hydrogel Tissue Scaffolds. Journal of Biomimetics, Biomaterials, and Tissue Engineering, 0, 19, 77-85.	0.7	7
1786	Actin flow and talin dynamics govern rigidity sensing in actin–integrin linkage through talin extension. Journal of the Royal Society Interface, 2014, 11, 20140734.	1.5	8
1787	Three-dimensional traction forces of Schwann cells on compliant substrates. Journal of the Royal Society Interface, 2014, 11, 20140247.	1.5	39
1788	Liver bioengineering. Organogenesis, 2014, 10, 250-259.	0.4	37
1789	Collective cell traction force analysis on aligned smooth muscle cell sheet between three-dimensional microwalls. Interface Focus, 2014, 4, 20130056.	1.5	11
1790	Mechanosensation. Progress in Molecular Biology and Translational Science, 2014, 126, 75-102.	0.9	25
1791	Technological Developments and Future Perspectives on Graphene-Based Metamaterials. Neurosurgery, 2014, 74, 499-516.	0.6	28
1792	Mechanical Cues Direct Focal Adhesion Dynamics. Progress in Molecular Biology and Translational Science, 2014, 126, 103-134.	0.9	19
1793	Nanoscaffold's stiffness affects primary cortical cell network formation. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	9
1794	Patterned Hydrogels for Simplified Measurement of Cell Traction Forces. Methods in Cell Biology, 2014, 121, 17-31.	0.5	13
1795	Bacterial Cellulose as a Substrate for Microbial Cell Culture. Applied and Environmental Microbiology, 2014, 80, 1926-1932.	1.4	28
1796	Morphology and electrostatics play active role in neuronal differentiation processes on flexible conducting substrates. Organogenesis, 2014, 10, 1-5.	0.4	14
1797	Modulation of cell behaviors by electrochemically active polyelectrolyte multilayers. E-Polymers, 2014, 14, 297-304.	1.3	2

#	Article	IF	CITATIONS
1798	Nanostructured substrate conformation can decrease osteoblast-like cell dysfunction in simulated microgravity conditions. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 978-988.	1.3	5
1799	Exploring the roles of integrin binding and cytoskeletal reorganization during mesenchymal stem cell mechanotransduction in soft and stiff hydrogels subjected to dynamic compression. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 38, 174-182.	1.5	23
1800	Concise Review: Hurdles in a Successful Example of Limbal Stem Cell-based Regenerative Medicine. Stem Cells, 2014, 32, 26-34.	1.4	95
1801	Design and development of nanocomposite scaffolds for auricular reconstruction. Nanomedicine: Nanotechnology, Biology, and Medicine, 2014, 10, 235-246.	1.7	64
1802	Differentiation of embryonic stem cells to cardiomyocytes on electrospun nanofibrous substrates. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 447-454.	1.6	34
1803	The Effect of Nanotopography on Modulating Protein Adsorption and the Fibrotic Response. Tissue Engineering - Part A, 2014, 20, 130-138.	1.6	41
1804	Lateral boundary mechanosensing by adherent cells in a collagen gel system. Biomaterials, 2014, 35, 1138-1149.	5.7	53
1805	Measuring stem cell dimensionality in tissue scaffolds. Biomaterials, 2014, 35, 2558-2567.	5.7	55
1806	Integrin activation and internalization mediated by extracellular matrix elasticity: A biomechanical model. Journal of Biomechanics, 2014, 47, 1479-1484.	0.9	31
1807	A functional polyester carrying free hydroxyl groups promotes the mineralization of osteoblast and human mesenchymal stem cell extracellular matrix. Acta Biomaterialia, 2014, 10, 2814-2823.	4.1	41
1808	Heparin-modified gelatin scaffolds for human corneal endothelial cell transplantation. Biomaterials, 2014, 35, 4005-4014.	5.7	82
1809	Effects of crosslinking on the mechanical properties, drug release and cytocompatibility of protein polymers. Acta Biomaterialia, 2014, 10, 26-33.	4.1	96
1810	Creating polymer hydrogel microfibres with internal alignment via electrical and mechanical stretching. Biomaterials, 2014, 35, 3243-3251.	5.7	83
1811	Characterization of dielectrophoresis-aligned nanofibrous silk fibroin–chitosan scaffold and its interactions with endothelial cells for tissue engineering applications. Acta Biomaterialia, 2014, 10, 3630-3640.	4.1	36
1812	Engineering interpenetrating network hydrogels as biomimetic cell niche with independently tunable biochemical and mechanical properties. Biomaterials, 2014, 35, 1807-1815.	5.7	60
1813	Temporal impact of substrate mechanics on differentiation of human embryonic stem cells to cardiomyocytes. Acta Biomaterialia, 2014, 10, 604-612.	4.1	62
1814	Threeâ€dimensional selfâ€assembling peptide matrix enhances the formation of embryoid bodies and their neuronal differentiation. Journal of Biomedical Materials Research - Part A, 2014, 102, 1991-2000.	2.1	16
1815	Biofunctional Micropatterning of Thermoformed 3D Substrates. Advanced Functional Materials, 2014, 24, 442-450.	7.8	19

#	Article	IF	CITATIONS
1817	Cellular contractility and substrate elasticity: a numerical investigation of the actin cytoskeleton and cell adhesion. Biomechanics and Modeling in Mechanobiology, 2014, 13, 417-435.	1.4	56
1818	Engineering microfluidic concentration gradient generators for biological applications. Microfluidics and Nanofluidics, 2014, 16, 1-18.	1.0	152
1819	Cytoskeletal disease: a role in the etiology of adult periodontitis. Oral Diseases, 2014, 20, 10-16.	1.5	10
1820	Assessing the Functional Mechanical Properties of Bioengineered Organs With Emphasis on the Lung. Journal of Cellular Physiology, 2014, 229, 1134-1140.	2.0	33
1821	Loss of p53 Enhances NF-κB-Dependent Lamellipodia Formation. Journal of Cellular Physiology, 2014, 229, 696-704.	2.0	30
1822	Review and analysis of performance metrics of droplet microfluidics systems. Microfluidics and Nanofluidics, 2014, 16, 921-939.	1.0	79
1823	Technical Advance: Introducing a novel metric, directionality time, to quantify human neutrophil chemotaxis as a function of matrix composition and stiffness. Journal of Leukocyte Biology, 2014, 95, 993-1004.	1.5	14
1824	Viscoelastic analysis of single-component and composite PEG and alginate hydrogels. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 7-14.	1.5	14
1825	Integrated Effects of Matrix Mechanics and Vascular Endothelial Growth Factor (VEGF) on Capillary Sprouting. Annals of Biomedical Engineering, 2014, 42, 1024-1036.	1.3	35
1826	Bio-chemo-mechanical models for nuclear deformation in adherent eukaryotic cells. Biomechanics and Modeling in Mechanobiology, 2014, 13, 929-943.	1.4	25
1827	Mathematical Modeling of the Dynamic Mechanical Behavior of Neighboring Sarcomeres in Actin Stress Fibers. Cellular and Molecular Bioengineering, 2014, 7, 73-85.	1.0	7
1828	In Vitro Microvessel Growth and Remodeling within a Three-Dimensional Microfluidic Environment. Cellular and Molecular Bioengineering, 2014, 7, 15-25.	1.0	49
1829	Effects of HyStemâ,,¢-HP Hydrogel Elasticity on Osteogenic Differentiation of Human Mesenchymal Stromal Cells. Cellular and Molecular Bioengineering, 2014, 7, 155-164.	1.0	2
1830	An approach to improve the efficiency of polymerization and enhance biological activity of poly(lactide―co â€ethylene oxide fumarate) hydrogels. Journal of Polymer Science Part A, 2014, 52, 1291-1299.	2.5	2
1831	Wound Repair., 2014, , 1595-1617.		7
1832	Specific control of cell–material interactions: Targeting cell receptors using ligand-functionalized polymer substrates. Progress in Polymer Science, 2014, 39, 1312-1347.	11.8	57
1833	Local Viscoelastic Properties of Live Cells Investigated Using Dynamic and Quasi-Static Atomic Force Microscopy Methods. Biophysical Journal, 2014, 106, 1033-1043.	0.2	80
1834	A biomimetic multi-layered collagen-based scaffold for osteochondral repair. Acta Biomaterialia, 2014, 10, 1996-2004.	4.1	223

#	Article	IF	Citations
1835	Augmentation of integrin-mediated mechanotransduction by hyaluronic acid. Biomaterials, 2014, 35, 71-82.	5.7	97
1836	Introduction to cell–hydrogel mechanosensing. Interface Focus, 2014, 4, 20130038.	1.5	173
1837	Integrated Micro/Nanoengineered Functional Biomaterials for Cell Mechanics and Mechanobiology: A Materials Perspective. Advanced Materials, 2014, 26, 1494-1533.	11.1	121
1838	25th Anniversary Article: Supramolecular Materials for Regenerative Medicine. Advanced Materials, 2014, 26, 1642-1659.	11.1	285
1839	MC3T3-E1 cells' response and osseointegration of bioactive sphene–titanium oxide composite coatings fabricated by a hybrid technique of microarc oxidation and heat treatment on titanium. Journal of Materials Chemistry B, 2014, 2, 2993.	2.9	8
1840	Study on multilayer structures prepared from heparin and semi-synthetic cellulose sulfates as polyanions and their influence on cellular response. Colloids and Surfaces B: Biointerfaces, 2014, 116, 93-103.	2.5	23
1841	Characterization of structural, mechanical and nano-mechanical properties of electrospun PGS/PCL fibers. RSC Advances, 2014, 4, 16951-16957.	1.7	67
1842	Woven silk fabric-reinforced silk nanofibrous scaffolds for regenerating load-bearing soft tissues. Acta Biomaterialia, 2014, 10, 921-930.	4.1	73
1843	Compliant 3D Microenvironment Improves \hat{l}^2 -Cell Cluster Insulin Expression Through Mechanosensing and \hat{l}^2 -Catenin Signaling. Tissue Engineering - Part A, 2014, 20, 1888-1895.	1.6	42
1844	Phenotypic Modulation of Smooth Muscle Cells by Chemical and Mechanical Cues of Electrospun Tecophilic/Gelatin Nanofibers. ACS Applied Materials & Samp; Interfaces, 2014, 6, 4089-4101.	4.0	43
1846	Using surface-motions for locomotion of microscopic robots in viscous fluids. Journal of Micro-Bio Robotics, 2014, 9, 61-77.	2.1	7
1847	Regulation of the endothelial barrier function: a filum granum of cellular forces, Rho-GTPase signaling and microenvironment. Cell and Tissue Research, 2014, 355, 557-576.	1.5	35
1848	Organ-on-a-chip platforms for studying drug delivery systems. Journal of Controlled Release, 2014, 190, 82-93.	4.8	308
1849	BMP growth factor signaling in a biomechanical context. BioFactors, 2014, 40, 171-187.	2.6	43
1850	Effects of angiogenic factors and 3D-microenvironments on vascularization within sandwich cultures. Biomaterials, 2014, 35, 4739-4748.	5.7	84
1851	Effect of modified cellulose nanocrystals on microstructural and mechanical properties of polyvinyl alcohol/ovalbumin biocomposite scaffolds. Materials Letters, 2014, 129, 61-64.	1.3	27
1852	Hydrogels with differential and patterned mechanics to study stiffness-mediated myofibroblastic differentiation of hepatic stellate cells. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 38, 198-208.	1.5	84
1853	Mechanical properties of alginate hydrogels manufactured using external gelation. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 36, 135-142.	1.5	149

#	ARTICLE	IF	CITATIONS
1854	Contractile forces regulate cell division in three-dimensional environments. Journal of Cell Biology, 2014, 205, 155-162.	2.3	71
1855	Cadherin adhesion controlled by cortical actin dynamics. Nature Cell Biology, 2014, 16, 508-510.	4.6	21
1856	Layer-by-layer assembled graphene oxide composite films for enhanced mechanical properties and fibroblast cell affinity. Journal of Materials Chemistry B, 2014, 2, 325-331.	2.9	48
1857	New technologies for measuring single cell mass. Lab on A Chip, 2014, 14, 646-652.	3.1	62
1858	Fine tuning and measurement of mechanical properties of crosslinked hyaluronic acid hydrogels as biomimetic scaffold coating in regenerative medicine. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 29, 309-316.	1.5	20
1859	Integral Role of Platelet-Derived Growth Factor in Mediating Transforming Growth Factor-β1–Dependent Mesenchymal Stem Cell Stiffening. Stem Cells and Development, 2014, 23, 245-261.	1.1	22
1860	Stochastic Foundations in Movement Ecology. Springer Series in Synergetics, 2014, , .	0.2	85
1861	Cellular mechanoadaptation to substrate mechanical properties: contributions of substrate stiffness and thickness to cell stiffness measurements using AFM. Soft Matter, 2014, 10, 1174.	1.2	35
1862	Biomaterial Strategies for Stem Cell Maintenance During < i>In Vitro < /i>Expansion. Tissue Engineering - Part B: Reviews, 2014, 20, 340-354.	2.5	28
1863	Global architecture of the F-actin cytoskeleton regulates cell shape-dependent endothelial mechanotransduction. Integrative Biology (United Kingdom), 2014, 6, 300.	0.6	42
1864	Role of Fluid Dynamics and Inflammation in Intracranial Aneurysm Formation. Circulation, 2014, 129, 373-382.	1.6	106
1865	Geometric control of capillary architecture via cell-matrix mechanical interactions. Biomaterials, 2014, 35, 3273-3280.	5.7	35
1866	Soft/Elastic Nanopatterned Biointerfaces in the Service of Cell Biology. Methods in Cell Biology, 2014, 119, 237-260.	0.5	9
1867	Probing mechanical principles of cell–nanomaterial interactions. Journal of the Mechanics and Physics of Solids, 2014, 62, 312-339.	2.3	61
1868	The Platelet and the Biophysical Microenvironment: Lessons from Cellular Mechanics. Thrombosis Research, 2014, 133, 532-537.	0.8	10
1869	Combined Effects of PEG Hydrogel Elasticity and Cell-Adhesive Coating on Fibroblast Adhesion and Persistent Migration. Biomacromolecules, 2014, 15, 195-205.	2.6	74
1870	Biomaterial design motivated by characterization of natural extracellular matrices. MRS Bulletin, 2014, 39, 18-24.	1.7	3
1871	Polymer-tethered lipid multi-bilayers: a biomembrane-mimicking cell substrate to probe cellular mechano-sensing. Soft Matter, 2014, 10, 1189.	1.2	12

#	Article	IF	CITATIONS
1873	Large effect of membrane tension on the fluid–solid phase transitions of two-component phosphatidylcholine vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 179-184.	3.3	53
1874	Myofibroblast Differentiation: Main Features, Biomedical Relevance, and the Role of Reactive Oxygen Species. Antioxidants and Redox Signaling, 2014, 21, 768-785.	2.5	37
1875	Three-dimensional perfused cell culture. Biotechnology Advances, 2014, 32, 243-254.	6.0	64
1876	Toward Intelligent Synthetic Neural Circuits: Directing and Accelerating Neuron Cell Growth by Self-Rolled-Up Silicon Nitride Microtube Array. ACS Nano, 2014, 8, 11108-11117.	7.3	87
1877	Macroporous 2-hydroxyethyl methacrylate hydrogels of dual porosity for cell cultivation: morphology, swelling, permeability, and mechanical behavior. Journal of Polymer Research, 2014, 21, 1.	1.2	24
1878	Physical influences of the extracellular environment on cell migration. Nature Reviews Molecular Cell Biology, 2014, 15, 813-824.	16.1	585
1879	How cells explore shape space: A quantitative statistical perspective of cellular morphogenesis. BioEssays, 2014, 36, 1195-1203.	1.2	22
1880	Single-cell 3D Bio-MEMS environment with engineered geometry and physiologically relevant stiffnesses. , 2014, , .		1
1881	Hydrogel–fibre composites with independent control over cell adhesion to gel and fibres as an integral approach towards a biomimetic artificial ECM. Biofabrication, 2014, 6, 024106.	3.7	14
1882	Visualization of asymmetric wetting ridges on soft solids with X-ray microscopy. Nature Communications, 2014, 5, 4369.	5.8	131
1883	Formulation and Characterization of a Porous, Elastomeric Biomaterial for Vocal Fold Tissue Engineering Research. Annals of Otology, Rhinology and Laryngology, 2014, 123, 866-874.	0.6	7
1884	From single fiber to macro-level mechanics: A structural finite-element model for elastomeric fibrous biomaterials. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 146-161.	1.5	69
1885	High-throughput screening for integrative biomaterials design: exploring advances and new trends. Trends in Biotechnology, 2014, 32, 627-636.	4.9	49
1886	Substrate Stiffness Mediated Metastasis Like Phenotype of Colon Cancer Cells is Independent of Cell to Gel Adhesion. Cellular and Molecular Bioengineering, 2014, 7, 532-543.	1.0	7
1887	Evaluation of singleâ€cell biomechanics as potential marker for oral squamous cell carcinomas: a pilot study. Oral Diseases, 2014, 20, e120-7.	1.5	32
1888	Stored red blood cell transfusions: iron, inflammation, immunity, and infection. Transfusion, 2014, 54, 2365-2371.	0.8	42
1889	Rapid osteogenic differentiation of mesenchymal stem cells on hydroxyapatite nanocrystal clusters-oriented nanotopography. RSC Advances, 2014, 4, 58019-58026.	1.7	3
1890	Construction and Characterization of Kilobasepair Densely Labeled Peptide-DNA. Biomacromolecules, 2014, 15, 4065-4072.	2.6	16

#	Article	IF	CITATIONS
1891	A time-dependent phenomenological model for cell mechano-sensing. Biomechanics and Modeling in Mechanobiology, 2014, 13, 451-462.	1.4	13
1892	Differentiation of Human Adipose-Derived Stem Cells into Neuron-Like Cells Which Are Compatible with Photocurable Three-Dimensional Scaffolds. Tissue Engineering - Part A, 2014, 20, 1271-1284.	1.6	64
1893	Protrusion force microscopy reveals oscillatory force generation and mechanosensing activity of human macrophage podosomes. Nature Communications, 2014, 5, 5343.	5.8	176
1894	Stretch-activated ion channel Piezo1 directs lineage choice in human neural stem cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16148-16153.	3.3	446
1895	Reprogramming cellular phenotype by soft collagen gels. Soft Matter, 2014, 10, 8829-8837.	1.2	32
1896	A polycaprolactone/silk-fibroin nanofibrous composite combined with human umbilical cord serum for subacute tympanic membrane perforation; an in vitro and in vivo study. Journal of Materials Chemistry B, 2014, 2, 2703.	2.9	42
1897	Optimal shapes and stresses of adherent cells on patterned substrates. Soft Matter, 2014, 10, 2424.	1.2	12
1898	Enhancing in vitro bioactivity and in vivo osteogenesis of organic–inorganic nanofibrous biocomposites with novel bioceramics. Journal of Materials Chemistry B, 2014, 2, 6293-6305.	2.9	22
1899	Cartilage grafts for bone repair and regeneration. , 2014, , 219-243.		1
1900	Ionically cross-linkable hyaluronate-based hydrogels for injectable cell delivery. Journal of Controlled Release, 2014, 196, 146-153.	4.8	52
1901	Functional coupling of ion channels in cellular mechanotransduction. Biochemical and Biophysical Research Communications, 2014, 451, 421-424.	1.0	8
1902	Fibronectin at Select Sites Binds Multiple Growth Factors and Enhances their Activity: Expansion of the Collaborative ECM-GF Paradigm. Journal of Investigative Dermatology, 2014, 134, 895-901.	0.3	116
1903	Engineering cell-adhesive gellan gum spongy-like hydrogels for regenerative medicine purposes. Acta Biomaterialia, 2014, 10, 4787-4797.	4.1	81
1904	Cytoskeletal transition in patterned cells correlates with interfacial energy model. Soft Matter, 2014, 10, 2444-2452.	1.2	8
1905	Light-assisted direct-write of 3D functional biomaterials. Lab on A Chip, 2014, 14, 268-275.	3.1	206
1906	The role of material structure and mechanical properties in cell–matrix interactions. Journal of Materials Chemistry B, 2014, 2, 2345.	2.9	66
1907	Defined 2-D microtissues on soft elastomeric silicone rubber using lift-off epoxy-membranes for biomechanical analyses. Soft Matter, 2014, 10, 2431.	1.2	13
1908	Early-time dynamics of actomyosin polarization in cells of confined shape in elastic matrices. Soft Matter, 2014, 10, 2453.	1.2	7

#	Article	IF	CITATIONS
1909	Design of thiol–ene photoclick hydrogels using facile techniques for cell culture applications. Biomaterials Science, 2014, 2, 1612-1626.	2.6	98
1910	Tuning the surface properties of hydrogel at the nanoscale with focused ion irradiation. Soft Matter, 2014, 10, 8448-8456.	1.2	12
1911	Anionic fibroin-derived polypeptides accelerate MSC osteoblastic differentiation in a three-dimensional osteoid-like dense collagen niche. Journal of Materials Chemistry B, 2014, 2, 5339.	2.9	16
1912	Cellular contractility and extracellular matrix stiffness regulate matrix metalloproteinase activity in pancreatic cancer cells. FASEB Journal, 2014, 28, 3589-3599.	0.2	108
1913	Defined topologically-complex protein matrices to manipulate cell shape <i>via</i> three-dimensional fiber-like patterns. Lab on A Chip, 2014, 14, 2191-2201.	3.1	24
1914	Tailoring the void space and mechanical properties in electrospun scaffolds towards physiological ranges. Journal of Materials Chemistry B, 2014, 2, 305-313.	2.9	40
1915	DNA-based digital tension probes reveal integrin forces during early cell adhesion. Nature Communications, 2014, 5, 5167.	5.8	258
1916	Microgel film dynamics modulate cell adhesion behavior. Soft Matter, 2014, 10, 1356-1364.	1.2	40
1917	Hyaluronic acid hydrogel stiffness and oxygen tension affect cancer cell fate and endothelial sprouting. Biomaterials Science, 2014, 2, 655.	2.6	72
1918	Tailoring the material properties of gelatin hydrogels by high energy electron irradiation. Journal of Materials Chemistry B, 2014, 2, 4297-4309.	2.9	59
1919	Stress fiber response to mechanics: a free energy dependent statistical model. Soft Matter, 2014, 10, 4603.	1.2	4
1920	Cell-printed hierarchical scaffolds consisting of micro-sized polycaprolactone (PCL) and electrospun PCL nanofibers/cell-laden alginate struts for tissue regeneration. Journal of Materials Chemistry B, 2014, 2, 314-324.	2.9	66
1921	Mechanotransduction and extracellular matrix homeostasis. Nature Reviews Molecular Cell Biology, 2014, 15, 802-812.	16.1	1,492
1922	Highly Moldable Electrospun Clay-Like Fluffy Nanofibers for Three-Dimensional Scaffolds. ACS Applied Materials & Samp; Interfaces, 2014, 6, 1082-1091.	4.0	39
1923	Fabrication of silicon molds with multi-level, non-planar, micro- and nano-scale features. Nanotechnology, 2014, 25, 375301.	1.3	5
1924	Stretchable and Micropatterned Membrane for Osteogenic Differentation of Stem Cells. ACS Applied Materials & Samp; Interfaces, 2014, 6, 11915-11923.	4.0	48
1925	Combining AFM and Acoustic Probes to Reveal Changes in the Elastic Stiffness Tensor of Living Cells. Biophysical Journal, 2014, 107, 1502-1512.	0.2	40
1926	Aligned and suspended fiber force probes for drug testing at single cell resolution. Biofabrication, 2014, 6, 045006.	3.7	7

#	Article	IF	Citations
1927	Three-dimensional electrospun polycaprolactone (PCL)/alginate hybrid composite scaffolds. Carbohydrate Polymers, 2014, 114, 213-221.	5.1	127
1928	Cell mechanics: principles, practices, and prospects. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2014, 6, 371-388.	6.6	232
1929	Mechanically and Chemically Tunable Cell Culture System for Studying the Myofibroblast Phenotype. Langmuir, 2014, 30, 5481-5487.	1.6	29
1930	Tuning Gelation Kinetics and Mechanical Rigidity of β-Hairpin Peptide Hydrogels via Hydrophobic Amino Acid Substitutions. ACS Applied Materials & Samp; Interfaces, 2014, 6, 14360-14368.	4.0	56
1931	Electrically regulated differentiation of skeletal muscle cells on ultrathin graphene-based films. RSC Advances, 2014, 4, 9534.	1.7	57
1932	Enzymatic synthesis of hyaluronic acid vinyl esters for two-photon microfabrication of biocompatible and biodegradable hydrogel constructs. Polymer Chemistry, 2014, 5, 6523-6533.	1.9	68
1933	Role of Hydrophobicity on Self-Assembly by Peptide Amphiphiles via Molecular Dynamics Simulations. Langmuir, 2014, 30, 7745-7754.	1.6	55
1934	Microscale technologies for regulating human stem cell differentiation. Experimental Biology and Medicine, 2014, 239, 1255-1263.	1.1	21
1935	The nuclear lamina is mechano-responsive to ECM elasticity in mature tissue. Journal of Cell Science, 2014, 127, 3005-15.	1.2	170
1936	Cadherin-11 regulates mesenchymal stem cell differentiation into smooth muscle cells and development of contractile function in vivo. Journal of Cell Science, 2014, 127, 2627-38.	1.2	72
1937	The Medium of Haptic Perception: A Tensegrity Hypothesis. Journal of Motor Behavior, 2014, 46, 143-187.	0.5	168
1938	Stiffness of Cross-Linked Poly(Dimethylsiloxane) Affects Bacterial Adhesion and Antibiotic Susceptibility of Attached Cells. Langmuir, 2014, 30, 10354-10362.	1.6	128
1939	Biodegradable elastomers for biomedical applications and regenerative medicine. Regenerative Medicine, 2014, 9, 385-398.	0.8	69
1940	Hybrid Elastin-like Polypeptide–Polyethylene Glycol (ELP-PEG) Hydrogels with Improved Transparency and Independent Control of Matrix Mechanics and Cell Ligand Density. Biomacromolecules, 2014, 15, 3421-3428.	2.6	85
1941	Bioengineering paradigms for cell migration in confined microenvironments. Current Opinion in Cell Biology, 2014, 30, 41-50.	2.6	37
1942	Enhanced laminin adsorption on nanowires compared to flat surfaces. Colloids and Surfaces B: Biointerfaces, 2014, 122, 85-89.	2.5	23
1943	Extracellular-controlled breast cancer cell formation and growth using non-UV patterned hydrogels via optically-induced electrokinetics. Lab on A Chip, 2014, 14, 1367.	3.1	42
1944	Enhanced bone cell functions on poly(ε-caprolactone) triacrylate networks grafted with polyhedral oligomeric silsesquioxane nanocages. Polymer, 2014, 55, 3836-3845.	1.8	26

#	Article	IF	CITATIONS
1945	Mechanical and structural properties of bone in non-critical and critical healing in rat. Acta Biomaterialia, 2014, 10, 4009-4019.	4.1	40
1946	Differential nuclear expression of Yap in basal epithelial cells across the cornea and substrates of differing stiffness. Experimental Eye Research, 2014, 127, 37-41.	1.2	44
1947	High throughput assessment and chemometric analysis of the interaction of epithelial and fibroblast cells with a polymer library. Applied Surface Science, 2014, 313, 926-935.	3.1	14
1948	Mechanical Checkpoint For Persistent Cell Polarization In Adhesion-Naive Fibroblasts. Biophysical Journal, 2014, 107, 324-335.	0.2	15
1949	Synthesis and High-Throughput Processing of Polymeric Hydrogels for 3D Cell Culture. Bioconjugate Chemistry, 2014, 25, 1581-1601.	1.8	46
1950	The effect of graphene substrate on osteoblast cell adhesion and proliferation. Journal of Biomedical Materials Research - Part A, 2014, 102, 3282-3290.	2.1	57
1951	Large enhancement in neurite outgrowth on a cell membrane-mimicking conducting polymer. Nature Communications, 2014, 5, 4523.	5.8	136
1952	Three-dimensional cancer models mimic cell-matrix interactions in the tumour microenvironment. Carcinogenesis, 2014, 35, 1671-1679.	1.3	123
1953	Cell–biomaterial interactions for blood vessel formation. , 2014, , 350-388.		1
1954	Genipin-Cross-Linked Layer-by-Layer Assemblies: Biocompatible Microenvironments To Direct Bone Cell Fate. Biomacromolecules, 2014, 15, 1602-1611.	2.6	38
1955	Nanoparticles Strengthen Intracellular Tension and Retard Cellular Migration. Nano Letters, 2014, 14, 83-88.	4.5	191
1956	3D bioprinting of tissues and organs. Nature Biotechnology, 2014, 32, 773-785.	9.4	5,158
1957	Tissue engineering of electrically responsive tissues using polyaniline based polymers: A review. Biomaterials, 2014, 35, 9068-9086.	5.7	339
1958	Influence of the stiffness of three-dimensional alginate/collagen-I interpenetrating networks on fibroblast biology. Biomaterials, 2014, 35, 8927-8936.	5.7	226
1959	Tenogenic Induction of Human MSCs by Anisotropically Aligned Collagen Biotextiles. Advanced Functional Materials, 2014, 24, 5762-5770.	7.8	142
1960	Engineering strategies to mimic the glioblastoma microenvironment. Advanced Drug Delivery Reviews, 2014, 79-80, 172-183.	6.6	118
1961	Self-Organized ECM-Mimetic Model Based on an Amphiphilic Multiblock Silk-Elastin-Like Corecombinamer with a Concomitant Dual Physical Gelation Process. Biomacromolecules, 2014, 15, 3781-3793.	2.6	77
1962	Material Stiffness Effects on Neurite Alignment to Photopolymerized Micropatterns. Biomacromolecules, 2014, 15, 3717-3727.	2.6	29

#	Article	IF	CITATIONS
1963	Molecular Mechanisms Underlying the Force-Dependent Regulation of Actin-to-ECM Linkage at the Focal Adhesions. Progress in Molecular Biology and Translational Science, 2014, 126, 135-154.	0.9	41
1964	Biomaterial–stem cell interactions and their impact on stem cell response. RSC Advances, 2014, 4, 53307-53320.	1.7	45
1965	Shrink Wrapping Cells in a Defined Extracellular Matrix to Modulate the Chemo-Mechanical Microenvironment. Cellular and Molecular Bioengineering, 2014, 7, 355-368.	1.0	19
1966	Influence of surface topography on the human epithelial cell response to micropatterned substrates with convex and concave architectures. Journal of Biological Engineering, 2014, 8, 13.	2.0	39
1967	A Cell Culture Substrate with Biologically Relevant Size-Scale Topography and Compliance of the Basement Membrane. Langmuir, 2014, 30, 2101-2108.	1.6	19
1968	Engineering <i>In Situ</i> Cross-Linkable and Neurocompatible Hydrogels. Journal of Neurotrauma, 2014, 31, 1431-1438.	1.7	15
1969	Engineering Cellular Response Using Nanopatterned Bulk Metallic Glass. ACS Nano, 2014, 8, 4366-4375.	7.3	91
1970	Signalling complexes at the cell-matrix interface. Current Opinion in Structural Biology, 2014, 29, 10-16.	2.6	17
1971	Polyampholyte polymers as a versatile zwitterionic biomaterial platform. Journal of Biomaterials Science, Polymer Edition, 2014, 25, 1479-1488.	1.9	44
1972	Focal adhesion kinase (FAK) perspectives in mechanobiology: implications for cell behaviour. Cell and Tissue Research, 2014, 357, 515-526.	1.5	57
1973	Measurements of elastic modulus for human anterior lens capsule with atomic force microscopy: the effect of loading force. International Ophthalmology, 2014, 34, 519-523.	0.6	9
1974	Elastic biodegradable starch/ethyleneâ€ <i>co</i> â€vinyl alcohol fibreâ€mesh scaffolds for tissue engineering applications. Journal of Applied Polymer Science, 2014, 131, .	1.3	10
1975	A new technique to improve the mechanical and biological performance of ultra high molecular weight polyethylene using a nylon coating. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 32, 198-209.	1.5	43
1976	A review of the effects of the cell environment physicochemical nanoarchitecture on stem cell commitment. Biomaterials, 2014, 35, 5278-5293.	5.7	114
1978	Skeletal Muscle Tissue Engineering: Methods to Form Skeletal Myotubes and Their Applications. Tissue Engineering - Part B: Reviews, 2014, 20, 403-436.	2.5	218
1979	Nano/microfibrous polymeric constructs loaded with bioactive agents and designed for tissue engineering applications: A review. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1562-1579.	1.6	71
1980	Biomembrane-mimicking lipid bilayer system as a mechanically tunable cell substrate. Biomaterials, 2014, 35, 3198-3207.	5.7	41
1981	Microgel Mechanics in Biomaterial Design. Accounts of Chemical Research, 2014, 47, 2426-2434.	7.6	69

#	Article	IF	CITATIONS
1982	A protocol for rheological characterization of hydrogels for tissue engineering strategies. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1063-1073.	1.6	277
1983	Probing the relevance of 3D cancer models in nanomedicine research. Advanced Drug Delivery Reviews, 2014, 79-80, 95-106.	6.6	80
1984	Chitosan-Based Thermoreversible Hydrogel as anin VitroTumor Microenvironment for Testing Breast Cancer Therapies. Molecular Pharmaceutics, 2014, 11, 2134-2142.	2.3	34
1985	The fundamental role of mechanical properties in the progression of cancer disease and inflammation. Reports on Progress in Physics, 2014, 77, 076602.	8.1	113
1986	The Nanoscale Architecture of Force-Bearing Focal Adhesions. Nano Letters, 2014, 14, 4257-4262.	4.5	65
1987	Role of Three-Dimensional Matrix Stiffness in Regulating the Response of Human Neural Cells to Toxins. Cellular and Molecular Bioengineering, 2014, 7, 278-284.	1.0	14
1988	A discrete approach for modeling cell–matrix adhesions. Computational Particle Mechanics, 2014, 1, 117-130.	1.5	22
1989	Validation of the effects of TGF- \hat{l}^21 on tumor recurrence and prognosis through tumor retrieval and cell mechanical properties. Cancer Cell International, 2014, 14, 20.	1.8	9
1990	Tunable diblock copolypeptide hydrogel depots for local delivery of hydrophobic molecules in healthy and injured central nervous system. Biomaterials, 2014, 35, 1989-2000.	5.7	45
1991	Cell reorientation under cyclic stretching. Nature Communications, 2014, 5, 3938.	5.8	167
1992	High-Resolution Traction Force Microscopy. Methods in Cell Biology, 2014, 123, 367-394.	0.5	181
1993	α-Catenin cytomechanics – role in cadherin-dependent adhesion and mechanotransduction. Journal of Cell Science, 2014, 127, 1779-1791.	1.2	107
1994	Molecular Mobility of Scaffolds' Biopolymers Influences Cell Growth. ACS Applied Materials & Samp; Interfaces, 2014, 6, 15980-15990.	4.0	10
1995	Substrate Stiffness Together with Soluble Factors Affects Chondrocyte Mechanoresponses. ACS Applied Materials & Diterfaces, 2014, 6, 16106-16116.	4.0	45
1996	Atomic force microscopy reveals age-dependent changes in nanomechanical properties of the extracellular matrix of native human menisci: implications for joint degeneration and osteoarthritis. Nanomedicine: Nanotechnology, Biology, and Medicine, 2014, 10, 1777-1785.	1.7	34
1997	Matrix Elasticity Regulates Lamin-A,C Phosphorylation and Turnover with Feedback to Actomyosin. Current Biology, 2014, 24, 1909-1917.	1.8	320
1998	Principles of Bioreactor Design for Tissue Engineering. , 2014, , 261-278.		2
1999	Adhesion and Wetting of Nanoparticles on Soft Surfaces. Macromolecules, 2014, 47, 3203-3209.	2.2	73

#	ARTICLE	IF	CITATIONS
2000	Mechanotransduction in C. elegans Morphogenesis and Tissue Function. Progress in Molecular Biology and Translational Science, 2014, 126, 281-316.	0.9	7
2001	Swelling and Mechanical Properties of Alginate Hydrogels with Respect to Promotion of Neural Growth. Tissue Engineering - Part C: Methods, 2014, 20, 401-411.	1.1	106
2002	High Contrast Visualization of Cell–Hydrogel Contact by Advanced Interferometric Optical Microscopy. Journal of Physical Chemistry Letters, 2014, 5, 253-257.	2.1	14
2003	Regulation of pigmentation by substrate elasticity in normal human melanocytes and melanotic MNT1 human melanoma cells. Experimental Dermatology, 2014, 23, 172-177.	1.4	12
2004	3D Biofabrication Strategies for Tissue Engineering and Regenerative Medicine. Annual Review of Biomedical Engineering, 2014, 16, 247-276.	5.7	522
2005	Matrix Dimensions, Stiffness, and Structural Properties Modulate Spontaneous Chondrogenic Commitment of Mouse Embryonic Fibroblasts. Tissue Engineering - Part A, 2014, 20, 1145-1155.	1.6	17
2006	Lamin B1 overexpression increases nuclear rigidity in autosomal dominant leukodystrophy fibroblasts. FASEB Journal, 2014, 28, 3906-3918.	0.2	67
2007	Nonlinear finite element simulations of injuries with free boundaries: Application to surgical wounds. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 616-633.	1.0	14
2008	Influence of dialdehyde bacterial cellulose with the nonlinear elasticity and topology structure of ECM on cell adhesion and proliferation. RSC Advances, 2014, 4, 3998-4009.	1.7	53
2009	The effect of time-dependent deformation of viscoelastic hydrogels on myogenic induction and Rac1 activity in mesenchymal stem cells. Biomaterials, 2014, 35, 1857-1868.	5.7	155
2010	Novel Growth Regime of MDCK II Model Tissues on Soft Substrates. Biophysical Journal, 2014, 106, L25-L28.	0.2	30
2011	Matrix-driven formation of mesenchymal stem cell–extracellular matrix microtissues on soft alginate hydrogels. Acta Biomaterialia, 2014, 10, 3197-3208.	4.1	85
2012	Polarization second harmonic generation by image correlation spectroscopy on collagen type I hydrogels. Acta Biomaterialia, 2014, 10, 2036-2042.	4.1	9
2013	Embryonic mechanical and soluble cues regulate tendon progenitor cell gene expression as a function of developmental stage and anatomical origin. Journal of Biomechanics, 2014, 47, 214-222.	0.9	60
2014	Mechanotransduction and fibrosis. Journal of Biomechanics, 2014, 47, 1997-2005.	0.9	157
2015	In vitro adhesion of Acanthamoeba castellanii to soft contact lenses depends on water content and disinfection procedure. Contact Lens and Anterior Eye, 2014, 37, 262-266.	0.8	20
2016	Genetically engineered silk–collagen-like copolymer for biomedical applications: Production, characterization and evaluation of cellular response. Acta Biomaterialia, 2014, 10, 3620-3629.	4.1	31
2017	Systematically organized nanopillar arrays reveal differences in adhesion and alignment properties of BMSC and Saos-2 cells. Colloids and Surfaces B: Biointerfaces, 2014, 119, 71-81.	2.5	12

#	ARTICLE	IF	CITATIONS
2018	Mouse embryonic stem cells cultured under serum- and feeder-free conditions maintain their self-renewal capacity on hydroxyapatite. Materials Science and Engineering C, 2014, 34, 214-220.	3.8	6
2019	Cell adhesion mechanisms on laterally mobile polymer films. Biomaterials, 2014, 35, 4827-4834.	5.7	26
2020	Fabrication of biconcave discoidal silica capsules and their uptake behavior by smooth muscle cells. Journal of Colloid and Interface Science, 2014, 426, 124-130.	5.0	7
2021	The Potential of Cellulose Nanocrystals in Tissue Engineering Strategies. Biomacromolecules, 2014, 15, 2327-2346.	2.6	417
2022	Physiology and metabolism of tissue-engineered skeletal muscle. Experimental Biology and Medicine, 2014, 239, 1203-1214.	1.1	47
2023	The Nano-Scale Mechanical Properties of the Extracellular Matrix Regulate Dermal Fibroblast Function. Journal of Investigative Dermatology, 2014, 134, 1862-1872.	0.3	207
2024	Extracellular matrix stiffness and composition jointly regulate the induction of malignant phenotypes in mammary epithelium. Nature Materials, 2014, 13, 970-978.	13.3	689
2025	Fabrication of poly(ethylene glycol): gelatin methacrylate composite nanostructures with tunable stiffness and degradation for vascular tissue engineering. Biofabrication, 2014, 6, 024112.	3.7	65
2026	Facilitating neural stem/progenitor cell niche calibration for neural lineage differentiation by polyelectrolyte multilayer films. Colloids and Surfaces B: Biointerfaces, 2014, 121, 54-65.	2.5	15
2027	The Osteoprint: A bioinspired two-photon polymerized 3-D structure for the enhancement of bone-like cell differentiation. Acta Biomaterialia, 2014, 10, 4304-4313.	4.1	92
2028	Effects of substrate stiffness on adipogenic and osteogenic differentiation of human mesenchymal stem cells. Materials Science and Engineering C, 2014, 40, 316-323.	3.8	99
2029	Stress Sensitivity and Mechanotransduction during Heart Development. Current Biology, 2014, 24, R495-R501.	1.8	56
2030	Some basic questions on mechanosensing in cell–substrate interaction. Journal of the Mechanics and Physics of Solids, 2014, 70, 116-135.	2.3	97
2031	Engineering of synthetic cellular microenvironments: Implications for immunity. Journal of Autoimmunity, 2014, 54, 100-111.	3.0	33
2032	Automated AFM force curve analysis for determining elastic modulus of biomaterials and biological samples. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 37, 209-218.	1.5	54
2033	Enhanced chondrogenesis of human nasal septum derived progenitors on nanofibrous scaffolds. Materials Science and Engineering C, 2014, 40, 445-454.	3.8	37
2034	Biophysical Characterization of Bladder Cancer Cells with Different Metastatic Potential. Cell Biochemistry and Biophysics, 2014, 68, 241-246.	0.9	47
2035	Gelation and biocompatibility of injectable alginate–calcium phosphate gels for bone regeneration. Journal of Biomedical Materials Research - Part A, 2014, 102, 808-817.	2.1	31

#	Article	IF	CITATIONS
2036	An Effect of Mechanical Properties of Polymer Surface on Fibroblast Adhesion. Nippon Gomu Kyokaishi, 2014, 87, 434-439.	0.0	0
2037	The taming of the cell: shape-memory nanopatterns direct cell orientation. International Journal of Nanomedicine, 2014, 9 Suppl 1, 117.	3.3	37
2038	ECM Protein Nanofibers and Nanostructures Engineered Using Surface-initiated Assembly. Journal of Visualized Experiments, $2014, \ldots$	0.2	10
2039	Micro and Nano-Scale Technologies for Cell Mechanics. Nanobiomedicine, 2014, 1, 5.	4.4	33
2040	Electroporation of Adherent Cells by Direct Lamination of Hydrogel-based Microelectrode Substrates. Chemistry Letters, 2014, 43, 444-446.	0.7	4
2041	Nanoscale Mechanical Testing of FIB-Isolated Biological Specimens. , 2014, , 382-391.		0
2042	Dynamic cell patterning of photoresponsive hyaluronic acid hydrogels. Journal of Biomedical Materials Research - Part A, 2014, 102, 381-391.	2.1	14
2043	The extracellular matrix: Structure, composition, age-related differences, tools for analysis and applications for tissue engineering. Journal of Tissue Engineering, 2014, 5, 204173141455711.	2.3	290
2044	In Search of the Pivot Point of Mechanotransduction: Mechanosensing of Stem Cells. Cell Transplantation, 2014, 23, 1-11.	1.2	48
2045	Quantifying cellular alignment on anisotropic biomaterial platforms. Journal of Biomedical Materials Research - Part A, 2014, 102, 420-428.	2.1	8
2046	Stable Biochemically Micro-patterned Hydrogel Layers Control Specific Cell Adhesion and Allow Long Term Cyclic Tensile Strain Experiments. Macromolecular Bioscience, 2014, 14, 1547-1555.	2.1	7
2047	A device for dynamic modulation of cell-generated tension in 3D biopolymer gels. , 2014, , .		0
2048	How deeply cells feel?., 2014,,.		1
2049	Biopolymers and supramolecular polymers as biomaterials for biomedical applications. MRS Bulletin, 2015, 40, 1089-1101.	1.7	49
2050	High Resolution, Large Deformation 3D Traction Force Microscopy. Biophysical Journal, 2015, 108, 493a.	0.2	1
2051	Fast nastic motion of plants and bioinspired structures. Journal of the Royal Society Interface, 2015, 12, 20150598.	1.5	95
2052	Matrix stiffness induces epithelial mesenchymal transition phenotypes of human epidermal keratinocytes on collagen coated two dimensional cell culture. Biomedical Engineering Letters, 2015, 5, 194-202.	2.1	13
2053	Threeâ€dimensional hydrogel encapsulated embryonic stem and carcinoma cells as culture platforms for cytotoxicity studies. AICHE Journal, 2015, 61, 3180-3184.	1.8	2

#	Article	IF	CITATIONS
2054	Using biomaterials to study stem cell mechanotransduction, growth and differentiation. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 528-539.	1.3	69
2055	Hydrogels Based on Poly(2-oxazoline) S for Pharmaceutical Applications. , 2015, , 231-258.		5
2056	Conducting Polymers: Prospects. , 0, , 2024-2038.		0
2057	Protein-mediated hydroxyapatite composite layer formation on nanotubular titania. Bioinspired, Biomimetic and Nanobiomaterials, 2015, 4, 155-165.	0.7	6
2058	Finding and tracing human MSC in 3D microenvironments with the photoconvertible protein Dendra2. Scientific Reports, 2015, 5, 10079.	1.6	9
2059	p53/PUMA expression in human pulmonary fibroblasts mediates cell activation and migration in silicosis. Scientific Reports, 2015, 5, 16900.	1.6	27
2060	Simple Polyacrylamide-based Multiwell Stiffness Assay for the Study of Stiffness-dependent Cell Responses. Journal of Visualized Experiments, 2015, , .	0.2	36
2061	Expression analysis of α-smooth muscle actin and tenascin-C in the periodontal ligament under orthodontic loading or in vitro culture. International Journal of Oral Science, 2015, 7, 232-241.	3.6	12
2062	Substrate Stiffness-Modulated Registry Phase Correlations in Cardiomyocytes Maps Structural Order to Coherent Beating. Biophysical Journal, 2015, 108, 443a.	0.2	21
2063	The Role of Biomaterials on Cancer Stem Cell Enrichment and Behavior. Jom, 2015, 67, 2543-2549.	0.9	9
2064	Modeling migration in cell colonies in two and three dimensional substrates with varying stiffnesses. In Silico Cell and Tissue Science, 2015, 2, .	2.6	10
2065	Structured illumination microscopy reveals focal adhesions are composed of linear subunits. Cytoskeleton, 2015, 72, 235-245.	1.0	41
2066	Osteogenic differentiation of umbilical cord and adipose derived stem cells onto highly porous 45S5 Bioglass [®] â€based scaffolds. Journal of Biomedical Materials Research - Part A, 2015, 103, 1029-1037.	2.1	32
2067	Surface chemistry gradients on silicone elastomers for highâ€throughput modulation of cellâ€adhesive interfaces. Journal of Biomedical Materials Research - Part A, 2015, 103, 2066-2076.	2.1	8
2068	Vertical bone augmentation induced by ultrathin hydroxyapatite sputtered coated mini titanium implants in a rabbit calvaria model. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2015, 103, 1700-1708.	1.6	9
2069	Atomic force microscopy and cells: Indentation profiles around the <scp>AFM</scp> tip, cell shape changes, and other examples of experimental factors affecting modeling. Microscopy Research and Technique, 2015, 78, 626-632.	1.2	14
2070	A Biomimetic Core-Shell Platform for Miniaturized 3D Cell and Tissue Engineering. Particle and Particle Systems Characterization, 2015, 32, 809-816.	1.2	61
2071	Nanomechanics of Cells and Biomaterials Studied by Atomic Force Microscopy. Advanced Healthcare Materials, 2015, 4, 2456-2474.	3.9	38

#	Article	IF	CITATIONS
2072	Glutamate affects dendritic morphology of neurons grown on compliant substrates. Biotechnology Progress, 2015, 31, 1128-1132.	1.3	8
2073	Analysis of mitochondrial mechanical dynamics using a confocal fluorescence microscope with a bent optical fibre. Journal of Microscopy, 2015, 260, 140-151.	0.8	6
2074	Cell Fiber Technology for Tissue Construction. Seibutsu Butsuri, 2015, 55, 206-207.	0.0	0
2075	Electrochemically Tunable Cell Adsorption on a Transparent and Adhesion-Switchable Superhydrophobic Polythiophene Film. Macromolecular Rapid Communications, 2015, 36, 1205-1210.	2.0	28
2076	Soft PEGâ€Hydrogels with Independently Tunable Stiffness and RGDSâ€Content for Cell Adhesion Studies. Macromolecular Bioscience, 2015, 15, 1338-1347.	2.1	30
2077	Interfacing Inorganic Nanowire Arrays and Living Cells for Cellular Function Analysis. Small, 2015, 11, 5600-5610.	5.2	50
2078	Vertical osteoconductivity of sputtered hydroxyapatite-coated mini titanium implants after dura mater elevation: Rabbit calvarial model. Journal of Tissue Engineering, 2015, 6, 204173141559207.	2.3	4
2079	Biological Archetypes for Self-Healing Materials. Advances in Polymer Science, 2015, , 307-344.	0.4	36
2080	A Universal and Facile Approach for the Formation of a Protein Hydrogel for 3D Cell Encapsulation. Advanced Functional Materials, 2015, 25, 6189-6198.	7.8	21
2081	Changes in actin and tubulin expression in osteogenic cells cultured on bioactive glassâ€based surfaces. Microscopy Research and Technique, 2015, 78, 1046-1053.	1.2	3
2082	Convergent Science Physical Oncology. Convergent Science Physical Oncology, 2015, 1, 010201.	2.6	0
2083	Protein Corona Influences Cell–Biomaterial Interactions in Nanostructured Tissue Engineering Scaffolds. Advanced Functional Materials, 2015, 25, 4379-4389.	7.8	57
2084	Fabrication of 3D Scaffolds with Precisely Controlled Substrate Modulus and Pore Size by Templatedâ€Fused Deposition Modeling to Direct Osteogenic Differentiation. Advanced Healthcare Materials, 2015, 4, 1826-1832.	3.9	31
2085	Tuning of Collagen Scaffold Properties Modulates Embedded Endothelial Cell Regulatory Phenotype in Repair of Vascular Injuries In Vivo. Advanced Healthcare Materials, 2015, 4, 2220-2228.	3.9	7
2086	Soft Poly(dimethylsiloxane) Elastomers from Architectureâ€Driven Entanglement Free Design. Advanced Materials, 2015, 27, 5132-5140.	11.1	163
2087	Redox gene expression of adipose-derived stem cells in response to soft hydrogel. Turkish Journal of Biology, 2015, 39, 682-691.	2.1	5
2088	Priming the Surface of Orthopedic Implants for Osteoblast Attachment in Bone Tissue Engineering. International Journal of Medical Sciences, 2015, 12, 701-707.	1.1	28
2089	Role of nanotopography in the development of tissue engineered 3D organs and tissues using mesenchymal stem cells. World Journal of Stem Cells, 2015, 7, 266.	1.3	41

#	Article	IF	Citations
2090	Forces of nature: understanding the role of mechanotransduction in stem cell differentiation. , 0, , 205-226.		0
2091	Substrate Elastic Modulus Regulates the Morphology, Focal Adhesions, and α-Smooth Muscle Actin Expression of Retinal Mýller Cells., 2015, 56, 5974.		11
2092	Reduced matrix rigidity promotes neonatal cardiomyocyte dedifferentiation, proliferation and clonal expansion. ELife, 2015, 4, .	2.8	118
2093	Cardiac muscle organization revealed in 3-D by imaging whole-mount mouse hearts using two-photon fluorescence and confocal microscopy. BioTechniques, 2015, 59, 295-308.	0.8	19
2094	Effect of Ceramic Scaffold Architectural Parameters on Biological Response. Frontiers in Bioengineering and Biotechnology, 2015, 3, 151.	2.0	83
2095	Dermal Contributions to Human Interfollicular Epidermal Architecture and Self-Renewal. International Journal of Molecular Sciences, 2015, 16, 28098-28107.	1.8	51
2096	Adult Stem Cell Responses to Nanostimuli. Journal of Functional Biomaterials, 2015, 6, 598-622.	1.8	37
2097	Mechanics of Biological Tissues and Biomaterials: Current Trends. Materials, 2015, 8, 4505-4511.	1.3	12
2098	Towards Tuning the Mechanical Properties of Three-Dimensional Collagen Scaffolds Using a Coupled Fiber-Matrix Model. Materials, 2015, 8, 5376-5384.	1.3	14
2099	Mechanochemical regulation of growth cone motility. Frontiers in Cellular Neuroscience, 2015, 9, 244.	1.8	127
2100	Smooth Muscle-Like Tissue Constructs with Circumferentially Oriented Cells Formed by the Cell Fiber Technology. PLoS ONE, 2015, 10, e0119010.	1.1	59
2101	Role of Mechanical Cues in Cell Differentiation and Proliferation: A 3D Numerical Model. PLoS ONE, 2015, 10, e0124529.	1.1	70
2102	Spatiotemporal Stability of Neonatal Rat Cardiomyocyte Monolayers Spontaneous Activity Is Dependent on the Culture Substrate. PLoS ONE, 2015, 10, e0127977.	1.1	17
2103	Increased Stiffness in Aged Skeletal Muscle Impairs Muscle Progenitor Cell Proliferative Activity. PLoS ONE, 2015, 10, e0136217.	1.1	117
2104	Free Form Deformation–Based Image Registration Improves Accuracy of Traction Force Microscopy. PLoS ONE, 2015, 10, e0144184.	1.1	23
2105	In Vitro Evaluation of Spider Silk Meshes as a Potential Biomaterial for Bladder Reconstruction. PLoS ONE, 2015, 10, e0145240.	1.1	22
2106	Nanocellulosic Materials in Tissue Engineering Applications. , 0, , .		4
2107	Hyaluronic Acid Based Hydrogels for Regenerative Medicine Applications. BioMed Research International, 2015, 2015, 1-12.	0.9	94

#	Article	IF	CITATIONS
2108	Physical, Spatial, and Molecular Aspects of Extracellular Matrix of <i>In Vivo </i> Niches and Artificial Scaffolds Relevant to Stem Cells Research. Stem Cells International, 2015, 2015, 1-35.	1.2	135
2109	Generation of contractile actomyosin bundles depends on mechanosensitive actin filament assembly and disassembly. ELife, 2015, 4, e06126.	2.8	118
2110	The activation of IgM- or isotype-switched IgG- and IgE-BCR exhibits distinct mechanical force sensitivity and threshold. ELife, 2015, 4, .	2.8	90
2111	Molecular mechanisms of cellular mechanotransduction in wound healing. , 0, , 266-294.		0
2112	Periodontal Biological Events Associated with Orthodontic Tooth Movement: The Biomechanics of the Cytoskeleton and the Extracellular Matrix. Scientific World Journal, The, 2015, 2015, 1-7.	0.8	18
2114	Microbuckling of fibrin provides a mechanism for cell mechanosensing. Journal of the Royal Society Interface, 2015, 12, 20150320.	1.5	89
2115	Bioinspired Tuning of Hydrogel Permeability-Rigidity Dependency for 3D Cell Culture. Scientific Reports, 2015, 5, 8948.	1.6	39
2116	Organizational metrics of interchromatin speckle factor domains: integrative classifier for stem cell adhesion & lineage signaling. Integrative Biology (United Kingdom), 2015, 7, 435-446.	0.6	11
2117	Matrix Stiffness and Nanoscale Spatial Organization of Cell-Adhesive Ligands Direct Stem Cell Fate. Nano Letters, 2015, 15, 4720-4729.	4.5	275
2118	Protein nanowires with conductive properties. Journal of Materials Chemistry C, 2015, 3, 6499-6504.	2.7	18
2119	Three-dimensional, soft neotissue arrays as high throughput platforms for the interrogation of engineered tissue environments. Biomaterials, 2015, 59, 39-52.	5.7	26
2120	Multiscale mechanobiology: computational models for integrating molecules to multicellular systems. Integrative Biology (United Kingdom), 2015, 7, 1093-1108.	0.6	33
2122	Biodegradable dendritic copolymers consisting of poly(L-lactide) and cRGDfK peptide: synthesis, characterization, and regulation of MC3T3-E1 cell functions. Designed Monomers and Polymers, 2015, 18, 557-566.	0.7	1
2123	Traction microscopy to identify force modulation in subresolution adhesions. Nature Methods, 2015, 12, 653-656.	9.0	138
2124	Fibronectin Interaction and Enhancement of Growth Factors: Importance for Wound Healing. Advances in Wound Care, 2015, 4, 469-478.	2.6	59
2125	Stem cell mechanobiology: diverse lessons from bone marrow. Trends in Cell Biology, 2015, 25, 523-532.	3.6	103
2126	Thermoresponsive PNIPAM Coatings on Nanostructured Gratings for Cell Alignment and Release. ACS Applied Materials & Diterfaces, 2015, 7, 11857-11862.	4.0	25
2128	Nano-bioelectronics via dip-pen nanolithography. Journal of Materials Chemistry C, 2015, 3, 6431-6444.	2.7	23

#	Article	IF	CITATIONS
2129	Cardiomyocyte subdomain contractility arising from microenvironmental stiffness and topography. Biomechanics and Modeling in Mechanobiology, 2015, 14, 589-602.	1.4	19
2130	Complete pulpodentin complex regeneration by modulating the stiffness of biomimetic matrix. Acta Biomaterialia, 2015, 16, 60-70.	4.1	68
2131	Polymers in Tissue Engineering. , 2015, , 177-217.		4
2132	Tunable Hydrogel Thin Films from Reactive Synthetic Polymers as Potential Two-Dimensional Cell Scaffolds. Langmuir, 2015, 31, 5623-5632.	1.6	14
2133	Rheological characterization of an injectable alginate gel system. BMC Biotechnology, 2015, 15, 29.	1.7	70
2134	Platelets and physics: How platelets "feel―and respond to their mechanical microenvironment. Blood Reviews, 2015, 29, 377-386.	2.8	52
2135	Concise Review: Stem Cell Microenvironment on a Chip: Current Technologies for Tissue Engineering and Stem Cell Biology. Stem Cells Translational Medicine, 2015, 4, 1352-1368.	1.6	67
2136	New formulations for realization and characterization of homogeneous tissue mimicking materials for HIFU exposures. , 2015, , .		2
2137	Micropillar type three-axis force sensor for measurement of cellular force. , 2015, , .		2
2138	The biophysical nature of cells: potential cell behaviours revealed by analytical and computational studies of cell surface mechanics. BMC Biophysics, 2015, 8, 8.	4.4	70
2139	Cadherin-Based Cell-Cell Adhesions: Adhesion Structure, Signalling and Computational Modeling. , 2015, , 151-168.		0
2140	Surface Stiffnessâ€"a Parameter for Sensing the Chirality of Saccharides. ACS Applied Materials & Samp; Interfaces, 2015, 7, 27223-27233.	4.0	19
2141	Magnetically Self-Assembled Colloidal Three-Dimensional Structures as Cell Growth Scaffold. Langmuir, 2015, 31, 9576-9581.	1.6	3
2142	MRI and mechanobiology: new science at the intersection of engineering and medicine. , 2015, , .		0
2143	Long term effects of substrate stiffness on the development of hMSC mechanical properties. RSC Advances, 2015, 5, 105651-105660.	1.7	13
2144	Mechanical Interaction of Metastatic Cancer Cells with a Soft Gel. Procedia IUTAM, 2015, 12, 211-219.	1.2	16
2145	Intercellular Communication in Cancer., 2015,,.		4
2146	Injectable polymeric biomaterials: a brief review. Materials Technology, 2015, 30, B273-B282.	1.5	2

#	Article	IF	CITATIONS
2147	Driven self-assembly of hard nanoplates on soft elastic shells. Chinese Physics B, 2015, 24, 118202.	0.7	2
2148	Enhanced Differentiation and Delivery of Mouse Retinal Progenitor Cells Using a Micropatterned Biodegradable Thin-Film Polycaprolactone Scaffold. Tissue Engineering - Part A, 2015, 21, 1247-1260.	1.6	44
2149	Mechanics of blastopore closure during amphibian gastrulation. Developmental Biology, 2015, 398, 57-67.	0.9	30
2150	Beta 1 integrin binding plays a role in the constant traction force generation in response to varying stiffness for cells grown on mature cardiac extracellular matrix. Experimental Cell Research, 2015, 330, 311-324.	1.2	31
2151	Nanoscale Directional Motion towards Regions of Stiffness. Physical Review Letters, 2015, 114, 015504.	2.9	72
2152	Creased hydrogels as active platforms for mechanical deformation of cultured cells. Lab on A Chip, 2015, 15, 1160-1167.	3.1	15
2153	Actomyosin bundles serve as a tension sensor and a platform for ERK activation. EMBO Reports, 2015, 16, 250-257.	2.0	57
2154	Progress in cell-based therapies for tendon repair. Advanced Drug Delivery Reviews, 2015, 84, 240-256.	6.6	152
2155	Enhanced Schwann Cell Attachment and Alignment Using One-Pot "Dual Click―GRGDS and YIGSR Derivatized Nanofibers. Biomacromolecules, 2015, 16, 357-363.	2.6	47
2156	Cell Volume Fluctuations in MDCK Monolayers. Biophysical Journal, 2015, 108, 247-250.	0.2	88
2157	Extracellular matrix presentation modulates vascular smooth muscle cell mechanotransduction. Matrix Biology, 2015, 41, 36-43.	1.5	68
2158	Exploiting cell-mediated contraction and adhesion to structure tissues <i>in vitro</i> . Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20140200.	1.8	8
2159	Biphasic response of cell invasion to matrix stiffness in three-dimensional biopolymer networks. Acta Biomaterialia, 2015, 13, 61-67.	4.1	122
2160	Force production and mechanical accommodation during convergent extension. Development (Cambridge), 2015, 142, 692-701.	1.2	69
2161	Substrate stiffness-modulated registry phase correlations in cardiomyocytes map structural order to coherent beating. Nature Communications, 2015, 6, 6085.	5.8	44
2162	Ultrasoft, highly deformable microgels. Soft Matter, 2015, 11, 2018-2028.	1.2	84
2163	A Biomechanical Model for Fluidization of Cells under Dynamic Strain. Biophysical Journal, 2015, 108, 43-52.	0.2	18
2164	A mechanical characterization of polymer scaffolds and films at the macroscale and nanoscale. Journal of Biomedical Materials Research - Part A, 2015, 103, 162-169.	2.1	20

#	Article	IF	CITATIONS
2165	Hydrogel-based methods for engineering cellular microenvironment with spatiotemporal gradients. Critical Reviews in Biotechnology, 2016, 36, 1-13.	5.1	39
2166	Intracellular forces during guided cell growth on micropatterns using FRET measurement. Journal of Biomechanics, 2015, 48, 627-635.	0.9	20
2167	Substrate stress relaxation regulates cell spreading. Nature Communications, 2015, 6, 6364.	5.8	637
2168	Anchors and Signals. Current Topics in Developmental Biology, 2015, 112, 233-272.	1.0	44
2169	Modulation of Endothelial Cell Migration via Manipulation of Adhesion Site Growth Using Nanopatterned Surfaces. ACS Applied Materials & Samp; Interfaces, 2015, 7, 4390-4400.	4.0	25
2170	Physically-strengthened collagen bioactive nanocomposite gels for bone: A feasibility study. Tissue Engineering and Regenerative Medicine, 2015, 12, 90-97.	1.6	16
2171	Why is cytoskeletal contraction required for cardiac fusion before but not after looping begins?. Physical Biology, 2015, 12, 016012.	0.8	12
2172	Culture of preantral follicles in poly(ethylene) glycolâ€based, threeâ€dimensional hydrogel: a relationship between swelling ratio and follicular developments. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 319-323.	1.3	19
2173	High-resolution imaging of cellular processes across textured surfaces using an indexed-matched elastomer. Acta Biomaterialia, 2015, 14, 53-60.	4.1	17
2174	Formation of contractile networks and fibers in the medial cell cortex through myosinâ€II turnover, contraction, and stressâ€stabilization. Cytoskeleton, 2015, 72, 29-46.	1.0	6
2175	Creating stiffness gradient polyvinyl alcohol hydrogel using a simple gradual freezing–thawing method to investigate stem cell differentiation behaviors. Biomaterials, 2015, 40, 51-60.	5.7	181
2176	Mobility of the Arg-Gly-Asp ligand on the outermost surface of biomaterials suppresses integrin-mediated mechanotransduction and subsequent cell functions. Acta Biomaterialia, 2015, 13, 42-51.	4.1	15
2177	Biophysical properties of human breast cancer cells measured using silicon MEMS resonators and atomic force microscopy. Lab on A Chip, 2015, 15, 839-847.	3.1	68
2178	Two-Bubble Acoustic Tweezing Cytometry for Biomechanical Probing and Stimulation of Cells. Biophysical Journal, 2015, 108, 32-42.	0.2	27
2179	Concise Review: Tailoring Bioengineered Scaffolds for Stem Cell Applications in Tissue Engineering and Regenerative Medicine. Stem Cells Translational Medicine, 2015, 4, 156-164.	1.6	52
2180	Tug of warâ€"The influence of opposing physical forces on epithelial cell morphology. Developmental Biology, 2015, 401, 92-102.	0.9	64
2181	A Multimaterial Bioink Method for 3D Printing Tunable, Cellâ€Compatible Hydrogels. Advanced Materials, 2015, 27, 1607-1614.	11.1	487
2182	Tough and elastic hydrogel of hyaluronic acid and chondroitin sulfate as potential cell scaffold materials. International Journal of Biological Macromolecules, 2015, 74, 367-375.	3.6	59

#	Article	IF	CITATIONS
2183	PDGFâ€'stimulated dispersal of cell clusters and disruption of fibronectin matrix on three-dimensional collagen matrices requires matrix metalloproteinase-2. Molecular Biology of the Cell, 2015, 26, 1098-1105.	0.9	4
2184	Pharmacological activation of myosin II paralogs to correct cell mechanics defects. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1428-1433.	3.3	54
2185	Application of multiple levels of fluid shear stress to endothelial cells plated on polyacrylamide gels. Lab on A Chip, 2015, 15, 1205-1212.	3.1	55
2187	Highly elastic and suturable electrospun poly(glycerol sebacate) fibrous scaffolds. Acta Biomaterialia, 2015, 18, 30-39.	4.1	118
2188	Photothermally Induced Local Dissociation of Collagens for Harvesting of Cell Sheets. Angewandte Chemie - International Edition, 2015, 54, 5869-5873.	7.2	36
2189	Tissue-specific mechanical and geometrical control of cell viability and actin cytoskeleton alignment. Scientific Reports, 2014, 4, 6160.	1.6	33
2190	Elasticity of Nanoparticles Influences Their Blood Circulation, Phagocytosis, Endocytosis, and Targeting. ACS Nano, 2015, 9, 3169-3177.	7.3	470
2191	Bio-based polymers, supercritical fluids and tissue engineering. Process Biochemistry, 2015, 50, 826-838.	1.8	76
2192	Osseointegration improvement by plasma electrolytic oxidation of modified titanium alloys surfaces. Journal of Materials Science: Materials in Medicine, 2015, 26, 72.	1.7	48
2193	Featured Article: Temporal responses of human endothelial and smooth muscle cells exposed to uniaxial cyclic tensile strain. Experimental Biology and Medicine, 2015, 240, 1298-1309.	1.1	16
2194	Cells as liquid motors: Mechanosensitivity emerges from collective dynamics of actomyosin cortex. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2740-2745.	3.3	68
2195	Lyophilized Silk Sponges: A Versatile Biomaterial Platform for Soft Tissue Engineering. ACS Biomaterials Science and Engineering, 2015, 1, 260-270.	2.6	146
2196	The Role of Matrix Compliance on Cell Responses to Drugs and Toxins: Towards Predictive Drug Screening Platforms. Macromolecular Bioscience, 2015, 15, 589-599.	2.1	14
2197	Controlled Remodeling of Hydrogel Networks and Subsequent Crosslinking: A Strategy for Preparation of Alginate Hydrogels with Ultrahigh Density and Enhanced Mechanical Properties. Macromolecular Chemistry and Physics, 2015, 216, 914-921.	1.1	8
2198	Nano-hydroxyapatite promotes self-assembly of honeycomb pores in poly(<scp> </scp> -lactide) films through breath-figure method and MC3T3-E1 cell functions. RSC Advances, 2015, 5, 6607-6616.	1.7	27
2199	Biomaterial based modulation of macrophage polarization: a review and suggested design principles. Materials Today, 2015, 18, 313-325.	8.3	629
2200	The synergistic effect of micro-topography and biochemical culture environment to promote angiogenesis and osteogenic differentiation of human mesenchymal stem cells. Acta Biomaterialia, 2015, 18, 100-111.	4.1	35
2201	Liquid Crystal Elastomer Microspheres as Three-Dimensional Cell Scaffolds Supporting the Attachment and Proliferation of Myoblasts. ACS Applied Materials & Elastomeres, 2015, 7, 14528-14535.	4.0	53

#	Article	IF	CITATIONS
2202	Matrix cross-linking–mediated mechanotransduction promotes posttraumatic osteoarthritis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9424-9429.	3.3	82
2203	Bidirectional Interplay between Vimentin Intermediate Filaments and Contractile Actin Stress Fibers. Cell Reports, 2015, 11, 1511-1518.	2.9	157
2204	PAK1 is involved in sensing the orientation of collagen stiffness gradients in mouse fibroblasts. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 2526-2538.	1.9	5
2205	Epicardial application of cardiac progenitor cells in a 3D-printed gelatin/hyaluronic acid patch preserves cardiac function after myocardial infarction. Biomaterials, 2015, 61, 339-348.	5.7	265
2206	Matrix rigidity regulates the transition of tumor cells to a bone-destructive phenotype through integrin l ² 3 and TGF-l ² receptor type II. Biomaterials, 2015, 64, 33-44.	5.7	65
2207	Droplets move over viscoelastic substrates by surfing a ridge. Nature Communications, 2015, 6, 7891.	5.8	136
2208	Retinal Glia. Colloquium Series on Neuroglia in Biology and Medicine From Physiology To Disease, 2015, 2, 1-644.	0.5	5
2209	The Biomechanics of eyelid tarsus tissue. Journal of Biomechanics, 2015, 48, 3455-3459.	0.9	16
2210	A theoretical model of the endothelial cell morphology due to different waveforms. Journal of Theoretical Biology, 2015, 379, 16-23.	0.8	8
2211	Mechanotransduction in neutrophil activation and deactivation. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 3105-3116.	1.9	44
2212	InÂvitro myogenesis induced by human recombinant elastin-like proteins. Biomaterials, 2015, 67, 240-253.	5.7	13
2213	Directing cell migration and organization via nanocrater-patterned cell-repellent interfaces. Nature Materials, 2015, 14, 918-923.	13.3	159
2214	Fundamentals of nanotechnology and orthopedic materials. , 2015, , 1-25.		3
2215	Bioinspired nanopolymers and nanocomposites for orthopedic applications. , 2015, , 77-96.		0
2216	Sequence-Dependent Structural Stability of Self-Assembled Cylindrical Nanofibers by Peptide Amphiphiles. Biomacromolecules, 2015, 16, 2209-2219.	2.6	25
2217	Bioinspired Quercitrin Nanocoatings: A Fluorescence-Based Method for Their Surface Quantification, and Their Effect on Stem Cell Adhesion and Differentiation to the Osteoblastic Lineage. ACS Applied Materials & Samp; Interfaces, 2015, 7, 16857-16864.	4.0	29
2218	Controlled Assembly of Fibronectin Nanofibrils Triggered by Random Copolymer Chemistry. ACS Applied Materials & Distriction (2015), 7, 18125-18135.	4.0	16
2219	Titania nanotube arrays as interfaces for neural prostheses. Materials Science and Engineering C, 2015, 49, 735-745.	3.8	25

#	Article	IF	CITATIONS
2220	Thermogelling and Chemoselectively Cross-Linked Hydrogels with Controlled Mechanical Properties and Degradation Behavior. Biomacromolecules, 2015, 16, 2840-2851.	2.6	28
2221	Peptide Bioink: Self-Assembling Nanofibrous Scaffolds for Three-Dimensional Organotypic Cultures. Nano Letters, 2015, 15, 6919-6925.	4.5	161
2222	Priming cells for their final destination: microenvironment controlled cell culture by a modular ECM-mimicking feeder film. Biomaterials Science, 2015, 3, 1302-1311.	2.6	22
2223	Lung Extracellular Matrix and Fibroblast Function. Annals of the American Thoracic Society, 2015, 12, S30-S33.	1.5	145
2224	Tendon extracellular matrix damage, degradation and inflammation in response to in vitro overload exercise. Journal of Orthopaedic Research, 2015, 33, 889-897.	1.2	90
2225	Single molecular force across single integrins dictates cell spreading. Integrative Biology (United) Tj ETQq $1\ 1\ 0.78$	4314 rgBT	 <mark>42</mark> verlock
2226	Measuring dynamic cell–material interactions and remodeling during 3D human mesenchymal stem cell migration in hydrogels. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3757-64.	3.3	149
2227	Adaptive rheology and ordering of cell cytoskeleton govern matrix rigidity sensing. Nature Communications, 2015, 6, 7525.	5.8	233
2228	Unidirectional Cell Crawling Model Guided by Extracellular Cues. Journal of Biomechanical Engineering, 2015, 137, .	0.6	4
2229	Matrix stiffness-modulated proliferation and secretory function of the airway smooth muscle cells. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2015, 308, L1125-L1135.	1.3	60
2230	Inelastic mechanics: A unifying principle in biomechanics. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 3025-3037.	1.9	24
2231	Size-Tunable Organic Nanodot Arrays: A Versatile Platform for Manipulating and Imaging Cells. Nano Letters, 2015, 15, 5178-5184.	4.5	17
2232	Fast, multi-frequency and quantitative nanomechanical mapping of live cells using the atomic force microscope. Scientific Reports, 2015, 5, 11692.	1.6	109
2233	Integration of cell–cell and cell–ECM adhesion in vertebrate morphogenesis. Current Opinion in Cell Biology, 2015, 36, 48-53.	2.6	47
2234	Computer Simulations of Bottle Brushes: From Melts to Soft Networks. Macromolecules, 2015, 48, 5006-5015.	2.2	80
2235	Filamin A Mediates Wound Closure by Promoting Elastic Deformation and Maintenance of Tension in the Collagen Matrix. Journal of Investigative Dermatology, 2015, 135, 2852-2861.	0.3	19
2236	Fractal heterogeneity in minimal matrix models of scars modulates stiff-niche stem-cell responses via nuclear exit of a mechanorepressor. Nature Materials, 2015, 14, 951-960.	13.3	108
2237	Electrochemically designed interfaces: Hydroxyapatite coated macro-mesoporous titania surfaces. Applied Surface Science, 2015, 350, 62-68.	3.1	17

#	Article	IF	CITATIONS
2238	Combination of positive charges and honeycomb pores to promote MC3T3-E1 cell behaviour. RSC Advances, 2015, 5, 42276-42286.	1.7	7
2239	Validation tool for traction force microscopy. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1377-1385.	0.9	7
2240	Ultrasoft Alginate Hydrogels Support Long-Term Three-Dimensional Functional Neuronal Networks. Tissue Engineering - Part A, 2015, 21, 2177-2185.	1.6	46
2241	Mechanics regulates ATP-stimulated collective calcium response in fibroblast cells. Journal of the Royal Society Interface, 2015, 12, 20150140.	1.5	14
2242	Collective cell migration induced by mechanical stress and substrate adhesiveness. Physical Review E, 2015, 91, 012712.	0.8	8
2243	Nanomechanical and topographical imaging of living cells by atomic force microscopy with colloidal probes. Review of Scientific Instruments, 2015, 86, 033705.	0.6	77
2244	Mechanical forces in musculoskeletal tissue engineering. , 2015, , 77-93.		4
2245	Production of Centimeter-Scale Gradient Patterns by Graded Elastomeric Tip Array. ACS Applied Materials & Interfaces, 2015, 7, 6991-7000.	4.0	10
2246	Isoforms Confer Characteristic Force Generation and Mechanosensation by Myosin II Filaments. Biophysical Journal, 2015, 108, 1997-2006.	0.2	64
2247	Mechanical biocompatibility of highly deformable biomedical materials. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 48, 100-124.	1.5	78
2248	Reinforcement of hydrogels using three-dimensionally printed microfibres. Nature Communications, 2015, 6, 6933.	5.8	567
2249	Substrate stiffness regulates Bâ€cell activation, proliferation, class switch, and Tâ€cellâ€independent antibody responses in vivo. European Journal of Immunology, 2015, 45, 1621-1634.	1.6	76
2250	Cytoskeletal prestress regulates nuclear shape and stiffness in cardiac myocytes. Experimental Biology and Medicine, 2015, 240, 1543-1554.	1.1	33
2251	Architecture and migration of an epithelium on a cylindrical wire. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5944-5949.	3.3	103
2252	Alpha-actinin binding kinetics modulate cellular dynamics and force generation. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6619-6624.	3.3	87
2253	Toward a Tunable Fibrous Scaffold: Structural Development during Uniaxial Drawing of Coextruded Poly(ε-caprolactone) Fibers. Macromolecules, 2015, 48, 2614-2627.	2.2	35
2254	Physical View on the Interactions Between Cancer Cells and the Endothelial Cell Lining During Cancer Cell Transmigration and Invasion. Biophysical Reviews and Letters, 2015, 10, 1-24.	0.9	3
2255	Heterotypic control of basement membrane dynamics during branching morphogenesis. Developmental Biology, 2015, 401, 103-109.	0.9	19

#	Article	IF	CITATIONS
2256	Bioengineered Scaffolds for 3D Analysis of Glioblastoma Proliferation and Invasion. Annals of Biomedical Engineering, 2015, 43, 1965-1977.	1.3	59
2257	Physicochemical and Biomechanical Stimuli in Cell-Based Articular Cartilage Repair. Current Rheumatology Reports, 2015, 17, 22.	2.1	32
2258	Probing the Biophysical Properties of Primary Breast Tumor-Derived Fibroblasts. Cellular and Molecular Bioengineering, 2015, 8, 76-85.	1.0	20
2259	Real-time automated characterization of 3D morphology and mechanics of developing plant cells. International Journal of Robotics Research, 2015, 34, 1136-1146.	5.8	29
2260	Vascularized and Complex Organ Buds from Diverse Tissues via Mesenchymal Cell-Driven Condensation. Cell Stem Cell, 2015, 16, 556-565.	5.2	372
2261	Host Response to Biomaterials for Pelvic Floor Reconstruction. , 2015, , 375-423.		4
2262	Introduction to In Situ Forming Hydrogels for Biomedical Applications. Series in Bioengineering, 2015, , 5-35.	0.3	25
2263	Hydrophilic polyurethane matrix promotes chondrogenesis of mesenchymal stem cells. Materials Science and Engineering C, 2015, 54, 182-195.	3.8	22
2264	Flightless I interacts with NMMIIA to promote cell extension formation, which enables collagen remodeling. Molecular Biology of the Cell, 2015, 26, 2279-2297.	0.9	18
2265	Concurrent photopatterning of elastic modulus and structures in photosensitive silicone elastomers. Extreme Mechanics Letters, 2015, 3, 1-7.	2.0	8
2266	Silk Hydrogels of Tunable Structure and Viscoelastic Properties Using Different Chronological Orders of Genipin and Physical Cross-Linking. ACS Applied Materials & Interfaces, 2015, 7, 12099-12108.	4.0	60
2267	Physiologically inspired cardiac scaffolds for tailored <i>in vivo</i> function and heart regeneration. Biomedical Materials (Bristol), 2015, 10, 034003.	1.7	55
2268	Fabrication of a novel blended membrane with chitosan and silk microfibers for wound healing: characterization, in vitro and in vivo studies. Journal of Materials Chemistry B, 2015, 3, 3634-3642.	2.9	62
2269	Physical and biological activities of newly designed, macro-pore-structure-controlled 3D fibrous poly(ε-caprolactone)/hydroxyapatite composite scaffolds. RSC Advances, 2015, 5, 26954-26964.	1.7	11
2270	Regulation of adipogenesis and osteogenesis in mesenchymal stem cells by vascular endothelial growth factor A. Journal of Internal Medicine, 2015, 277, 674-680.	2.7	24
2271	Multi-scale undulations in human aortic endothelial cell fibers. European Physical Journal E, 2015, 38, 96.	0.7	2
2272	Force transmission during adhesion-independent migration. Nature Cell Biology, 2015, 17, 524-529.	4.6	279
2276	Traumatic Brain Injury and the Neuronal Microenvironment: A Potential Role for Neuropathological Mechanotransduction. Neuron, 2015, 85, 1177-1192.	3.8	142

#	Article	IF	CITATIONS
2277	Toward Structured Macroporous Hydrogel Composites: Electron Beam-Initiated Polymerization of Layered Cryogels. Biomacromolecules, 2015, 16, 1146-1156.	2.6	6
2278	Primary cilia mechanics affects cell mechanosensation: A computational study. Journal of Theoretical Biology, 2015, 379, 38-46.	0.8	37
2279	CDH2 and CDH11 act as regulators of stem cell fate decisions. Stem Cell Research, 2015, 14, 270-282.	0.3	133
2280	Cyclic stretching of soft substrates induces spreading and growth. Nature Communications, 2015, 6, 6333.	5 . 8	244
2281	Mechanical dynamics in live cells and fluorescence-based force/tension sensors. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 1889-1904.	1.9	42
2282	Structure–mechanics relationships in mineralized tendons. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 52, 72-84.	1.5	11
2284	Micropillar substrates: A tool for studying cell mechanobiology. Methods in Cell Biology, 2015, 125, 289-308.	0.5	46
2285	Regulation of stem cell fate by nanomaterial substrates. Nanomedicine, 2015, 10, 829-847.	1.7	65
2286	Biomaterials in Regenerative Medicine. , 2015, , 141-149.		0
2287	Bioactive Gyroid Scaffolds Formed by Sacrificial Templating of Nanocellulose and Nanochitin Hydrogels as Instructive Platforms for Biomimetic Tissue Engineering. Advanced Materials, 2015, 27, 2989-2995.	11.1	195
2288	Cell Mechanosensitivity to Extremely Low-Magnitude Signals Is Enabled by a LINCed Nucleus. Stem Cells, 2015, 33, 2063-2076.	1.4	122
2289	Nuclear mechanotransduction: Forcing the nucleus to respond. Nucleus, 2015, 6, 19-22.	0.6	60
2290	Molecularly Engineered Biodegradable Polymer Networks with a Wide Range of Stiffness for Bone and Peripheral Nerve Regeneration. Advanced Functional Materials, 2015, 25, 2715-2724.	7.8	51
2291	Biomaterials based strategies for skeletal muscle tissue engineering: Existing technologies and future trends. Biomaterials, 2015, 53, 502-521.	5.7	347
2292	Tunable Stress Relaxation Behavior of an Alginate-Polyacrylamide Hydrogel: Comparison with Muscle Tissue. Biomacromolecules, 2015, 16, 1497-1505.	2.6	80
2293	Aggregation dynamics of molecular bonds between compliant materials. Soft Matter, 2015, 11, 2812-2820.	1.2	22
2294	Active mechanical coupling between the nucleus, cytoskeleton and the extracellular matrix, and the implications for perinuclear actomyosin organization. Soft Matter, 2015, 11, 2353-2363.	1.2	12
2295	Development of human corneal epithelium on organized fibrillated transparent collagen matrices synthesized at high concentration. Acta Biomaterialia, 2015, 22, 50-58.	4.1	28

#	ARTICLE	IF	CITATIONS
2296	Differential Effects of Culture Senescence and Mechanical Stimulation on the Proliferation and Leiomyogenic Differentiation of MSC from Different Sources: Implications for Engineering Vascular Grafts. Tissue Engineering - Part A, 2015, 21, 1364-1375.	1.6	37
2297	Relationship between Segmental Relaxation of Polystyrene Films and Stick–Slip Behavior during Dynamic Wetting of Liquid Droplets on Their Surfaces. Journal of Physical Chemistry B, 2015, 119, 12325-12335.	1.2	8
2298	The effect of Young's modulus on the neuronal differentiation of mouse embryonic stem cells. Acta Biomaterialia, 2015, 25, 253-267.	4.1	44
2299	Direct measurement of DNA-mediated adhesion between lipid bilayers. Physical Chemistry Chemical Physics, 2015, 17, 15615-15628.	1.3	40
2300	Directional migration of cancer cells induced by a blue light intensity gradient. Biomedical Optics Express, 2015, 6, 2624.	1.5	9
2301	Compact Saloplastic Membranes of Natural Polysaccharides for Soft Tissue Engineering. Chemistry of Materials, 2015, 27, 7490-7502.	3.2	53
2302	Effect of Polyelectrolyte Film Stiffness on Endothelial Cells During Endothelial-to-Mesenchymal Transition. Biomacromolecules, 2015, 16, 3584-3593.	2.6	57
2303	Macroporous Biodegradable Cryogels of Synthetic Poly(\hat{l} ±-amino acids). Biomacromolecules, 2015, 16, 3455-3465.	2.6	26
2304	Mechanotransduction: use the force(s). BMC Biology, 2015, 13, 47.	1.7	183
2305	Nonequilibrium Fluctuations in Biological Strands, Machines, and Cells. Journal of the Physical Society of Japan, 2015, 84, 102001.	0.7	15
2306	Cell shape and the microenvironment regulate nuclear translocation of <scp>NF</scp> â€Î°B in breast epithelial and tumor cells. Molecular Systems Biology, 2015, 11, 790.	3.2	122
2307	Mechanoreception at the cell membrane: More than the integrins. Archives of Biochemistry and Biophysics, 2015, 586, 20-26.	1.4	46
2308	Vascular smooth muscle cell functional contractility depends on extracellular mechanical properties. Journal of Biomechanics, 2015, 48, 3044-3051.	0.9	66
2309	Modeling the formation of cell-matrix adhesions on a single 3D matrix fiber. Journal of Theoretical Biology, 2015, 384, 84-94.	0.8	9
2310	The effect of TGF-β1 and BMP-4 on bone marrow-derived stem cell morphology on a novel bioabsorbable nanocomposite material. Artificial Cells, Nanomedicine and Biotechnology, 2015, 43, 230-234.	1.9	5
2311	Crosstalk between focal adhesions and material mechanical properties governs cell mechanics and functions. Acta Biomaterialia, 2015, 23, 63-71.	4.1	67
2312	Fabrication of uniform-sized poly-É>-caprolactone microspheres and their applications in human embryonic stem cell culture. Biomedical Microdevices, 2015, 17, 105.	1.4	10
2313	Active Biochemical Regulation of Cell Volume and a Simple Model of Cell Tension Response. Biophysical Journal, 2015, 109, 1541-1550.	0.2	63

#	Article	IF	Citations
2314	Cell-mediated fibre recruitment drives extracellular matrix mechanosensing inÂengineered fibrillar microenvironments. Nature Materials, 2015, 14, 1262-1268.	13.3	464
2315	Quantifying cell-induced matrix deformation in three dimensions based on imaging matrix fibers. Integrative Biology (United Kingdom), 2015, 7, 1186-1195.	0.6	48
2316	Incorporation of fibrin into a collagen–glycosaminoglycan matrix results in a scaffold with improved mechanical properties and enhanced capacity to resist cell-mediated contraction. Acta Biomaterialia, 2015, 26, 205-214.	4.1	49
2317	Polyacrylamide gel substrates that simulate the mechanical stiffness of normal and malignant neuronal tissues increase protoporphyin IX synthesis in glioma cells. Journal of Biomedical Optics, 2015, 20, 098002.	1.4	20
2318	Writing in the granular gel medium. Science Advances, 2015, 1, e1500655.	4.7	466
2319	Three-Dimensional Confocal Microscopy Indentation Method for Hydrogel Elasticity Measurement. Langmuir, 2015, 31, 9684-9693.	1.6	42
2320	Influence of PCL molecular weight on mesenchymal stromal cell differentiation. RSC Advances, 2015, 5, 54510-54516.	1.7	29
2321	Biofabrication of reinforced 3D-scaffolds using two-component hydrogels. Journal of Materials Chemistry B, 2015, 3, 9067-9078.	2.9	56
2322	Biomechanical Screening of Cell Therapies for Vocal Fold Scar. Tissue Engineering - Part A, 2015, 21, 2437-2447.	1.6	15
2323	Negative Curvature and Control of Excitable Biological Media. Springer Series in Materials Science, 2015, , 237-258.	0.4	1
2324	3D patterned substrates for bioartificial blood vessels – The effect of hydrogels on aligned cells on a biomaterial surface. Acta Biomaterialia, 2015, 26, 159-168.	4.1	35
2325	Dynamic stiffness of polyelectrolyte multilayer films based on disulfide bonds for in situ control of cell adhesion. Journal of Materials Chemistry B, 2015, 3, 7546-7553.	2.9	31
2326	Nanofiber Yarn/Hydrogel Core–Shell Scaffolds Mimicking Native Skeletal Muscle Tissue for Guiding 3D Myoblast Alignment, Elongation, and Differentiation. ACS Nano, 2015, 9, 9167-9179.	7.3	317
2327	Characterization of the mechanical properties of HL-1 cardiomyocytes with high throughput magnetic tweezers. Applied Physics Letters, 2015, 107, .	1.5	6
2328	Arginine–glycine–aspartic acid functional branched semi-interpenetrating hydrogels. Soft Matter, 2015, 11, 7567-7578.	1.2	8
2329	Nanomechanical clues from morphologically normal cervical squamous cells could improve cervical cancer screening. Nanoscale, 2015, 7, 15589-15593.	2.8	5
2330	A synthetic hydrogel for the high-throughput study of cell–ECM interactions. Nature Communications, 2015, 6, 8129.	5 . 8	125
2331	Transparent, Nanostructured Silk Fibroin Hydrogels with Tunable Mechanical Properties. ACS Biomaterials Science and Engineering, 2015, 1, 964-970.	2.6	58

#	Article	lF	CITATIONS
2332	The Expression Pattern of MicroRNAs and the Associated Pathways Involved in the Development of Porcine Placental Folds That Contribute to the Expansion of the Exchange Surface Area1. Biology of Reproduction, 2015, 93, 62.	1.2	31
2333	Measuring Cell Mechanics. Colloquium Series on Quantitative Cell Biology, 2015, 2, 1-75.	0.5	3
2334	Live cell tracking of symmetry break in actin cytoskeleton triggered by abrupt changes in micromechanical environments. Biomaterials Science, 2015, 3, 1539-1544.	2.6	13
2335	Alginate micro-encapsulation of mesenchymal stromal cells enhances modulation of the neuro-inflammatory response. Cytotherapy, 2015, 17, 1353-1364.	0.3	53
2336	A Review on Extracellular Matrix Mimicking Strategies for an Artificial Stem Cell Niche. Polymer Reviews, 2015, 55, 561-595.	5. 3	70
2337	Recent advances in engineering topography mediated antibacterial surfaces. Nanoscale, 2015, 7, 15568-15575.	2.8	143
2338	$TGF\hat{I}^2$ functionalized starPEG-heparin hydrogels modulate human dermal fibroblast growth and differentiation. Acta Biomaterialia, 2015, 25, 65-75.	4.1	55
2339	Contact Mechanics of Nanoparticles: Pulling Rigid Nanoparticles from Soft, Polymeric Surfaces. Langmuir, 2015, 31, 12520-12529.	1.6	16
2340	Integrin Molecular Tension within Motile Focal Adhesions. Biophysical Journal, 2015, 109, 2259-2267.	0.2	72
2341	Identifying Mechanisms of Homeostatic Signaling in Fibroblast Differentiation. Bulletin of Mathematical Biology, 2015, 77, 1556-1582.	0.9	18
2342	Quantifying stretch and secretion in the embryonic lung: Implications for morphogenesis. Mechanisms of Development, 2015, 138, 356-363.	1.7	19
2343	Jararhagin disruption of endothelial cell anchorage is enhanced in collagen enriched matrices. Toxicon, 2015, 108, 240-248.	0.8	15
2344	A model for compression-weakening materials and the elastic fields due to contractile cells. Journal of the Mechanics and Physics of Solids, 2015, 85, 16-32.	2.3	47
2345	Extracellular rigidity sensing by talin isoform-specific mechanical linkages. Nature Cell Biology, 2015, 17, 1597-1606.	4.6	278
2346	Differentiation capacity and maintenance of differentiated phenotypes of human mesenchymal stromal cells cultured on two distinct types of 3D polymeric scaffolds. Integrative Biology (United Kingdom), 2015, 7, 1574-1586.	0.6	6
2347	An in vitro study on the collective tumor cell migration on nanoroughened poly(dimethylsiloxane) surfaces. Journal of Materials Chemistry B, 2015, 3, 1565-1572.	2.9	8
2348	Rheology of peptide―and proteinâ€based physical hydrogels: Are everyday measurements just scratching the surface?. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2015, 7, 34-68.	3.3	92
2349	Peptide modification of purified gellan gum. Journal of Materials Chemistry B, 2015, 3, 1106-1115.	2.9	44

#	Article	IF	CITATIONS
2350	Force fluctuations in three-dimensional suspended fibroblasts. Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20140028.	1.8	26
2351	Manipulating the Intersection of Angiogenesis and Inflammation. Annals of Biomedical Engineering, 2015, 43, 628-640.	1.3	27
2352	Poly(ester-urethane) scaffolds: effect of structure on properties and osteogenic activity of stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 930-942.	1.3	15
2353	Atomic force microscopy in biomaterials surface science. Physical Chemistry Chemical Physics, 2015, 17, 2950-2959.	1.3	59
2354	Role of threeâ€dimensional matrix stiffness in regulating the chemoresistance of hepatocellular carcinoma cells. Biotechnology and Applied Biochemistry, 2015, 62, 556-562.	1.4	55
2355	Biomimicry at the nanoscale: current research and perspectives of two-photon polymerization. Nanoscale, 2015, 7, 2841-2850.	2.8	77
2356	Biomineralized hydroxyapatite nanoclay composite scaffolds with polycaprolactone for stem cellâ€based bone tissue engineering. Journal of Biomedical Materials Research - Part A, 2015, 103, 2077-2101.	2.1	71
2357	Cooperative contractility: The role of stress fibres in the regulation of cell-cell junctions. Journal of Biomechanics, 2015, 48, 520-528.	0.9	14
2358	Large amplitude oscillatory shear studies on the strain-stiffening behavior of gelatin gels. Chinese Journal of Polymer Science (English Edition), 2015, 33, 70-83.	2.0	24
2359	VUV treatment combined with mechanical strain of stretchable polymer foils resulting in cell alignment. Applied Surface Science, 2015, 325, 105-111.	3.1	11
2360	Extracellular matrix elasticity and topography: Materialâ€based cues that affect cell function via conserved mechanisms. Journal of Biomedical Materials Research - Part A, 2015, 103, 1246-1258.	2.1	158
2361	Surface modulation of complex stiffness via layer-by-layer assembly as a facile strategy for selective cell adhesion. Biomaterials Science, 2015, 3, 352-360.	2.6	34
2362	Concise Reviews: The Role of Biomechanics in the Limbal Stem Cell Niche: New Insights for Our Understanding of This Structure. Stem Cells, 2015, 33, 916-924.	1.4	26
2363	Gradient Biomaterials as Tissue Scaffolds. , 2015, , 175-186.		1
2364	Advanced Polymers in Medicine. , 2015, , .		24
2365	Genomic Instability and Cancer Metastasis. Cancer Metastasis - Biology and Treatment, 2015, , .	0.1	1
2366	Oriented matrix promotes directional tubulogenesis. Acta Biomaterialia, 2015, 11, 264-273.	4.1	9
2367	Inelastic behaviour of collagen networks in cell–matrix interactions and mechanosensation. Journal of the Royal Society Interface, 2015, 12, 20141074.	1.5	69

#	Article	IF	CITATIONS
2368	Covalent conjugation of mechanically stiff graphene oxide flakes to three-dimensional collagen scaffolds for osteogenic differentiation of human mesenchymal stem cells. Carbon, 2015, 83, 162-172.	5.4	110
2369	Effect of different hydroxyapatite incorporation methods on the structural and biological properties of porous collagen scaffolds for bone repair. Journal of Anatomy, 2015, 227, 732-745.	0.9	46
2370	3D in vitro modeling of the central nervous system. Progress in Neurobiology, 2015, 125, 1-25.	2.8	196
2371	A novel three-dimensional scaffold for regenerative endodontics: materials and biological characterizations. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, E116-E123.	1.3	77
2372	A novel, visible light-induced, rapidly cross-linkable gelatin scaffold for osteochondral tissue engineering. Scientific Reports, 2014, 4, 4457.	1.6	99
2373	Evolving insights in cell–matrix interactions: Elucidating how non-soluble properties of the extracellular niche direct stem cell fate. Acta Biomaterialia, 2015, 11, 3-16.	4.1	115
2374	Cell Adhesion and Movement., 2015,, 61-72.		1
2375	Cell-Matrix Interactions and Signal Transduction. , 2015, , 47-60.		1
2376	Mechanical regulation of mesenchymal stem cell differentiation. Journal of Anatomy, 2015, 227, 717-731.	0.9	179
2377	Bone tissue regeneration: the role of scaffold geometry. Biomaterials Science, 2015, 3, 231-245.	2.6	390
2378	Controlling the elastic modulus of cellulose nanofibril hydrogelsâ€"scaffolds with potential in tissue engineering. Cellulose, 2015, 22, 473-481.	2.4	104
2379	Human corneal epithelial cell response to substrate stiffness. Acta Biomaterialia, 2015, 11, 324-332.	4.1	24
2380	Mesenchymal morphogenesis of embryonic stem cells dynamically modulates the biophysical microtissue niche. Scientific Reports, 2015, 4, 4290.	1.6	15
2381	PDMS substrate stiffness affects the morphology and growth profiles of cancerous prostate and melanoma cells. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 41, 13-22.	1.5	62
2382	Electrical Stimulation Using Conductive Polymer Polypyrrole Promotes Differentiation of Human Neural Stem Cells: A Biocompatible Platform for Translational Neural Tissue Engineering. Tissue Engineering - Part C: Methods, 2015, 21, 385-393.	1.1	146
2383	Fibroblast extracellular matrix and adhesion on microtextured polydimethylsiloxane scaffolds., 2015, 103, 861-869.		12
2384	A Writable Polypeptide–DNA Hydrogel with Rationally Designed Multiâ€modification Sites. Small, 2015, 11, 1138-1143.	5.2	119
2385	Non-channel mechanosensors working at focal adhesion-stress fiber complex. Pflugers Archiv European Journal of Physiology, 2015, 467, 141-155.	1.3	14

#	Article	IF	CITATIONS
2386	Directing Valvular Interstitial Cell Myofibroblastâ€Like Differentiation in a Hybrid Hydrogel Platform. Advanced Healthcare Materials, 2015, 4, 121-130.	3.9	66
2387	Three-dimensional development of tensile pre-strained annulus fibrosus cells for tissue regeneration: An in-vitro study. Experimental Cell Research, 2015, 331, 176-182.	1.2	7
2388	The emergence of extracellular matrix mechanics and cell traction forces as important regulators of cellular self-organization. Biomechanics and Modeling in Mechanobiology, 2015, 14, 1-13.	1.4	63
2389	Development of a novel smart scaffold for human skeletal muscle regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2016, 10, 162-171.	1.3	35
2391	Image analysis of self-organized multicellular patterns. Current Directions in Biomedical Engineering, 2016, 2, 523-527.	0.2	1
2392	Bone Structural Similarity Score: A Multiparametric Tool to Match Properties of Biomimetic Bone Substitutes with their Target Tissues. Journal of Applied Biomaterials and Functional Materials, 2016, 14, e277-e289.	0.7	10
2393	Current status and perspectives in atomic force microscopy-based identification of cellular transformation. International Journal of Nanomedicine, 2016, 11, 2107.	3.3	9
2394	Biomaterials for dermal substitutes. , 2016, , 227-252.		1
2395	Biofunctionalization of silicone rubber with microgroove-patterned surface and carbon-ion implantation to enhance biocompatibility and reduce capsule formation. International Journal of Nanomedicine, 2016, Volume 11, 5563-5572.	3.3	15
2396	Nano- and microstructured materials for in vitro studies of the physiology of vascular cells. Beilstein Journal of Nanotechnology, 2016, 7, 1620-1641.	1.5	38
2397	Translational approaches to functional platelet production ex vivo. Thrombosis and Haemostasis, 2016, 115, 250-256.	1.8	18
2398	Tissue-Derived Matrices. , 2016, , 229-250.		O
2399	Resilin in the Engineering of Elastomeric Biomaterials. , 2016, , .		0
2400	Variation of Hydroxyapatite Content in Soft Gelatin Affects Mesenchymal Stem Cell Differentiation. Brazilian Archives of Biology and Technology, 2016, 59, .	0.5	3
2401	Polymeric biomaterials for bone regeneration. Annals of Joint, 0, 1, 27-27.	1.0	58
2402	Development and Applications of Microfluidic Devices for Cell Culture in Cell Biology. Molecular Biology (Los Angeles, Calif), 0, s1, .	0.0	O
2403	Engineering Tendon: Scaffolds, Bioreactors, and Models of Regeneration. Stem Cells International, 2016, 2016, 1-11.	1.2	38
2404	Design and fabrication of nanocomposites for musculoskeletal tissue regeneration. , 2016, , 3-29.		14

#	Article	IF	CITATIONS
2405	Mesenchymal Stem Cell Fate: Applying Biomaterials for Control of Stem Cell Behavior. Frontiers in Bioengineering and Biotechnology, 2016, 4, 38.	2.0	60
2406	Modulating the Substrate Stiffness to Manipulate Differentiation of Resident Liver Stem Cells and to Improve the Differentiation State of Hepatocytes. Stem Cells International, 2016, 2016, 1-12.	1.2	66
2407	Biophysical Aspects of T Lymphocyte Activation at the Immune Synapse. Frontiers in Immunology, 2016, 7, 46.	2.2	42
2408	The Regulation of Cellular Responses to Mechanical Cues by Rho GTPases. Cells, 2016, 5, 17.	1.8	85
2409	Under Pressure: Mechanical Stress Management in the Nucleus. Cells, 2016, 5, 27.	1.8	50
2410	PEG-Chitosan Hydrogel with Tunable Stiffness for Study of Drug Response of Breast Cancer Cells. Polymers, 2016, 8, 112.	2.0	39
2411	3D Culture of Chondrocytes in Gelatin Hydrogels with Different Stiffness. Polymers, 2016, 8, 269.	2.0	160
2412	MEDYAN: Mechanochemical Simulations of Contraction and Polarity Alignment in Actomyosin Networks. PLoS Computational Biology, 2016, 12, e1004877.	1.5	81
2413	Simvastatin Ameliorates Matrix Stiffness-Mediated Endothelial Monolayer Disruption. PLoS ONE, 2016, 11, e0147033.	1.1	39
2414	A Unidirectional Cell Switching Gate by Engineering Grating Length and Bending Angle. PLoS ONE, 2016, 11, e0147801.	1.1	15
2415	Dedifferentiated Human Articular Chondrocytes Redifferentiate to a Cartilage-Like Tissue Phenotype in a Poly(Îμ-Caprolactone)/Self-Assembling Peptide Composite Scaffold. Materials, 2016, 9, 472.	1.3	28
2416	Synthesis of Chiral Oligomerâ€Grafted Biodegradable Polyurethanes and Their Chiralâ€Dependent Influence on Bone Marrow Stem Cell Behaviors. Macromolecular Rapid Communications, 2016, 37, 1331-1336.	2.0	12
2417	Reverse engineering liver buds through self-driven condensation and organization towards medical application. Developmental Biology, 2016, 420, 221-229.	0.9	37
2418	A Biodesigned Nanocomposite Biomaterial for Auricular Cartilage Reconstruction. Advanced Healthcare Materials, 2016, 5, 1203-1212.	3.9	18
2419	Temporal Modulation of Stem Cell Activity Using Magnetoactive Hydrogels. Advanced Healthcare Materials, 2016, 5, 2536-2544.	3.9	73
2420	Double Linear Gradient Biointerfaces for Determining Twoâ€Parameter Dependent Stem Cell Behavior. ChemNanoMat, 2016, 2, 407-413.	1.5	16
2421	Cell migration and organization in threeâ€dimensional in vitro culture driven by stiffness gradient. Biotechnology and Bioengineering, 2016, 113, 2496-2506.	1.7	29
2422	Stiffnessâ€controlled threeâ€dimensional collagen scaffolds for differentiation of human Wharton's jelly mesenchymal stem cells into cardiac progenitor cells. Journal of Biomedical Materials Research - Part A, 2016, 104, 2234-2242.	2.1	19

#	Article	IF	CITATIONS
2423	Boron nitride nanotubeâ€enhanced osteogenic differentiation of mesenchymal stem cells. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 323-329.	1.6	61
2424	Poly(2â€oxazoline) hydrogels crosslinked with aliphatic bis(2â€oxazoline)s: Properties, cytotoxicity, and cell cultivation. Journal of Polymer Science Part A, 2016, 54, 1548-1559.	2.5	29
2425	<i>In vitro</i> three-dimensional cancer metastasis modeling: Past, present, and future. Chinese Physics B, 2016, 25, 018709.	0.7	1
2426	<scp>T</scp> he use of substrate materials and topography to modify growth patterns and rates of differentiation of muscle cells. Journal of Biomedical Materials Research - Part A, 2016, 104, 1638-1645.	2.1	21
2427	The role of substrate topography on the cellular uptake of nanoparticles. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 488-495.	1.6	31
2428	Fibronectin Fiber Extension Decreases Cell Spreading and Migration. Journal of Cellular Physiology, 2016, 231, 1728-1736.	2.0	35
2429	Extracellular Matrix Stiffness Controls VEGF Signaling and Processing in Endothelial Cells. Journal of Cellular Physiology, 2016, 231, 2026-2039.	2.0	70
2430	Stiffness of Hydrogels Regulates Cellular Reprogramming Efficiency Through Mesenchymalâ€ŧoâ€Epithelial Transition and Stemness Markers. Macromolecular Bioscience, 2016, 16, 199-206.	2.1	53
2431	A newly identified mechanism involved in regulation of human mesenchymal stem cells by fibrous substrate stiffness. Acta Biomaterialia, 2016, 42, 247-257.	4.1	46
2432	Local dynamic mechanical analysis for heterogeneous soft matter using ferrule-top indentation. Soft Matter, 2016, 12, 3066-3073.	1.2	45
2433	Threeâ€dimensional matrix stiffness and adhesive ligands affect cancer cell response to toxins. Biotechnology and Bioengineering, 2016, 113, 443-452.	1.7	44
2434	Bedside, Benchtop, and Bioengineering: Physicochemical Imaging Techniques in Biomineralization. Advanced Healthcare Materials, 2016, 5, 507-528.	3.9	7
2435	Organic Bioelectronics: Bridging the Signaling Gap between Biology and Technology. Chemical Reviews, 2016, 116, 13009-13041.	23.0	422
2436	Cellular Response to Reagentâ€Free Electronâ€Irradiated Gelatin Hydrogels. Macromolecular Bioscience, 2016, 16, 914-924.	2.1	18
2437	3D-Bioprinting of Polylactic Acid (PLA) Nanofiber–Alginate Hydrogel Bioink Containing Human Adipose-Derived Stem Cells. ACS Biomaterials Science and Engineering, 2016, 2, 1732-1742.	2.6	232
2438	Micro and nanotechnologies in heart valve tissue engineering. Biomaterials, 2016, 103, 278-292.	5 . 7	38
2439	Switching the Stiffness of Polyelectrolyte Assembly by Light to Control Behavior of Supported Cells. Macromolecular Bioscience, 2016, 16, 1422-1431.	2.1	32
2440	Self-healing Materials. Advances in Polymer Science, 2016, , .	0.4	54

#	Article	IF	CITATIONS
2441	Substrate Stiffness Regulates the Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left—Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left–Right Asymmetry in Cell Orientation. ACS Applied Materials & Development of Left—Right Asymmetry in Cell Orientation.	4.0	11
2442	Roles of endothelial A-type lamins in migration of T cells on and under endothelial layers. Scientific Reports, 2016, 6, 23412.	1.6	12
2443	Uncoupling shear and uniaxial elastic moduli of semiflexible biopolymer networks: compression-softening and stretch-stiffening. Scientific Reports, 2016, 6, 19270.	1.6	122
2444	3D culture models of tissues under tension. Journal of Cell Science, 2017, 130, 63-70.	1.2	40
2445	Three-Dimensional Stiff Graphene Scaffold on Neural Stem Cells Behavior. ACS Applied Materials & Interfaces, 2016, 8, 34227-34233.	4.0	98
2446	Differential Kras ^{V12} protein levels control a switch regulating lung cancer cell morphology and motility. Convergent Science Physical Oncology, 2016, 2, 035004.	2.6	10
2447	Effect of an underlying substrate in a nanofibrous membrane system on cultured cells. Biomedical Physics and Engineering Express, 2016, 2, 045001.	0.6	5
2449	Identification of brefelamide as a novel inhibitor of osteopontin that suppresses invasion of A549 lung cancer cells. Oncology Reports, 2016, 36, 2357-2364.	1.2	17
2450	Three-dimensional spherical spatial boundary conditions differentially regulate osteogenic differentiation of mesenchymal stromal cells. Scientific Reports, 2016, 6, 21253.	1.6	46
2451	Fluid Mechanics as a Driver of Tissue-Scale Mechanical Signaling in Organogenesis. Current Pathobiology Reports, 2016, 4, 199-208.	1.6	11
2452	Extracellular matrix stiffness dictates Wnt expression through integrin pathway. Scientific Reports, 2016, 6, 20395.	1.6	155
2453	What is really driving cell–surface interactions? Layer-by-layer assembled films may help to answer questions concerning cell attachment and response to biomaterials. Biointerphases, 2016, 11, 019009.	0.6	30
2454	Cell mechanics as a marker for diseases: Biomedical applications of AFM. AIP Conference Proceedings, 2016, , .	0.3	51
2455	A myosin activator improves actin assembly and sarcomere function of human-induced pluripotent stem cell-derived cardiomyocytes with a troponin T point mutation. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 311, H107-H117.	1.5	34
2456	3D printing of hydrogels in a temperature controlled environment with high spatial resolution. Current Directions in Biomedical Engineering, 2016, 2, 109-112.	0.2	5
2459	Correlating confocal microscopy and atomic force indentation reveals metastatic cancer cells stiffen during invasion into collagen I matrices. Scientific Reports, 2016, 6, 19686.	1.6	123
2463	Freestanding 3-D microvascular networks made of alginate hydrogel as a universal tool to create microchannels inside hydrogels. Biomicrofluidics, 2016, 10, 044112.	1.2	13
2465	Structures for biomimetic, fluidic, and biological applications. MRS Bulletin, 2016, 41, 993-1001.	1.7	8

#	Article	IF	CITATIONS
2466	Graphene-based Materials in Health and Environment. Carbon Nanostructures, 2016, , .	0.1	5
2467	Stimulus Responsive Graphene Scaffolds for Tissue Engineering. Carbon Nanostructures, 2016, , 219-256.	0.1	3
2468	The extracellular microscape governs mesenchymal stem cell fate. Journal of Biological Engineering, 2016, 10, 16.	2.0	14
2470	Mechanical Criterion for the Rupture of a Cell Membrane under Compression. Biophysical Journal, 2016, 111, 2711-2721.	0.2	34
2471	The mammalian LINC complex regulates genome transcriptional responses to substrate rigidity. Scientific Reports, 2016, 6, 38063.	1.6	121
2472	Mechanical properties tunability of three-dimensional polymeric structures in two-photon lithography. IEEE Nanotechnology Magazine, 2016, , 1-1.	1.1	42
2473	Cell Adhesion to the Extracellular Matrix. , 2016, , 713-719.		0
2476	The inner workings of stress fibers â^' from contractile machinery to focal adhesions and back. Journal of Cell Science, 2016, 129, 1293-1304.	1.2	155
2477	Extracellular Regulation of Cell-to-Matrix Adhesion. , 2016, , 192-198.		0
2478	Influence of purified multiwalled carbon nanotubes on the mechanical and morphological behavior in poly (L-lactic acid) matrix. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 547-560.	1.5	8
2479	Bio-functionalized silk hydrogel microfluidic systems. Biomaterials, 2016, 93, 60-70.	5.7	101
2480	Nanofibrous poly(3-hydroxybutyrate)/poly(3-hydroxyoctanoate) scaffolds provide a functional microenvironment for cartilage repair. Journal of Biomaterials Applications, 2016, 31, 77-91.	1.2	47
2481	Interfacial geometry dictates cancer cell tumorigenicity. Nature Materials, 2016, 15, 856-862.	13.3	156
2482	Influence of nanomechanical stress induced by ZnO nanoparticles of different shapes on the viability of cells. Soft Matter, 2016, 12, 4162-4169.	1.2	18
2483	Polyester with Pendent Acetylcholine-Mimicking Functionalities Promotes Neurite Growth. ACS Applied Materials & Samp; Interfaces, 2016, 8, 9590-9599.	4.0	18
2484	Photoresponsive Polysaccharide-Based Hydrogels with Tunable Mechanical Properties for Cartilage Tissue Engineering. ACS Applied Materials & Interfaces, 2016, 8, 14423-14429.	4.0	52
2485	Poly(DL-lactide-co-ε-caprolactone) and poly(DL-lactide-co-glycolide) blends for biomedical application: Physical properties, cell compatibility, and in vitro degradation behavior. International Journal of Polymeric Materials and Polymeric Biomaterials, 2016, 65, 741-750.	1.8	8
2486	Bone Tissue Engineering: Past–Present–Future. Methods in Molecular Biology, 2016, 1416, 21-33.	0.4	32

#	Article	IF	Citations
2487	Rationally Designed Dynamic Protein Hydrogels with Reversibly Tunable Mechanical Properties. Biophysical Journal, 2016, 110, 40a.	0.2	2
2488	Mechanically Stiff, Zinc Cross-Linked Nanocomposite Scaffolds with Improved Osteostimulation and Antibacterial Properties. ACS Applied Materials & Samp; Interfaces, 2016, 8, 13735-13747.	4.0	37
2489	Strain-enhanced stress relaxation impacts nonlinear elasticity in collagen gels. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5492-5497.	3.3	217
2490	A facile construction of gradient micro-patterned OCP coatings on medical titanium for high throughput evaluation of biocompatibility. Journal of Materials Chemistry B, 2016, 4, 4017-4024.	2.9	10
2491	Mechanotransduction and nuclear function. Current Opinion in Cell Biology, 2016, 40, 98-105.	2.6	86
2492	Hydroxyapatite-hybridized chitosan/chitin whisker bionanocomposite fibers for bone tissue engineering applications. Carbohydrate Polymers, 2016, 144, 419-427.	5.1	90
2493	Cells as strain-cued automata. Journal of the Mechanics and Physics of Solids, 2016, 87, 177-226.	2.3	8
2494	Mechanical properties and cellular response of novel electrospun nanofibers for ligament tissue engineering: Effects of orientation and geometry. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 258-270.	1.5	94
2495	Synthetic hydrogels with stiffness gradients for durotaxis study and tissue engineering scaffolds. Tissue Engineering and Regenerative Medicine, 2016, 13, 126-139.	1.6	32
2496	Regulation of breast cancer cell behaviours by the physical microenvironment constructed via projection microstereolithography. Biomaterials Science, 2016, 4, 863-870.	2.6	20
2497	Concentration-Dependent <i>h</i> MSC Differentiation on Orthogonal Concentration Gradients of GRGDS and BMP-2 Peptides. Biomacromolecules, 2016, 17, 1486-1495.	2.6	20
2498	A scaffoldless technique for self-generation of three-dimensional keratinospheroids on liquid crystal surfaces. Biotechnic and Histochemistry, 2016, 91, 283-295.	0.7	6
2499	Capturing extracellular matrix properties inÂvitro: Microengineering materials to decipher cell and tissue level processes. Experimental Biology and Medicine, 2016, 241, 930-938.	1.1	25
2500	Single cell rigidity sensing: A complex relationship between focal adhesion dynamics and large-scale actin cytoskeleton remodeling. Cell Adhesion and Migration, 2016, 10, 554-567.	1.1	47
2501	Polymeric Electrospinning for Musculoskeletal Regenerative Engineering. Regenerative Engineering and Translational Medicine, 2016, 2, 69-84.	1.6	35
2502	A toolbox to explore the mechanics of living embryonic tissues. Seminars in Cell and Developmental Biology, 2016, 55, 119-130.	2.3	112
2503	Custom Multiwell Plate Design for Rapid Assembly of Photopatterned Hydrogels. Tissue Engineering - Part C: Methods, 2016, 22, 543-551.	1.1	5
2504	Simulation of extracellular matrix remodeling by fibroblast cells in soft three-dimensional bioresorbable scaffolds. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1685-1698.	1.4	8

#	Article	IF	CITATIONS
2505	Direct cellular organization with ring-shaped composite polymers and glass substrates for urethral sphincter tissue engineering. Journal of Materials Chemistry B, 2016, 4, 3998-4008.	2.9	5
2506	Strain Stiffening of Fibrillar Collagen during Individual and Collective Cell Migration Identified by AFM Nanoindentation. ACS Applied Materials & Samp; Interfaces, 2016, 8, 21946-21955.	4.0	123
2507	Co-effects of matrix low elasticity and aligned topography on stem cell neurogenic differentiation and rapid neurite outgrowth. Nanoscale, 2016, 8, 10252-10265.	2.8	109
2508	Influence of mechanical properties of alginate-based substrates on the performance of Schwann cells in culture. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 898-915.	1.9	69
2509	Lifelong Cyclic Mechanical Strain Promotes Large Elastic Artery Stiffening: Increased Pulse Pressure and Old Age-Related Organ Failure. Canadian Journal of Cardiology, 2016, 32, 624-633.	0.8	28
2510	An irregular-shaped homogeneous refractive index model for interpretation of the surface plasmon resonance response from living cell attachment. Analytical Methods, 2016, 8, 3301-3306.	1.3	1
2511	Material- and feature-dependent effects on cell adhesion to micro injection moulded medical polymers. Colloids and Surfaces B: Biointerfaces, 2016, 145, 46-54.	2.5	14
2512	Engineering Approaches for Understanding Osteogenesis: Hydrogels as Synthetic Bone Microenvironments. Hormone and Metabolic Research, 2016, 48, 726-736.	0.7	7
2513	Cellular mechanisms of skin repair in humans and other mammals. Journal of Cell Communication and Signaling, 2016, 10, 103-120.	1.8	209
2514	A Novel Nanosilver/Nanosilica Hydrogel for Bone Regeneration in Infected Bone Defects. ACS Applied Materials & Samp; Interfaces, 2016, 8, 13242-13250.	4.0	59
2515	Biomimetic 3D Clusters Using Human Adipose Derived Mesenchymal Stem Cells and Breast Cancer Cells: A Study on Migration and Invasion of Breast Cancer Cells. Molecular Pharmaceutics, 2016, 13, 2204-2213.	2.3	10
2516	Substrate stiffness and matrix composition coordinately control the differentiation of liver progenitor cells. Biomaterials, 2016, 99, 82-94.	5.7	86
2517	Screening out irrelevant cell-based models of disease. Nature Reviews Drug Discovery, 2016, 15, 751-769.	21.5	402
2518	High content image analysis of focal adhesion-dependent mechanosensitive stem cell differentiation. Integrative Biology (United Kingdom), 2016, 8, 1049-1058.	0.6	21
2519	In vitro models for evaluating safety and efficacy of novel technologies for skin drug delivery. Journal of Controlled Release, 2016, 242, 89-104.	4.8	55
2520	Looking Beyond the Genes. Current Topics in Developmental Biology, 2016, 119, 227-290.	1.0	8
2521	Bioactive Hydrogels and Their Applications in Regenerative Medicine., 2016,, 57-74.		2
2522	Bridging Disciplines: Burrowing Your Own Rabbit Holes. CheM, 2016, 1, 180-181.	5.8	O

#	Article	IF	Citations
2523	Breast cancer cells mechanosensing in engineered matrices: Correlation with aggressive phenotype. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 208-220.	1.5	13
2524	Fabrication of mesoscale topographical gradients in bulk titanium and their use in injection moulding. Microelectronic Engineering, 2016, 164, 36-42.	1.1	1
2525	Modeling of the mechano-chemical behaviour of the nuclear pore complex: current research and perspectives. Integrative Biology (United Kingdom), 2016, 8, 1011-1021.	0.6	12
2526	Physical View on the Interactions Between Cancer Cells and the Endothelial Cell Lining During Cancer Cell Transmigration and Invasion., 2016,, 19-42.		O
2527	Cardiomyocyte progenitor cell mechanoresponse unrevealed: strain avoidance and mechanosome development. Integrative Biology (United Kingdom), 2016, 8, 991-1001.	0.6	21
2528	Insights to regenerate materials: learning from nature. Smart Materials and Structures, 2016, 25, 084001.	1.8	1
2529	Scattering of Cell Clusters in Confinement. Biophysical Journal, 2016, 111, 1496-1506.	0.2	14
2530	Influence of Donor Age and Stimulation Intensity on Osteogenic Differentiation of Rat Mesenchymal Stromal Cells in Response to Focused Low-Intensity Pulsed Ultrasound. Ultrasound in Medicine and Biology, 2016, 42, 2965-2974.	0.7	7
2531	A Tensegrity Model of Cell Reorientation on Cyclically Stretched Substrates. Biophysical Journal, 2016, 111, 1478-1486.	0.2	65
2532	Nano-mechanical single-cell sensing of cell–matrix contacts. Nanoscale, 2016, 8, 18105-18112.	2.8	7
2533	Engineering Protein Hydrogels Using SpyCatcher-SpyTag Chemistry. Biomacromolecules, 2016, 17, 2812-2819.	2.6	75
2534	Recent progress in gellan gum hydrogels provided by functionalization strategies. Journal of Materials Chemistry B, 2016, 4, 6164-6174.	2.9	126
2535	Biodegradable fiducial markers for X-ray imaging – soft tissue integration and biocompatibility. Journal of Materials Chemistry B, 2016, 4, 5700-5712.	2.9	16
2536	Surface stiffening and enhanced photoluminescence of ion implanted cellulose – polyvinyl alcohol – silica composite. Carbohydrate Polymers, 2016, 153, 619-630.	5.1	9
2537	Development of a microphysiological model of human kidney proximal tubule function. Kidney International, 2016, 90, 627-637.	2.6	198
2538	Atomic force microscopy for the investigation of molecular and cellular behavior. Micron, 2016, 89, 60-76.	1.1	25
2539	Processing and surface modification of polymer nanofibers for biological scaffolds: a review. Journal of Materials Chemistry B, 2016, 4, 5958-5974.	2.9	61
2540	A mathematical model for electrical impedance spectroscopy of zwitterionic hydrogels. Soft Matter, 2016, 12, 7028-7037.	1.2	10

#	Article	IF	CITATIONS
2541	Reduced cell cohesiveness of outgrowths from eccrine sweat glands delays wound closure in elderly skin. Aging Cell, 2016, 15, 842-852.	3.0	18
2542	Macroporous Hydrogels Composed Entirely of Synthetic Polypeptides: Biocompatible and Enzyme Biodegradable 3D Cellular Scaffolds. Biomacromolecules, 2016, 17, 2981-2991.	2.6	48
2543	Actin Filament Structures in Migrating Cells. Handbook of Experimental Pharmacology, 2016, 235, 123-152.	0.9	49
2544	Role of mechanical factors in applications of stimuli-responsive polymer gels – Status and prospects. Polymer, 2016, 101, 415-449.	1.8	33
2545	Collective epithelial cell sheet adhesion and migration on polyelectrolyte multilayers with uniform and gradients of compliance. Experimental Cell Research, 2016, 346, 17-29.	1.2	18
2546	N-cadherin-functionalized polymer-tethered multi-bilayer: a cell surface-mimicking substrate to probe cellular mechanosensitivity. Soft Matter, 2016, 12, 8274-8284.	1.2	7
2547	Effect of different densities of silver nanoparticles on neuronal growth. Journal of Nanoparticle Research, 2016, 18, 1.	0.8	16
2548	Softening Substrates Promote Chondrocytes Phenotype via RhoA/ROCK Pathway. ACS Applied Materials & Samp; Interfaces, 2016, 8, 22884-22891.	4.0	67
2549	Substrate modulus regulates osteogenic differentiation of rat mesenchymal stem cells through integrin \hat{l}^21 and BMP receptor type IA. Journal of Materials Chemistry B, 2016, 4, 3584-3593.	2.9	12
2550	Role of catch bonds in actomyosin mechanics and cell mechanosensitivity. Physical Review E, 2016, 94, 012403.	0.8	26
2551	Cell sheet mechanics: How geometrical constraints induce the detachment of cell sheets from concave surfaces. Acta Biomaterialia, 2016, 45, 85-97.	4.1	38
2552	The Nuclear Lamina: From Mechanosensing in Differentiation to Cancer Cell Migration. , 2016, , 175-195.		3
2553	Highâ€sensitivity microelectromechanical systemsâ€based triâ€axis force sensor for monitoring cellular traction force. Micro and Nano Letters, 2016, 11, 563-567.	0.6	4
2554	Tubing-Electrospinning: A One-Step Process for Fabricating Fibrous Matrices with Spatial, Chemical, and Mechanical Gradients. ACS Applied Materials & Samp; Interfaces, 2016, 8, 22721-22731.	4.0	12
2556	Heat- and pH-induced BSA conformational changes, hydrogel formation and application as 3D cell scaffold. Archives of Biochemistry and Biophysics, 2016, 606, 134-142.	1.4	41
2557	Fibrous nonlinear elasticity enables positive mechanical feedback between cells and ECMs. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14043-14048.	3.3	267
2558	A viscoelastic–stochastic model of the effects of cytoskeleton remodelling on cell adhesion. Royal Society Open Science, 2016, 3, 160539.	1.1	16
2559	Viscoplasticity Enables Mechanical Remodeling ofÂMatrix by Cells. Biophysical Journal, 2016, 111, 2296-2308.	0.2	144

#	Article	IF	CITATIONS
2560	Block Copolymer Brushes for Completely Decoupled Control of Determinants of Cell–Surface Interactions. Angewandte Chemie, 2016, 128, 13308-13311.	1.6	6
2561	Block Copolymer Brushes for Completely Decoupled Control of Determinants of Cell–Surface Interactions. Angewandte Chemie - International Edition, 2016, 55, 13114-13117.	7.2	32
2562	An improved model for exploring the effect of physicochemical properties of alginate-based microcapsules on their fibrosis formation in vivo. RSC Advances, 2016, 6, 93288-93297.	1.7	0
2563	Reduction of fibroblast size/mechanical force downâ€regulates <scp>TGF</scp> â€Î² type <scp>II</scp> receptor: implications for human skin aging. Aging Cell, 2016, 15, 67-76.	3.0	84
2564	Yield stress determines bioprintability of hydrogels based on gelatin-methacryloyl and gellan gum for cartilage bioprinting. Biofabrication, 2016, 8, 035003.	3.7	261
2565	A novel gelatin-based micro-cavitary hydrogel for potential application in delivery of anchorage dependent cells: A study with vasculogenesis model. Colloids and Surfaces B: Biointerfaces, 2016, 146, 334-342.	2.5	13
2566	Enzymatic Cross-Linking of Resilin-Based Proteins for Vascular Tissue Engineering Applications. Biomacromolecules, 2016, 17, 2530-2539.	2.6	27
2567	Direct Gradient Photolithography of Photodegradable Hydrogels with Patterned Stiffness Control with Submicrometer Resolution. ACS Biomaterials Science and Engineering, 2016, 2, 1309-1318.	2.6	60
2568	Geometric control and modeling of genome reprogramming. Bioarchitecture, 2016, 6, 76-84.	1.5	15
2569	Biomimetic Extracellular Environment Based on Natural Origin Polyelectrolyte Multilayers. Small, 2016, 12, 4308-4342.	5.2	100
2570	L1-regularized reconstruction for traction force microscopy. , 2016, , .		3
2571	Proliferation and Recruitment Contribute to Myocardial Macrophage Expansion in Chronic Heart Failure. Circulation Research, 2016, 119, 853-864.	2.0	318
2572	Tissue engineering with gellan gum. Biomaterials Science, 2016, 4, 1276-1290.	2.6	130
2573	Acellular dermal matrix from one-day-old mouse skin on adult scarless cutaneous wound repair by second harmonic generation microscopic imaging. RSC Advances, 2016, 6, 71852-71862.	1.7	8
2574	Physico-chemical properties of PDMS surfaces suitable as substrates for cell cultures. Applied Surface Science, 2016, 389, 247-254.	3.1	34
2575	Mechanical Properties of Aligned Nanotopologies for Directing Cellular Behavior. Advanced Materials Interfaces, 2016, 3, 1600275.	1.9	23
2576	Effect of Peptide Sequences on Supramolecular Interactions of Naphthaleneimide/Tripeptide Conjugates. Langmuir, 2016, 32, 7630-7638.	1.6	31
2577	Designer Extracellular Matrix Based on DNA–Peptide Networks Generated by Polymerase Chain Reaction. Angewandte Chemie - International Edition, 2016, 55, 10136-10140.	7.2	36

#	Article	IF	CITATIONS
2578	Bundle Formation in Biomimetic Hydrogels. Biomacromolecules, 2016, 17, 2642-2649.	2.6	47
2579	Substrate Stiffness Combined with Hepatocyte Growth Factor Modulates Endothelial Cell Behavior. Biomacromolecules, 2016, 17, 2767-2776.	2.6	36
2580	Deletion of Calponin 2 in Mouse Fibroblasts Increases Myosin II-Dependent Cell Traction Force. Biochemistry, 2016, 55, 6046-6055.	1.2	11
2581	Effect of substrate elasticity on macroscopic parameters of fish keratocyte migration. Physical Biology, 2016, 13, 054001.	0.8	5
2582	Assessment of alginate hydrogel degradation in biological tissue using viscosity-sensitive fluorescent dyes. Methods and Applications in Fluorescence, 2016, 4, 044002.	1.1	12
2583	Leaving the Scientific Comfort Zone to Address Complex Challenges. CheM, 2016, 1, 181-183.	5.8	1
2584	Atomic force microscopy and graph analysis to study the P-cadherin/SFK mechanotransduction signalling in breast cancer cells. Nanoscale, 2016, 8, 19390-19401.	2.8	18
2585	Effects of high-gradient magnetic fields on living cell machinery. Journal Physics D: Applied Physics, 2016, 49, 493003.	1.3	49
2586	Smart Polymeric Hydrogels for Cartilage Tissue Engineering: A Review on the Chemistry and Biological Functions. Biomacromolecules, 2016, 17, 3441-3463.	2.6	201
2587	Stiffness of pancreatic cancer cells is associated with increased invasive potential. Integrative Biology (United Kingdom), 2016, 8, 1232-1245.	0.6	89
2588	Understanding Polymerâ€Cell Attachment. Macromolecular Bioscience, 2016, 16, 1864-1872.	2.1	2
2589	Biomimetic, Osteoconductive Non-mulberry Silk Fiber Reinforced Tricomposite Scaffolds for Bone Tissue Engineering. ACS Applied Materials & Samp; Interfaces, 2016, 8, 30797-30810.	4.0	122
2590	Regulation of actin catch-slip bonds with a RhoA-formin module. Scientific Reports, 2016, 6, 35058.	1.6	14
2591	Regulation of cell-cell fusion by nanotopography. Scientific Reports, 2016, 6, 33277.	1.6	30
2592	How Tissue Mechanical Properties Affect Enteric Neural Crest Cell Migration. Scientific Reports, 2016, 6, 20927.	1.6	45
2593	Graphene-augmented nanofiber scaffolds demonstrate new features in cells behaviour. Scientific Reports, 2016, 6, 30150.	1.6	17
2594	Recent advances in biological uses of traction force microscopy. International Journal of Precision Engineering and Manufacturing, 2016, 17, 1401-1412.	1.1	12
2595	Materials and technologies for soft implantable neuroprostheses. Nature Reviews Materials, 2016, 1 , .	23.3	485

#	Article	IF	Citations
2596	Double-Network Hydrogel with Tunable Mechanical Performance and Biocompatibility for the Fabrication of Stem Cells-Encapsulated Fibers and 3D Assemble. Scientific Reports, 2016, 6, 33462.	1.6	36
2597	Persistence of fan-shaped keratocytes is a matrix-rigidity-dependent mechanism that requires $\hat{l}\pm5\hat{l}^21$ integrin engagement. Scientific Reports, 2016, 6, 34141.	1.6	31
2598	The effects of nanotopography and coculture systems to promote angiogenesis for wound repair. Nanomedicine, 2016, 11, 2997-3007.	1.7	3
2599	Topographic confinement of epithelial clusters induces epithelial-to-mesenchymal transition in compliant matrices. Scientific Reports, 2016, 6, 18831.	1.6	49
2600	Frequent mechanical stress suppresses proliferation of mesenchymal stem cells from human bone marrow without loss of multipotency. Scientific Reports, 2016, 6, 24264.	1.6	39
2601	Comparison between power-law rheological parameters of living cells in frequency and time domains measured by atomic force microscopy. Japanese Journal of Applied Physics, 2016, 55, 08NB22.	0.8	9
2602	Three-Dimensional Characterization of Mechanical Interactions between Endothelial Cells and Extracellular Matrix during Angiogenic Sprouting. Scientific Reports, 2016, 6, 21362.	1.6	31
2603	Dynamic monitoring of cell mechanical properties using profile microindentation. Scientific Reports, 2016, 6, 21529.	1.6	32
2604	Mechanobiological induction of long-range contractility by diffusing biomolecules and size scaling in cell assemblies. Scientific Reports, 2016, 6, 27692.	1.6	11
2605	Injectable Hydrogels for Neural Tissue Regeneration. , 2016, , 303-353.		1
2606	Fiber Network Models Predict Enhanced Cell Mechanosensing on Fibrous Gels. Journal of Biomechanical Engineering, 2016, 138, .	0.6	23
2607	Hydrogels Constructed from Engineered Proteins. Small, 2016, 12, 973-987.	5.2	62
2608	Musselâ€Inspired Polymer Carpets: Direct Photografting of Polymer Brushes on Polydopamine Nanosheets for Controlled Cell Adhesion. Advanced Materials, 2016, 28, 1489-1494.	11.1	76
2609	Modification of gellan gum with nanocrystalline hydroxyapatite facilitates cell expansion and spontaneous osteogenesis. Biotechnology and Bioengineering, 2016, 113, 1568-1576.	1.7	13
2610	Reality Check for Nanomaterialâ€Mediated Therapy with 3D Biomimetic Culture Systems. Advanced Functional Materials, 2016, 26, 4046-4065.	7.8	47
2611	Progress in Corneal Stromal Repair: From Tissue Grafts and Biomaterials to Modular Supramolecular Tissueâ€Like Assemblies. Advanced Materials, 2016, 28, 5381-5399.	11.1	48
2612	Liquid-like Solids Support Cells in 3D. ACS Biomaterials Science and Engineering, 2016, 2, 1787-1795.	2.6	124
2613	Elucidating the molecular mechanisms underlying cellular response to biophysical cues using synthetic biology approaches. Cell Adhesion and Migration, 2016, 10, 540-553.	1.1	7

#	Article	IF	CITATIONS
2614	A Computational Model of YAP/TAZ Mechanosensing. Biophysical Journal, 2016, 110, 2540-2550.	0.2	61
2615	Swelling Behavior and Nanomechanical Properties of (Peptide-Modified) Poly(2-hydroxyethyl) Tj ETQq1 1 0.78431-4609-4618.	4 rgBT /O	verlock 10 19
2616	AFM mapping of the elastic properties of brain tissue reveals kPa $\hat{l}/4$ m ^{$\hat{a}^2$1} gradients of rigidity. Soft Matter, 2016, 12, 6232-6239.	1.2	55
2617	N-terminal specific conjugation of extracellular matrix proteins to 2-pyridinecarboxaldehyde functionalized polyacrylamide hydrogels. Biomaterials, 2016, 102, 268-276.	5.7	46
2618	Micro- and Nanoscale Technologies for Delivery into Adherent Cells. Trends in Biotechnology, 2016, 34, 665-678.	4.9	44
2619	Multifunctional Surface Manipulation Using Orthogonal Click Chemistry. Langmuir, 2016, 32, 6600-6605.	1.6	45
2620	Biofabrication of 3D Alginate-Based Hydrogel for Cancer Research: Comparison of Cell Spreading, Viability, and Adhesion Characteristics of Colorectal HCT116 Tumor Cells. Tissue Engineering - Part C: Methods, 2016, 22, 708-715.	1.1	54
2621	Fabrication of water-stable silk fibroin scaffolds through self-assembly of proteins. RSC Advances, 2016, 6, 61402-61409.	1.7	22
2622	The essential role of inorganic substrate in the migration and osteoblastic differentiation of mesenchymal stem cells. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 353-365.	1.5	12
2623	An artificial niche preserves the quiescence of muscle stem cells and enhances their therapeutic efficacy. Nature Biotechnology, 2016, 34, 752-759.	9.4	165
2624	A thermodynamically motivated model for stress-fiber reorganization. Biomechanics and Modeling in Mechanobiology, $2016,15,761$ - $789.$	1.4	46
2625	Elastic hydrogel as a sensor for detection of mechanical stress generated by single cells grown in three-dimensional environment. Biomaterials, 2016, 98, 103-112.	5.7	31
2626	Endothelial directed collective migration depends on substrate stiffness via localized myosin contractility and cell-matrix interactions. Journal of Biomechanics, 2016, 49, 1369-1380.	0.9	31
2627	Remarkable Structure and Elasticity Relaxation Dynamics of Poly(diallyldimethylammonium) Tj ETQq1 1 0.784314	rgBT /Ove	erlock 10 Tf
2628	Chitosan Derivatives. , 2016, , 49-118.		1
2629	Structure–mechanical property correlations of hydrogel forming β-sheet peptides. Chemical Society Reviews, 2016, 45, 4797-4824.	18.7	135
2630	Liquid drops attract or repel by the inverted Cheerios effect. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7403-7407.	3.3	95
2631	Three-dimensional hierarchical cultivation of human skin cells on bio-adaptive hybrid fibers. Integrative Biology (United Kingdom), 2016, 8, 775-784.	0.6	16

#	Article	IF	CITATIONS
2632	Tuning the Mechanical Properties of Poly(Ethylene Glycol) Microgelâ€Based Scaffolds to Increase 3D Schwann Cell Proliferation. Macromolecular Bioscience, 2016, 16, 535-544.	2.1	35
2633	Redefining the induction of periodontal tissue regeneration in primates by the osteogenic proteins of the transforming growth factorâ€Î² supergene family. Journal of Periodontal Research, 2016, 51, 699-715.	1.4	14
2634	Neural regulation of cancer: from mechanobiology to inflammation. Clinical and Translational Immunology, 2016, 5, e78.	1.7	22
2635	Inkjet printing Schwann cells and neuronal analogue NG108-15 cells. Biofabrication, 2016, 8, 015017.	3.7	84
2636	Sulfated Hydrogel Matrices Direct Mitogenicity and Maintenance of Chondrocyte Phenotype through Activation of FGF Signaling. Advanced Functional Materials, 2016, 26, 3649-3662.	7.8	68
2637	Stemâ€Cell Clinging by a Thread: AFM Measure of Polymerâ€Brush Lateral Deformation. Advanced Materials Interfaces, 2016, 3, 1500456.	1.9	40
2638	On the Theories and Numerics of Continuum Models for Adaptation Processes in Biological Tissues. Archives of Computational Methods in Engineering, 2016, 23, 301-322.	6.0	8
2639	Single-Cell Migration in Complex Microenvironments: Mechanics and Signaling Dynamics. Journal of Biomechanical Engineering, 2016, 138, 021004.	0.6	74
2640	Synthesis, Structural and Micromechanical Properties of 3D Hyaluronic Acid-Based Cryogel Scaffolds. Biomacromolecules, 2016, 17, 580-589.	2.6	41
2641	Cellulose Nanofibril Hydrogel Tubes as Sacrificial Templates for Freestanding Tubular Cell Constructs. Biomacromolecules, 2016, 17, 905-913.	2.6	63
2642	Nanostructured conducting polymers for stiffness controlled cell adhesion. Nanotechnology, 2016, 27, 074001.	1.3	15
2643	Elasticity Modulation of Fibroblast-Derived Matrix for Endothelial Cell Vascular Morphogenesis and Mesenchymal Stem Cell Differentiation. Tissue Engineering - Part A, 2016, 22, 415-426.	1.6	4
2644	Development of Biodegradable Poly(citrate)-Polyhedral Oligomeric Silsesquioxanes Hybrid Elastomers with High Mechanical Properties and Osteogenic Differentiation Activity. ACS Applied Materials & Samp; Interfaces, 2016, 8, 3079-3091.	4.0	44
2645	Dynamic Strength of Molecular Bond Clusters Under Displacement- and Force-Controlled Loading Conditions. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .	1.1	13
2646	Influence of 3D Microgrooves on C2C12 Cell Proliferation, Migration, Alignment, F-actin Protein Expression and Gene Expression. Journal of Materials Science and Technology, 2016, 32, 901-908.	5.6	17
2647	Photoresponsive self-healing supramolecular hydrogels for light-induced release of DNA and doxorubicin. Chemical Communications, 2016, 52, 3143-3146.	2.2	98
2648	Multi-layered collagen-based scaffolds for osteochondral defect repair in rabbits. Acta Biomaterialia, 2016, 32, 149-160.	4.1	170
2649	A Langevin model of physical forces in cell volume fluctuations. Journal of Biomechanics, 2016, 49, 1286-1289.	0.9	6

#	Article	IF	CITATIONS
2650	One size does not fit all: developing a cell-specific niche for in vitro study of cell behavior. Matrix Biology, 2016, 52-54, 426-441.	1.5	85
2651	Crosslinking of extracellular matrix scaffolds derived from pluripotent stem cell aggregates modulates neural differentiation. Acta Biomaterialia, 2016, 30, 222-232.	4.1	52
2652	Focal adhesions, stress fibers and mechanical tension. Experimental Cell Research, 2016, 343, 14-20.	1.2	308
2653	Endogenous Cartilage Repair by Recruitment of Stem Cells. Tissue Engineering - Part B: Reviews, 2016, 22, 160-171.	2.5	40
2654	Fabrication of hydrogels with elasticity changed by alkaline phosphatase for stem cell culture. Acta Biomaterialia, 2016, 29, 215-227.	4.1	22
2655	Stretch-Induced Helical Conformations in Poly(<scp>l</scp> -lysine)/Hyaluronic Acid Multilayers. ACS Applied Materials & Description of the Applied Materials & Description of	4.0	11
2656	Tailored and biodegradable poly(2-oxazoline) microbeads as 3D matrices for stem cell culture in regenerative therapies. Biomaterials, 2016, 79, 1-14.	5.7	26
2657	Mechanical cytoprotection: A review of cytoskeleton-protection approaches for cells. Journal of Biomechanics, 2016, 49, 1321-1329.	0.9	27
2658	Cell growth on 3D microstructured surfaces. Materials Science and Engineering C, 2016, 63, 686-689.	3.8	5
2659	A scaffold with a bio-mimetically designed micro/nano-fibrous structure using decellularized extracellular matrix. RSC Advances, 2016, 6, 29697-29706.	1.7	13
2660	Optical quantification of forces at play during stem cell differentiation. , 2016, , .		0
2661	A Solvent and Initiator Free, Low-Modulus, Degradable Polyester Platform with Modular Functionality for Ambient-Temperature 3D Printing. Macromolecules, 2016, 49, 2429-2437.	2.2	35
2662	Advances and Challenges in Recapitulating Human Pulmonary Systems: At the Cusp of Biology and Materials. ACS Biomaterials Science and Engineering, 2016, 2, 473-488.	2.6	25
2663	Hydrogels with Dual Gradients of Mechanical and Biochemical Cues for Deciphering Cell-Niche Interactions. ACS Biomaterials Science and Engineering, 2016, 2, 845-852.	2.6	46
2664	Insight on stem cell preconditioning and instructive biomaterials to enhance cell adhesion, retention, and engraftment for tissue repair. Biomaterials, 2016, 90, 85-115.	5 . 7	94
2665	Multicolor Cell Barcoding Technology for Long-Term Surveillance of Epithelial Regeneration in Zebrafish. Developmental Cell, 2016, 36, 668-680.	3.1	71
2666	Polymer microarray technology for stem cell engineering. Acta Biomaterialia, 2016, 34, 60-72.	4.1	21
2667	Wide-range stiffness gradient PVA/HA hydrogel to investigate stem cell differentiation behavior. Acta Biomaterialia, 2016, 35, 23-31.	4.1	141

#	Article	lF	Citations
2668	Strong and Biostable Hyaluronic Acid–Calcium Phosphate Nanocomposite Hydrogel via in Situ Precipitation Process. Biomacromolecules, 2016, 17, 841-851.	2.6	60
2669	Substrate Fluidity Regulates Cell Adhesion and Morphology on Poly(Îμ-caprolactone)-Based Materials. ACS Biomaterials Science and Engineering, 2016, 2, 446-453.	2.6	34
2670	3,4-Dihydroxy-L-Phenylalanine as a Novel Covalent Linker of Extracellular Matrix Proteins to Polyacrylamide Hydrogels with a Tunable Stiffness. Tissue Engineering - Part C: Methods, 2016, 22, 91-101.	1.1	17
2671	Advanced Artificial Extracellular Matrices Using Amphiphilic Nanogel-Cross-Linked Thin Films To Anchor Adhesion Proteins and Cytokines. ACS Biomaterials Science and Engineering, 2016, 2, 375-384.	2.6	13
2672	Mechanical and biological properties of photocurable oligolactide-HA composites investigated under accelerated degradation. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 675-691.	1.9	5
2673	Cellular microenvironment controls the nuclear architecture of breast epithelia through \hat{l}^21 -integrin. Cell Cycle, 2016, 15, 345-356.	1.3	23
2674	Mucin-Inspired Thermoresponsive Synthetic Hydrogels Induce Stasis in Human Pluripotent Stem Cells and Human Embryos. ACS Central Science, 2016, 2, 65-74.	5. 3	110
2675	An injectable scaffold based on crosslinked hyaluronic acid gel for tissue regeneration. RSC Advances, 2016, 6, 16838-16850.	1.7	38
2676	Functionalizing micro-3D-printed protein hydrogels for cell adhesion and patterning. Journal of Materials Chemistry B, 2016, 4, 1818-1826.	2.9	18
2677	A chemo-mechanical free-energy-based approach to model durotaxis and extracellular stiffness-dependent contraction and polarization of cells. Interface Focus, 2016, 6, 20150067.	1.5	72
2678	Actin flows in cell migration: from locomotion and polarity to trajectories. Current Opinion in Cell Biology, 2016, 38, 12-17.	2.6	74
2679	Ageing is associated with reduction of mechanically-induced activation of Smad2/3P signaling in articular cartilage. Osteoarthritis and Cartilage, 2016, 24, 146-157.	0.6	44
2680	Injectable biomaterials: a perspective on the next wave of injectable therapeutics. Biomedical Materials (Bristol), 2016, 11, 014110.	1.7	31
2681	Magnetically actuated cell-laden microscale hydrogels for probing strain-induced cell responses in three dimensions. NPG Asia Materials, 2016, 8, e238-e238.	3.8	49
2682	Development of complex-shaped liver multicellular spheroids as a human-based model for nanoparticle toxicity assessment in vitro. Toxicology and Applied Pharmacology, 2016, 294, 78-85.	1.3	42
2683	Spider Silk Peptide Is a Compact, Linear Nanospring Ideal for Intracellular Tension Sensing. Nano Letters, 2016, 16, 2096-2102.	4.5	61
2684	Skeletal Muscle Loading Changes its Regenerative Capacity. Sports Medicine, 2016, 46, 783-792.	3.1	14
2685	Nanoengineered bioactive 3D composite scaffold: A unique combination of graphene oxide and nanotopography for tissue engineering applications. Composites Part B: Engineering, 2016, 90, 503-511.	5.9	45

#	ARTICLE	IF	CITATIONS
2686	Bio-inspired smart hydrogel with temperature-dependent properties and enhanced cell attachment. Journal of Materials Chemistry B, 2016, 4, 1740-1746.	2.9	33
2687	Elastic modulus of ultrathin polymer films characterized by atomic force microscopy: The role of probe radius. Polymer, 2016, 87, 114-122.	1.8	34
2688	Fibrin-fiber architecture influences cell spreading and differentiation. Cell Adhesion and Migration, 2016, 10, 495-504.	1.1	29
2689	Front–Rear Polarization by Mechanical Cues: From Single Cells to Tissues. Trends in Cell Biology, 2016, 26, 420-433.	3.6	127
2690	Mean deformation metrics for quantifying 3D cell–matrix interactions without requiring information about matrix material properties. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2898-2903.	3.3	60
2691	Phosphorylated poly(sebacoyl diglyceride) – a phosphate functionalized biodegradable polymer for bone tissue engineering. Journal of Materials Chemistry B, 2016, 4, 2090-2101.	2.9	38
2692	Cell elasticity with altered cytoskeletal architectures across multiple cell types. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 197-207.	1.5	108
2693	Synthesis of Binary Nanopatterns on Hydrogels for Initiating Cellular Responses. Chemistry of Materials, 2016, 28, 1806-1815.	3.2	31
2694	Foams Made of Engineered Recombinant Spider Silk Proteins as 3D Scaffolds for Cell Growth. ACS Biomaterials Science and Engineering, 2016, 2, 517-525.	2.6	45
2695	YAP Nuclear Localization in the Absence of Cell-Cell Contact Is Mediated by a Filamentous Actin-dependent, Myosin II- and Phospho-YAP-independent Pathway during Extracellular Matrix Mechanosensing. Journal of Biological Chemistry, 2016, 291, 6096-6110.	1.6	188
2696	Haplotypes drop by drop. Nature Biotechnology, 2016, 34, 296-298.	9.4	36
2697	From clinical imaging to implantation of 3D printed tissues. Nature Biotechnology, 2016, 34, 295-296.	9.4	20
2698	Fabrication and in vitro biocompatibilities of fibrous biocomposites consisting of PCL and M13 bacteriophage-conjugated alginate for bone tissue engineering. Journal of Materials Chemistry B, 2016, 4, 656-665.	2.9	10
2699	β3 integrin–mediated spreading induced by matrix-bound BMP-2 controls Smad signaling in a stiffness-independent manner. Journal of Cell Biology, 2016, 212, 693-706.	2.3	64
2700	Microscale characterization of the viscoelastic properties of hydrogel biomaterials using dual-mode ultrasound elastography. Biomaterials, 2016, 88, 12-24.	5.7	37
2701	Lateral Chain Length in Polyalkyl Acrylates Determines the Mobility of Fibronectin at the Cell/Material Interface. Langmuir, 2016, 32, 800-809.	1.6	29
2702	Mechanosensing via cell-matrix adhesions in 3D microenvironments. Experimental Cell Research, 2016, 343, 60-66.	1.2	208
2703	Development of a FRET-based recombinant tension sensor to visualize cell–material interactions. Journal of Materials Chemistry B, 2016, 4, 649-655.	2.9	5

#	Article	IF	CITATIONS
2704	Optimisation of UV irradiation as a binding site conserving method for crosslinking collagen-based scaffolds. Journal of Materials Science: Materials in Medicine, 2016, 27, 14.	1.7	73
2705	Nuclear Magnetic Resonance Insight into the Multiple Glycosaminoglycan Binding Modes of the Link Module from Human TSG-6. Biochemistry, 2016, 55, 262-276.	1.2	20
2706	Shaping tissues by balancing active forces and geometric constraints. Journal Physics D: Applied Physics, 2016, 49, 053001.	1.3	21
2707	Hierarchical Nanowire Arrays as Three-Dimensional Fractal Nanobiointerfaces for High Efficient Capture of Cancer Cells. Nano Letters, 2016, 16, 766-772.	4.5	122
2708	Substrate stiffness does affect the fate of human keratinocytes. RSC Advances, 2016, 6, 3539-3551.	1.7	23
2709	Pulmonary Arterial Stiffness: Toward a New Paradigm in Pulmonary Arterial Hypertension Pathophysiology and Assessment. Current Hypertension Reports, 2016, 18, 4.	1.5	51
2710	Engineering Î ² -sheet peptide assemblies for biomedical applications. Biomaterials Science, 2016, 4, 365-374.	2.6	80
2711	Quantitative Ultrasound for Nondestructive Characterization of Engineered Tissues and Biomaterials. Annals of Biomedical Engineering, 2016, 44, 636-648.	1.3	16
2712	Cells Sensing Mechanical Cues: Stiffness Influences the Lifetime of Cell–Extracellular Matrix Interactions by Affecting the Loading Rate. ACS Nano, 2016, 10, 207-217.	7.3	54
2713	Mechanobiology of cell migration in the context of dynamic two-way cell–matrix interactions. Journal of Biomechanics, 2016, 49, 1355-1368.	0.9	42
2714	High Throughput Layer-by-Layer Films for Extracting Film Forming Parameters and Modulating Film Interactions with Cells. ACS Applied Materials & Samp; Interfaces, 2016, 8, 2255-2261.	4.0	18
2715	3D bioprinting for engineering complex tissues. Biotechnology Advances, 2016, 34, 422-434.	6.0	1,240
2716	An inverted dielectrophoretic device for analysis of attached single cell mechanics. Lab on A Chip, 2016, 16, 561-573.	3.1	30
2717	Three Dimensional and Homogenous Single Cell Cyclic Stretch within a Magnetic Micropillar Array (mMPA) for a Cell Proliferation Study. ACS Biomaterials Science and Engineering, 2016, 2, 65-72.	2.6	9
2718	Cell adhesion on NiTi thin film sputter-deposited meshes. Materials Science and Engineering C, 2016, 59, 611-616.	3.8	10
2719	Multiscale modelling of solid tumour growth: the effect of collagen micromechanics. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1079-1090.	1.4	16
2720	Stiffness of hyaluronic acid gels containing liver extracellular matrix supports human hepatocyte function and alters cell morphology. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 55, 87-103.	1.5	58
2721	Human mesenchymal stem cells cultured on silk hydrogels with variable stiffness and growth factor differentiate into mature smooth muscle cell phenotype. Acta Biomaterialia, 2016, 31, 156-166.	4.1	107

#	Article	IF	Citations
2722	Interplay of Matrix Stiffness and Cell–Cell Contact in Regulating Differentiation of Stem Cells. ACS Applied Materials & Differentiation of Stem Cells.	4.0	111
2723	Stress-stiffening-mediated stem-cell commitment switch in soft responsive hydrogels. Nature Materials, 2016, 15, 318-325.	13.3	319
2724	Hydrogels with tunable stress relaxation regulate stem cell fate and activity. Nature Materials, 2016, 15, 326-334.	13.3	1,650
2725	Solvent-free, supersoft and superelastic bottlebrush melts and networks. Nature Materials, 2016, 15, 183-189.	13.3	428
2726	Mechanical control of cardiac myofibroblasts. Journal of Molecular and Cellular Cardiology, 2016, 93, 133-142.	0.9	192
2727	Silk protein-based hydrogels: Promising advanced materials for biomedical applications. Acta Biomaterialia, 2016, 31, 17-32.	4.1	373
2728	Polymer chain flexibility-induced differences in fetuin A adsorption and its implications on cell attachment and proliferation. Acta Biomaterialia, 2016, 31, 89-98.	4.1	17
2729	Cellular modulation by the elasticity of biomaterials. Journal of Materials Chemistry B, 2016, 4, 9-26.	2.9	72
2730	Review of cellular mechanotransduction on micropost substrates. Medical and Biological Engineering and Computing, 2016, 54, 249-271.	1.6	9
2731	Engineering Mechanical, Biochemical, and Topographical Niche Cues by Photocrosslinkable, Microribbon-Like Hydrogels., 2016,, 249-266.		0
2732	Intrinsic and extrinsic mechanical properties related to the differentiation of mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2016, 473, 752-757.	1.0	27
2733	For whom the cells pull: Hydrogel and micropost devices for measuring traction forces. Methods, 2016, 94, 51-64.	1.9	61
2734	Monitoring developmental force distributions in reconstituted embryonic epithelia. Methods, 2016, 94, 101-113.	1.9	38
2735	Study of stiffness effects of poly(amidoamine)–poly(n-isopropyl acrylamide) hydrogel on wound healing. Colloids and Surfaces B: Biointerfaces, 2016, 140, 574-582.	2.5	46
2736	Shear stress mediates exocytosis of functional TRPV4 channels in endothelial cells. Cellular and Molecular Life Sciences, 2016, 73, 649-666.	2.4	70
2737	Microscale Technologies for Cell Engineering., 2016,,.		3
2738	Pushing, pulling, and squeezing our way to understanding mechanotransduction. Methods, 2016, 94, 4-12.	1.9	27
2739	Impact of particle elasticity on particle-based drug delivery systems. Advanced Drug Delivery Reviews, 2017, 108, 51-67.	6.6	302

#	Article	IF	CITATIONS
2740	Controlling cell adhesion using layer-by-layer approaches for biomedical applications. Materials Science and Engineering C, 2017, 70, 1163-1175.	3.8	84
2741	Induction of cell self-organization on weakly positively charged surfaces prepared by the deposition of polyion complex nanoparticles of thermoresponsive, zwitterionic copolymers., 2017, 105, 1009-1015.		8
2742	Recovery of cellular traction in three-dimensional nonlinear hyperelastic matrices. Computer Methods in Applied Mechanics and Engineering, 2017, 314, 296-313.	3.4	23
2743	3D Bioprinting for Tissue and Organ Fabrication. Annals of Biomedical Engineering, 2017, 45, 148-163.	1.3	507
2744	Gelatin electrospun nanofibrous matrices for cardiac tissue engineering applications. International Journal of Polymeric Materials and Polymeric Biomaterials, 2017, 66, 20-27.	1.8	22
2745	Effect of the gel elasticity of model skin matrices on the distance/depthâ€dependent transmission of vibration energy supplied from a cosmetic vibrator. International Journal of Cosmetic Science, 2017, 39, 42-48.	1.2	O
2746	Schwann cells and neurite outgrowth from embryonic dorsal root ganglions are highly mechanosensitive. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 493-501.	1.7	40
2747	Hydroxyapatite-intertwined hybrid nanofibres for the mineralization of osteoblasts. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 1853-1864.	1.3	13
2748	Multilayered dense collagen-silk fibroin hybrid: a platform for mesenchymal stem cell differentiation towards chondrogenic and osteogenic lineages. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2046-2059.	1.3	27
2749	Enriching a cellulose hydrogel with a biologically active marine exopolysaccharide for cell-based cartilage engineering. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 1152-1164.	1.3	42
2750	Nanostructured gellan and xanthan hydrogel depot integrated within a baghdadite scaffold augments bone regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 1195-1211.	1.3	19
2751	From morphogen to morphogenesis and back. Nature, 2017, 541, 311-320.	13.7	258
2752	Mechanosensing by the nucleus: From pathways to scaling relationships. Journal of Cell Biology, 2017, 216, 305-315.	2.3	301
2753	Fabrication of elastomer pillar arrays with height gradient for cell culture studies. Microelectronic Engineering, 2017, 175, 50-55.	1.1	7
2754	ICAP-1 monoubiquitination coordinates matrix density and rigidity sensing for cell migration through ROCK2- MRCKα balance. Journal of Cell Science, 2017, 130, 626-636.	1.2	7
2755	Controlling the morphology and outgrowth of nerve and neuroglial cells: The effect of surface topography. Acta Biomaterialia, 2017, 51, 21-52.	4.1	171
2756	Photopatterned Hydrogels to Investigate the Endothelial Cell Response to Matrix Stiffness Heterogeneity. ACS Biomaterials Science and Engineering, 2017, 3, 3007-3016.	2.6	41
2757	Simultaneous measurement of the Young's modulus and the Poisson ratio of thin elastic layers. Soft Matter, 2017, 13, 1048-1055.	1.2	27

#	Article	IF	CITATIONS
2758	Cross-Linking Chemistry of Tyramine-Modified Hyaluronan Hydrogels Alters Mesenchymal Stem Cell Early Attachment and Behavior. Biomacromolecules, 2017, 18, 855-864.	2.6	48
2759	The Mechanics of Single Cell and Collective Migration of Tumor Cells. Journal of Biomechanical Engineering, 2017, 139, .	0.6	105
2760	A nanofibrous electrospun patch to maintain human mesenchymal cell stemness. Journal of Materials Science: Materials in Medicine, 2017, 28, 44.	1.7	18
2761	Measuring mechanodynamics in an unsupported epithelial monolayer grown at an air–water interface. Molecular Biology of the Cell, 2017, 28, 111-119.	0.9	3
2762	Sonochemically-fabricated Ga@C-dots@Ga nanoparticle-aided neural growth. Journal of Materials Chemistry B, 2017, 5, 1371-1379.	2.9	37
2763	Elasticity patterns induced by phase-separation in polymer blend films. Thin Solid Films, 2017, 624, 181-186.	0.8	4
2764	Cell mechanics: a dialogue. Reports on Progress in Physics, 2017, 80, 036601.	8.1	36
2765	The influence of surface modified poly(<scp> </scp> -lactic acid) films on the differentiation of human monocytes into macrophages. Biomaterials Science, 2017, 5, 551-560.	2.6	24
2766	Hyaluronic acid facilitates chondrogenesis and matrix deposition of human adipose derived mesenchymal stem cells and human chondrocytes co-cultures. Acta Biomaterialia, 2017, 52, 130-144.	4.1	96
2767	Biomechanically primed liver microtumor array as a high-throughput mechanopharmacological screening platform for stroma-reprogrammed combinatorial therapy. Biomaterials, 2017, 124, 12-24.	5.7	25
2768	Patterned parylene C for cell adhesion, spreading and alignment studies. Microelectronic Engineering, 2017, 175, 56-60.	1.1	4
2769	The Horizon of Materiobiology: A Perspective on Material-Guided Cell Behaviors and Tissue Engineering. Chemical Reviews, 2017, 117, 4376-4421.	23.0	424
2770	Membrane Pore Spacing Can Modulate Endothelial Cell–Substrate and Cell–Cell Interactions. ACS Biomaterials Science and Engineering, 2017, 3, 243-248.	2.6	55
2771	Evidences of non-linear short-term stress relaxation in polymers. Polymer Testing, 2017, 59, 220-229.	2.3	22
2772	Development of a rapid in vitro tissue deadhesion system using the thermoresponsive sol-gel transition of hydroxybutyl chitosan. Journal of Biomaterials Science, Polymer Edition, 2017, 28, 958-973.	1.9	13
2773	Development of a thermosensitive HAMA-containing bio-ink for the fabrication of composite cartilage repair constructs. Biofabrication, 2017, 9, 015026.	3.7	85
2774	Hierarchically ordered polymer nanofiber shish kebabs as a bone scaffold material. Journal of Biomedical Materials Research - Part A, 2017, 105, 1786-1798.	2.1	33
2775	Self-Assembled Liquid-Crystalline Membranes Form Supramolecular Hydrogels via Hydrogen Bonding. Macromolecular Rapid Communications, 2017, 38, 1600762.	2.0	5

#	Article	IF	CITATIONS
2776	The optimal density of cellular solids in axial tension. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 701-713.	0.9	4
2777	Comprehensive proteomic characterization of stem cell-derived extracellular matrices. Biomaterials, 2017, 128, 147-159.	5.7	132
2778	Thin polymeric films for building biohybrid microrobots. Bioinspiration and Biomimetics, 2017, 12, 021001.	1.5	23
2779	Effect of hydrogel elasticity and ephrinB2-immobilized manner on Runx2 expression of human mesenchymal stem cells. Acta Biomaterialia, 2017, 58, 312-322.	4.1	9
2780	Colloidal force probe study of poly(di(ethylene glycol)methylether methacrylate) homopolymer brush layers in aqueous media at different temperatures. European Polymer Journal, 2017, 89, 440-448.	2.6	18
2781	Optimal Environmental Stiffness for Stem Cell Mediated Ischemic Myocardium Repair. Methods in Molecular Biology, 2017, 1553, 293-304.	0.4	3
2782	Cellular Response to Surface Topography and Substrate Stiffness. Pancreatic Islet Biology, 2017, , 41-57.	0.1	3
2783	Green tea polyphenol tailors cell adhesivity of RGD displaying surfaces: multicomponent models monitored optically. Scientific Reports, 2017, 7, 42220.	1.6	46
2784	The development of polymeric biomaterials inspired by the extracellular matrix. Journal of Biomaterials Science, Polymer Edition, 2017, 28, 1051-1069.	1.9	19
2785	A Drug-Induced Hybrid Electrospun Poly-Capro-Lactone: Cell-Derived Extracellular Matrix Scaffold for Liver Tissue Engineering. Tissue Engineering - Part A, 2017, 23, 650-662.	1.6	49
2786	Persistence-Driven Durotaxis: Generic, Directed Motility in Rigidity Gradients. Physical Review Letters, 2017, 118, 078103.	2.9	58
2787	Enzymatic mineralization generates ultrastiff and tough hydrogels with tunable mechanics. Nature, 2017, 543, 407-410.	13.7	211
2788	Inductive biomaterials for bone regeneration. Journal of Materials Research, 2017, 32, 1047-1060.	1.2	16
2789	Quantitative Analyses of Dynamic Features of Fibroblasts on Different Protein-Coated Compliant Substrates. ACS Biomaterials Science and Engineering, 2017, 3, 2987-2998.	2.6	5
2790	Isolation and Characterization of Vessel-Associated Stem/Progenitor Cells from Skeletal Muscle. Methods in Molecular Biology, 2017, 1556, 149-177.	0.4	8
2791	Biomechanical cell regulatory networks as complex adaptive systems in relation to cancer. Cancer Cell International, 2017, 17, 16.	1.8	12
2792	One further step to cell behaviour understanding. Inorganic Chemistry Frontiers, 2017, 4, 761-763.	3.0	0
2793	Precise measurements of capsule mechanical properties using indentation. Soft Matter, 2017, 13, 1943-1947.	1.2	35

#	Article	IF	CITATIONS
2794	Impact of matrix stiffness on fibroblast function. Materials Science and Engineering C, 2017, 74, 146-151.	3.8	65
2795	Corrosion resistance and biological activity of TiO ₂ implant coatings produced in oxygen-rich environments. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 20-27.	1.0	4
2796	Bioactive surfaces from seaweed-derived alginates for the cultivation of human stem cells. Journal of Applied Phycology, 2017, 29, 2451-2461.	1.5	25
2797	Optimizing Double-Network Hydrogel for Biomedical Soft Robots. Soft Robotics, 2017, 4, 191-201.	4.6	59
2798	Spatial development of gingival fibroblasts and dental pulp cells: Effect of extracellular matrix. Tissue and Cell, 2017, 49, 401-409.	1.0	6
2799	Method to study cell migration under uniaxial compression. Molecular Biology of the Cell, 2017, 28, 809-816.	0.9	20
2800	The sulfilimine cross-link of collagen IV contributes to kidney tubular basement membrane stiffness. American Journal of Physiology - Renal Physiology, 2017, 313, F596-F602.	1.3	60
2801	Spatiotemporally Controlled Mechanical Cues Drive Progenitor Mesenchymal-to-Epithelial Transition Enabling Proper Heart Formation and Function. Current Biology, 2017, 27, 1326-1335.	1.8	24
2802	Isolation of Astrocytes Displaying Myofibroblast Properties and Present in Multiple Sclerosis Lesions. Neurochemical Research, 2017, 42, 2427-2434.	1.6	5
2803	Surface Atomic Structure Directs the Fate of Human Mesenchymal Stem Cells. ACS Applied Materials & Samp; Interfaces, 2017, 9, 15274-15285.	4.0	20
2804	Engineered 3D Cardiac Fibrotic Tissue to Study Fibrotic Remodeling. Advanced Healthcare Materials, 2017, 6, 1601434.	3.9	85
2805	Biomacromolecular-based ionic-covalent hydrogels for cell encapsulation: The atelocollagen â^' Oxidized polysaccharides couples. Carbohydrate Polymers, 2017, 169, 366-375.	5.1	7
2806	Molecular force sensors to measure stress in cells. Journal Physics D: Applied Physics, 2017, 50, 233001.	1.3	14
2807	Mechanotransduction and Growth Factor Signalling to Engineer Cellular Microenvironments. Advanced Healthcare Materials, 2017, 6, 1700052.	3.9	56
2808	Tuning reversible cell adhesion to methacrylate-based thermoresponsive polymers: Effects of composition on substrate hydrophobicity and cellular responses. Journal of Biomedical Materials Research - Part A, 2017, 105, 2416-2428.	2.1	11
2809	Mechanosensing of substrate stiffness regulates focal adhesions dynamics in cell. Meccanica, 2017, 52, 3389-3398.	1.2	18
2810	Superficial physicochemical properties of polyurethane biomaterials as osteogenic regulators in human mesenchymal stem cells fates. Colloids and Surfaces B: Biointerfaces, 2017, 156, 292-304.	2.5	37
2811	Tunable Structural and Mechanical Properties of Cellulose Nanofiber Substrates in Aqueous Conditions for Stem Cell Culture. Biomacromolecules, 2017, 18, 2034-2044.	2.6	33

#	Article	IF	CITATIONS
2812	Poly(2-oxazoline) hydrogels by photoinduced thiol-ene "click―reaction using different dithiol crosslinkers. Journal of Polymer Research, 2017, 24, 1.	1.2	20
2813	Biocompatible, degradable thermoplastic polyurethane based on polycaprolactone-block-polytetrahydrofuran-block-polycaprolactone copolymers for soft tissue engineering. Journal of Materials Chemistry B, 2017, 5, 4137-4151.	2.9	89
2814	The distribution of vinculin to lipid rafts plays an important role in sensing stiffness of extracellular matrix. Bioscience, Biotechnology and Biochemistry, 2017, 81, 1136-1147.	0.6	16
2815	Mechanical properties of films and three-dimensional scaffolds made of fibroin and gelatin. Biophysics (Russian Federation), 2017, 62, 17-23.	0.2	7
2816	Extrusion Bioprinting of Shearâ€Thinning Gelatin Methacryloyl Bioinks. Advanced Healthcare Materials, 2017, 6, 1601451.	3.9	352
2817	Role of mechanics in the appearance of oscillatory instability and standing waves of the mechanochemical activity in the <i>Physarum polycephalum </i> Physics, 2017, 50, 213002.	1.3	18
2818	Noninvasive Measurement of Ear Cartilage Elasticity on the Cellular Level. Plastic and Reconstructive Surgery - Global Open, 2017, 5, e1147.	0.3	10
2819	Conducting Polymer Scaffolds for Hosting and Monitoring 3D Cell Culture. Advanced Biology, 2017, 1, 1700052.	3.0	89
2820	Poly(ethylmethacrylate-co-diethylaminoethyl acrylate) coating improves endothelial re-population, bio-mechanical and anti-thrombogenic properties of decellularized carotid arteries for blood vessel replacement. Scientific Reports, 2017, 7, 407.	1.6	16
2821	Multiscale model predicts increasing focal adhesion size with decreasing stiffness in fibrous matrices. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E4549-E4555.	3.3	88
2822	MSCs on an acellular dermal matrix (ADM) sourced from neonatal mouse skin regulate collagen reconstruction of granulation tissue during adult cutaneous wound healing. RSC Advances, 2017, 7, 22998-23010.	1.7	6
2823	Polyurethane acrylates as effective substrates for sustained in vitro culture of human myotubes. Acta Biomaterialia, 2017, 57, 115-126.	4.1	6
2824	A facile one-step strategy for development of a double network fibrous scaffold for nerve tissue engineering. Biofabrication, 2017, 9, 025008.	3.7	41
2825	Solid stress and elastic energy as measures of tumour mechanopathology. Nature Biomedical Engineering, 2017, 1, .	11.6	280
2826	Modeling the Human Scarred Heart In Vitro: Toward New Tissue Engineered Models. Advanced Healthcare Materials, 2017, 6, 1600571.	3.9	25
2827	Live Tissue Imaging to Elucidate Mechanical Modulation of Stem Cell Niche Quiescence. Stem Cells Translational Medicine, 2017, 6, 285-292.	1.6	20
2828	Tubular clathrin/AP-2 lattices pinch collagen fibers to support 3D cell migration. Science, 2017, 356, .	6.0	94
2829	Effects of mechanical stimulation on the reprogramming of somatic cells into human-induced pluripotent stem cells. Stem Cell Research and Therapy, 2017, 8, 139.	2.4	16

#	Article	IF	CITATIONS
2830	Modeling Physiological Events in 2D vs. 3D Cell Culture. Physiology, 2017, 32, 266-277.	1.6	1,069
2831	Talking over the extracellular matrix: How do cells communicate mechanically?. Seminars in Cell and Developmental Biology, 2017, 71, 99-105.	2.3	64
2832	Novel fibrous collagen-based cream accelerates fibroblast growth for wound healing applications: in vitro and in vivo evaluation. Biomaterials Science, 2017, 5, 1868-1883.	2.6	36
2833	Biophysical Regulation of Cell Behaviorâ€"Cross Talk between Substrate Stiffness and Nanotopography. Engineering, 2017, 3, 36-54.	3.2	193
2834	Stem cell migration and mechanotransduction on linear stiffness gradient hydrogels. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5647-5652.	3.3	370
2835	Recent advances in electrospun nanofibers for wound healing. Nanomedicine, 2017, 12, 1335-1352.	1.7	282
2836	Self-Healing, Self-Assembled β-Sheet Peptide–Poly(γ-glutamic acid) Hybrid Hydrogels. Journal of the American Chemical Society, 2017, 139, 7250-7255.	6.6	143
2837	Characterization and Standardization of Cultured Cardiac Fibroblasts for <i>Ex Vivo </i> Models of Heart Fibrosis and Heart Ischemia. Tissue Engineering - Part C: Methods, 2017, 23, 422-433.	1.1	21
2838	Effects of bone substitute architecture and surface properties on cell response, angiogenesis, and structure of new bone. Journal of Materials Chemistry B, 2017, 5, 6175-6192.	2.9	199
2839	The intricate anatomy of the periodontal ligament and its development: Lessons for periodontal regeneration. Journal of Periodontal Research, 2017, 52, 965-974.	1.4	121
2840	Cellular mechanosensing of the biophysical microenvironment: A review of mathematical models of biophysical regulation of cell responses. Physics of Life Reviews, 2017, 22-23, 88-119.	1.5	67
2841	Interactions of Neurons with Physical Environments. Advanced Healthcare Materials, 2017, 6, 1700267.	3.9	76
2842	3D Cell Culture: An Introduction. Methods in Molecular Biology, 2017, 1612, 1-11.	0.4	42
2843	Correlating network structure with functional properties of capillary alginate gels for muscle fiber formation. Food Hydrocolloids, 2017, 72, 210-218.	5.6	31
2844	Printing Functional Protein Nanodots on Soft Elastomers: From Transfer Mechanism to Cell Mechanosensing. Nano Letters, 2017, 17, 4284-4290.	4.5	8
2845	Neural interfaces engineered via micro- and nanostructured coatings. Nano Today, 2017, 14, 59-83.	6.2	60
2846	Comparison Study on Four Biodegradable Polymer Coatings for Controlling Magnesium Degradation and Human Endothelial Cell Adhesion and Spreading. ACS Biomaterials Science and Engineering, 2017, 3, 936-950.	2.6	56
2847	Theory on Bending in Cantilever Beams With Adsorbed Islands. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	1.1	1

#	Article	IF	CITATIONS
2848	Collagen Gels with Different Fibrillar Microarchitectures Elicit Different Cellular Responses. ACS Applied Materials & Different Cellular Responses. ACS Applied Materials & Different Fibrillar Microarchitectures Elicit Different Cellular Responses. ACS Applied Materials & Different Fibrillar Microarchitectures Elicit Different Cellular Responses. ACS Applied Materials & Different Fibrillar Microarchitectures Elicit Different Cellular Responses. ACS Applied Materials & Different Fibrillar Microarchitectures Elicit Different Cellular Responses. ACS Applied Materials & Different Fibrillar Microarchitectures Elicit Different Cellular Responses. ACS Applied Materials & Different Cellular Responses. ACS Applied Materials & Different Cellular Responses.	4.0	120
2849	Mechanical properties, structure, bioadhesion, and biocompatibility of pectin hydrogels. Journal of Biomedical Materials Research - Part A, 2017, 105, 2572-2581.	2.1	45
2850	The fibrous cellular microenvironment, and how cells make sense of a tangled web. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5772-5774.	3.3	12
2851	Characterisation of cellular adhesion reinforcement by multiple bond force spectroscopy in alveolar epithelial cells. Biology of the Cell, 2017, 109, 255-272.	0.7	3
2852	Biocompatibility of hydrogel-based scaffolds for tissue engineering applications. Biotechnology Advances, 2017, 35, 530-544.	6.0	579
2853	Flexible nanofilms coated with aligned piezoelectric microfibers preserve the contractility of cardiomyocytes. Biomaterials, 2017, 139, 213-228.	5 . 7	62
2854	Nonlinear mechanics of hybrid polymer networks that mimic the complex mechanical environment of cells. Nature Communications, 2017, 8, 15478.	5.8	60
2855	Improvement of endothelial progenitor outgrowth cell (EPOC)-mediated vascularization in gelatin-based hydrogels through pore size manipulation. Acta Biomaterialia, 2017, 58, 225-237.	4.1	36
2856	Alternately plasma-roughened nanosurface of a hybrid scaffold for aligning myoblasts. Biofabrication, 2017, 9, 025035.	3.7	4
2857	Microfluidic Programming of Compositional Hydrogel Landscapes. Macromolecular Rapid Communications, 2017, 38, 1700255.	2.0	12
2859	Stiffness of Protease Sensitive and Cell Adhesive PEG Hydrogels Promotes Neovascularization In Vivo. Annals of Biomedical Engineering, 2017, 45, 1387-1398.	1.3	35
2860	A bio-inspired high strength three-layer nanofiber vascular graft with structure guided cell growth. Journal of Materials Chemistry B, 2017, 5, 3758-3764.	2.9	62
2861	High-resolution spatiotemporal strain mapping reveals non-uniform deformation in micropatterned elastomers. Journal of Micromechanics and Microengineering, 2017, 27, 045008.	1.5	4
2862	Mechanical Cell–Cell Communication in Fibrous Networks: The Importance of Network Geometry. Bulletin of Mathematical Biology, 2017, 79, 498-524.	0.9	42
2863	Phase-field model of cellular migration: Three-dimensional simulations in fibrous networks. Computer Methods in Applied Mechanics and Engineering, 2017, 320, 162-197.	3.4	43
2864	MCAK-mediated regulation of endothelial cell microtubule dynamics is mechanosensitive to myosin-II contractility. Molecular Biology of the Cell, 2017, 28, 1223-1237.	0.9	13
2865	Nerve Cells Decide to Orient inside an Injectable Hydrogel with Minimal Structural Guidance. Nano Letters, 2017, 17, 3782-3791.	4.5	165
2866	The effect of native silk fibroin powder on the physical properties and biocompatibility of biomedical polyurethane membrane. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 337-346.	1.0	5

#	Article	IF	CITATIONS
2867	The rotation of mouse myoblast nuclei is dependent on substrate elasticity. Cytoskeleton, 2017, 74, 184-194.	1.0	6
2868	Bioprinters in Use Today. , 2017, , 65-80.		O
2869	Mechanical design in embryos: mechanical signalling, robustness and developmental defects. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20150516.	1.8	34
2870	Tuning Cell and Tissue Development by Combining Multiple Mechanical Signals. Tissue Engineering - Part B: Reviews, 2017, 23, 494-504.	2.5	17
2871	Integrin-mediated traction force enhances paxillin molecular associations and adhesion dynamics that increase the invasiveness of tumor cells into a three-dimensional extracellular matrix. Molecular Biology of the Cell, 2017, 28, 1467-1488.	0.9	110
2873	Hydrogels with Modulated Ionic Load for Mammalian Cell Harvesting with Reduced Bacterial Adhesion. Biomacromolecules, 2017, 18, 1521-1531.	2.6	17
2874	Calcium oscillations in wounded fibroblast monolayers are spatially regulated through substrate mechanics. Physical Biology, 2017, 14, 045006.	0.8	19
2875	Functionalization of conducting polymers for biointerface applications. Progress in Polymer Science, 2017, 70, 18-33.	11.8	91
2876	Honing Cell and Tissue Culture Conditions for Bone and Cartilage Tissue Engineering. Cold Spring Harbor Perspectives in Medicine, 2017, 7, a025734.	2.9	7
2877	Cardiac regeneration: All work and no repair?. Science Translational Medicine, 2017, 9, .	5.8	11
2878	Dynamic Cellular Interactions with Extracellular Matrix Triggered by Biomechanical Tuning of Lowâ€Rigidity, Supported Lipid Membranes. Advanced Healthcare Materials, 2017, 6, 1700243.	3.9	21
2879	New advances in probing cell–extracellular matrix interactions. Integrative Biology (United) Tj ETQq1 1 0.7843	14 rgBT /O	verlock 10
2880	Templated, Macroporous PEGâ€DA Hydrogels and Their Potential Utility as Tissue Engineering Scaffolds. Macromolecular Materials and Engineering, 2017, 302, 1600512.	1.7	10
2881	Dissection of mechanical force in living cells by super-resolved traction force microscopy. Nature Protocols, 2017, 12, 783-796.	5.5	53
2882	Elastic modulus and hydraulic permeability of MDCK monolayers. Journal of Biomechanics, 2017, 53, 210-213.	0.9	26
2883	An Atelocollagen Coating for Efficient Local Gene Silencing by Using Small Interfering RNA. Molecular Therapy - Nucleic Acids, 2017, 6, 290-301.	2.3	9
2884	A Magneto-Microfluidic System for Investigating the Influence of an Externally Induced Force Gradient in a Collagen Type I ECM on HMVEC Sprouting. SLAS Technology, 2017, 22, 413-424.	1.0	7
2885	Osteogenic and tenogenic induction of hBMSCs by an integrated nanofibrous scaffold with chemical and structural mimicry of the bone–ligament connection. Journal of Materials Chemistry B, 2017, 5, 1015-1027.	2.9	23

#	Article	IF	Citations
2886	Metastatic breast cancer cells adhere strongly on varying stiffness substrates, initially without adjusting their morphology. Biomechanics and Modeling in Mechanobiology, 2017, 16, 961-970.	1.4	37
2887	The influence of substrate modulus on retinal pigment epithelial cells. Journal of Biomedical Materials Research - Part A, 2017, 105, 1260-1266.	2.1	33
2888	Hydrogels with Lotus Leaf Topography: Investigating Surface Properties and Cell Adhesion. Langmuir, 2017, 33, 485-493.	1.6	28
2889	Factors affecting the mechanical behavior of collagen hydrogels for skin tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 69, 85-97.	1.5	30
2890	PNIPAM grafted surfaces through ATRP and RAFT polymerization: Chemistry and bioadhesion. Colloids and Surfaces B: Biointerfaces, 2017, 151, 143-155.	2.5	57
2891	Matrix rigidity regulates microtubule network polarization in migration. Cytoskeleton, 2017, 74, 114-124.	1.0	32
2892	Biophysical regulation of mouse embryonic stem cell fate and genomic integrity by feeder derived matrices. Biomaterials, 2017, 119, 9-22.	5.7	21
2893	Fabrication of electrospun HPGL scaffolds via glycidyl methacrylate cross-linker: Morphology, mechanical and biological properties. Materials Science and Engineering C, 2017, 73, 72-79.	3.8	5
2894	Cell adhesion on glassy scaffolds with a different mechanical response. Journal of Materials Chemistry B, 2017, 5, 714-719.	2.9	5
2895	The Actin Cytoskeleton. Handbook of Experimental Pharmacology, 2017, , .	0.9	2
2896	Engineered extracellular microenvironment with a tunable mechanical property for controlling cell behavior and cardiomyogenic fate of cardiac stem cells. Acta Biomaterialia, 2017, 50, 234-248.	4.1	26
2897	Mineralization potential of cellulose-nanofibrils reinforced gelatine scaffolds for promoted calcium deposition by mesenchymal stem cells. Materials Science and Engineering C, 2017, 73, 478-489.	3.8	48
2898	Optical High Content Nanoscopy of Epigenetic Marks Decodes Phenotypic Divergence in Stem Cells. Scientific Reports, 2017, 7, 39406.	1.6	5
2899	Keloid progression: a stiffness gap hypothesis. International Wound Journal, 2017, 14, 764-771.	1.3	30
2900	Endothelial basement membrane laminin 511 is essential for shear stress response. EMBO Journal, 2017, 36, 183-201.	3.5	75
2901	Interaction of Droplets Separated by an Elastic Film. Langmuir, 2017, 33, 75-81.	1.6	12
2902	Tissue Engineering Using Plant-Derived Cellulose Nanofibrils (CNF) as Scaffold Material. ACS Symposium Series, 2017, , 171-189.	0.5	9
2903	Covalent Incorporation of Heparin Improves Chondrogenesis in Photocurable Gelatinâ€Methacryloyl Hydrogels. Macromolecular Bioscience, 2017, 17, 1700158.	2.1	63

#	Article	IF	CITATIONS
2904	Designing tougher elastomers with ionomers. Science, 2017, 358, 449-450.	6.0	23
2905	Horizontal alignment of $5\hat{a}\in^2$ -> $3\hat{a}\in^2$ intergene distance segment tropy with respect to the gene as the conserved basis for DNA transcription. Future Science OA, 2017, 3, FSO160.	0.9	5
2906	Morphomechanical and structural changes induced by ROCK inhibitor in breast cancer cells. Experimental Cell Research, 2017, 360, 303-309.	1,2	25
2907	Hydrogels that listen to cells: a review of cell-responsive strategies in biomaterial design for tissue regeneration. Materials Horizons, 2017, 4, 1020-1040.	6.4	144
2908	Polyacrylamide ferrogels with embedded maghemite nanoparticles for biomedical engineering. Results in Physics, 2017, 7, 3624-3633.	2.0	42
2909	Mechanical confinement regulates cartilage matrix formation by chondrocytes. Nature Materials, 2017, 16, 1243-1251.	13.3	348
2910	A perforated microhole-based microfluidic device for improving sprouting angiogenesis <i>iin vitro</i> . Biomicrofluidics, 2017, 11, 054111.	1.2	4
2911	Quantitative structural mechanobiology of platelet-driven blood clot contraction. Nature Communications, 2017, 8, 1274.	5 . 8	115
2912	A micro-mechanical device for in-situ stretching of single cells cultured on it. Journal of Micro-Bio Robotics, 2017, 13, 27-37.	2.1	6
2913	Functional and Biomimetic Materials for Engineering of the Three-Dimensional Cell Microenvironment. Chemical Reviews, 2017, 117, 12764-12850.	23.0	582
2914	Effects of dynamic matrix remodelling on <i>en masse</i> migration of fibroblasts on collagen matrices. Journal of the Royal Society Interface, 2017, 14, 20170287.	1.5	20
2915	Bifunctional Hydrogels Containing the Laminin Motif IKVAV PromoteÂNeurogenesis. Stem Cell Reports, 2017, 9, 1432-1440.	2.3	92
2916	Physical probing of cells. Journal Physics D: Applied Physics, 2017, 50, 463001.	1.3	9
2917	Cell volume change through water efflux impacts cell stiffness and stem cell fate. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8618-E8627.	3.3	362
2918	Hydrogel-based microchannels to measure confinement- and stiffness-sensitive Yes-associated-protein activity in epithelial clusters. MRS Communications, 2017, 7, 450-457.	0.8	8
2919	Nuclear envelope: a new frontier in plant mechanosensing?. Biophysical Reviews, 2017, 9, 389-403.	1.5	16
2920	Decorating a Blank Slate Protein Hydrogel: A General and Robust Approach for Functionalizing Protein Hydrogels. Biomacromolecules, 2017, 18, 3726-3732.	2.6	32
2921	Adaptation trajectories during adhesion and spreading affect future cell states. Scientific Reports, 2017, 7, 12308.	1.6	6

#	Article	IF	Citations
2922	The role of Vimentin in Regulating Cell Invasive Migration in Dense Cultures of Breast Carcinoma Cells. Nano Letters, 2017, 17, 6941-6948.	4.5	55
2923	Cell response of flexible PMMA-derivatives: supremacy of surface chemistry over substrate stiffness. Journal of Materials Science: Materials in Medicine, 2017, 28, 183.	1.7	O
2924	The role of declining adaptive homeostasis in ageing. Journal of Physiology, 2017, 595, 7275-7309.	1.3	136
2925	EFFECTS OF SUBSTRATE DEFORMABILITY ON CELL BEHAVIORS: ELASTIC MODULUS VERSUS THICKNESS. Journal of Mechanics in Medicine and Biology, 2017, 17, 1750088.	0.3	1
2926	Elastic Properties of Pore-Spanning Apical Cell Membranes Derived from MDCK II Cells. Biophysical Journal, 2017, 113, 1822-1830.	0.2	9
2927	Regulation of genome organization and gene expression by nuclear mechanotransduction. Nature Reviews Molecular Cell Biology, 2017, 18, 717-727.	16.1	301
2928	Probing blood cell mechanics of hematologic processes at the single micron level. Lab on A Chip, 2017, 17, 3804-3816.	3.1	6
2929	Hydrogel Modulus Affects Proliferation Rate and Pluripotency of Human Mesenchymal Stem Cells Grown in Three-Dimensional Culture. ACS Biomaterials Science and Engineering, 2017, 3, 3433-3446.	2.6	33
2930	Self-spreading of the wetting ridge during stick-slip on a viscoelastic surface. Soft Matter, 2017, 13, 8331-8336.	1.2	34
2931	Synthetic Biomaterials to Rival Nature's Complexity—a Path Forward with Combinatorics, Highâ€Throughput Discovery, and High ontent Analysis. Advanced Healthcare Materials, 2017, 6, 1700535.	3.9	3
2932	Mechanically dynamic PDMS substrates to investigate changing cell environments. Biomaterials, 2017, 145, 23-32.	5.7	68
2933	Screening Platform for Cell Contact Guidance Based on Inorganic Biomaterial Micro/nanotopographical Gradients. ACS Applied Materials & Samp; Interfaces, 2017, 9, 31433-31445.	4.0	67
2934	Mechanosensing in the immune response. Seminars in Cell and Developmental Biology, 2017, 71, 137-145.	2.3	32
2935	Epithelial Monolayers Coalesce on a Viscoelastic Substrate through Redistribution of Vinculin. Biophysical Journal, 2017, 113, 1585-1598.	0.2	19
2936	Reinforcing the inner phase of the filled hydrogels with CNTs alters drug release properties and human keratinocyte morphology: A study on the gelatin-tamarind gum filled hydrogels. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 538-548.	1.5	22
2937	Controlled in situ graft polymerization of DMAEMA onto cotton surface via SI-ARGET ATRP for low-adherent wound dressings. Cellulose, 2017, 24, 5211-5224.	2.4	33
2938	Nanoparticles and innate immunity: new perspectives on host defence. Seminars in Immunology, 2017, 34, 33-51.	2.7	244
2939	Soft Substrates Containing Hyaluronan Mimic the Effects of Increased Stiffness on Morphology, Motility, and Proliferation of Glioma Cells. Biomacromolecules, 2017, 18, 3040-3051.	2.6	70

#	Article	IF	CITATIONS
2940	The control of stem cell morphology and differentiation using three-dimensional printed scaffold architecture. MRS Communications, 2017, 7, 383-390.	0.8	13
2941	The Functional Response of Mesenchymal Stem Cells to Electronâ€Beam Patterned Elastomeric Surfaces Presenting Micrometer to Nanoscale Heterogeneous Rigidity. Advanced Materials, 2017, 29, 1702119.	11.1	23
2942	Patterning Bioactive Proteins or Peptides on Hydrogel Using Photochemistry for Biological Applications. Journal of Visualized Experiments, 2017, , .	0.2	1
2943	Three-dimensional nano-architected scaffolds with tunable stiffness for efficient bone tissue growth. Acta Biomaterialia, 2017, 63, 294-305.	4.1	65
2944	Biomimetic Stress Sensitive Hydrogel Controlled by DNA Nanoswitches. Biomacromolecules, 2017, 18, 3310-3317.	2.6	31
2945	High sensitivity HPLC method for determination of the allysine concentration in tissue by use of a naphthol derivative. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2017, 1064, 7-13.	1.2	14
2946	Quantitative analysis of mechanical force required for cell extrusion in zebrafish embryonic epithelia. Biology Open, 2017, 6, 1575-1580.	0.6	13
2947	Tailored Approaches in Drug Development and Diagnostics: From Molecular Design to Biological Model Systems. Advanced Healthcare Materials, 2017, 6, 1700258.	3.9	38
2948	Vertically Aligned Carbon Nanotubes as Platform for Biomimetically Inspired Mechanical Sensing, Bioactive Surfaces, and Electrical Cell Interfacing. Advanced Biology, 2017, 1, e1700101.	3.0	19
2949	Past matrix stiffness primes epithelial cells and regulates their future collective migration through a mechanical memory. Biomaterials, 2017, 146, 146-155.	5.7	118
2950	Investigation of neuronal pathfinding and construction of artificial neuronal networks on 3D-arranged porous fibrillar scaffolds with controlled geometry. Scientific Reports, 2017, 7, 7716.	1.6	17
2951	Advanced Biotechnologies Toward Engineering a Cell Home for Stem Cell Accommodation. Advanced Materials Technologies, 2017, 2, 1700022.	3.0	9
2952	Body Shape and Coloration of Silkworm Larvae Are Influenced by a Novel Cuticular Protein. Genetics, 2017, 207, 1053-1066.	1.2	43
2953	Coordinated increase of nuclear tension and lamin-A with matrix stiffness outcompetes lamin-B receptor that favors soft tissue phenotypes. Molecular Biology of the Cell, 2017, 28, 3333-3348.	0.9	94
2954	Substrate properties modulate cell membrane roughness by way of actin filaments. Scientific Reports, 2017, 7, 9068.	1.6	24
2955	Hydrogel substrate stress-relaxation regulates the spreading and proliferation of mouse myoblasts. Acta Biomaterialia, 2017, 62, 82-90.	4.1	120
2956	The effect of HPMC and MC as pore formers on the rheology of the implant microenvironment and the drug release in vitro. Carbohydrate Polymers, 2017, 177, 433-442.	5.1	12
2957	Dynamic Mechano-Regulation of Myoblast Cells on Supramolecular Hydrogels Cross-Linked by Reversible Host-Guest Interactions. Scientific Reports, 2017, 7, 7660.	1.6	46

#	ARTICLE	IF	CITATIONS
2958	Surface functionalisation of nanodiamonds for human neural stem cell adhesion and proliferation. Scientific Reports, 2017, 7, 7307.	1.6	48
2959	Bi-functional oxidized dextran–based hydrogel inducing microtumors: An in vitro three-dimensional lung tumor model for drug toxicity assays. Journal of Tissue Engineering, 2017, 8, 204173141771839.	2.3	13
2960	Endothelial Cell Culture Under Perfusion On A Polyester-Toner Microfluidic Device. Scientific Reports, 2017, 7, 10466.	1.6	20
2961	Chromosome Intermingling: Mechanical Hotspots for Genome Regulation. Trends in Cell Biology, 2017, 27, 810-819.	3.6	36
2962	Host–Guest Recognition-Assisted Electrochemical Release: Its Reusable Sensing Application Based on DNA Cross Configuration-Fueled Target Cycling and Strand Displacement Reaction Amplification. Analytical Chemistry, 2017, 89, 8266-8272.	3.2	34
2963	Matrix Stiffness Differentially Regulates Cellular Uptake Behavior of Nanoparticles in Two Breast Cancer Cell Lines. ACS Applied Materials & Samp; Interfaces, 2017, 9, 25915-25928.	4.0	26
2964	Physical limits to biomechanical sensing in disordered fibre networks. Nature Communications, 2017, 8, 16096.	5.8	47
2965	Substrate Curvature Restricts Spreading and Induces Differentiation of Human Mesenchymal Stem Cells. Biotechnology Journal, 2017, 12, 1700360.	1.8	19
2966	AFM-Nanomechanical Test: An Interdisciplinary Tool That Links the Understanding of Cartilage and Meniscus Biomechanics, Osteoarthritis Degeneration, and Tissue Engineering. ACS Biomaterials Science and Engineering, 2017, 3, 2033-2049.	2.6	42
2967	Lmna knockout mouse embryonic fibroblasts are less contractile than their wild-type counterparts. Integrative Biology (United Kingdom), 2017, 9, 709-721.	0.6	9
2968	Comprehensive Examination of Mechanical and Diffusional Effects on Cell Behavior Using a Decoupled 3D Hydrogel System. Macromolecular Bioscience, 2017, 17, 1700162.	2.1	20
2969	Amyloid Fibrils form Hybrid Colloidal Gels and Aerogels with Dispersed CaCO ₃ Nanoparticles. Advanced Functional Materials, 2017, 27, 1700897.	7.8	38
2970	Controlled Exposure of Bioactive Growth Factor in 3D Amyloid Hydrogel for Stem Cells Differentiation. Advanced Healthcare Materials, 2017, 6, 1700368.	3.9	32
2971	Gq-activated fibroblasts induce cardiomyocyte action potential prolongation and automaticity in a three-dimensional microtissue environment. American Journal of Physiology - Heart and Circulatory Physiology, 2017, 313, H810-H827.	1.5	25
2972	The ciliary membraneâ€associated proteome reveals actinâ€binding proteins as key components of cilia. EMBO Reports, 2017, 18, 1521-1535.	2.0	119
2973	Auricular Tissue Engineering Using Osteogenic Differentiation of Adipose Stem Cells with Small Intestine Submucosa. Plastic and Reconstructive Surgery, 2017, 140, 297-305.	0.7	11
2974	Cell Mechanosensors and the Possibilities of Using Magnetic Nanoparticles to Study Them and to Modify Cell Fate. Annals of Biomedical Engineering, 2017, 45, 2475-2486.	1.3	16
2975	Disordered Topography Mediates Filopodial Extension and Morphology of Cells on Stiff Materials. Advanced Functional Materials, 2017, 27, 1702689.	7.8	18

#	Article	IF	CITATIONS
2976	Rapid production of human liver scaffolds for functional tissue engineering by high shear stress oscillation-decellularization. Scientific Reports, 2017, 7, 5534.	1.6	79
2977	Standardized Nanomechanical Atomic Force Microscopy Procedure (SNAP) for Measuring Soft and Biological Samples. Scientific Reports, 2017, 7, 5117.	1.6	195
2978	Controlling Adult Stem Cell Behavior Using Nanodiamond-Reinforced Hydrogel: Implication in Bone Regeneration Therapy. Scientific Reports, 2017, 7, 6577.	1.6	73
2979	DDR2 controls the epithelial-mesenchymal-transition-related gene expression via c-Myb acetylation upon matrix stiffening. Scientific Reports, 2017, 7, 6847.	1.6	42
2980	Surface Topography Guides Morphology and Spatial Patterning of Induced Pluripotent Stem Cell Colonies. Stem Cell Reports, 2017, 9, 654-666.	2.3	120
2981	Engineering-derived approaches for iPSC preparation, expansion, differentiation and applications. Biofabrication, 2017, 9, 032001.	3.7	26
2982	Fabrication, chemical modification, and topographical patterning of reactive gels assembled from azlactoneâ€functionalized polymers and a diamine. Journal of Polymer Science Part A, 2017, 55, 3185-3194.	2.5	6
2983	Engineering Advanced Models of the Glioblastoma Microenvironment Using Biomaterials. Biology of Extracellular Matrix, 2017, , 75-89.	0.3	0
2984	A model for one-dimensional morphoelasticity and its application to fibroblast-populated collagen lattices. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1743-1763.	1.4	5
2985	Stiffness characterization of anisotropic trabecular meshwork. Journal of Biomechanics, 2017, 61, 144-150.	0.9	4
2986	Temporal Variation in Single-Cell Power-Law Rheology Spans the Ensemble Variation of Cell Population. Biophysical Journal, 2017, 113, 671-678.	0.2	24
2987	Hydrogels with Reversible Mechanics to Probe Dynamic Cell Microenvironments. Angewandte Chemie - International Edition, 2017, 56, 12132-12136.	7.2	220
2988	Rough Adhesive Hydrogels (RAd gels) for Underwater Adhesion. ACS Applied Materials & Samp; Interfaces, 2017, 9, 27409-27413.	4.0	36
2989	Flow induced adherens junction remodeling driven by cytoskeletal forces. Experimental Cell Research, 2017, 359, 327-336.	1.2	13
2990	In vitro evaluation of 3D bioprinted triâ€polymer network scaffolds for bone tissue regeneration. Journal of Biomedical Materials Research - Part A, 2017, 105, 3262-3272.	2.1	27
2992	Mutable polyelectrolyte tube arrays: mesoscale modeling and lateral force microscopy. Soft Matter, 2017, 13, 5543-5557.	1.2	3
2993	Analyzing Cell Surface Adhesion Remodeling in Response to Mechanical Tension Using Magnetic Beads. Journal of Visualized Experiments, 2017, , .	0.2	2
2994	Wip1 gene silencing enhances the chemosensitivity of human colon cancer cells. Oncology Letters, 2017, 14, 1875-1883.	0.8	7

#	Article	IF	Citations
2995	Hydrogels with Reversible Mechanics to Probe Dynamic Cell Microenvironments. Angewandte Chemie, 2017, 129, 12300-12304.	1.6	19
2996	Improving cartilage phenotype from differentiated pericytes in tunable peptide hydrogels. Scientific Reports, 2017, 7, 6895.	1.6	23
2997	Understanding biomaterial-tissue interface quality: combined <i>in vitro</i> evaluation. Science and Technology of Advanced Materials, 2017, 18, 550-562.	2.8	38
2998	Importance and regulation of adult stem cell migration. Journal of Cellular and Molecular Medicine, 2018, 22, 746-754.	1.6	78
2999	Tuning Alginate Bioink Stiffness and Composition for Controlled Growth Factor Delivery and to Spatially Direct MSC Fate within Bioprinted Tissues. Scientific Reports, 2017, 7, 17042.	1.6	267
3001	Understanding the extracellular forces that determine cell fate and maintenance. Development (Cambridge), 2017, 144, 4261-4270.	1.2	147
3002	Stiffness-dependent motility and Âproliferation uncoupled by deletion of CD44. Scientific Reports, 2017, 7, 16499.	1.6	48
3003	Designer biomaterials for mechanobiology. Nature Materials, 2017, 16, 1164-1168.	13.3	144
3004	Non-additive impacts of covalent cross-linking on the viscoelastic nanomechanics of ionic polyelectrolyte complexes. RSC Advances, 2017, 7, 53334-53345.	1.7	6
3005	Surface Mechanoengineering of a Zr-Based Bulk Metallic Glass via Ar-Nanobubble Doping To Probe Cell Sensitivity to Rigid Materials. ACS Applied Materials & Interfaces, 2017, 9, 43429-43437.	4.0	7
3006	Mechanosensitivity of Embryonic Neurites Promotes Their Directional Extension and Schwann Cells Progenitors Migration. Cellular Physiology and Biochemistry, 2017, 44, 1263-1270.	1.1	19
3007	Alginate/Chitosan Compact Polyelectrolyte Complexes: A Cell and Bacterial Repellent Material. Chemistry of Materials, 2017, 29, 10418-10425.	3.2	28
3008	An inâ€situ Dynamic Continuum of Supramolecular Phosphoglycopeptides Enables Formation of 3D Cell Spheroids. Angewandte Chemie - International Edition, 2017, 56, 16297-16301.	7.2	50
3009	Biomimetic Functionalized Surfaces and the Induction of Bone Formation. Tissue Engineering - Part A, 2017, 23, 1197-1209.	1.6	11
3010	Engineered ridge and micropillar array detectors to quantify the directional migration of fibroblasts. RSC Advances, 2017, 7, 51436-51443.	1.7	9
3011	Control of active turbulence through addressable soft interfaces. Journal of Physics Condensed Matter, 2017, 29, 504003.	0.7	3
3012	Simultaneous Measurements of Geometric and Viscoelastic Properties of Hydrogel Microbeads Using Continuousâ€Flow Microfluidics with Embedded Electrodes. Small, 2017, 13, 1702821.	5.2	19
3013	Measurement of cell traction force with a thin film PDMS cantilever. Biomedical Microdevices, 2017, 19, 97.	1.4	5

#	Article	IF	CITATIONS
3014	Microfibrous Scaffolds Enhance Endothelial Differentiation and Organization of Induced Pluripotent Stem Cells. Cellular and Molecular Bioengineering, 2017, 10, 417-432.	1.0	21
3015	Nanotopographic Regulation of Human Mesenchymal Stem Cell Osteogenesis. ACS Applied Materials & Lamp; Interfaces, 2017, 9, 41794-41806.	4.0	52
3016	Optimally designed collagen/polycaprolactone biocomposites supplemented with controlled release of HA/TCP/rhBMP-2 and HA/TCP/PRP for hard tissue regeneration. Materials Science and Engineering C, 2017, 78, 763-772.	3.8	23
3017	Inverse Opal Scaffolds and Their Biomedical Applications. Advanced Materials, 2017, 29, 1701115.	11.1	127
3018	Nuclear mechanotransduction: sensing the force from within. Current Opinion in Cell Biology, 2017, 46, 119-127.	2.6	63
3019	Poly(ethylene glycol)-Mediated Collagen Gel Mechanics Regulates Cellular Phenotypes in a Microchanneled Matrix. Biomacromolecules, 2017, 18, 2315-2323.	2.6	3
3020	Nanopatterned Adhesive, Stretchable Hydrogel to Control Ligand Spacing and Regulate Cell Spreading and Migration. ACS Nano, 2017, 11, 8282-8291.	7.3	86
3021	Influence of physico-mechanical properties of elastomeric material for different cell growth. Biomedical Materials (Bristol), 2017, 12, 065002.	1.7	25
3022	Thermal stability and rheological properties of the â€~non-stick' Caf1 biomaterial. Biomedical Materials (Bristol), 2017, 12, 051001.	1.7	16
3023	Actin-Based Adhesion Modules Mediate Cell Interactions with the Extracellular Matrix and Neighboring Cells. Cold Spring Harbor Perspectives in Biology, 2017, 9, a023234.	2.3	126
3024	Iontophoresis-assisted accelerated riboflavin/ultraviolet A scleral cross-linking: A potential treatment for pathologic myopia. Experimental Eye Research, 2017, 162, 37-47.	1.2	22
3025	How cells channel their stress: Interplay between Piezo1 and the cytoskeleton. Seminars in Cell and Developmental Biology, 2017, 71, 3-12.	2.3	180
3026	Morphologies and phenotypes in Bacillus subtilis biofilms. Journal of Microbiology, 2017, 55, 619-627.	1.3	8
3027	Investigating the effect of cell substrate on cancer cell stiffness by optical tweezers. Journal of Biomechanics, 2017, 60, 266-269.	0.9	35
3028	Super-resolved Traction Force Microscopy over whole cells. , 2017, , .		0
3029	Connecting Protein Conformation and Dynamics with Ligand–Receptor Binding Using Three-Color Förster Resonance Energy Transfer Tracking. Journal of the American Chemical Society, 2017, 139, 9937-9948.	6.6	14
3030	An integrated enhancement and reconstruction strategy for the quantitative extraction of actin stress fibers from fluorescence micrographs. BMC Bioinformatics, 2017, 18, 268.	1.2	17
3031	2.4 Self-Assembling Biomaterials â^†. , 2017, , 67-89.		2

#	Article	IF	CITATIONS
3032	Nacre Topography Produces Higher Crystallinity in Bone than Chemically Induced Osteogenesis. ACS Nano, 2017, 11, 6717-6727.	7.3	40
3033	Skeletal Dysplasia Mutations Effect on Human Filamins' Structure and Mechanosensing. Scientific Reports, 2017, 7, 4218.	1.6	13
3034	A 3D Culture Model to Study How Fluid Pressure and Flow Affect the Behavior of Aggregates of Epithelial Cells. Methods in Molecular Biology, 2017, 1501, 245-257.	0.4	10
3036	Active stiffening of F-actin network dominated by structural transition of actin filaments into bundles. Composites Part B: Engineering, 2017, 116, 377-381.	5.9	8
3037	Disruption of myoblast alignment by highly motile rhabdomyosarcoma cell in tissue structure. Journal of Bioscience and Bioengineering, 2017, 123, 259-264.	1.1	5
3038	Local calcium signalling is mediated by mechanosensitive ion channels in mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2017, 482, 563-568.	1.0	22
3039	Stiffness of polyelectrolyte multilayer film influences endothelial function of endothelial cell monolayer. Colloids and Surfaces B: Biointerfaces, 2017, 149, 379-387.	2.5	26
3040	Enhanced adhesion and proliferation of human umbilical vein endothelial cells on conductive PANI-PCL fiber scaffold by electrical stimulation. Materials Science and Engineering C, 2017, 72, 106-112.	3.8	78
3041	YAP-dependent mechanotransduction is required for proliferation and migration on native-like substrate topography. Biomaterials, 2017, 115, 155-166.	5.7	55
3042	Detecting Swelling States of Red Blood Cells by "Cell–Fluid Coupling Spectroscopy― Advanced Science, 2017, 4, 1600238.	5.6	4
3043	Gelatin-based extracellular matrix cryogels for cartilage tissue engineering. Journal of Industrial and Engineering Chemistry, 2017, 45, 421-429.	2.9	57
3044	Cell delivery for regenerative medicine by using bioresorbable polymers. , 2017, , 365-389.		1
3045	Electrically conductive graphene/polyacrylamide hydrogels produced by mild chemical reduction for enhanced myoblast growth and differentiation. Acta Biomaterialia, 2017, 48, 100-109.	4.1	142
3046	Cell infiltrative hydrogel fibrous scaffolds for accelerated wound healing. Acta Biomaterialia, 2017, 49, 66-77.	4.1	244
3047	Cementogenesis and osteogenesis in periodontal tissue regeneration by recombinant human transforming growth factorâ $<$ i>i $<$ i $<$ csub $>$ 3 $<$ /sub $>$: a pilot study $<$ i $>$ in Papio ursinus $<$ /i $>i>$. Journal of Clinical Periodontology, 2017, 44, 83-95.	2.3	15
3048	Trabecular meshwork stiffness in glaucoma. Experimental Eye Research, 2017, 158, 3-12.	1.2	120
3049	Vascular laminins in physiology and pathology. Matrix Biology, 2017, 57-58, 140-148.	1.5	47
3050	Paper-based cell culture platform and its emerging biomedical applications. Materials Today, 2017, 20, 32-44.	8.3	105

#	Article	IF	Citations
3051	Synthetic niche substrates engineered via two-photon laser polymerization for the expansion of human mesenchymal stromal cells. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2836-2845.	1.3	32
3052	Fibrin structural and diffusional analysis suggests that fibers are permeable to solute transport. Acta Biomaterialia, 2017, 47, 25-39.	4.1	23
3053	Cytoskeletal Perturbing Drugs and Their Effect on Cell Elasticity. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 169-177.	0.3	2
3054	Mechanical properties of PNIPAM based hydrogels: A review. Materials Science and Engineering C, 2017, 70, 842-855.	3.8	425
3055	Combining mechanical foaming and thermally induced phase separation to generate chitosan scaffolds for soft tissue engineering. Journal of Biomaterials Science, Polymer Edition, 2017, 28, 207-226.	1.9	33
3056	Tuning acoustic and mechanical properties of materials for ultrasound phantoms and smart substrates for cell cultures. Acta Biomaterialia, 2017, 49, 368-378.	4.1	92
3057	Leveraging Physiology for Precision Drug Delivery. Physiological Reviews, 2017, 97, 189-225.	13.1	125
3058	Functionalized self-assembly polypeptide hydrogel scaffold applied in modulation of neural progenitor cell behavior. Journal of Bioactive and Compatible Polymers, 2017, 32, 45-60.	0.8	11
3059	Gradient-Based Optimization for Poroelastic and Viscoelastic MR Elastography. IEEE Transactions on Medical Imaging, 2017, 36, 236-250.	5. 4	27
3060	Comparison of viscoelastic properties of cancer and normal thyroid cells on different stiffness substrates. European Biophysics Journal, 2017, 46, 309-324.	1.2	85
3061	A Bio-chemo-mechanical Model for Cell Contractility, Adhesion, Signaling, and Stress-Fiber Remodeling. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2017, , 53-81.	0.7	1
3062	Matrix and cellular mechanical properties are the driving factors for facilitating human cancer cell motility into 3D engineered matrices. Convergent Science Physical Oncology, 2017, 3, 044003.	2.6	53
3063	Characterization of deproteinized dentin for its use in bone tissue engineering. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, S73-S74.	0.9	2
3064	3D printing of biocomposites for osteochondral tissue engineering. , 2017, , 261-302.		18
3065	Mechanical response of transient telechelic networks with many-part stickers. Journal of Chemical Physics, 2017, 147, 194902.	1.2	7
3066	An inâ€situ Dynamic Continuum of Supramolecular Phosphoglycopeptides Enables Formation of 3D Cell Spheroids. Angewandte Chemie, 2017, 129, 16515-16519.	1.6	11
3067	Designing the stem cell microenvironment for guided connective tissue regeneration. Annals of the New York Academy of Sciences, 2017, 1410, 3-25.	1.8	20
3068	5.4 Biomaterials and the Microvasculature \hat{a} , 2017, 67-87.		0

#	ARTICLE	IF	CITATIONS
3069	Matrix stiffness enhances VEGFR-2 internalization, signaling, and proliferation in endothelial cells. Convergent Science Physical Oncology, 2017, 3, 044001.	2.6	55
3070	Mechanical Properties and Biocompatibility of in Situ Enzymatically Cross-Linked Gelatin Hydrogels. International Journal of Artificial Organs, 2017, 40, 159-168.	0.7	21
3071	Myoblast Adhesion, Proliferation and Differentiation on Human Elastin-Like Polypeptide (HELP) Hydrogels. Journal of Applied Biomaterials and Functional Materials, 2017, 15, 43-53.	0.7	14
3072	The effect of nanostructured surfaces on stem cell fate. , 2017, , 567-589.		5
3073	Chimeric biomolecules. , 2017, , 285-324.		2
3074	Label-free cell-substrate adhesion imaging on plasmonic nanocup arrays. Biomedical Optics Express, 2017, 8, 1139.	1.5	5
3075	Developing targeted biocomposites in tissue engineering and regenerative medicine., 2017,, 569-587.		0
3076	Vascular Mechanobiology: Towards Control of In Situ Regeneration. Cells, 2017, 6, 19.	1.8	42
3077	5.17 Three-Dimensional Bioengineered Cancer Models. , 2017, , 303-328.		2
3078	Regulation of Mitochondrial Structure and Dynamics by the Cytoskeleton and Mechanical Factors. International Journal of Molecular Sciences, 2017, 18, 1812.	1.8	132
3079	Scaling-Up Techniques for the Nanofabrication of Cell Culture Substrates via Two-Photon Polymerization for Industrial-Scale Expansion of Stem Cells. Materials, 2017, 10, 66.	1.3	40
3080	Preparation of Chitosan/Polyâ€Î³â€Clutamic Acid Polyelectrolyte Multilayers on Biomedical Metals for Local Antibiotic Delivery. Metals, 2017, 7, 418.	1.0	5
3081	Multifaceted Biomedical Applications of Functional Graphene Nanomaterials to Coated Substrates, Patterned Arrays and Hybrid Scaffolds. Nanomaterials, 2017, 7, 369.	1.9	22
3082	Characterization of Cell Scaffolds by Atomic Force Microscopy. Polymers, 2017, 9, 383.	2.0	42
3083	TGF- \hat{l}^21 Pretreatment Improves the Function of Mesenchymal Stem Cells in the Wound Bed. Frontiers in Cell and Developmental Biology, 2017, 5, 28.	1.8	35
3084	Progress in Integrative Biomaterial Systems to Approach Three-Dimensional Cell Mechanotransduction. Bioengineering, 2017, 4, 72.	1.6	12
3085	Dual-Component Gelatinous Peptide/Reactive Oligomer Formulations as Conduit Material and Luminal Filler for Peripheral Nerve Regeneration. International Journal of Molecular Sciences, 2017, 18, 1104.	1.8	16
3086	Different TCR-induced T lymphocyte responses are potentiated by stiffness with variable sensitivity. ELife, 2017, 6, .	2.8	150

#	Article	IF	CITATIONS
3087	Implications of Schwann Cells Biomechanics and Mechanosensitivity for Peripheral Nervous System Physiology and Pathophysiology. Frontiers in Molecular Neuroscience, 2017, 10, 345.	1.4	20
3088	Substrate stiffness governs the initiation of B cell activation by the concerted signaling of PKC \hat{I}^2 and focal adhesion kinase. ELife, 2017, 6, .	2.8	40
3089	2.2 Protein-Engineered Biomaterials: Synthesis and Characterization \hat{a}^{-} , , 2017, , 18-40.		0
3090	A bulky glycocalyx fosters metastasis formation by promoting G1 cell cycle progression. ELife, 2017, 6, .	2.8	71
3091	Paxillin facilitates timely neurite initiation on soft-substrate environments by interacting with the endocytic machinery. ELife, 2017, 6, .	2.8	27
3092	Effects of Tumor Necrosis Factor- $\langle i \rangle \hat{1} \pm \langle i \rangle$ on Morphology and Mechanical Properties of HCT116 Human Colon Cancer Cells Investigated by Atomic Force Microscopy. Scanning, 2017, 2017, 1-7.	0.7	12
3093	Mechanical Stress Regulates Osteogenesis and Adipogenesis of Rat Mesenchymal Stem Cells through PI3K/Akt/GSK- $3<$ i $>$ Î $^2<$ Ii $>$ (ci $>$ Î $^2<$ Ii)-Catenin Signaling Pathway. BioMed Research International, 2017, 2017, 1-10.	0.9	64
3094	Cardiac Progenitor Cells and the Interplay with Their Microenvironment. Stem Cells International, 2017, 2017, 1-20.	1.2	39
3095	Rat Liver Enzyme Release Depends on Blood Flow-Bearing Physical Forces Acting in Endothelium Glycocalyx rather than on Liver Damage. Oxidative Medicine and Cellular Longevity, 2017, 2017, 1-15.	1.9	9
3096	7.34 Retina Reconstruction., 2017,, 668-685.		0
3097	Investigation of surface topography and stiffness on adhesion and neurites extension of PC12 cells on crosslinked silica aerogel substrates. PLoS ONE, 2017, 12, e0185978.	1.1	24
3098	Self-Assembling RADA16-I Peptide Hydrogel Scaffold Loaded with Tamoxifen for Breast Reconstruction. BioMed Research International, 2017, 2017, 1-10.	0.9	13
3099	3D printed in vitro disease models. , 2017, , 115-138.		2
3100	5.5 Effect of Substrate Modulus on Cell Function and Differentiation. , 2017, , 88-101.		2
3101	2.9 Materials as Artificial Stem Cell Microenvironments $\hat{a}^{\sim}\text{t.}$, 2017, , 179-201.		0
3102	Engineering Niches for Bone Tissue Regeneration. , 2017, , 499-516.		1
3103	Center or periphery? Modeling the effects of focal adhesion placement during cell spreading. PLoS ONE, 2017, 12, e0171430.	1.1	9
3104	Vinculin association with actin cytoskeleton is necessary for stiffness-dependent regulation of vinculin behavior. PLoS ONE, 2017, 12, e0175324.	1.1	29

#	ARTICLE	IF	CITATIONS
3105	Endermologie New Aproach in the Medicine Treatment. Technological Engineering, 2017, 14, 27-30.	0.3	2
3106	Corneal epithelial cells exposed to shear stress show altered cytoskeleton and migratory behaviour. PLoS ONE, 2017, 12, e0178981.	1.1	45
3107	Engineering Approaches for Creating Skeletal Muscle. Frontiers in Nanobiomedical Research, 2017, , 1-27.	0.1	2
3108	Full L1-regularized Traction Force Microscopy over whole cells. BMC Bioinformatics, 2017, 18, 365.	1.2	10
3109	Prerequisites for Mesenchymal Stem Cell Transplantation in Spinal Cord Injury. , 2017, , .		1
3110	Soft tissue application of biocomposites. , 2017, , 59-82.		1
3111	Surface Patterning of Gold Nanoparticles on PEG-Based Hydrogels to Control Cell Adhesion. Polymers, 2017, 9, 154.	2.0	15
3112	Bio-Instructive Cues in Scaffolds for Musculoskeletal Tissue Engineering and Regenerative Medicine. , 2017, , 3-35.		6
3113	Shape Memory Polymers Containing Higher Acrylate Content Display Increased Endothelial Cell Attachment. Polymers, 2017, 9, 572.	2.0	7
3114	Cell therapies for tendons and ligament repair. , 2017, , 251-276.		0
3115	Tailoring the mechanical properties of gelatin methacryloyl hydrogels through manipulation of the photocrosslinking conditions. Soft Matter, 2018, 14, 2142-2151.	1.2	123
3116	Mechanosensitive adhesion complexes in epithelial architecture and cancer onset. Current Opinion in Cell Biology, 2018, 50, 42-49.	2.6	43
3117	Mechanotransduction in tumor progression: The dark side of the force. Journal of Cell Biology, 2018, 217, 1571-1587.	2.3	225
3118	Actomyosin-Mediated Tension Orchestrates Uncoupled Respiration in Adipose Tissues. Cell Metabolism, 2018, 27, 602-615.e4.	7.2	70
3119	Characterizing viscoelastic mechanical properties of highly compliant polymers and biological tissues using impact indentation. Acta Biomaterialia, 2018, 71, 388-397.	4.1	47
3120	Masquelet technique: The effect of altering implant material and topography on membrane matrix composition, mechanical and barrier properties in a rat defect model. Journal of Biomechanics, 2018, 72, 53-62.	0.9	26
3121	Comparative regenerative mechanisms across different mammalian tissues. Npj Regenerative Medicine, 2018, 3, 6.	2.5	157
3122	Evaluation of cellular adhesion and organization in different microporous polymeric scaffolds. Biotechnology Progress, 2018, 34, 505-514.	1.3	8

#	Article	IF	CITATIONS
3123	Coupling mechanical tension and GTPase signaling to generate cell and tissue dynamics. Physical Biology, 2018, 15, 046004.	0.8	42
3124	Needle-shaped ultrathin piezoelectric microsystem for guided tissue targeting via mechanical sensing. Nature Biomedical Engineering, 2018, 2, 165-172.	11.6	108
3125	Investigation of bismuth doped bioglass/graphene oxide nanocomposites for bone tissue engineering. Ceramics International, 2018, 44, 3791-3799.	2.3	33
3126	Substrate Stiffness Coupling TGF- \hat{l}^21 Modulates Migration and Traction Force of MDA-MB-231 Human Breast Cancer Cells in Vitro. ACS Biomaterials Science and Engineering, 2018, 4, 1337-1345.	2.6	22
3127	Glass transition in temperature-responsive poly(butyl methacrylate) grafted polymer brushes. Impact of thickness and temperature on wetting, morphology, and cell growth. Journal of Materials Chemistry B, 2018, 6, 1613-1621.	2.9	19
3128	Advanced Materials through Assembly of Nanocelluloses. Advanced Materials, 2018, 30, e1703779.	11.1	493
3129	Modulating cell response on cellulose surfaces; tunable attachment and scaffold mechanics. Cellulose, 2018, 25, 925-940.	2.4	48
3130	Programmable hydrogels. Biomaterials, 2018, 178, 663-680.	5.7	73
3131	Complex mechanics of the heterogeneous extracellular matrix in cancer. Extreme Mechanics Letters, 2018, 21, 25-34.	2.0	158
3132	Hypothermia-Modulating Matrix Elasticity of Injured Brain Promoted Neural Lineage Specification of Mesenchymal Stem Cells. Neuroscience, 2018, 377, 1-11.	1.1	7
3133	Graphene-Augmented Nanofiber Scaffolds Trigger Gene Expression Switching of Four Cancer Cell Types. ACS Biomaterials Science and Engineering, 2018, 4, 1622-1629.	2.6	11
3134	Biomimetic gels with chemical and physical interpenetrating networks. Polymer International, 2018, 67, 1330-1334.	1.6	11
3135	Nonlinear Optical Methods for Characterization of Molecular Structure and Surface Chemistry. Topics in Catalysis, 2018, 61, 1101-1124.	1.3	16
3136	Hybrid graphene–ceramic nanofibre network for spontaneous neural differentiation of stem cells. Interface Focus, 2018, 8, 20170037.	1.5	11
3137	Large-scale fabrication of free-standing and sub- $\hat{l}\frac{1}{4}$ m PDMS through-hole membranes. Nanoscale, 2018, 10, 7711-7718.	2.8	39
3138	Degradation rate affords a dynamic cue to regulate stem cells beyond varied matrix stiffness. Biomaterials, 2018, 178, 467-480.	5.7	118
3139	Modeling and predictions of biphasic mechanosensitive cell migration altered by cell-intrinsic properties and matrix confinement. Physical Biology, 2018, 15, 065001.	0.8	9
3140	Coacervationâ€Mediated Combinatorial Synthesis of Biomatrices for Stem Cell Culture and Directed Differentiation. Advanced Materials, 2018, 30, e1706100.	11.1	18

#	Article	IF	CITATIONS
3141	Three dimensional extrusion printing induces polymer molecule alignment and cell organization within engineered cartilage. Journal of Biomedical Materials Research - Part A, 2018, 106, 2190-2199.	2.1	27
3142	Biologically Relevant Laminins in Regenerative Medicine. Pancreatic Islet Biology, 2018, , 59-82.	0.1	0
3143	Probing nano-scale viscoelastic response in air and in liquid with dynamic atomic force microscopy. Soft Matter, 2018, 14, 3998-4006.	1.2	7
3144	3D functional scaffolds for skin tissue engineering. , 2018, , 345-365.		36
3145	Cell contraction induces long-ranged stress stiffening in the extracellular matrix. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4075-4080.	3.3	231
3146	Mechanical Considerations for Electrospun Nanofibers in Tendon and Ligament Repair. Advanced Healthcare Materials, 2018, 7, e1701277.	3.9	57
3147	3D bone models to study the complex physical and cellular interactions between tumor and the bone microenvironment. Journal of Cellular Biochemistry, 2018, 119, 5053-5059.	1.2	17
3148	Tuning of elasticity and surface properties of hydrogel cell culture substrates by simple chemical approach. Journal of Colloid and Interface Science, 2018, 524, 102-113.	5.0	26
3149	The Theory of Tensegrity and Spatial Organization of Living Matter. Russian Journal of Developmental Biology, 2018, 49, 87-100.	0.1	4
3151	Cellular behaviors on polymeric scaffolds with 2D-patterned mechanical properties. Polymer Journal, 2018, 50, 737-743.	1.3	3
3152	Intracellular Pressure: A Driver of Cell Morphology and Movement. International Review of Cell and Molecular Biology, 2018, 337, 185-211.	1.6	15
3153	Adjoint-based error estimation and mesh adaptation for stabilized finite deformation elasticity. Computer Methods in Applied Mechanics and Engineering, 2018, 337, 263-280.	3.4	8
3154	Opto-acoustic microscopy reveals adhesion mechanics of single cells. Review of Scientific Instruments, 2018, 89, 014901.	0.6	19
3155	Electrospun Polythiophene Phenylenes for Tissue Engineering. Biomacromolecules, 2018, 19, 1456-1468.	2.6	37
3156	Development of hybrid scaffold with biomimetic 3D architecture for bone regeneration. Nanomedicine: Nanotechnology, Biology, and Medicine, 2018, 14, 1325-1336.	1.7	41
3157	Initial Cell Adhesion onto a Phospholipid Polymer Brush Surface Modified with a Terminal Cell Adhesion Peptide. ACS Applied Materials & Samp; Interfaces, 2018, 10, 15250-15257.	4.0	24
3158	Mechanotransduction via the LINC complex regulates DNA replication in myonuclei. Journal of Cell Biology, 2018, 217, 2005-2018.	2.3	62
3159	Extracellular Matrix for Tissue Engineering and Biomaterials. Pancreatic Islet Biology, $2018, \ldots$	0.1	2

#	Article	IF	CITATIONS
3160	Harnessing Cell Dynamic Responses on Magnetoelectric Nanocomposite Films to Promote Osteogenic Differentiation. ACS Applied Materials & Samp; Interfaces, 2018, 10, 7841-7851.	4.0	62
3161	Holographic Traction Force Microscopy. Scientific Reports, 2018, 8, 3038.	1.6	13
3162	Imaging mechanotransduction: Seeing forces from molecules to cells. Current Opinion in Biomedical Engineering, 2018, 5, 58-65.	1.8	7
3163	The Mechanical Contribution of Vimentin to Cellular Stress Generation. Journal of Biomechanical Engineering, 2018, 140, .	0.6	7
3164	Silk fibroin/collagen protein hybrid cell-encapsulating hydrogels with tunable gelation and improved physical and biological properties. Acta Biomaterialia, 2018, 69, 218-233.	4.1	91
3165	Enhancement of bio-stability and mechanical properties of hyaluronic acid hydrogels by tannic acid treatment. Carbohydrate Polymers, 2018, 186, 290-298.	5.1	115
3166	Mechanobiology of the cell–matrix interplay: Catching a glimpse of complexity via minimalistic models. Extreme Mechanics Letters, 2018, 20, 59-64.	2.0	14
3167	Mechanisms of Plastic Deformation in Collagen Networks Induced by Cellular Forces. Biophysical Journal, 2018, 114, 450-461.	0.2	108
3168	Influence of ionic crosslinkers (Ca ²⁺ /Ba ²⁺ /Zn ²⁺) on the mechanical and biological properties of 3D Bioplotted Hydrogel Scaffolds. Journal of Biomaterials Science, Polymer Edition, 2018, 29, 1126-1154.	1.9	72
3169	Three-dimensional Tissue Engineered Aligned Astrocyte Networks to Recapitulate Developmental Mechanisms and Facilitate Nervous System Regeneration. Journal of Visualized Experiments, 2018, , .	0.2	12
3170	Elastomeric sensor surfaces for high-throughput single-cell force cytometry. Nature Biomedical Engineering, 2018, 2, 124-137.	11.6	47
3171	Assessment of the ability of poly(<scp>l</scp> â€lysine)â€"poly(ethylene glycol) (PLLâ€"PEG) hydrogels to support the growth of U87â€MG and F98 glioma tumor cells. Journal of Applied Polymer Science, 2018, 135, 46287.	1.3	9
3172	Photoresponsive Hydrogels with Photoswitchable Mechanical Properties Allow Time-Resolved Analysis of Cellular Responses to Matrix Stiffening. ACS Applied Materials & Diterfaces, 2018, 10, 7765-7776.	4.0	93
3173	Advancing the neurocomputer. Neurocomputing, 2018, 284, 36-51.	3.5	3
3174	Vertical Light Sheet Enhanced Side-View Imaging for AFM Cell Mechanics Studies. Scientific Reports, 2018, 8, 1504.	1.6	34
3175	Placental basement membrane proteins are required for effective cytotrophoblast invasion in a threeâ€dimensional bioprinted placenta model. Journal of Biomedical Materials Research - Part A, 2018, 106, 1476-1487.	2.1	42
3176	Graphene Oxide Hybridized nHAC/PLGA Scaffolds Facilitate the Proliferation of MC3T3-E1 Cells. Nanoscale Research Letters, 2018, 13, 15.	3.1	52
3177	Heterogeneous adhesion of cells on polymer surfaces with underlying amorphous/crystalline phases. Journal of Materials Chemistry B, 2018, 6, 903-907.	2.9	6

#	Article	IF	CITATIONS
3178	Homologous Sodium Alginate/Chitosan-Based Scaffolds, but Contrasting Effect on Stem Cell Shape and Osteogenesis. ACS Applied Materials & Samp; Interfaces, 2018, 10, 6930-6941.	4.0	29
3179	Automated fabrication of photopatterned gelatin hydrogels for organ-on-chips applications. Biofabrication, 2018, 10, 025004.	3.7	48
3180	Engineered Phage Matrix Stiffness-Modulating Osteogenic Differentiation. ACS Applied Materials & Lamp; Interfaces, 2018, 10, 4349-4358.	4.0	20
3181	Piezo2 channel regulates RhoA and actin cytoskeleton to promote cell mechanobiological responses. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1925-1930.	3.3	158
3182	Eigenstrain as a mechanical set-point of cells. Biomechanics and Modeling in Mechanobiology, 2018, 17, 951-959.	1.4	9
3183	Mechanically Reinforced Extracellular Matrix Scaffold for Application of Cartilage Tissue Engineering. Tissue Engineering and Regenerative Medicine, 2018, 15, 287-299.	1.6	24
3184	Controlling Cellular Volume via Mechanical and Physical Properties of Substrate. Biophysical Journal, 2018, 114, 675-687.	0.2	65
3185	Biofunctionalized aligned microgels provide 3D cell guidance to mimic complex tissue matrices. Biomaterials, 2018, 163, 128-141.	5.7	86
3186	Sprouting angiogenesis induces significant mechanical heterogeneities and ECM stiffening across length scales in fibrin hydrogels. Biomaterials, 2018, 162, 99-108.	5.7	49
3187	Orientations of Cells on Compliant Substrates under Biaxial Stretches: A Theoretical Study. Biophysical Journal, 2018, 114, 701-710.	0.2	35
3188	Engineering 3D Hydrogels for Personalized In Vitro Human Tissue Models. Advanced Healthcare Materials, 2018, 7, 1701165.	3.9	96
3189	Soy Protein/Cellulose Nanofiber Scaffolds Mimicking Skin Extracellular Matrix for Enhanced Wound Healing. Advanced Healthcare Materials, 2018, 7, e1701175.	3.9	142
3190	Hierarchical Design of Tissue Regenerative Constructs. Advanced Healthcare Materials, 2018, 7, e1701067.	3.9	68
3191	FLECS Technology for High-Throughput Single-Cell Force Biology and Screening. Assay and Drug Development Technologies, 2018, 16, 7-11.	0.6	3
3192	Recent Progress in Developing Injectable Matrices for Enhancing Cell Delivery and Tissue Regeneration. Advanced Healthcare Materials, 2018, 7, e1701065.	3.9	59
3193	Evaluation and improvement of organic semiconductors' biocompatibility towards fibroblasts and cardiomyocytes. Sensors and Actuators B: Chemical, 2018, 260, 418-425.	4.0	19
3194	Mechanical Evaluation of Tracheal Grafts on Different Scales. Artificial Organs, 2018, 42, 476-483.	1.0	7
3195	Highly stretchable HA/SA hydrogels for tissue engineering. Journal of Biomaterials Science, Polymer Edition, 2018, 29, 543-561.	1.9	18

#	ARTICLE	IF	CITATIONS
3196	Association between biomechanical alterations and migratory ability of semaphorin-3A-treated thymocytes. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 816-824.	1.1	9
3197	Peptide-based coatings for flexible implantable neural interfaces. Scientific Reports, 2018, 8, 502.	1.6	24
3198	Biomechanical measurement and analysis of colchicine-induced effects on cells by nanoindentation using an atomic force microscope. Journal of Biomechanics, 2018, 67, 84-90.	0.9	13
3199	Nanoparticle–Cell Interaction: A Cell Mechanics Perspective. Advanced Materials, 2018, 30, e1704463.	11.1	94
3200	Targeting extracellular matrix stiffness to attenuate disease: From molecular mechanisms to clinical trials. Science Translational Medicine, 2018, 10, .	5.8	390
3201	Endothelial–mesenchymal transition in atherosclerosis. Cardiovascular Research, 2018, 114, 565-577.	1.8	239
3202	Tunable mechanical properties of stent-like microscaffolds for studying cancer cell recognition of stiffness gradients. Microelectronic Engineering, 2018, 190, 11-18.	1.1	20
3203	Substrate stiffnessâ€dependent exacerbation of endothelial permeability and inflammation: mechanisms and potential implications in ALI and PH (2017 Grover Conference Series). Pulmonary Circulation, 2018, 8, 1-9.	0.8	28
3204	Why the impact of mechanical stimuli on stem cells remains a challenge. Cellular and Molecular Life Sciences, 2018, 75, 3297-3312.	2.4	35
3205	3D bioprinting for cell culture and tissue fabrication. Bio-Design and Manufacturing, 2018, 1, 45-61.	3.9	56
3206	Functional brain-specific microvessels from iPSC-derived human brain microvascular endothelial cells: the role of matrix composition on monolayer formation. Fluids and Barriers of the CNS, 2018, 15, 7.	2.4	83
3207	About Chemical Strategies to Fabricate Cellâ€Instructive Biointerfaces with Static and Dynamic Complexity. Advanced Healthcare Materials, 2018, 7, e1701192.	3.9	25
3208	Functionality of decellularized matrix in cartilage regeneration: A comparison of tissue versus cell sources. Acta Biomaterialia, 2018, 74, 56-73.	4.1	65
3209	Computational Modeling of Cell Adhesion Under the Effect of Substrate Stiffness. IEEE Nanotechnology Magazine, 2018, 17, 402-406.	1.1	6
3210	Cyclic uniaxial compression of human stem cells seeded on a bone biomimetic nanocomposite decreases anti-osteogenic commitment evoked by shear stress. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 83, 84-93.	1.5	10
3211	A history of exploring cancer in context. Nature Reviews Cancer, 2018, 18, 359-376.	12.8	361
3212	Native collagen hydrogel nanofibres with anisotropic structure using core-shell electrospinning. Scientific Reports, 2018, 8, 6248.	1.6	78
3213	Kidney decellularized extracellular matrix hydrogels: Rheological characterization and human glomerular endothelial cell response to encapsulation. Journal of Biomedical Materials Research - Part A, 2018, 106, 2448-2462.	2.1	44

#	Article	IF	CITATIONS
3214	A Microfluidic Hydrogel Chip with Orthogonal Dual Gradients of Matrix Stiffness and Oxygen for Cytotoxicity Test. Biochip Journal, 2018, 12, 93-101.	2.5	43
3216	3D-printing porosity: A new approach to creating elevated porosity materials and structures. Acta Biomaterialia, 2018, 72, 94-109.	4.1	79
3217	High-strength double network hydrogels as potential materials for artificial 3D scaffold of cell migration in vitro. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 549, 50-57.	2.3	12
3218	Characterization of the mechanical properties of cancer cells in 3D matrices in response to collagen concentration and cytoskeletal inhibitors. Integrative Biology (United Kingdom), 2018, 10, 232-241.	0.6	29
3219	Mechanosensitivity of Cancer Cells in Contact with Soft Substrates Using AFM. Biophysical Journal, 2018, 114, 1165-1175.	0.2	63
3220	Beyond Tissue Stiffness and Bioadhesivity: Advanced Biomaterials to Model Tumor Microenvironments and Drug Resistance. Trends in Cancer, 2018, 4, 281-291.	3.8	36
3221	Engineering the Cell Microenvironment Using Novel Photoresponsive Hydrogels. ACS Applied Materials & Samp; Interfaces, 2018, 10, 12374-12389.	4.0	48
3222	Cilostazol-Loaded Poly(ε-Caprolactone) Electrospun Drug Delivery System for Cardiovascular Applications. Pharmaceutical Research, 2018, 35, 32.	1.7	56
3223	Cell proliferation influenced by matrix compliance of gelatin grafted poly(d,l-Lactide) three dimensional scaffolds. Colloids and Surfaces B: Biointerfaces, 2018, 166, 170-178.	2.5	15
3224	Manipulating nanoparticle transport within blood flow through external forces: an exemplar of mechanics in nanomedicine. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170845.	1.0	79
3225	Substratum stiffness tunes proliferation downstream of Wnt3a in part by regulating integrin-linked kinase and frizzled-1. Journal of Cell Science, 2018, 131, .	1.2	19
3226	Polymer and Photonic Materials Towards Biomedical Breakthroughs. , 2018, , .		4
3227	3D tissue engineering, an emerging technique for pharmaceutical research. Acta Pharmaceutica Sinica B, 2018, 8, 756-766.	5.7	49
3228	Polymer Processing Through Multiphoton Absorption. , 2018, , 49-69.		1
3229	Injectable hyaluronic acid based microrods provide local micromechanical and biochemical cues to attenuate cardiac fibrosis after myocardial infarction. Biomaterials, 2018, 169, 11-21.	5.7	54
3230	Active cell-matrix coupling regulates cellular force landscapes of cohesive epithelial monolayers. Npj Computational Materials, 2018, 4, .	3.5	13
3231	Macroporous click-elastin-like hydrogels for tissue engineering applications. Materials Science and Engineering C, 2018, 88, 140-147.	3.8	30
3232	Collagen Fibrils: Nature's Highly Tunable Nonlinear Springs. ACS Nano, 2018, 12, 3671-3680.	7.3	51

#	Article	IF	CITATIONS
3233	Cellular Constituents of the Prostate Stroma: Key Contributors to Prostate Cancer Progression and Therapy Resistance. Cold Spring Harbor Perspectives in Medicine, 2018, 8, a030510.	2.9	57
3234	Mechanosensation across borders: fibroblasts inside a macroporous scaffold sense and respond to the mechanical environment beyond the scaffold walls. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 265-275.	1.3	8
3235	The stiffness of a crosslinked hyaluronan hydrogel affects its chondroâ€induction activity on hADSCs. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 808-816.	1.6	21
3236	Materials-Directed Differentiation of Mesenchymal Stem Cells for Tissue Engineering and Regeneration. ACS Biomaterials Science and Engineering, 2018, 4, 1115-1127.	2.6	105
3237	Regulation of Breast Cancer Progression by Extracellular Matrix Mechanics: Insights from 3D Culture Models. ACS Biomaterials Science and Engineering, 2018, 4, 302-313.	2.6	36
3238	Evaluation of photochemistry reaction kinetics to pattern bioactive proteins on hydrogels for biological applications. Bioactive Materials, 2018, 3, 64-73.	8.6	20
3239	The effect of substrate stiffness on cancer cell volume homeostasis. Journal of Cellular Physiology, 2018, 233, 1414-1423.	2.0	20
3240	Mechanically Loading Cell/Hydrogel Constructs with Low-Intensity Pulsed Ultrasound for Bone Repair. Tissue Engineering - Part A, 2018, 24, 254-263.	1.6	18
3241	Aging and ocular tissue stiffness in glaucoma. Survey of Ophthalmology, 2018, 63, 56-74.	1.7	117
3242	The role of the microenvironment in the biophysics of cancer. Seminars in Cell and Developmental Biology, 2018, 73, 107-114.	2.3	53
3243	Nanotechnology and Nanomaterials for Improving Neural Interfaces. Advanced Functional Materials, 2018, 28, 1700905.	7.8	56
3244	Mining the Stiffness-Sensitive Transcriptome in Human Vascular Smooth Muscle Cells Identifies Long Noncoding RNA Stiffness Regulators. Arteriosclerosis, Thrombosis, and Vascular Biology, 2018, 38, 164-173.	1.1	43
3245	Cellular volume regulation and substrate stiffness modulate the detachment dynamics of adherent cells. Journal of the Mechanics and Physics of Solids, 2018, 112, 594-618.	2.3	18
3246	New bioactive glass scaffolds with exceptional qualities for bone tissue regeneration: response of osteoblasts and osteoclasts. Biomedical Materials (Bristol), 2018, 13, 025005.	1.7	14
3247	Applications of nanocomposite hydrogels for biomedical engineering and environmental protection. Environmental Chemistry Letters, 2018, 16, 113-146.	8.3	207
3248	Predicting the role of microstructural and biomechanical cues in tumor growth and spreading. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2935.	1.0	7
3249	Cellular shear stiffness reflects progression of arsenic-induced transformation during G1. Carcinogenesis, 2018, 39, 109-117.	1.3	11
3250	Cell Culture and Observation on Microfluidics. Integrated Analytical Systems, 2018, , 119-147.	0.4	O

#	Article	IF	CITATIONS
3251	Guiding morphogenesis in cell-instructive microgels for therapeutic angiogenesis. Biomaterials, 2018, 154, 34-47.	5.7	52
3252	Characterisation of hyaluronic acid methylcellulose hydrogels for 3D bioprinting. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 389-399.	1.5	125
3253	When stem cells meet graphene: Opportunities and challenges in regenerative medicine. Biomaterials, 2018, 155, 236-250.	5.7	232
3254	Measuring the Mechanical Properties of Single Cells by AFM. Springer Theses, 2018, , 33-47.	0.0	0
3255	How Deep Might Myoblasts Sense: The Effect of Substrate Stiffness and Thickness on the Behavior of Myoblasts. Journal of Medical and Biological Engineering, 2018, 38, 596-606.	1.0	4
3256	Role of substrate biomechanics in controlling (stem) cell fate: Implications in regenerative medicine. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 1012-1019.	1.3	17
3257	Emerging roles for LPP in metastatic cancer progression. Journal of Cell Communication and Signaling, 2018, 12, 143-156.	1.8	25
3258	Hydrostatic pressure in combination with topographical cues affects the fate of bone marrowâ€derived human mesenchymal stem cells for bone tissue regeneration. Journal of Biomedical Materials Research - Part A, 2018, 106, 629-640.	2.1	22
3259	A Viscoelastic Study of Poly(Îμ-Caprolactone) Microsphere Sintered Bone Tissue Engineering Scaffold. Journal of Medical and Biological Engineering, 2018, 38, 359-369.	1.0	2
3260	An Electromagnetic System for Inducing a Localized Force Gradient in an ECM and Its Influence on HMVEC Sprouting. SLAS Technology, 2018, 23, 70-82.	1.0	2
3261	Gelatin methacrylate scaffold for bone tissue engineering: The influence of polymer concentration. Journal of Biomedical Materials Research - Part A, 2018, 106, 201-209.	2.1	122
3262	Caveolin-1 Controls Hyperresponsiveness to Mechanical Stimuli and Fibrogenesis-Associated RUNX2 ActivationÂin Keloid Fibroblasts. Journal of Investigative Dermatology, 2018, 138, 208-218.	0.3	74
3263	Isomeric control of the mechanical properties of supramolecular filament hydrogels. Biomaterials Science, 2018, 6, 216-224.	2.6	6
3264	Anomalous Vascular Dynamics of Nanoworms within Blood Flow. ACS Biomaterials Science and Engineering, 2018, 4, 66-77.	2.6	16
3265	Why we need mechanics to understand animal regeneration. Developmental Biology, 2018, 433, 155-165.	0.9	19
3266	Tissue–electronics interfaces: from implantable devices to engineered tissues. Nature Reviews Materials, 2018, 3, .	23.3	372
3267	Cell–Extracellular Matrix Mechanobiology: Forceful Tools and Emerging Needs for Basic and Translational Research. Nano Letters, 2018, 18, 1-8.	4.5	103
3268	Comparison of biophysical properties characterized for microtissues cultured using microencapsulation and liquid crystal based 3D cell culture techniques. Cytotechnology, 2018, 70, 13-29.	0.7	3

#	Article	IF	CITATIONS
3269	Large-area alginate/PEO-PPO-PEO hydrogels with thermoreversible rheology at physiological temperatures. Polymer, 2018, 135, 171-177.	1.8	27
3270	Surface-attached hydrogel coatings via C,H-insertion crosslinking for biomedical and bioanalytical applications (Review). Biointerphases, 2018, 13, 010801.	0.6	71
3271	A "Cellâ€Friendly―Window for the Interaction of Cells with Hyaluronic Acid/Polyâ€∢scp>l∢/scp>‣ysine Multilayers. Macromolecular Bioscience, 2018, 18, 1700319.	2.1	18
3272	Electrical Programming of Soft Matter: Using Temporally Varying Electrical Inputs To Spatially Control Self Assembly. Biomacromolecules, 2018, 19, 364-373.	2.6	46
3273	Displacement Propagation in Fibrous Networks Due to Local Contraction. Journal of Biomechanical Engineering, 2018, 140, .	0.6	23
3274	Computational modeling of singleâ€cell mechanics and cytoskeletal mechanobiology. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2018, 10, e1407.	6.6	36
3275	Genipin-treated chitosan nanofibers as a novel scaffold for nerve guidance channel design. Colloids and Surfaces B: Biointerfaces, 2018, 162, 126-134.	2.5	37
3276	Ultrastretchable Kirigami Bioprobes. Advanced Healthcare Materials, 2018, 7, 1701100.	3.9	114
3277	Culturing substrates influence the morphological, mechanical and biochemical features of lung adenocarcinoma cells cultured in 2D or 3D. Tissue and Cell, 2018, 50, 15-30.	1.0	25
3278	Specific Nanoporous Geometries on Anodized Alumina Surfaces Influence Astrocyte Adhesion and Glial Fibrillary Acidic Protein Immunoreactivity Levels. ACS Biomaterials Science and Engineering, 2018, 4, 128-141.	2.6	13
3279	Photopolymerization of cell-laden gelatin methacryloyl hydrogels using a dental curing light for regenerative dentistry. Dental Materials, 2018, 34, 389-399.	1.6	154
3280	Stress relaxing hyaluronic acid-collagen hydrogels promote cell spreading, fiber remodeling, and focal adhesion formation in 3D cell culture. Biomaterials, 2018, 154, 213-222.	5.7	368
3281	Guidelines for Microplate Selection in High Content Imaging. Methods in Molecular Biology, 2018, 1683, 75-88.	0.4	5
3282	Cell Migration in 1D and 2D Nanofiber Microenvironments. Annals of Biomedical Engineering, 2018, 46, 392-403.	1.3	42
3283	An engineered cell-imprinted substrate directs osteogenic differentiation in stem cells. Biomaterials Science, 2018, 6, 189-199.	2.6	38
3284	Nonswelling Thiol–Yne Cross-Linked Hydrogel Materials as Cytocompatible Soft Tissue Scaffolds. Biomacromolecules, 2018, 19, 1378-1388.	2.6	67
3285	Investigations of Cellular and Molecular Biophysical Properties by Atomic Force Microscopy Nanorobotics. Springer Theses, 2018, , .	0.0	0
3286	Tissueâ€Engineered Peripheral Nerve Interfaces. Advanced Functional Materials, 2018, 28, 1701713.	7.8	53

#	ARTICLE	IF	CITATIONS
3287	Rebooting the collagen gel: Artificial hydrogels for the study of epithelial mesenchymal transformation. Developmental Dynamics, 2018, 247, 332-339.	0.8	5
3288	Cardiac Biomechanics in Normal Physiology and Disease. , 2018, , 411-419.		0
3289	The mechanics of phantom Mikado networks. Journal of Physics Communications, 2018, 2, 055015.	0.5	2
3290	Physical cues of biomaterials guide stem cell fate of differentiation: The effect of elasticity of cell culture biomaterials. Open Physics, 2018, 16, 943-955.	0.8	13
3291	Contraction Dynamics of Rod Microtissues of Gingiva-Derived and Periodontal Ligament-Derived Cells. Frontiers in Physiology, 2018, 9, 1683.	1.3	10
3292	Concept of Hematopoietic and Stromal Niches for Cell-Based Diagnostics and Regenerative Medicine (a) Tj ETQq1	1.0.7843	14 rgBT /0
3293	3D printing of nanocellulose hydrogel scaffolds with tunable mechanical strength towards wound healing application. Journal of Materials Chemistry B, 2018, 6, 7066-7075.	2.9	129
3294	Hemodynamic shear flow regulates biophysical characteristics and functions of circulating breast tumor cells reminiscent of brain metastasis. Soft Matter, 2018, 14, 9528-9533.	1.2	18
3295	OBSOLETE: Cardiac Biomechanics in Normal Physiology and Disease., 2018,,.		0
3296	Nonlinear Cellular Mechanical Behavior Adaptation to Substrate Mechanics Identified by Atomic Force Microscope. International Journal of Molecular Sciences, 2018, 19, 3461.	1.8	18
3297	Biomechanics in Oncology. Advances in Experimental Medicine and Biology, 2018, , .	0.8	7
3298	Discrete Subaortic Stenosis: Perspective Roadmap to a Complex Disease. Frontiers in Cardiovascular Medicine, 2018, 5, 122.	1.1	29
3299	Cartilage Tissue Engineering Using Stem Cells and Bioprinting Technology—Barriers to Clinical Translation. Frontiers in Surgery, 2018, 5, 70.	0.6	67
3300	Topographical Features of Graphene-Oxide-Functionalized Substrates Modulate Cancer and Healthy Cell Adhesion Based on the Cell Tissue of Origin. ACS Applied Materials & Samp; Interfaces, 2018, 10, 41978-41985.	4.0	19
3301	Strain-triggered mechanical feedback in self-organizing optic-cup morphogenesis. Science Advances, 2018, 4, eaau1354.	4.7	69
3302	Long-term functionality of a soft electrode array for epidural spinal cord stimulation in a minipig model. , 2018, 2018, 1432-1435.		8
3303	Photoresponsive Hydrogels with Photoswitchable Stiffness: Emerging Platforms to Study Temporal Aspects of Mesenchymal Stem Cell Responses to Extracellular Stiffness Regulation. Advances in Experimental Medicine and Biology, 2018, 1144, 53-69.	0.8	6
3304	Atomic Force Microscopy in Molecular and Cell Biology. , 2018, , .		6

#	Article	IF	CITATIONS
3305	Tissue-Level Mechanosensitivity: Predicting and Controlling the Orientation of 3D Vascular Networks. Nano Letters, 2018, 18, 7698-7708.	4.5	16
3306	In Situ Measuring Mechanical Properties of Normal and Disease Cells. , 2018, , 161-178.		1
3307	Silk-Mesoporous Silica-Based Hybrid Macroporous Scaffolds using Ice-Templating Method: Mechanical, Release, and Biological Studies. ACS Applied Bio Materials, 2018, 1, 2082-2093.	2.3	6
3308	Nanoindentation of Soft Biological Materials. Micromachines, 2018, 9, 654.	1.4	95
3310	Synthesis of a tri-network alginate hydrogel for use as an injectable cell carrier. Biomedical Physics and Engineering Express, 2018, 5, 015017.	0.6	7
3311	Nanostructured Thermoresponsive Surfaces Engineered via Stable Immobilization of Smart Nanogels with Assistance of Polydopamine. ACS Applied Materials & Samp; Interfaces, 2018, 10, 44092-44101.	4.0	20
3312	Caring for cells in microsystems: principles and practices of cell-safe device design and operation. Lab on A Chip, 2018, 18, 3333-3352.	3.1	17
3314	Orthogonal programming of heterogeneous micro-mechano-environments and geometries in three-dimensional bio-stereolithography. Nature Communications, 2018, 9, 4096.	5.8	58
3315	Into the breach: how cells cope with wounds. Open Biology, 2018, 8, .	1.5	36
3316	Conjugation of Nanomaterials and Nematic Liquid Crystals for Futuristic Applications and Biosensors. Biosensors, 2018, 8, 69.	2.3	16
3317	Electroactive Scaffolds for Neurogenesis and Myogenesis: Grapheneâ€Based Nanomaterials. Small, 2018, 14, e1801983.	5.2	81
3318	All-Organic Conductive Biomaterial as an Electroactive Cell Interface. ACS Applied Materials & Samp; Interfaces, 2018, 10, 35547-35556.	4.0	16
3319	Biomechanical Rigidity and Quantitative Proteomics Analysis of Segmental Regions of the Trabecular Meshwork at Physiologic and Elevated Pressures. , 2018, 59, 246.		54
3320	Magnetic Force-driven in Situ Selective Intracellular Delivery. Scientific Reports, 2018, 8, 14205.	1.6	7
3321	Efficient <i>in situ</i> gene delivery <i>via</i> PEG diacrylate matrices. Biomaterials Science, 2018, 6, 3241-3250.	2.6	13
3322	Synthesis and 3D Printing of PEG–Poly(propylene fumarate) Diblock and Triblock Copolymer Hydrogels. ACS Macro Letters, 2018, 7, 1254-1260.	2.3	50
3323	Cooperation of dual modes of cell motility promotes epithelial stress relaxation to accelerate wound healing. PLoS Computational Biology, 2018, 14, e1006502.	1.5	53
3324	Video-Rate Bioluminescence Imaging of Degranulation of Mast Cells Attached to the Extracellular Matrix. Frontiers in Cell and Developmental Biology, 2018, 6, 74.	1.8	4

#	Article	IF	CITATIONS
3325	EFFECT OF THE POLYACRYLAMIDE FERROGEL ELASTICITY ON THE CELL ADHESIVENESS TO MAGNETIC COMPOSITE. Journal of Mechanics in Medicine and Biology, 2018, 18, 1850060.	0.3	9
3326	Hybrid Syntheticâ€Biological Hydrogel System for Adipose Tissue Regeneration. Macromolecular Bioscience, 2018, 18, e1800122.	2.1	24
3327	Exposure to tobacco smoke increases bone loss in spontaneously hypertensive rats. Inhalation Toxicology, 2018, 30, 229-238.	0.8	2
3328	Engineered systems to study the synergistic signaling between integrin-mediated mechanotransduction and growth factors (Review). Biointerphases, 2018, 13, 06D302.	0.6	21
3329	Thermally Responsive Microfibers Mediated Stem Cell Fate via Reversibly Dynamic Mechanical Stimulation. Advanced Functional Materials, 2018, 28, 1804773.	7.8	32
3330	The nonlinear elasticity of hyperelastic models for stretch-dominated cellular structures. International Journal of Non-Linear Mechanics, 2018, 106, 144-154.	1.4	8
3331	Vascular Endothelial Cell Behavior in Complex Mechanical Microenvironments. ACS Biomaterials Science and Engineering, 2018, 4, 3818-3842.	2.6	34
3332	A biomaterial with a channel-like pore architecture induces endochondral healing of bone defects. Nature Communications, 2018, 9, 4430.	5.8	126
3333	Noninvasive Imaging: Brillouin Confocal Microscopy. Advances in Experimental Medicine and Biology, 2018, 1092, 351-364.	0.8	11
3334	Cytoskeletal Anisotropy Controls Geometry and Forces of Adherent Cells. Physical Review Letters, 2018, 121, 178101.	2.9	17
3335	Backward nested descriptors asymptotics with inference on stem cell differentiation. Annals of Statistics, 2018, 46, .	1.4	11
3336	Increased elastic modulus of plasma polymer coatings reinforced with detonation nanodiamond particles improves osteogenic differentiation of mesenchymal stem cells. Turkish Journal of Biology, 2018, 42, 195-203.	2.1	1
3337	Composite hydrogel: A high fidelity soft tissue mimic for surgery. Materials and Design, 2018, 160, 886-894.	3.3	45
3338	In Situ Imprinting of Topographic Landscapes at the Cell–Substrate Interface. Journal of the American Chemical Society, 2018, 140, 14064-14068.	6.6	18
3339	Cerium oxide nanoparticles at the nano-bio interface: size-dependent cellular uptake. Artificial Cells, Nanomedicine and Biotechnology, 2018, 46, 956-963.	1.9	38
3340	Reorientation dynamics and structural interdependencies of actin, microtubules and intermediate filaments upon cyclic stretch application. Cytoskeleton, 2018, 75, 385-394.	1.0	19
3341	Microenvironment Influences Cancer Cell Mechanics from Tumor Growth to Metastasis. Advances in Experimental Medicine and Biology, 2018, 1092, 69-90.	0.8	20
3342	Graphene-Based Nanocomposites as Promising Options for Hard Tissue Regeneration. Advances in Experimental Medicine and Biology, 2018, 1078, 103-117.	0.8	12

#	Article	IF	Citations
3343	Reconstructing the Human Renal Vascular–Tubular Unit In Vitro. Advanced Healthcare Materials, 2018, 7, 1801120.	3.9	44
3344	Tailoring the Interface of Biomaterials to Design Effective Scaffolds. Journal of Functional Biomaterials, 2018, 9, 50.	1.8	43
3345	Reconstruction of Regenerative Stem Cell Niche by Cell Aggregate Engineering. Methods in Molecular Biology, 2018, 2002, 87-99.	0.4	7
3346	Viscoelastic properties of microgel thin films control fibroblast modes of migration and pro-fibrotic responses. Biomaterials, 2018, 185, 371-382.	5.7	29
3347	Designing stem cell niches for differentiation and self-renewal. Journal of the Royal Society Interface, 2018, 15, 20180388.	1.5	107
3348	Periodontal cell mechanotransduction. Open Biology, 2018, 8, .	1.5	31
3349	Liquid Crystal-Templated Synthesis of Mesoporous Membranes with Predetermined Pore Alignment. ACS Applied Materials & Discrete Samp; Interfaces, 2018, 10, 33484-33492.	4.0	25
3350	Random walker models for durotaxis. Physical Biology, 2018, 15, 066009.	0.8	13
3351	Functionalized Scaffold for in Situ Efficient Gene Transfection of Mesenchymal Stem Cells Spheroids toward Chondrogenesis. ACS Applied Materials & Samp; Interfaces, 2018, 10, 33993-34004.	4.0	23
3352	Collagen organization deposited by fibroblasts encapsulated in pH responsive methacrylated alginate hydrogels. Journal of Biomedical Materials Research - Part A, 2018, 106, 2934-2943.	2.1	16
3353	Inflammation-Independent Mechanisms of Intestinal Fibrosis: The Role of the Extracellular Matrix. , 2018, , 77-95.		1
3354	Biofabrication via integrated additive manufacturing and electrofluidodynamics., 2018,, 71-85.		1
3355	Bridging the gap in peripheral nerve repair with 3D printed and bioprinted conduits. Biomaterials, 2018, 186, 44-63.	5 . 7	81
3356	Acoustic Tweezing Cytometry Induces Rapid Initiation of Human Embryonic Stem Cell Differentiation. Scientific Reports, 2018, 8, 12977.	1.6	20
3357	Integrated Microfluidic Chip for Efficient Isolation and Deformability Analysis of Circulating Tumor Cells. Advanced Biology, 2018, 2, 1800200.	3.0	21
3358	Stem Cell Expansion and Fate Decision on Liquid Substrates Are Regulated by Self-Assembled Nanosheets. ACS Nano, 2018, 12, 9206-9213.	7.3	44
3359	Three-Dimensional In Vitro Hydro- and Cryogel-Based Cell-Culture Models for the Study of Breast-Cancer Metastasis to Bone. Cancers, 2018, 10, 292.	1.7	25
3360	Cyclic Redox-Mediated Switching of Surface Properties of Thiolated Polysaccharide Multilayers and Its Effect on Fibroblast Adhesion. ACS Applied Materials & Samp; Interfaces, 2018, 10, 31168-31177.	4.0	12

#	Article	IF	CITATIONS
3361	Effect of far-field compliance on local failure dynamics of soft solids. Extreme Mechanics Letters, 2018, 24, 14-20.	2.0	12
3362	SiNWs Biophysically Regulate the Fates of Human Mesenchymal Stem Cells. Scientific Reports, 2018, 8, 12913.	1.6	8
3363	Fibrin Stiffness Mediates Dormancy of Tumor-Repopulating Cells via a Cdc42-Driven Tet2 Epigenetic Program. Cancer Research, 2018, 78, 3926-3937.	0.4	74
3364	Micropatterned biodegradable polyesters clicked with CQAASIKVAV promote cell alignment, directional migration, and neurite outgrowth. Acta Biomaterialia, 2018, 74, 143-155.	4.1	36
3365	Integrating Physical and Molecular Insights on Immune Cell Migration. Trends in Immunology, 2018, 39, 632-643.	2.9	73
3366	Optimising experimental research in respiratory diseases: an ERS statement. European Respiratory Journal, 2018, 51, 1702133.	3.1	98
3367	Tunable Pentapeptide Selfâ€Assembled βâ€Sheet Hydrogels. Angewandte Chemie - International Edition, 2018, 57, 7709-7713.	7.2	93
3368	Projection-Based 3D Printing of Cell Patterning Scaffolds with Multiscale Channels. ACS Applied Materials & Samp; Interfaces, 2018, 10, 19428-19435.	4.0	74
3369	Production of Elastin-like Protein Hydrogels for Encapsulation and Immunostaining of Cells in 3D. Journal of Visualized Experiments, 2018, , .	0.2	20
3370	Mechanotargeting: Mechanicsâ€Dependent Cellular Uptake of Nanoparticles. Advanced Materials, 2018, 30, e1707464.	11.1	38
3371	Tunable Pentapeptide Selfâ€Assembled βâ€Sheet Hydrogels. Angewandte Chemie, 2018, 130, 7835-7839.	1.6	16
3372	Direct Micropatterning of Extracellular Matrix Proteins on Functionalized Polyacrylamide Hydrogels Shows Geometric Regulation of Cell–Cell Junctions. ACS Biomaterials Science and Engineering, 2018, 4, 2340-2349.	2.6	15
3373	The role played by the molecular weight and acetylation degree in modulating the stiffness and elasticity of chitosan gels. Carbohydrate Polymers, 2018, 196, 405-413.	5.1	39
3374	Mediator kinase CDK8/CDK19 drives YAP1-dependent BMP4-induced EMT in cancer. Oncogene, 2018, 37, 4792-4808.	2.6	49
3375	A vacuum-actuated microtissue stretcher for long-term exposure to oscillatory strain within a 3D matrix. Biomedical Microdevices, 2018, 20, 43.	1.4	18
3376	Adsorption force of fibronectin controls transmission of cell traction force and subsequent stem cell fate. Biomaterials, 2018, 162, 170-182.	5.7	17
3377	Photonic force optical coherence elastography for three-dimensional mechanical microscopy. Nature Communications, 2018, 9, 2079.	5.8	33
3378	Photopolymerizable Materials for Cell Encapsulation. , 2018, , 353-396.		5

#	Article	IF	CITATIONS
3380	Mouse Keratinocytes Without Keratin Intermediate Filaments Demonstrate Substrate Stiffness Dependent Behaviors. Cellular and Molecular Bioengineering, 2018, 11, 163-174.	1.0	8
3381	Complex strain induced structural changes observed in fibrin assembled in human plasma. Nanoscale, 2018, 10, 10063-10072.	2.8	7
3382	Development of a Novel Orthogonal Double Gradient for Highâ€Throughput Screening of Mesenchymal Stem Cells–Materials Interaction. Advanced Materials Interfaces, 2018, 5, 1800504.	1.9	24
3383	Chaperone-assisted selective autophagy in healthy and papillomavirus-associated neoplastic urothelium of cattle. Veterinary Microbiology, 2018, 221, 134-142.	0.8	11
3384	Combined experimental and computational characterization of crosslinked collagen-based hydrogels. PLoS ONE, 2018, 13, e0195820.	1.1	65
3385	Mechanisms and impact of altered tumour mechanics. Nature Cell Biology, 2018, 20, 766-774.	4.6	201
3386	Prestressed cells are prone to cytoskeleton failures under localized shear strain: an experimental demonstration on muscle precursor cells. Scientific Reports, 2018, 8, 8602.	1.6	10
3387	Engineering subcellular-patterned biointerfaces to regulate the surface wetting of multicellular spheroids. Nano Research, 2018, 11, 5704-5715.	5.8	13
3388	Use of nanostructured materials in hard tissue engineering. , 2018, , 257-295.		0
3389	Mechanical Properties of Graphene Foam and Graphene Foamâ€"Tissue Composites. Advanced Engineering Materials, 2018, 20, 1800166.	1.6	25
3390	Quantitative assessment of cell contractility using polarized light microscopy. Journal of Biophotonics, 2018, 11, e201800008.	1.1	16
3391	Tunable cell-surface mimetics as engineered cell substrates. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 2076-2093.	1.4	1
3392	Dopantâ€Free Hydrogels with Intrinsic Photoluminescence and Biodegradable Properties. Advanced Functional Materials, 2018, 28, 1802607.	7.8	29
3393	Enzymatically degradable alginate hydrogel systems to deliver endothelial progenitor cells for potential revasculature applications. Biomaterials, 2018, 179, 109-121.	5.7	52
3394	Zero-dimensional, one-dimensional, two-dimensional and three-dimensional biomaterials for cell fate regulation. Advanced Drug Delivery Reviews, 2018, 132, 33-56.	6.6	55
3395	Chemically Modified Gellan Gum Hydrogels with Tunable Properties for Use as Tissue Engineering Scaffolds. ACS Omega, 2018, 3, 6998-7007.	1.6	86
3396	Facile incorporation of REDV into porous silk fibroin scaffolds for enhancing vascularization of thick tissues. Materials Science and Engineering C, 2018, 93, 96-105.	3.8	17
3397	A review of biomaterials in bone defect healing, remaining shortcomings and future opportunities for bone tissue engineering. Bone and Joint Research, 2018, 7, 232-243.	1.3	345

#	ARTICLE	IF	CITATIONS
3398	Mesenchylmal Stem Cell Culture on Poly(N-isopropylacrylamide) Hydrogel with Repeated Thermo-Stimulation. International Journal of Molecular Sciences, 2018, 19, 1253.	1.8	21
3399	Stem Cell Differentiation is Regulated by Extracellular Matrix Mechanics. Physiology, 2018, 33, 16-25.	1.6	191
3400	Biomechanical assessment of myocardial infarction using optical coherence elastography. Biomedical Optics Express, 2018, 9, 728.	1.5	29
3401	YAP/TAZ Are Essential for TGF-β2–Mediated Conjunctival Fibrosis. , 2018, 59, 3069.		54
3402	Thin Film Composite Silicon Elastomers for Cell Culture and Skin Applications: Manufacturing and Characterization. Journal of Visualized Experiments, 2018, , .	0.2	2
3403	Profiling the origin, dynamics, and function of traction force in B cell activation. Science Signaling, 2018, 11, .	1.6	59
3404	Cyclic Stretch Negatively Regulates IL- $1\hat{l}^2$ Secretion Through the Inhibition of NLRP3 Inflammasome Activation by Attenuating the AMP Kinase Pathway. Frontiers in Physiology, 2018, 9, 802.	1.3	21
3405	Photocontrolled Multidirectional Differentiation of Mesenchymal Stem Cells on an Upconversion Substrate. Angewandte Chemie - International Edition, 2018, 57, 11182-11187.	7.2	46
3406	Cellular Mechanotransduction: From Tension to Function. Frontiers in Physiology, 2018, 9, 824.	1.3	594
3407	Stiffness Measurement of Soft Silicone Substrates for Mechanobiology Studies Using a Widefield Fluorescence Microscope. Journal of Visualized Experiments, 2018, , .	0.2	14
3408	Gelatin/PVA scaffolds fabricated using a 3D-printing process employed with a low-temperature plate for hard tissue regeneration: Fabrication and characterizations. International Journal of Biological Macromolecules, 2018, 120, 119-127.	3.6	78
3409	From scaffold to structure: the synthetic production of cell derived extracellular matrix for liver tissue engineering. Biomedical Physics and Engineering Express, 2018, 4, 065015.	0.6	28
3410	Electrospun gelatin-based scaffolds as a novel 3D platform to study the function of contractile smooth muscle cells <i>in vitro</i> . Biomedical Physics and Engineering Express, 2018, 4, 045039.	0.6	12
3411	Stiffness modification of photopolymerizable gelatin-methacrylate hydrogels influences endothelial differentiation of human mesenchymal stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 2099-2111.	1.3	41
3412	Contractility of Airway Smooth Muscle Cell in Response to Zinc Oxide Nanoparticles by Traction Force Microscopy. Annals of Biomedical Engineering, 2018, 46, 2000-2011.	1.3	10
3413	Effects of Matrix Stiffness on the Morphology, Adhesion, Proliferation and Osteogenic Differentiation of Mesenchymal Stem Cells. International Journal of Medical Sciences, 2018, 15, 257-268.	1.1	173
3414	Photocontrolled Multidirectional Differentiation of Mesenchymal Stem Cells on an Upconversion Substrate. Angewandte Chemie, 2018, 130, 11352-11357.	1.6	9
3415	Stiffness and swelling characteristics of nanocellulose films in cell culture media. Cellulose, 2018, 25, 4969-4978.	2.4	15

#	Article	IF	CITATIONS
3416	Collagen Scaffolds in Cartilage Tissue Engineering and Relevant Approaches for Future Development. Tissue Engineering and Regenerative Medicine, 2018, 15, 673-697.	1.6	149
3417	Liquid-crystalline nanoarchitectures for tissue engineering. Beilstein Journal of Nanotechnology, 2018, 9, 205-215.	1.5	15
3418	Mechanobiology of the corneal epithelium. Experimental Eye Research, 2018, 177, 122-129.	1.2	49
3419	Biomaterials for Enhancing Neuronal Repair. Frontiers in Materials, 2018, 5, .	1.2	29
3420	Recent Developments in Tough Hydrogels for Biomedical Applications. Gels, 2018, 4, 46.	2.1	85
3421	Hydrogel fibrous scaffolds for accelerated wound healing. , 2018, , 251-274.		1
3422	Nanoengineering of Soft Polymer Particles for Exploring Bio-Nano Interactions. , 2018, , 393-419.		1
3423	CaMKK2 Regulates Mechanosensitive Assembly of Contractile Actin Stress Fibers. Cell Reports, 2018, 24, 11-19.	2.9	28
3424	Chemically defined, ultrasoft PDMS elastomers with selectable elasticity for mechanobiology. PLoS ONE, 2018, 13, e0195180.	1.1	17
3425	Strategy for Preparing Mechanically Strong Hyaluronic Acid–Silica Nanohybrid Hydrogels via In Situ Sol–Gel Process. Macromolecular Materials and Engineering, 2018, 303, 1800213.	1.7	7
3426	Role of Microenvironment in Glioma Invasion: What We Learned from In Vitro Models. International Journal of Molecular Sciences, 2018, 19, 147.	1.8	102
3427	Novel Nano-Materials and Nano-Fabrication Techniques for Flexible Electronic Systems. Micromachines, 2018, 9, 263.	1.4	38
3428	Developing a MEMS Device with Built-in Microfluidics for Biophysical Single Cell Characterization. Micromachines, 2018, 9, 275.	1.4	9
3429	Mechanically tunable conductive interpenetrating network hydrogels that mimic the elastic moduli of biological tissue. Nature Communications, 2018, 9, 2740.	5. 8	344
3430	Biomimetic Layer-by-Layer Self-Assembly of Nanofilms, Nanocoatings, and 3D Scaffolds for Tissue Engineering. International Journal of Molecular Sciences, 2018, 19, 1641.	1.8	62
3431	Cobalt and Titanium nanoparticles influence on human osteoblast mitochondrial activity and biophysical properties of their cytoskeleton. Journal of Colloid and Interface Science, 2018, 531, 410-420.	5.0	9
3432	Acoustic formation of multicellular tumor spheroids enabling on-chip functional and structural imaging. Lab on A Chip, 2018, 18, 2466-2476.	3.1	51
3433	Behavioral remodeling of normal and cancerous epithelial cell lines with differing invasion potential induced by substrate elastic modulus. Cell Adhesion and Migration, 2018, 12, 1-17.	1.1	19

#	Article	IF	CITATIONS
3434	Protrusion Force Microscopy: A Method to Quantify Forces Developed by Cell Protrusions. Journal of Visualized Experiments, $2018, \dots$	0.2	1
3435	Engineering biofunctional in vitro vessel models using a multilayer bioprinting technique. Scientific Reports, 2018, 8, 10430.	1.6	143
3436	Adaptive Multifunctional Supramolecular Assemblies of Glycopeptides Rapidly Enable Morphogenesis. Biochemistry, 2018, 57, 4867-4879.	1.2	17
3437	Morphomechanical Alterations Induced by Transforming Growth Factor-β1 in Epithelial Breast Cancer Cells. Cancers, 2018, 10, 234.	1.7	11
3438	Mechanical confinement via a PEG/Collagen interpenetrating network inhibits behavior characteristic of malignant cells in the triple negative breast cancer cell line MDA.MB.231. Acta Biomaterialia, 2018, 77, 85-95.	4.1	26
3439	Microfluidics for mechanobiology of model organisms. Methods in Cell Biology, 2018, 146, 217-259.	0.5	13
3440	3D Printing of Silk Particle-Reinforced Chitosan Hydrogel Structures and Their Properties. ACS Biomaterials Science and Engineering, 2018, 4, 3036-3046.	2.6	78
3441	Nano- and Micro-Patterned S-, H-, and X-PDMS for Cell-Based Applications: Comparison of Wettability, Roughness, and Cell-Derived Parameters. Frontiers in Bioengineering and Biotechnology, 2018, 6, 51.	2.0	11
3442	The Bioelectric Code: Reprogramming Cancer and Aging From the Interface of Mechanical and Chemical Microenvironments. Frontiers in Cell and Developmental Biology, 2018, 6, 21.	1.8	37
3443	Enhancing Biological and Biomechanical Fixation of Osteochondral Scaffold: A Grand Challenge. Advances in Experimental Medicine and Biology, 2018, 1059, 255-298.	0.8	4
3444	Epithelialâ€mesenchymal transition softens head and neck cancer cells to facilitate migration in 3D environments. Journal of Cellular and Molecular Medicine, 2018, 22, 3837-3846.	1.6	21
3445	Determining mechanical features of modulated epithelial monolayers using subnuclear particle tracking. Journal of Cell Science, 2018, 131, .	1.2	14
3446	Vascular differentiation from pluripotent stem cells in $3\hat{a} \in \mathbb{D}$ auxetic scaffolds. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 1679-1689.	1.3	21
3447	Differentiation of human induced pluripotent stem cells into nucleus pulposus-like cells. Stem Cell Research and Therapy, 2018, 9, 61.	2.4	70
3448	Fibrous Topography-Potentiated Canonical Wnt Signaling Directs the Odontoblastic Differentiation of Dental Pulp-Derived Stem Cells. ACS Applied Materials & Samp; Interfaces, 2018, 10, 17526-17541.	4.0	37
3449	Human tissue-engineered skeletal muscle: a novel 3D in vitro model for drug disposition and toxicity after intramuscular injection. Scientific Reports, 2018, 8, 12206.	1.6	51
3450	Complex bile duct network formation within liver decellularized extracellular matrix hydrogels. Scientific Reports, 2018, 8, 12220.	1.6	50
3451	Increased Substrate Stiffness Elicits a Myofibroblastic Phenotype in Human Lamina Cribrosa Cells., 2018, 59, 803.		21

#	Article	IF	CITATIONS
3452	Actin and myosin II modulate differentiation of pluripotent stem cells. PLoS ONE, 2018, 13, e0195588.	1.1	21
3453	Biomaterials for Bone Tissue Engineering: Recent Advances and Challenges. , 2018, , 429-452.		5
3454	Hydrogel Actuators and Sensors for Biomedical Soft Robots: Brief Overview with Impending Challenges. Biomimetics, 2018, 3, 15.	1.5	164
3455	Modulation of extracellular matrix by annulus fibrosus cells on tailored silk based angle-ply intervertebral disc construct. Materials and Design, 2018, 158, 74-87.	3.3	11
3456	An optimized culture system for notochordal cell expansion with retention of phenotype. JOR Spine, 2018, 1, e1028.	1.5	15
3457	Matrix stiffness modulates infection of endothelial cells by <i>Listeria monocytogenes</i> via expression of cell surface vimentin. Molecular Biology of the Cell, 2018, 29, 1571-1589.	0.9	31
3458	Substrate stiffness and mechanical stress due to intercellular cooperativity guides tissue structure. Journal of Theoretical Biology, 2018, 457, 124-136.	0.8	5
3459	Cell-Instructive Alginate Hydrogels Targeting RhoA. Bioconjugate Chemistry, 2018, 29, 3042-3053.	1.8	5
3460	Substrate-led cholesterol extraction from supported lipid membranes. Nanoscale, 2018, 10, 16332-16342.	2.8	13
3461	Biomechanical performance of hybrid electrospun structures for skin regeneration. Materials Science and Engineering C, 2018, 93, 816-827.	3.8	30
3462	Mechanical Mapping of Spinal Cord Growth and Repair in Living Zebrafish Larvae by Brillouin Imaging. Biophysical Journal, 2018, 115, 911-923.	0.2	133
3463	TGF-Î ² 1-SOX9 axis-inducible COL10A1 promotes invasion and metastasis in gastric cancer via epithelial-to-mesenchymal transition. Cell Death and Disease, 2018, 9, 849.	2.7	128
3464	Fibronectin interaction with growth factors in the context of general ways extracellular matrix molecules regulate growth factor signaling. Italian Journal of Dermatology and Venereology, 2018, 153, 361-374.	0.1	5
3465	Nanostructured polymer scaffolds for tissue engineering technology. , 2018, , 451-483.		4
3466	The homeostatic ensemble for cells. Biomechanics and Modeling in Mechanobiology, 2018, 17, 1631-1662.	1.4	27
3467	Advanced and Rationalized Atomic Force Microscopy Analysis Unveils Specific Properties of Controlled Cell Mechanics. Frontiers in Physiology, 2018, 9, 1121.	1.3	7
3468	Friction-Induced Inflammation. Tribology Letters, 2018, 66, 1.	1.2	37
3469	Poly (ethylene glycol) hydrogel elasticity influences human mesenchymal stem cell behavior. International Journal of Energy Production and Management, 2018, 5, 167-175.	1.9	38

#	Article	IF	CITATIONS
3470	Substrate deformations induce directed keratinocyte migration. Journal of the Royal Society Interface, 2018, 15, 20180133.	1.5	12
3471	Mechanics of epithelial tissue formation. Journal of Theoretical Biology, 2018, 454, 182-189.	0.8	20
3472	Hydrodynamics of shape-driven rigidity transitions in motile tissues. Soft Matter, 2018, 14, 5628-5642.	1.2	25
3473	Acoustic radiation force impulse elastography in evaluation of triple-negative breast cancer: A preliminary experience. Clinical Hemorheology and Microcirculation, 2018, 70, 301-310.	0.9	6
3474	Controlling the orientation of a cell-synthesized extracellular matrix by using engineered gelatin-based building blocks. Biomaterials Science, 2018, 6, 2084-2091.	2.6	16
3475	Coherent Timescales and Mechanical Structure ofÂMulticellular Aggregates. Biophysical Journal, 2018, 114, 2703-2716.	0.2	18
3476	Force-activatable coating enables high-resolution cellular force imaging directly on regular cell culture surfaces. Physical Biology, 2018, 15, 065002.	0.8	14
3477	PDMS with designer functionalities—Properties, modifications strategies, and applications. Progress in Polymer Science, 2018, 83, 97-134.	11.8	478
3478	CDCA7 is a critical mediator of lymphomagenesis that selectively regulates anchorage-independent growth. Haematologica, 2018, 103, 1669-1678.	1.7	20
3479	Fabrication and Characterization of Chitosan–Hyaluronic Acid Scaffolds with Varying Stiffness for Glioblastoma Cell Culture. Advanced Healthcare Materials, 2018, 7, e1800295.	3.9	61
3480	Creating a Novel Graphene Oxide/Iron/Polylactic Acid Composite that Promotes Dental Pulp Stem Cell Proliferation and Mineralization. MRS Advances, 2018, 3, 1725-1733.	0.5	7
3481	Engineering Microvascular Networks in LED Light-Cured Cell-Laden Hydrogels. ACS Biomaterials Science and Engineering, 2018, 4, 2563-2570.	2.6	41
3482	Biomechanoâ€Interactive Materials and Interfaces. Advanced Materials, 2018, 30, e1800572.	11.1	93
3483	A Review of Nanofiber Shish Kebabs and Their Potential in Creating Effective Biomimetic Bone Scaffolds. Regenerative Engineering and Translational Medicine, 2018, 4, 107-119.	1.6	13
3485	Hierarchical Micro- and Nanopatterning of Metallic Glass to Engineer Cellular Responses. ACS Applied Bio Materials, 2018, 1, 51-58.	2.3	12
3486	An immortalised mesenchymal stem cell line maintains mechano-responsive behaviour and can be used as a reporter of substrate stiffness. Scientific Reports, 2018, 8, 8981.	1.6	31
3487	Biomimetic cardiovascular platforms for in vitro disease modeling and therapeutic validation. Biomaterials, 2019, 198, 78-94.	5.7	24
3488	Fabrication of single gel with different mechanical stiffness using threeâ€dimensional mold. Journal of Biomedical Materials Research - Part A, 2019, 107, 6-11.	2.1	5

#	Article	IF	CITATIONS
3489	Decoding cell signalling and regulation of oligodendrocyte differentiation. Seminars in Cell and Developmental Biology, 2019, 95, 54-73.	2.3	25
3490	Encapsulated piezoelectric nanoparticle–hydrogel smart material to remotely regulate cell differentiation and proliferation: a finite element model. Computational Mechanics, 2019, 63, 471-489.	2.2	8
3491	Fabrication of Hydrogels with a Stiffness Gradient Using Limited Mixing in the Hele-Shaw Geometry. Experimental Mechanics, 2019, 59, 1249-1259.	1.1	20
3492	Mechanical Characterization of the Lamellar Structure of Human Abdominal Aorta in the Development of Atherosclerosis: An Atomic Force Microscopy Study. Cardiovascular Engineering and Technology, 2019, 10, 181-192.	0.7	14
3493	Mechanical Properties and Degradability of Electrospun PCL/PLGA Blended Scaffolds as Vascular Grafts. Transactions of Tianjin University, 2019, 25, 152-160.	3.3	32
3494	Physical and mechanical properties of RAFT-stabilised collagen gels for tissue engineering applications. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 99, 216-224.	1.5	8
3495	Mechanotransduction: from the cell surface to the nucleus via RhoA. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180229.	1.8	73
3496	Unfolding of polymers tethered to viscoelastic substrates. Soft Matter, 2019, 15, 6885-6895.	1.2	1
3497	Investigation of the effect of substrate morphology on MDCK cell mechanical behavior using atomic force microscopy. Applied Physics Letters, 2019, 115, 063701.	1.5	6
3498	Myosin-II mediated traction forces evoke localized Piezo1-dependent Ca2+ flickers. Communications Biology, 2019, 2, 298.	2.0	141
3499	Rigidityâ€Dependent Placental Cells Uptake of Silkâ€Based Microcapsules. Macromolecular Bioscience, 2019, 19, e1900105.	2.1	7
3500	Viscoelasticity in natural tissues and engineered scaffolds for tissue reconstruction. Acta Biomaterialia, 2019, 97, 74-92.	4.1	88
3501	Hyaluronic Acid-Based Hybrid Hydrogel Microspheres with Enhanced Structural Stability and High Injectability. ACS Omega, 2019, 4, 13834-13844.	1.6	30
3502	Evaluation of polydimethylsiloxaneâ€based substrates for in vitro culture of human periodontal ligament cells. Journal of Biomedical Materials Research - Part A, 2019, 107, 2796-2805.	2.1	6
3503	Studying nucleicÂenvelope and plasma membrane mechanics of eukaryotic cells using confocal reflectance interferometric microscopy. Nature Communications, 2019, 10, 3652.	5.8	20
3504	A surface-engineered NIR light-responsive actuator for controllable modulation of collective cell migration. Journal of Materials Chemistry B, 2019, 7, 5528-5534.	2.9	7
3505	Method for the Direct Fabrication of Polyacrylamide Hydrogels with Controlled Stiffness in Polystyrene Multiwell Plates for Mechanobiology Assays. ACS Biomaterials Science and Engineering, 2019, 5, 4219-4227.	2.6	18
3506	Interactions at scaffold interfaces: Effect of surface chemistry, structural attributes and bioaffinity. Materials Science and Engineering C, 2019, 105, 110078.	3.8	60

#	Article	IF	CITATIONS
3507	Bioprinting of a Cell-Laden Conductive Hydrogel Composite. ACS Applied Materials & Distriction (2019, 11, 30518-30533).	4.0	117
3508	Alfalfa Nanofibers for Dermal Wound Healing. ACS Applied Materials & Samp; Interfaces, 2019, 11, 33535-33547.	4.0	43
3509	Automated analysis of soft hydrogel microindentation: Impact of various indentation parameters on the measurement of Youngâ \in TM s modulus. PLoS ONE, 2019, 14, e0220281.	1.1	30
3510	Migration of endothelial cells and mesenchymal stem cells into hyaluronic acid hydrogels with different moduli under induction of pro-inflammatory macrophages. Journal of Materials Chemistry B, 2019, 7, 5478-5489.	2.9	31
3511	The role of biomaterials in stem cell-based regenerative medicine. Future Medicinal Chemistry, 2019, 11, 1777-1790.	1.1	38
3512	The effect of cartilage extracellular matrix particle size on the chondrogenic differentiation of bone marrow mesenchymal stem cells. Regenerative Medicine, 2019, 14, 663-680.	0.8	10
3513	Development of a bioâ€MEMS device for electrical and mechanical conditioning and characterization of cell sheets for myocardial repair. Biotechnology and Bioengineering, 2019, 116, 3098-3111.	1.7	8
3514	Mechanically Stable C2-Phenylalanine Hybrid Hydrogels for Manipulating Cell Adhesion. ACS Applied Materials & Interfaces, 2019, 11, 28657-28664.	4.0	14
3515	Cassie–Baxter Surfaces for Reversible, Barrier-Free Integration of Microfluidics and 3D Cell Culture. Langmuir, 2019, 35, 10299-10308.	1.6	7
3516	Micropattern-based platform as a physiologically relevant model to study epithelial morphogenesis and nephrotoxicity. Biomaterials, 2019, 218, 119339.	5.7	17
3517	Rapid Fabrication, Microstructure, and in Vitro and in Vivo Investigations of a High-Performance Multilayer Coating with External, Flexible, and Silicon-Doped Hydroxyapatite Nanorods on Titanium. ACS Biomaterials Science and Engineering, 2019, 5, 4244-4262.	2.6	10
3518	Actin stress fiber dynamics in laterally confined cells. Integrative Biology (United Kingdom), 2019, 11, 175-185.	0.6	5
3519	Polysaccharide-based tissue-engineered vascular patches. Materials Science and Engineering C, 2019, 104, 109973.	3.8	12
3520	Physical impacts of PLGA scaffolding on hMSCs: Recovery neurobiology insight for implant design to treat spinal cord injury. Experimental Neurology, 2019, 320, 112980.	2.0	19
3521	Digital Light Processing-Based 3D Printing of Cell-Seeding Hydrogel Scaffolds with Regionally Varied Stiffness. ACS Biomaterials Science and Engineering, 2019, 5, 4825-4833.	2.6	44
3522	Cyclic Stretch Force Induces Periodontal Ligament Cells to Secrete Exosomes That Suppress IL- $1\hat{l}^2$ Production Through the Inhibition of the NF- \hat{l}^2 B Signaling Pathway in Macrophages. Frontiers in Immunology, 2019, 10, 1310.	2.2	63
3523	Magnetic microboats for floating, stiffness tunable, air–liquid interface epithelial cultures. Lab on A Chip, 2019, 19, 2786-2798.	3.1	15
3524	Elastocapillarity-based transport of liquids in flexible confinements and over soft substrates. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	10

#	Article	IF	Citations
3525	Mechanical characterization of single cells based on microfluidic techniques. TrAC - Trends in Analytical Chemistry, 2019, 117, 47-57.	5.8	17
3526	Force-Dependent Binding Constants. Biochemistry, 2019, 58, 4696-4709.	1.2	44
3527	Use of delivery technologies to mediate tissue regeneration and repair., 2019, , 131-139.		0
3528	Composite of Peptideâ€Supramolecular Polymer and Covalent Polymer Comprises a New Multifunctional, Bioâ€Inspired Soft Material. Macromolecular Rapid Communications, 2019, 40, e1900175.	2.0	37
3529	Thermal rectification of graphene on substrates with inhomogeneous stiffness. Carbon, 2019, 154, 81-89.	5.4	19
3530	The Influence of Polymer Blends on Regulating Chondrogenesis. Coatings, 2019, 9, 451.	1.2	1
3531	Elastic modulus of Dictyostelium is affected by mechanotransduction. Journal of Biological Physics, 2019, 45, 293-305.	0.7	0
3532	Extracellular and intercellular force distribution in circularly shaped epithelia. Extreme Mechanics Letters, 2019, 31, 100526.	2.0	10
3533	Substrate Compliance Directs the Osteogenic Lineages of Stem Cells from the Human Apical Papilla via the Processes of Mechanosensing and Mechanotransduction. ACS Applied Materials & Eamp; Interfaces, 2019, 11, 26448-26459.	4.0	29
3534	High-frequency microrheology in 3D reveals mismatch between cytoskeletal and extracellular matrix mechanics. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14448-14455.	3.3	48
3535	Living Materials Herald a New Era in Soft Robotics. Advanced Materials, 2019, 31, e1807747.	11.1	78
3536	Entrapment of N-Hydroxyphthalimide Carbon Dots in Different Topical Gel Formulations: New Composites with Anticancer Activity. Pharmaceutics, 2019, 11, 303.	2.0	9
3537	Mechanics of Brain Tissues Studied by Atomic Force Microscopy: A Perspective. Frontiers in Neuroscience, 2019, 13, 600.	1.4	47
3538	Oxime Cross-Linked Alginate Hydrogels with Tunable Stress Relaxation. Biomacromolecules, 2019, 20, 4419-4429.	2.6	42
3539	Mechanical changes of peripheral nerve tissue microenvironment and their structural basis during development. APL Bioengineering, 2019, 3, 036107.	3.3	38
3540	Biomimetic Nanosilica–Collagen Scaffolds for In Situ Bone Regeneration: Toward a Cellâ€Free, Oneâ€Step Surgery. Advanced Materials, 2019, 31, e1904341.	11.1	134
3541	Carbon nanotube micropillars trigger guided growth of complex human neural stem cells networks. Nano Research, 2019, 12, 2894-2899.	5.8	27
3542	Biophysics of Cell-Substrate Interactions Under Shear. Frontiers in Cell and Developmental Biology, 2019, 7, 251.	1.8	27

#	ARTICLE	IF	Citations
3543	Emerging technologies in mechanotransduction research. Current Opinion in Chemical Biology, 2019, 53, 125-130.	2.8	19
3544	Tissue stiffness at the human maternal–fetal interface. Human Reproduction, 2019, 34, 1999-2008.	0.4	68
3545	High-fidelity and high-efficiency additive manufacturing using tunable pre-curing digital light processing. Additive Manufacturing, 2019, 30, 100889.	1.7	46
3546	Evaluation of PEG-Based Hydrogel Influence on Estrogen-Receptor-Driven Responses in MCF7 Breast Cancer Cells. ACS Biomaterials Science and Engineering, 2019, 5, 6089-6098.	2.6	13
3547	Cell Migrations: Causes and Functions. Advances in Experimental Medicine and Biology, 2019, , .	0.8	6
3548	The Protein Mat(ters)â€"Revealing the Biologically Relevant Mechanical Contribution of Collagen- and Fibronectin-Coated Micropatterns. ACS Applied Materials & Interfaces, 2019, 11, 41791-41798.	4.0	4
3549	Influence of aorta extracellular matrix in electrospun polycaprolactone scaffolds. Journal of Applied Polymer Science, 2019, 136, 48181.	1.3	18
3550	An investigation into the high strength bonding technology of wafer-to-wafer with large-scale au line. Journal of Physics: Conference Series, 2019, 1209, 012013.	0.3	1
3551	The Research on Application of Virtual Reality Technology in Museums. Journal of Physics: Conference Series, 2019, 1302, 042049.	0.3	7
3552	Combining Convolutional Neural Network and Photometric Refinement for Accurate Homography Estimation. IEEE Access, 2019, 7, 109460-109473.	2.6	11
3553	Simplified Regional Prediction Model of Long-Term Trend for Critical Frequency of Ionospheric F2 Region over East Asia. Applied Sciences (Switzerland), 2019, 9, 3219.	1.3	11
3554	Cell Nanomechanics Based on Dielectric Elastomer Actuator Device. Nano-Micro Letters, 2019, 11, 98.	14.4	13
3556	Mechanical Interaction between Cells Facilitates Molecular Transport. Advanced Biology, 2019, 3, e1900192.	3.0	16
3557	A Short Peptide Hydrogel with High Stiffness Induced by 3 ₁₀ â∈Helices to βâ∈Sheet Transition in Water. Advanced Science, 2019, 6, 1901173.	5.6	36
3558	Migration regulates cellular mechanical states. Molecular Biology of the Cell, 2019, 30, 3104-3111.	0.9	14
3559	Bioactuators based on stimulus-responsive hydrogels and their emerging biomedical applications. NPG Asia Materials, $2019,11,\ldots$	3.8	202
3560	Matrix Mechanics as Regulatory Factors and Therapeutic Targets in Hepatic Fibrosis. International Journal of Biological Sciences, 2019, 15, 2509-2521.	2.6	29
3561	A Critical Review of Microelectrode Arrays and Strategies for Improving Neural Interfaces. Advanced Healthcare Materials, 2019, 8, e1900558.	3.9	58

#	Article	IF	Citations
3562	Efficient and Stable FASnI ₃ Perovskite Solar Cells with Effective Interface Modulation by Lowâ€Dimensional Perovskite Layer. ChemSusChem, 2019, 12, 5007-5014.	3.6	111
3563	Not All T Cell Synapses Are Built the Same Way. Trends in Immunology, 2019, 40, 977-980.	2.9	18
3564	Effect of Adhesion and Substrate Elasticity on Neutrophil Extracellular Trap Formation. Frontiers in Immunology, 2019, 10, 2320.	2.2	35
3565	The Physical and Chemical Properties of Soil Crust in Straw Checkerboards with Different Ages in the Mu Us Sandland, Northern China. Sustainability, 2019, 11, 4755.	1.6	7
3566	Synthetic 3D PEG-Anisogel Tailored with Fibronectin Fragments Induce Aligned Nerve Extension. Biomacromolecules, 2019, 20, 4075-4087.	2.6	38
3567	Emergent membrane morphologies in relaxed and tense membranes in presence of reversible adhesive pinning interactions. Physical Biology, 2019, 16, 066011.	0.8	10
3568	Quantifying the Local Mechanical Properties of Cells in a Fibrous Three-Dimensional Microenvironment. Biophysical Journal, 2019, 117, 817-828.	0.2	8
3569	Cell cycle progression in confining microenvironments is regulated by a growth-responsive TRPV4-PI3K/Akt-p27 ^{Kip1} signaling axis. Science Advances, 2019, 5, eaaw6171.	4.7	107
3570	Brown Adipocyte and Splenocyte Co-Culture Maintains Regulatory T Cell Subset in Intermittent Hypobaric Conditions. Tissue Engineering and Regenerative Medicine, 2019, 16, 539-548.	1.6	1
3571	Molecular and Clinical Insights into the Invasive Capacity of Glioblastoma Cells. Journal of Oncology, 2019, 2-16.	0.6	46
3573	Roadmap to Local Tumour Growth: Insights from Cervical Cancer. Scientific Reports, 2019, 9, 12768.	1.6	8
3574	Targeting Mechanoresponsive Proteins in Pancreatic Cancer: 4-Hydroxyacetophenone Blocks Dissemination and Invasion by Activating MYH14. Cancer Research, 2019, 79, 4665-4678.	0.4	44
3575	The role of anthrax toxin protein receptor 1 as a new mechanosensor molecule and its mechanotransduction in BMSCs under hydrostatic pressure. Scientific Reports, 2019, 9, 12642.	1.6	20
3576	Tumor Cell Mechanosensing During Incorporation into the Brain Microvascular Endothelium. Cellular and Molecular Bioengineering, 2019, 12, 455-480.	1.0	13
3577	The Role of the Optical Stretcher Is Crucial in the Investigation of Cell Mechanics Regulating Cell Adhesion and Motility. Frontiers in Cell and Developmental Biology, 2019, 7, 184.	1.8	36
3578	Nuclear decoupling is part of a rapid protein-level cellular response to high-intensity mechanical loading. Nature Communications, 2019, 10, 4149.	5.8	58
3579	Heterogeneity in The Mechanical Properties of Integrins Determines Mechanotransduction Dynamics in Bone Osteoblasts. Scientific Reports, 2019, 9, 13113.	1.6	16
3580	Employing PEG crosslinkers to optimize cell viability in gel phase bioinks and tailor post printing mechanical properties. Acta Biomaterialia, 2019, 99, 121-132.	4.1	35

#	Article	IF	Citations
3581	Registry Kinetics of Myosin Motor Stacks Driven by Mechanical Force-Induced Actin Turnover. Biophysical Journal, 2019, 117, 856-866.	0.2	6
3582	Incorporation of a silicon-based polymer to PEG-DA templated hydrogel scaffolds for bioactivity and osteoinductivity. Acta Biomaterialia, 2019, 99, 100-109.	4.1	24
3583	High-Throughput Cell Motility Studies on Surface-Bound Protein Nanoparticles with Diverse Structural and Compositional Characteristics. ACS Biomaterials Science and Engineering, 2019, 5, 5470-5480.	2.6	7
3584	Biomechanical studies on biomaterial degradation and co-cultured cells: mechanisms, potential applications, challenges and prospects. Journal of Materials Chemistry B, 2019, 7, 7439-7459.	2.9	33
3585	Longer collagen fibers trigger multicellular streaming on soft substrates via enhanced forces and cell-cell cooperation. Journal of Cell Science, 2019, 132, .	1.2	13
3586	Versatile and High-throughput Force Measurement Platform for Dorsal Cell Mechanics. Scientific Reports, 2019, 9, 13286.	1.6	8
3587	Leveraging Biomaterial Mechanics to Improve Pluripotent Stem Cell Applications for Tissue Engineering. Frontiers in Bioengineering and Biotechnology, 2019, 7, 260.	2.0	19
3588	Biophysical Principles of Ion-Channel-Mediated Mechanosensory Transduction. Cell Reports, 2019, 29, 1-12.	2.9	154
3589	Quantitative screening of the effects of hyper-osmotic stress on cancer cells cultured in 2- or 3-dimensional settings. Scientific Reports, 2019, 9, 13782.	1.6	23
3590	Effect of Hierarchical Scaffold Consisting of Aligned dECM Nanofibers and Poly(lactide- <i>co</i> -glycolide) Struts on the Orientation and Maturation of Human Muscle Progenitor Cells. ACS Applied Materials & Samp; Interfaces, 2019, 11, 39449-39458.	4.0	46
3591	Biomolecule-Conjugated Macroporous Hydrogels for Biomedical Applications. ACS Biomaterials Science and Engineering, 2019, 5, 6320-6341.	2.6	33
3592	Effect of oblique polymer pillars on spreading and elongation of rat mesenchymal stem cells. Colloids and Surfaces B: Biointerfaces, 2019, 183, 110485.	2.5	0
3593	Guided assembly, nanostructuring and functionalization with brushes of microscale polymer cubes for tailored 3-D cell microenvironments. European Polymer Journal, 2019, 113, 47-51.	2.6	7
3594	Second harmonic generation microscopy of collagen organization in tunable, environmentally responsive alginate hydrogels. Biomaterials Science, 2019, 7, 1188-1199.	2.6	18
3595	Multifactorial bottomâ€up bioengineering approaches for the development of living tissue substitutes. FASEB Journal, 2019, 33, 5741-5754.	0.2	26
3596	Hyaluronic Acid: Incorporating the Bio into the Material. ACS Biomaterials Science and Engineering, 2019, 5, 3753-3765.	2.6	103
3597	Polyelectrolyte multilayers of poly (I-lysine) and hyaluronic acid on nanostructured surfaces affect stem cell response. Nanoscale, 2019, 11, 2878-2891.	2.8	21
3598	Durotaxis by Human Cancer Cells. Biophysical Journal, 2019, 116, 670-683.	0.2	139

#	ARTICLE	IF	CITATIONS
3599	Latest Progress in Electrospun Nanofibers for Wound Healing Applications. ACS Applied Bio Materials, 2019, 2, 952-969.	2.3	258
3600	Complex Tuning of Physical Properties of Hyperbranched Polyglycerolâ€Based Bioink for Microfabrication of Cellâ€Laden Hydrogels. Advanced Functional Materials, 2019, 29, 1808750.	7.8	29
3601	Conductive electrospun scaffolds with electrical stimulation for neural differentiation of conjunctiva mesenchymal stem cells. Artificial Organs, 2019, 43, 780-790.	1.0	34
3602	Quantitative phase imaging reveals matrix stiffness-dependent growth and migration of cancer cells. Scientific Reports, 2019, 9, 248.	1.6	44
3603	Photoâ€Crosslinked Elastomeric Bimodal Poly(trimethylene carbonate) Networks. Macromolecular Materials and Engineering, 2019, 304, 1800623.	1.7	12
3604	Mammalian cell viability on hydrophobic and superhydrophobic fabrics. Materials Science and Engineering C, 2019, 99, 241-247.	3.8	25
3605	Atomic force microscopy-indentation demonstrates that alginate beads are mechanically stable under cell culture conditions. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 93, 61-69.	1.5	18
3606	Poly(ethylene glycol)-crosslinked gelatin hydrogel substrates with conjugated bioactive peptides influence endothelial cell behavior. Biomaterials, 2019, 201, 99-112.	5.7	47
3607	Biomechanical Microenvironment Regulates Fusogenicity of Breast Cancer Cells. ACS Biomaterials Science and Engineering, 2019, 5, 3817-3827.	2.6	13
3608	Human Skeletal Muscle Cells on Engineered 3D Platform Express Key Growth and Developmental Proteins. ACS Biomaterials Science and Engineering, 2019, 5, 970-976.	2.6	3
3609	Modulus of Fibrous Collagen at the Length Scale of a Cell. Experimental Mechanics, 2019, 59, 1323-1334.	1.1	19
3610	Translational mechanobiology: Designing synthetic hydrogel matrices for improved in vitro models and cell-based therapies. Acta Biomaterialia, 2019, 94, 97-111.	4.1	38
3611	Facile tuning of the mechanical properties of a biocompatible soft material. Scientific Reports, 2019, 9, 7125.	1.6	4
3612	Fiber Density Modulates Cell Spreading in 3D Interstitial Matrix Mimetics. ACS Biomaterials Science and Engineering, 2019, 5, 2965-2975.	2.6	64
3613	Stiff Substrates Enhance Endothelial Oxidative Stress in Response to Protein Kinase C Activation. Applied Bionics and Biomechanics, 2019, 2019, 1-14.	0.5	8
3614	Regulation of nuclear architecture, mechanics, and nucleocytoplasmic shuttling of epigenetic factors by cell geometric constraints. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13200-13209.	3.3	166
3615	Optimization of 3D bioprinting of human neuroblastoma cells using sodium alginate hydrogel. Bioprinting, 2019, 16, e00053.	2.9	44
3616	Image-based Characterization of 3D Collagen Networks and the Effect of Embedded Cells. Microscopy and Microanalysis, 2019, 25, 971-981.	0.2	14

#	Article	IF	Citations
3617	High resolution bioprinting of multi-component hydrogels. Biofabrication, 2019, 11, 045008.	3.7	42
3618	A model of guided cell self-organization for rapid and spontaneous formation of functional vessels. Science Advances, 2019, 5, eaau6562.	4.7	61
3619	Regeneration of Dermis: Scarring and Cells Involved. Cells, 2019, 8, 607.	1.8	164
3620	The role of scaffolds in tissue engineering. , 2019, , 23-49.		10
3621	Scaffold for bone tissue engineering. , 2019, , 189-209.		14
3622	Scaffolds for bridging sciatic nerve gaps. , 2019, , 67-93.		3
3623	Impacts of cross-linker chain length on the physical properties of polyampholyte hydrogels. Biointerphases, 2019, 14, 031002.	0.6	10
3624	The consequence of substrates of large-scale rigidity on actin network tension in adherent cells. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 1073-1082.	0.9	3
3625	Argon plasma-treated fluorinated ethylene propylene: Growth of primary dermal fibroblasts and mesenchymal stem cells. Tissue and Cell, 2019, 58, 121-129.	1.0	7
3627	Positive impact of dynamic seeding of mesenchymal stem cells on bone-like biodegradable scaffolds with increased content of calcium phosphate nanoparticles. Molecular Biology Reports, 2019, 46, 4483-4500.	1.0	7
3628	Microfluidic Shear Assay to Distinguish between Bacterial Adhesion and Attachment Strength on Stiffness-Tunable Silicone Substrates. Langmuir, 2019, 35, 8840-8849.	1.6	25
3629	Micropatterned substrates with physiological stiffness promote cell maturation and Pompe disease phenotype in human induced pluripotent stem cellâ€derived skeletal myocytes. Biotechnology and Bioengineering, 2019, 116, 2377-2392.	1.7	30
3630	Interplay Between LOX Enzymes and Integrins in the Tumor Microenvironment. Cancers, 2019, 11, 729.	1.7	50
3631	Decellularized extracellular matrix hydrogels—cell behavior as a function of matrix stiffness. Current Opinion in Biomedical Engineering, 2019, 10, 123-133.	1.8	18
3632	Superhydrophobicity: advanced biological and biomedical applications. Biomaterials Science, 2019, 7, 3110-3137.	2.6	81
3633	Tissue Engineering for Clean Meat Production. Frontiers in Sustainable Food Systems, 2019, 3, .	1.8	142
3634	Diversity of collective migration patterns of invasive breast cancer cells emerging during microtrack invasion. Physical Review E, 2019, 99, 062403.	0.8	7
3635	Water-induced surface reorganization of bioscaffolds composed of an amphiphilic hyperbranched polymer. Polymer Journal, 2019, 51, 1045-1053.	1.3	9

#	Article	IF	CITATIONS
3636	Adsorption of Fibrinogen and Fibronectin on Elastomeric Poly(butylene succinate) Copolyesters. Langmuir, 2019, 35, 8850-8859.	1.6	12
3637	Quasi-3D morphology and modulation of focal adhesions of human adult stem cells through combinatorial concave elastomeric surfaces with varied stiffness. Soft Matter, 2019, 15, 5154-5162.	1.2	4
3638	From macroscopic mechanics to cell-effective stiffness within highly aligned macroporous collagen scaffolds. Materials Science and Engineering C, 2019, 103, 109760.	3.8	10
3639	Mechanotransduction and Growth Factor Signaling in Hydrogel-Based Microenvironments. , 2019, , 87-87.		1
3640	Mechanics and Actomyosin-Dependent Survival/Chemoresistance of Suspended Tumor Cells in Shear Flow. Biophysical Journal, 2019, 116, 1803-1814.	0.2	53
3641	Plasma Polymer Coatings To Direct the Differentiation of Mouse Kidney-Derived Stem Cells into Podocyte and Proximal Tubule-like Cells. ACS Biomaterials Science and Engineering, 2019, 5, 2834-2845.	2.6	4
3642	Elevated BMP and Mechanical Signaling Through YAP1/RhoA Poises FOP Mesenchymal Progenitors for Osteogenesis. Journal of Bone and Mineral Research, 2019, 34, 1894-1909.	3.1	29
3643	Observations of Membrane Domain Reorganization in Mechanically Compressed Artificial Cells. ChemBioChem, 2019, 20, 2666-2673.	1.3	9
3644	PMMA-CNT-HAp nanocomposites optimized for 3D-printing applications. Materials Research Express, 2019, 6, 085405.	0.8	15
3645	Mechanically robust photodegradable gelatin hydrogels for 3D cell culture and <i>in situ</i> mechanical modification. Polymer Chemistry, 2019, 10, 3180-3193.	1.9	25
3646	Tunable and Reversible Substrate Stiffness Reveals a Dynamic Mechanosensitivity of Cardiomyocytes. ACS Applied Materials & Dynamic Mechanosensitivity of Cardiomyocytes.	4.0	58
3647	"Microgravity―as a unique and useful stem cell culture environment for cell-based therapy. Regenerative Therapy, 2019, 12, 2-5.	1.4	22
3648	Fibrinogenâ€Based Hydrogel Modulus and Ligand Density Effects on Cell Morphogenesis in Twoâ€Dimensional and Threeâ€Dimensional Cell Cultures. Advanced Healthcare Materials, 2019, 8, 1801436.	3.9	16
3649	Asymmetric multifunctional 3D cell microenvironments by capillary force assembly. Journal of Materials Chemistry B, 2019, 7, 3560-3568.	2.9	4
3650	Cell Mechanosensing. Resonance, 2019, 24, 289-296.	0.2	2
3651	Carbon nanotube-based materialsâ€"Preparation, biocompatibility, and applications in dentistry. , 2019, , 41-76.		4
3652	3D Print Technology for Cell Culturing. , 2019, , 83-114.		1
3653	Graphene nanomaterials for regulating stem cell fate in neurogenesis and their biocompatibility. Current Opinion in Biomedical Engineering, 2019, 10, 69-78.	1.8	12

#	Article	IF	CITATIONS
3654	Exploring the cell–protein–mineral interfaces: Interplay of silica (nano)rods@collagen biocomposites with human dermal fibroblasts. Materials Today Bio, 2019, 1, 100004.	2.6	7
3655	The Influence of Polymer Processing Methods on Polymer Film Physical Properties and Vascular Cell Responsiveness. ACS Applied Bio Materials, 2019, 2, 3234-3244.	2.3	4
3656	Chitosan-Gelatin-Polypyrrole Cryogel Matrix for Stem Cell Differentiation into Neural Lineage and Sciatic Nerve Regeneration in Peripheral Nerve Injury Model. ACS Biomaterials Science and Engineering, 2019, 5, 3007-3021.	2.6	23
3657	Matrix crosslinking enhances macrophage adhesion, migration, and inflammatory activation. APL Bioengineering, 2019, 3, 016103.	3.3	58
3658	Mechanical microenvironment as a key cellular regulator in the liver. Acta Mechanica Sinica/Lixue Xuebao, 2019, 35, 289-298.	1.5	10
3659	Beyond Linear Elastic Modulus: Viscoelastic Models for Brain and Brain Mimetic Hydrogels. ACS Biomaterials Science and Engineering, 2019, 5, 3964-3973.	2.6	19
3660	Influence of surface topography attributes on settlement and adhesion of natural and synthetic species. Soft Matter, 2019, 15, 4045-4067.	1.2	39
3661	Sensitivity analysis for the mechanics of tendons and ligaments: Investigation on the effects of collagen structural properties via a multiscale modeling approach. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3209.	1.0	24
3662	Nano design of extracellular matrix for tissue engineering. , 2019, , 547-583.		0
3663	Anti-fibrotic Effects of Cardiac Progenitor Cells in a 3D-Model of Human Cardiac Fibrosis. Frontiers in Cardiovascular Medicine, 2019, 6, 52.	1.1	27
3664	Identification of Filamin A Mechanobinding Partner I: Smoothelin Specifically Interacts with the Filamin A Mechanosensitive Domain 21. Biochemistry, 2019, 58, 4726-4736.	1.2	17
3665	Artificial cell membrane binding thrombin constructs drive in situ fibrin hydrogel formation. Nature Communications, 2019, 10, 1887.	5.8	30
3666	Deformation behavior of porous PHBV scaffold in compression: A finite element analysis study. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 96, 1-8.	1.5	14
3667	Hyaluronate-alginate hybrid hydrogels prepared with various linkers for chondrocyte encapsulation. Carbohydrate Polymers, 2019, 218, 1-7.	5.1	22
3668	Rapidly Assembling Pentapeptides for Injectable Delivery (RAPID) Hydrogels as Cytoprotective Cell Carriers. ACS Biomaterials Science and Engineering, 2019, 5, 2117-2121.	2.6	25
3669	Programmable microscale stiffness pattern of flat polymeric substrates by temperature-memory technology. MRS Communications, 2019, 9, 181-188.	0.8	2
3670	Spatial–Temporal Changes of Mechanical Microenvironment in Skin Wounds During Negative Pressure Wound Therapy. ACS Biomaterials Science and Engineering, 2019, 5, 1762-1770.	2.6	10
3671	Substrate mechanics controls adipogenesis through YAP phosphorylation by dictating cell spreading. Biomaterials, 2019, 205, 64-80.	5.7	72

#	Article	IF	CITATIONS
3672	Design of biomimetic collagen matrices by reagent-free electron beam induced crosslinking: Structure-property relationships and cellular response. Materials and Design, 2019, 168, 107606.	3.3	40
3673	Tuning surface functionalization and collagen gel thickness to regulate cancer cell migration. Colloids and Surfaces B: Biointerfaces, 2019, 179, 37-47.	2.5	5
3674	Nanotopography-based engineering of retroviral DNA integration patterns. Nanoscale, 2019, 11, 5693-5704.	2.8	3
3675	The Use of Pluripotent Stem Cell-Derived Organoids to Study Extracellular Matrix Development during Neural Degeneration. Cells, 2019, 8, 242.	1.8	14
3676	A New Player in Tissue Mechanics: MicroRNA Control of Mechanical Homeostasis. Developmental Cell, 2019, 48, 596-598.	3.1	3
3677	Laser printing-enabled direct creation of cellular heterogeneity in lab-on-a-chip devices. Lab on A Chip, 2019, 19, 1644-1656.	3.1	17
3678	Strong triaxial coupling and anomalous Poisson effect in collagen networks. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6790-6799.	3.3	72
3679	Regulating substrate mechanics to achieve odontogenic differentiation for dental pulp stem cells on TiO2 filled and unfilled polyisoprene. Acta Biomaterialia, 2019, 89, 60-72.	4.1	17
3680	Polydispersity and negative charge are key modulators of extracellular matrix deposition under macromolecular crowding conditions. Acta Biomaterialia, 2019, 88, 197-210.	4.1	47
3681	Stimuli-Responsive, Pentapeptide, Nanofiber Hydrogel for Tissue Engineering. Journal of the American Chemical Society, 2019, 141, 4886-4899.	6.6	211
3682	Regulating Mechanotransduction in Three Dimensions using Subâ€Cellular Scale, Crosslinkable Fibers of Controlled Diameter, Stiffness, and Alignment. Advanced Functional Materials, 2019, 29, 1808967.	7.8	23
3683	Dronpa: A Light-Switchable Fluorescent Protein for Opto-Biomechanics. Nano Letters, 2019, 19, 3176-3181.	4.5	25
3684	Poly(alkyl glycidyl ether) hydrogels for harnessing the bioactivity of engineered microbes. Faraday Discussions, 2019, 219, 58-72.	1.6	8
3685	Can tissue engineering produce bioartificial organs for transplantation?. Artificial Organs, 2019, 43, 536-541.	1.0	5
3686	Chitosan-based composite bilayer scaffold as an in vitro osteochondral defect regeneration model. Biomedical Microdevices, 2019, 21, 34.	1.4	40
3687	The Role of CLP36 in Pancreatic Cancer Cells during Migration and in Cell Shape Morphology. Biophysical Journal, 2019, 116, 547a.	0.2	0
3688	Effect of chain flexibility on cell adhesion: Semi-flexible model-based analysis of cell adhesion to hydrogels. Scientific Reports, 2019, 9, 2463.	1.6	19
3689	Photoelasticity-based evaluation of cellular contractile force for phenotypic discrimination of vascular smooth muscle cells. Scientific Reports, 2019, 9, 3960.	1.6	14

#	Article	IF	CITATIONS
3690	Biphasic mechanosensitivity of T cell receptor-mediated spreading of lymphocytes. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5908-5913.	3.3	55
3691	Diffusive–stochastic–viscoelastic model for specific adhesion of viscoelastic solids via molecular bonds. Acta Mechanica Sinica/Lixue Xuebao, 2019, 35, 343-354.	1.5	4
3692	Biophysical regulation of macrophages in health and disease. Journal of Leukocyte Biology, 2019, 106, 283-299.	1.5	79
3693	Randomly Distributed K14+ Breast Tumor Cells Polarize to the Leading Edge and Guide Collective Migration in Response to Chemical and Mechanical Environmental Cues. Cancer Research, 2019, 79, 1899-1912.	0.4	43
3694	Evaluation of the elastic Young's modulus and cytotoxicity variations in fibroblasts exposed to carbon-based nanomaterials. Journal of Nanobiotechnology, 2019, 17, 32.	4.2	31
3695	The Contribution of Magnetic Nanoparticles to Ferrogel Biophysical Properties. Nanomaterials, 2019, 9, 232.	1.9	30
3696	Myosin II governs intracellular pressure and traction by distinct tropomyosin-dependent mechanisms. Molecular Biology of the Cell, 2019, 30, 1170-1181.	0.9	27
3697	Mechanosensing and Mechanoregulation of Endothelial Cell Functions. , 2019, 9, 873-904.		115
3698	Overlooked? Underestimated? Effects of Substrate Curvature on Cell Behavior. Trends in Biotechnology, 2019, 37, 838-854.	4.9	107
3699	Cellular and Sub-Cellular Mechanics: Measurement of Material Properties. , 2019, , 227-244.		2
3700	Morphological and mechanical stability of bladder cancer cells in response to substrate rigidity. Biochimica Et Biophysica Acta - General Subjects, 2019, 1863, 1006-1014.	1.1	24
3701	Mechanical Force Induces Phosphorylation-Mediated Signaling that Underlies Tissue Response and Robustness in Xenopus Embryos. Cell Systems, 2019, 8, 226-241.e7.	2.9	18
3702	Engineered Fibrous Networks To Investigate the Influence of Fiber Mechanics on Myofibroblast Differentiation. ACS Biomaterials Science and Engineering, 2019, 5, 3899-3908.	2.6	42
3703	Scalable Highâ€Throughput Production of Modular Microgels for In Situ Assembly of Microporous Tissue Scaffolds. Advanced Functional Materials, 2019, 29, 1900071.	7.8	122
3704	Numerical analysis of mesenchymal stem cell mechanotransduction dynamics reveals homoclinic bifurcations. International Journal of Non-Linear Mechanics, 2019, 113, 146-157.	1.4	0
3705	The TRPV4-TAZ Mechanotransduction Signaling Axis in Matrix Stiffness- and $TGF\hat{l}^21$ -Induced Epithelial-Mesenchymal Transition. Cellular and Molecular Bioengineering, 2019, 12, 139-152.	1.0	27
3706	Photo-induced viscoelasticity in cytocompatible hydrogel substrates. New Journal of Physics, 2019, 21, 045004.	1.2	24
3707	Immobilized Transforming Growth Factor-Beta 1 in a Stiffness-Tunable Artificial Extracellular Matrix Enhances Mechanotransduction in the Epithelial Mesenchymal Transition of Hepatocellular Carcinoma. ACS Applied Materials & Samp; Interfaces, 2019, 11, 14660-14671.	4.0	17

#	Article	IF	CITATIONS
3708	Construction of Cell–Extracellular Matrix Microenvironments by Conjugating ECM Proteins on Supported Lipid Bilayers. Frontiers in Materials, 2019, 6, .	1.2	9
3709	Activating a Reserve Neural Stem Cell Population InÂVitro Enables Engraftment and Multipotency after Transplantation. Stem Cell Reports, 2019, 12, 680-695.	2.3	29
3710	Coupling tumor growth and bio distribution models. Biomedical Microdevices, 2019, 21, 33.	1.4	13
3711	Polysaccharide-Based Hybrid Self-Healing Hydrogel Supports the Paracrine Response of Mesenchymal Stem Cells. ACS Applied Bio Materials, 2019, 2, 2013-2027.	2.3	35
3712	Electrospun Nanometer to Micrometer Scale Biomimetic Synthetic Membrane Scaffolds in Drug Delivery and Tissue Engineering: A Review. Applied Sciences (Switzerland), 2019, 9, 910.	1.3	7
3713	Thermoresponsive Stiffness Softening of Hierarchically Porous Nanohybrid Membranes Promotes Niches for Mesenchymal Stem Cell Differentiation. Advanced Healthcare Materials, 2019, 8, e1801556.	3.9	12
3714	Bacterial mechanosensing: the force will be with you, always. Journal of Cell Science, 2019, 132, .	1.2	67
3715	Dynamic protein hydrogels with reversibly tunable stiffness regulate human lung fibroblast spreading reversibly. Chemical Communications, 2019, 55, 5235-5238.	2.2	33
3717	Atomic force microscopy-based cancer diagnosis by detecting cancer-specific biomolecules and cells. Biochimica Et Biophysica Acta: Reviews on Cancer, 2019, 1871, 367-378.	3.3	30
3718	Hydrogels with enhanced protein conjugation efficiency reveal stiffness-induced YAP localization in stem cells depends on biochemical cues. Biomaterials, 2019, 202, 26-34.	5.7	59
3719	Peptideâ€modified bone repair materials: Factors influencing osteogenic activity. Journal of Biomedical Materials Research - Part A, 2019, 107, 1491-1512.	2.1	23
3720	Tendon Tissue Engineering: Effects of Mechanical and Biochemical Stimulation on Stem Cell Alignment on Cellâ€Laden Hydrogel Yarns. Advanced Healthcare Materials, 2019, 8, e1801218.	3.9	84
3721	Varying PEG density to control stress relaxation in alginate-PEG hydrogels for 3D cell culture studies. Biomaterials, 2019, 200, 15-24.	5.7	172
3722	Novel inverse finite-element formulation for reconstruction of relative local stiffness in heterogeneous extra-cellular matrix and traction forces on active cells. Physical Biology, 2019, 16, 036002.	0.8	9
3723	Signal Transduction across the Nuclear Envelope: Role of the LINC Complex in Bidirectional Signaling. Cells, 2019, 8, 124.	1.8	41
3724	Universal Kinetics of the Onset of Cell Spreading on Substrates of Different Stiffness. Biophysical Journal, 2019, 116, 551-559.	0.2	16
3725	Biomaterials used in stem cell therapy for spinal cord injury. Progress in Materials Science, 2019, 103, 374-424.	16.0	43
3726	Cytoskeletal stiffening in synthetic hydrogels. Nature Communications, 2019, 10, 609.	5.8	63

#	Article	IF	CITATIONS
3727	Aligned topography mediated cell elongation reverses pathological phenotype of <scp><i>iin vitro</i></scp> cultured keloid fibroblasts. Journal of Biomedical Materials Research - Part A, 2019, 107, 1366-1378.	2.1	6
3728	Fibronectin fiber creep under constant force loading. Acta Biomaterialia, 2019, 88, 78-85.	4.1	5
3729	The ABC Guide to Fluorescent Toolsets for the Development of Future Biomaterials. Frontiers in Bioengineering and Biotechnology, 2019, 7, 5.	2.0	1
3730	Layer-by-layer assembly as a robust method to construct extracellular matrix mimic surfaces to modulate cell behavior. Progress in Polymer Science, 2019, 92, 1-34.	11.8	54
3731	3D Printing of Silk Fibroin for Biomedical Applications. Materials, 2019, 12, 504.	1.3	81
3732	Injectable hierarchical micro/nanofibrous collagen-based scaffolds. Chemical Engineering Journal, 2019, 365, 220-230.	6.6	19
3733	MicroRNA-dependent regulation of biomechanical genes establishes tissue stiffness homeostasis. Nature Cell Biology, 2019, 21, 348-358.	4.6	44
3734	Regenerated Antheraea pernyi Silk Fibroin/Poly(N-isopropylacrylamide) Thermosensitive Composite Hydrogel with Improved Mechanical Strength. Polymers, 2019, 11, 302.	2.0	15
3735	Nonlinear scaling effects in the stiffness of soft cellular structures. Royal Society Open Science, 2019, 6, 181361.	1.1	5
3736	Gasâ€Shearing Fabrication of Multicompartmental Microspheres: A Oneâ€Step and Oilâ€Free Approach. Advanced Science, 2019, 6, 1802342.	5 . 6	87
3737	A conductive cellâ€imprinted substrate based on CNT–PDMS composite. Biotechnology and Applied Biochemistry, 2019, 66, 445-453.	1.4	2
3738	Material stiffness influences the polarization state, function and migration mode of macrophages. Acta Biomaterialia, 2019, 89, 47-59.	4.1	245
3739	A Biocompatible, Biodegradable, and Functionalizable Copolyester and Its Application in Water-Responsive Shape Memory Scaffold. ACS Biomaterials Science and Engineering, 2019, 5, 1668-1676.	2.6	26
3740	A novel technique for <i>iin situ</i> uniaxial tests of self-assembled soft biomaterials. Lab on A Chip, 2019, 19, 1153-1161.	3.1	10
3741	Identification of a mechanogenetic link between substrate stiffness and chemotherapeutic response in breast cancer. Biomaterials, 2019, 202, 1-11.	5.7	50
3742	Real time remodeling of cellular morphology using optical imprinting of cell-culture substrates. Biomedical Physics and Engineering Express, 2019, 5, 035029.	0.6	6
3743	Electroconductive materials as biomimetic platforms for tissue regeneration. Biotechnology Advances, 2019, 37, 444-458.	6.0	32
3744	Physiochemical and morphological dependent growth of NIH/3T3 and PC-12 on polyaniline-chloride/chitosan bionanocomposites. Materials Science and Engineering C, 2019, 99, 1304-1312.	3.8	22

#	Article	IF	Citations
3745	Multi-modal characterization of polymeric gels to determine the influence of testing method on observed elastic modulus. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 92, 152-161.	1.5	14
3746	Latest Advances in Cryogel Technology for Biomedical Applications. Advanced Therapeutics, 2019, 2, 1800114.	1.6	187
3747	Cell-Cell and Cell-Matrix Interactions during Axons Guidance. , 0, , .		0
3748	Reduced graphene oxide: osteogenic potential for bone tissue engineering. IET Nanobiotechnology, 2019, 13, 720-725.	1.9	31
3749	Influence of polydimethylsiloxane substrate stiffness on corneal epithelial cells. Royal Society Open Science, 2019, 6, 191796.	1,1	18
3750	Low force, high noise: Isolating indentation forces through autocorrelation analysis. Biotribology, 2019, 20, 100110.	0.9	4
3751	Fiber stiffness, pore size and adhesion control migratory phenotype of MDA-MB-231 cells in collagen gels. PLoS ONE, 2019, 14, e0225215.	1.1	30
3752	A mechanical toy model linking cell-substrate adhesion to multiple cellular migratory responses. Journal of Biological Physics, 2019, 45, 401-421.	0.7	0
3753	Effect of heterogeneity and spatial correlations on the structure of a tumor invasion front in cellular environments. Physical Review E, 2019, 100, 062409.	0.8	9
3754	Dipeptide Self-Assembled Hydrogels with Tunable Mechanical Properties and Degradability for 3D Bioprinting. ACS Applied Materials & Samp; Interfaces, 2019, 11, 46419-46426.	4.0	75
3755	Influence of substrate stiffness on human induced pluripotent stem cells: preliminary results*., 2019, 2019, 1039-1043.		1
3756	Substrate curvature induces fallopian tube epithelial cell invasion via cell–cell tension in a model of ovarian cortical inclusion cysts. Integrative Biology (United Kingdom), 2019, 11, 342-352.	0.6	12
3757	Force chains in cell–cell mechanical communication. Journal of the Royal Society Interface, 2019, 16, 20190348.	1.5	32
3758	B cell mechanosensing: A mechanistic overview. Advances in Immunology, 2019, 144, 23-63.	1.1	9
3759	Picosecond ultrasounds as elasticity probes in neuron-like cells models. Applied Physics Letters, 2019, 115, 213701.	1.5	12
3760	Forced Unfolding of Proteins Directs Biochemical Cascades. Biochemistry, 2019, 58, 4893-4902.	1.2	21
3761	Chemical unfolding of protein domains induces shape change in programmed protein hydrogels. Nature Communications, 2019, 10, 5439.	5.8	58
3762	Micro-Engineered Models of Development Using Induced Pluripotent Stem Cells. Frontiers in Bioengineering and Biotechnology, 2019, 7, 357.	2.0	8

#	Article	IF	Citations
3763	Atomic force acoustic microscopy reveals the influence of substrate stiffness and topography on cell behavior. Beilstein Journal of Nanotechnology, 2019, 10, 2329-2337.	1.5	9
3764	A Facile Method to Fabricate Anisotropic Extracellular Matrix with 3D Printing Topological Microfibers. Materials, 2019, 12, 3944.	1.3	2
3765	Solution viscosity regulates chondrocyte proliferation and phenotype during 3D culture. Journal of Materials Chemistry B, 2019, 7, 7713-7722.	2.9	32
3766	Cell-Membrane-Inspired Silicone Interfaces that Mitigate Proinflammatory Macrophage Activation and Bacterial Adhesion. Langmuir, 2019, 35, 1882-1894.	1.6	35
3767	Localised non-viral delivery of nucleic acids for nerve regeneration in injured nervous systems. Experimental Neurology, 2019, 319, 112820.	2.0	11
3768	Microfabricated kidney tissue models. , 2019, , 91-120.		1
3769	Microfluidic devices for disease modeling in muscle tissue. Biomaterials, 2019, 198, 250-258.	5.7	15
3770	Directly observing alterations of morphology and mechanical properties of living cancer cells with atomic force microscopy. Talanta, 2019, 191, 461-468.	2.9	23
3771	A Self-Healing, All-Organic, Conducting, Composite Peptide Hydrogel as Pressure Sensor and Electrogenic Cell Soft Substrate. ACS Nano, 2019, 13, 163-175.	7.3	149
3772	Controlled dissolution of freeform 3D printed carbohydrate glass scaffolds in hydrogels using a hydrophobic spray coating. Additive Manufacturing, 2019, 26, 193-201.	1.7	9
3773	Direct stimulation of cellular immune response via TLR2 signaling triggered by contact with hybrid glyco-biointerfaces composed of chitohexaose and cellohexaose. Colloids and Surfaces B: Biointerfaces, 2019, 175, 517-522.	2.5	5
3774	In vitro biocompatibility study of a water-rinsed biomimetic silk porous scaffold with olfactory ensheathing cells. International Journal of Biological Macromolecules, 2019, 125, 526-533.	3.6	8
3775	Equilibrium unzipping at finite temperature. Archive of Applied Mechanics, 2019, 89, 535-544.	1.2	5
3776	Integration of hyper-compliant microparticles into a 3D melanoma tumor model. Journal of Biomechanics, 2019, 82, 46-53.	0.9	5
3777	Origin of efficiency enhancement in cell capture on nanostructured arrays. Journal of Materials Science, 2019, 54, 4236-4245.	1.7	7
3778	Human dermal fibroblast proliferation controlled by surface roughness of two-component nanostructured latex polymer coatings. Colloids and Surfaces B: Biointerfaces, 2019, 174, 136-144.	2.5	19
3779	Structural and bone marrow stem cell biocompatibility studies of hydrogel synthesized via chemo-enzymatic route. Journal of Biomaterials Applications, 2019, 33, 854-865.	1.2	1
3780	In Situ Investigation of Interrelationships Between Morphology and Biomechanics of Endothelial and Glial Cells and their Nuclei. Advanced Science, 2019, 6, 1801638.	5.6	18

#	Article	IF	CITATIONS
3781	<scp>TRPV</scp> 4 regulates matrix stiffness and <scp>TGF</scp> β1â€induced epithelialâ€mesenchymal transition. Journal of Cellular and Molecular Medicine, 2019, 23, 761-774.	1.6	72
3782	One-pot synthesis of silane-modified hyaluronic acid hydrogels for effective antibacterial drug delivery via sol–gel stabilization. Colloids and Surfaces B: Biointerfaces, 2019, 174, 308-315.	2.5	30
3783	Cytocompatible carbon nanotube reinforced polyethylene glycol composite hydrogels for tissue engineering. Materials Science and Engineering C, 2019, 98, 1133-1144.	3.8	41
3784	Differential Modulation of Platelet Adhesion and Spreading by Adhesive Ligand Density. Nano Letters, 2019, 19, 1418-1427.	4.5	23
3785	Precisely controllable hybrid graphene scaffold reveals size effects on differentiation of neural progenitor cells in mimicking neural network. Carbon, 2019, 145, 90-99.	5.4	14
3786	Epithelial cells exert differential traction stress in response to substrate stiffness. Experimental Eye Research, 2019, 181, 25-37.	1.2	17
3787	Modulation of Mesenchymal Stem Cells Mechanosensing at Fluid Interfaces by Tailored Selfâ€Assembled Protein Monolayers. Small, 2019, 15, e1804640.	5.2	58
3788	Tissue cell differentiation and multicellular evolution via cytoskeletal stiffening in mechanically stressed microenvironments. Acta Mechanica Sinica/Lixue Xuebao, 2019, 35, 270-274.	1.5	18
3789	Threeâ€dimensional spherical gelatin bubbleâ€based scaffold improves the myotube formation of H9c2 myoblasts. Biotechnology and Bioengineering, 2019, 116, 1190-1200.	1.7	13
3790	Decellularized caprine liver-derived biomimetic and pro-angiogenic scaffolds for liver tissue engineering. Materials Science and Engineering C, 2019, 98, 939-948.	3.8	40
3791	Design of moldable hydrogels for biomedical applications using dynamic covalent boronic esters. Materials Today Chemistry, 2019, 12, 16-33.	1.7	134
3792	3D mapping of native extracellular matrix reveals cellular responses to the microenvironment. Journal of Structural Biology: X, 2019, 1, 100002.	0.7	19
3793	Gelatin-Based Matrices as a Tunable Platform To Study in Vitro and in Vivo 3D Cell Invasion. ACS Applied Bio Materials, 2019, 2, 916-929.	2.3	14
3794	3D Hydrogels Containing Interconnected Microchannels of Subcellular Size for Capturing Human Pathogenic <i>Acanthamoeba Castellanii</i> Lacs Biomaterials Science and Engineering, 2019, 5, 1784-1792.	2.6	19
3795	Dispersible hydrogel force sensors reveal patterns of solid mechanical stress in multicellular spheroid cultures. Nature Communications, 2019, 10, 144.	5.8	83
3796	Biomimetic Designer Scaffolds Made of D,L-Lactide-É>-Caprolactone Polymers by 2-Photon Polymerization. Tissue Engineering - Part B: Reviews, 2019, 25, 167-186.	2.5	17
3797	Current Use of Biological Scaffolds in Plastic Surgery. Plastic and Reconstructive Surgery, 2019, 143, 209-220.	0.7	22
3798	Mechanosensing at Cellular Interfaces. Langmuir, 2019, 35, 7509-7519.	1.6	36

#	Article	IF	CITATIONS
3799	Gallol-derived ECM-mimetic adhesive bioinks exhibiting temporal shear-thinning and stabilization behavior. Acta Biomaterialia, 2019, 95, 165-175.	4.1	84
3800	Extracellular matrix: The ideal natural fibrous nanocomposite products. , 2019, , 263-286.		2
3801	Atomic force microscopy-based mechanobiology. Nature Reviews Physics, 2019, 1, 41-57.	11.9	500
3802	Matrix stiffness modulates the differentiation of neural crest stem cells in vivo. Journal of Cellular Physiology, 2019, 234, 7569-7578.	2.0	38
3803	Nano and micro biomechanical alterations of annulus fibrosus after in situ immobilization revealed by atomic force microscopy. Journal of Orthopaedic Research, 2019, 37, 232-238.	1.2	13
3804	Progressive changes of elastic moduli of arterial wall and atherosclerotic plaque components during plaque development in human coronary arteries. Medical and Biological Engineering and Computing, 2019, 57, 731-740.	1.6	27
3805	Structural, topographical, and mechanical characteristics of purified polyhydroxyoctanoate polymer. Journal of Applied Polymer Science, 2019, 136, 47192.	1.3	28
3806	Dissecting cellular mechanics: Implications for aging, cancer, and immunity. Seminars in Cell and Developmental Biology, 2019, 93, 16-25.	2.3	18
3807	Dynamic Contact Guidance of Myoblasts by Feature Size and Reversible Switching of Substrate Topography: Orchestration of Cell Shape, Orientation, and Nematic Ordering of Actin Cytoskeletons. Langmuir, 2019, 35, 7538-7551.	1.6	24
3808	Effects of Geometry on the Mechanics and Alignment of Three-Dimensional Engineered Microtissues. ACS Biomaterials Science and Engineering, 2019, 5, 3843-3855.	2.6	23
3809	Characterization of the Kinetics and Mechanism of Degradation of Human Mesenchymal Stem Cell-Laden Poly(ethylene glycol) Hydrogels. ACS Applied Bio Materials, 2019, 2, 81-92.	2.3	22
3810	Optimizing Blended Collagen-Fibrin Hydrogels for Cardiac Tissue Engineering with Human iPSC-derived Cardiomyocytes. ACS Biomaterials Science and Engineering, 2019, 5, 887-899.	2.6	90
3811	Graded Protein/PEG Nanopattern Arrays: Well-Defined Gradient Biomaterials to Induce Basic Cellular Behaviors. ACS Applied Materials & Samp; Interfaces, 2019, 11, 1595-1603.	4.0	12
3812	Endothelial Cell Mechanotransduction in the Dynamic Vascular Environment. Advanced Biology, 2019, 3, e1800252.	3.0	60
3813	Role of Substrate Stiffness in Tissue Spreading: Wetting Transition and Tissue Durotaxis. Langmuir, 2019, 35, 7571-7577.	1.6	25
3814	Electron Microscopy for 3D Scaffolds–Cell Biointerface Characterization. Advanced Biology, 2019, 3, e1800103.	3.0	21
3815	Matrices, scaffolds & Carriers for cell delivery in nerve regeneration. Experimental Neurology, 2019, 319, 112837.	2.0	50
3816	Maintenance and Culture of MSCs. , 2019, , 39-61.		4

#	Article	IF	CITATIONS
3817	Hepatocyte culture on 3D porous scaffolds of PCL/PMCL. Colloids and Surfaces B: Biointerfaces, 2019, 173, 185-193.	2.5	24
3818	Electrospun nanofibrous thermoplastic polyurethane/poly(glycerol sebacate) hybrid scaffolds for vocal fold tissue engineering applications. Materials Science and Engineering C, 2019, 94, 740-749.	3.8	64
3819	Fabrication and characterization of thiol-triacrylate polymer via Michael addition reaction for biomedical applications. Biomedical Materials (Bristol), 2019, 14, 015001.	1.7	8
3820	Tyramineâ€conjugated alginate hydrogels as a platform for bioactive scaffolds. Journal of Biomedical Materials Research - Part A, 2019, 107, 114-121.	2.1	32
3821	Cytoskeletal remodeling induced by substrate rigidity regulates rheological behaviors in endothelial cells. Journal of Biomedical Materials Research - Part A, 2019, 107, 71-80.	2.1	23
3822	Bactericidal effects of nanopatterns: A systematic review. Acta Biomaterialia, 2019, 83, 29-36.	4.1	164
3823	Advances in cellular nanoscale force detection and manipulation. Arabian Journal of Chemistry, 2019, 12, 3163-3171.	2.3	12
3824	Hydrogels for Advanced Stem Cell Therapies: A Biomimetic Materials Approach for Enhancing Natural Tissue Function. IEEE Reviews in Biomedical Engineering, 2019, 12, 333-351.	13.1	38
3825	Characterisation of a cointegrate plasmid harbouring blaNDM-1 in a clinical Salmonella Lomita strain. International Journal of Antimicrobial Agents, 2020, 55, 105817.	1.1	23
3826	Biomaterials for Personalized Cell Therapy. Advanced Materials, 2020, 32, e1902005.	11.1	76
3827	Hydrogel screening approaches for bone and cartilage tissue regeneration. Annals of the New York Academy of Sciences, 2020, 1460, 25-42.	1.8	19
3828	Microvascular engineering: Dynamic changes in microgel-entrapped vascular cells correlates with higher vasculogenic/angiogenic potential. Biomaterials, 2020, 228, 119554.	5 . 7	28
3829	Grazing simplifies soil microâ€food webs and decouples their relationships with ecosystem functions in grasslands. Global Change Biology, 2020, 26, 960-970.	4.2	70
3830	Fiber Scaffold Patterning for Mending Hearts: 3D Organization Bringing the Next Step. Advanced Healthcare Materials, 2020, 9, e1900775.	3.9	24
3831	Gels for Live Analysis of Compartmentalized Environments (GLAnCE): A tissue model to probe tumour phenotypes at tumour-stroma interfaces. Biomaterials, 2020, 228, 119572.	5 . 7	12
3832	Hydrogel-based 3D bioprinting: A comprehensive review on cell-laden hydrogels, bioink formulations, and future perspectives. Applied Materials Today, 2020, 18, 100479.	2.3	266
3833	Macromolecular dextran sulfate facilitates extracellular matrix deposition by electrostatic interaction independent from a macromolecular crowding effect. Materials Science and Engineering C, 2020, 106, 110280.	3.8	29
3834	Grayscale maskâ€assisted photochemical crosslinking for a dense collagen construct with stiffness gradient. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 1000-1009.	1.6	7

#	Article	IF	Citations
3835	Development of High-Resolution Three-Dimensional-Printed Extracellular Matrix Scaffolds and Their Compatibility with Pluripotent Stem Cells and Early Retinal Cells. Journal of Ocular Pharmacology and Therapeutics, 2020, 36, 42-55.	0.6	16
3836	Effects of Substrate Stiffness on Morphology and MMPâ€1 Gene Expression in Tenocytes Stimulated With Interleukinâ€1β. Journal of Orthopaedic Research, 2020, 38, 150-159.	1.2	8
3837	From Engineered Tissues and Microfludics to Human Eyes-On-A-Chip. Journal of Ocular Pharmacology and Therapeutics, 2020, 36, 4-6.	0.6	3
3838	Bioprinted trachea constructs with patient-matched design, mechanical and biological properties. Biofabrication, 2020, 12, 015022.	3.7	34
3839	Combined Effects of Electrical Stimulation and Protein Coatings on Myotube Formation in a Soft Porous Scaffold. Annals of Biomedical Engineering, 2020, 48, 734-746.	1.3	9
3840	Cell mechanical microenvironment for cell volume regulation. Journal of Cellular Physiology, 2020, 235, 4070-4081.	2.0	22
3841	Research on function and mechanisms of a novel small moleculeWG449E for hypertrophic scar. Journal of the European Academy of Dermatology and Venereology, 2020, 34, 608-618.	1.3	7
3842	Bioengineered microenvironment to culture early embryos. Cell Proliferation, 2020, 53, e12754.	2.4	11
3843	Modeling the life cycle of the human brain. Current Opinion in Biomedical Engineering, 2020, 15, 16-25.	1.8	13
3844	Engineering Helical Modular Polypeptide-Based Hydrogels as Synthetic Extracellular Matrices for Cell Culture. Biomacromolecules, 2020, 21, 566-580.	2.6	23
3845	Meta-biomaterials. Biomaterials Science, 2020, 8, 18-38.	2.6	90
3846	Designing multigradient biomaterials for skin regeneration. Materials Today Advances, 2020, 5, 100051.	2.5	49
3847	Opposite responses of normal hepatocytes and hepatocellular carcinoma cells to substrate viscoelasticity. Biomaterials Science, 2020, 8, 1316-1328.	2.6	44
3848	Proanthocyanidin-crosslinked collagen/konjac glucomannan hydrogel with improved mechanical properties and MRI trackable biodegradation for potential tissue engineering scaffolds. Journal of Materials Chemistry B, 2020, 8, 316-331.	2.9	20
3849	Stretching of fibroblast cells on micropatterned gelatin on silicone elastomer. Journal of Materials Chemistry B, 2020, 8, 416-425.	2.9	6
3850	Substrate curvature as a cue to guide spatiotemporal cell and tissue organization. Biomaterials, 2020, 232, 119739.	5.7	191
3851	Systematic approach to characterize the dynamics of protein adsorption on the surface of biomaterials using proteomics. Colloids and Surfaces B: Biointerfaces, 2020, 188, 110756.	2.5	28
3852	Secretome-Based Prediction of Three-Dimensional Hepatic Microtissue Physiological Relevance. ACS Biomaterials Science and Engineering, 2020, 6, 587-596.	2.6	О

#	Article	IF	CITATIONS
3853	Enhanced function of chondrocytes in a chitosanâ€based hydrogel to regenerate cartilage tissues by accelerating degradability of the hydrogel via a hydrolysable crosslinker. Journal of Applied Polymer Science, 2020, 137, 48893.	1.3	6
3854	Mechanophysical Cues in Extracellular Matrix Regulation of Cell Behavior. ChemBioChem, 2020, 21, 1254-1264.	1.3	28
3855	Synthesis and characterization of electrospun bioactive glass nanofibers-reinforced calcium sulfate bone cement and its cell biological response. Ceramics International, 2020, 46, 10029-10039.	2.3	26
3856	3D Printed Wavy Scaffolds Enhance Mesenchymal Stem Cell Osteogenesis. Micromachines, 2020, 11, 31.	1.4	25
3857	Spatiotemporal variations of contact stress between liquid-crystal films and fibroblasts Guide cell fate and skin regeneration. Colloids and Surfaces B: Biointerfaces, 2020, 188, 110745.	2.5	6
3858	Next-Generation Biomaterials for Culture and Manipulation of Stem Cells. Cold Spring Harbor Perspectives in Biology, 2020, 12, a035691.	2.3	10
3859	Organs-on-a-chip engineering. , 2020, , 47-130.		11
3860	Well Plate Integrated Topography Gradient Screening Technology for Studying Cellâ€Surface Topography Interactions. Advanced Biology, 2020, 4, e1900218.	3.0	9
3861	RGDâ€functionalized supported lipid bilayers modulate preâ€osteoblast adherence and promote osteogenic differentiation. Journal of Biomedical Materials Research - Part A, 2020, 108, 923-937.	2.1	5
3862	Tuning Ligand Density To Optimize Pharmacokinetics of Targeted Nanoparticles for Dual Protection against Tumor-Induced Bone Destruction. ACS Nano, 2020, 14, 311-327.	7.3	39
3863	Modified acellular porcine corneal matrix in deep lamellar transplantation of rabbit cornea. Journal of Biomaterials Applications, 2020, 34, 1092-1104.	1.2	6
3864	Click-cross-linked, doxorubicin-loaded hydrogels based on poly(styrene-alt-maleic anhydride). EXPRESS Polymer Letters, 2020, 14, 248-260.	1.1	4
3865	Combination Stiffness Gradient with Chemical Stimulation Directs Glioma Cell Migration on a Microfluidic Chip. Analytical Chemistry, 2020, 92, 892-898.	3.2	46
3866	Elasticity of fiber meshes from multiblock copolymers influences endothelial cell behavior. Clinical Hemorheology and Microcirculation, 2020, 74, 405-415.	0.9	5
3867	Stem Cell Mechanosensation on Gelatin Methacryloyl (GelMA) Stiffness Gradient Hydrogels. Annals of Biomedical Engineering, 2020, 48, 893-902.	1.3	72
3868	Direct process feedback in extrusion-based 3D bioprinting. Biofabrication, 2020, 12, 015017.	3.7	30
3869	Multilayered microcasting of agarose–collagen composites for neurovascular modeling. Bioprinting, 2020, 17, e00069.	2.9	12
3870	Mechanics-Controlled Dynamic Cell Niches Guided Osteogenic Differentiation of Stem Cells via Preserved Cellular Mechanical Memory. ACS Applied Materials & Samp; Interfaces, 2020, 12, 260-274.	4.0	30

#	Article	IF	CITATIONS
3871	Mechanobiology of annulus fibrosus and nucleus pulposus cells in intervertebral discs. Cell and Tissue Research, 2020, 379, 429-444.	1.5	69
3872	Micropatterned Poly(ethylene glycol) Islands Disrupt Endothelial Cell–Substrate Interactions Differently from Microporous Membranes. ACS Biomaterials Science and Engineering, 2020, 6, 959-968.	2.6	17
3873	Cellulose-Derived Nanographene Oxide Reinforced Macroporous Scaffolds of High Internal Phase Emulsion-Templated Cross-Linked Poly ($\hat{l}\mu$ -caprolactone). Biomacromolecules, 2020, 21, 589-596.	2.6	26
3874	Mechanical Response of Neural Cells to Physiologically Relevant Stiffness Gradients. Advanced Healthcare Materials, 2020, 9, e1901036.	3.9	41
3875	Emerging Concepts and Tools in Cell Mechanomemory. Annals of Biomedical Engineering, 2020, 48, 2103-2112.	1.3	9
3876	Vertically aligned carbon nanotube micropillars induce unidirectional chondrocyte orientation. Carbon, 2020, 158, 681-689.	5.4	5
3877	Immobilized RGD concentration and proteolytic degradation synergistically enhance vascular sprouting within hydrogel scaffolds of varying modulus. Journal of Biomaterials Science, Polymer Edition, 2020, 31, 324-349.	1.9	10
3878	Micropatterned hydrogels and cell alignment enhance the odontogenic potential of stem cells from apical papilla in-vitro. Dental Materials, 2020, 36, 88-96.	1.6	30
3879	Mechanical aspects of dental implants and osseointegration: A narrative review. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103574.	1.5	122
3880	Stiffness Sensing by Cells. Physiological Reviews, 2020, 100, 695-724.	13.1	227
3881	Rapid fabrication and screening of tailored functional 3D biomaterials. Materials Science and Engineering C, 2020, 108, 110489.	3.8	10
3882	Repair of Rotator Cuff Tendon Defects in Aged Rats Using a Growth Factor Injectable Gel Scaffold. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2020, 36, 629-637.	1.3	26
3883	Soft Microenvironments Induce Chemoresistance by Increasing Autophagy Downstream of Integrin-Linked Kinase. Cancer Research, 2020, 80, 4103-4113.	0.4	20
3884	Migration of the 3T3 Cell with a Lamellipodium on Various Stiffness Substrates—Tensegrity Model. Applied Sciences (Switzerland), 2020, 10, 6644.	1.3	7
3885	Keratocyte mechanobiology. Experimental Eye Research, 2020, 200, 108228.	1.2	11
3886	A Hydrogel-Integrated Culture Device to Interrogate T Cell Activation with Physicochemical Cues. ACS Applied Materials & Company (1997)	4.0	27
3887	Physical limits to sensing material properties. Nature Communications, 2020, 11, 5170.	5.8	2
3888	Hydrogel Network Dynamics Regulate Vascular Morphogenesis. Cell Stem Cell, 2020, 27, 798-812.e6.	5.2	76

#	ARTICLE	IF	Citations
3889	Enhancement of the Mechanical Properties of Hydrogels with Continuous Fibrous Reinforcement. ACS Biomaterials Science and Engineering, 2020, 6, 5453-5473.	2.6	37
3890	Progress in the mechanical modulation of cell functions in tissue engineering. Biomaterials Science, 2020, 8, 7033-7081.	2.6	36
3891	Modelling Neuromuscular Diseases in the Age of Precision Medicine. Journal of Personalized Medicine, 2020, 10, 178.	1.1	4
3892	Dermal Extracellular Matrix-Derived Hydrogels as an <i>In Vitro</i> Substrate to Study Mast Cell Maturation. Tissue Engineering - Part A, 2021, 27, 1008-1022.	1.6	10
3893	Designing Biomaterials to Modulate Notch Signaling in Tissue Engineering and Regenerative Medicine. Tissue Engineering - Part B: Reviews, 2021, 27, 383-410.	2.5	15
3894	Hydrogel Micropost Arrays with Single Post Tunability to Study Cell Volume and Mechanotransduction. Advanced Biology, 2020, 4, e2000012.	3.0	11
3895	Success Criteria and Preclinical Testing of Multifunctional Hydrogels for Tendon Regeneration. Tissue Engineering - Part C: Methods, 2020, 26, 506-518.	1.1	7
3896	Influence of Cellular Microenvironment on Human Articular Chondrocyte Cell Signaling. Cartilage, 2021, 13, 935S-946S.	1.4	4
3897	Formation and Developmental Specification of the Odontogenic and Osteogenic Mesenchymes. Frontiers in Cell and Developmental Biology, 2020, 8, 640.	1.8	18
3898	Reticulated Vitreous Carbon Foams from Sucrose: Promising Materials for Bone Tissue Engineering Applications. Macromolecular Research, 2020, 28, 888-895.	1.0	8
3899	Multiscale engineering of functional organic polymer interfaces for neuronal stimulation and recording. Materials Chemistry Frontiers, 2020, 4, 3444-3471.	3.2	6
3900	Nanoscale Organization and Functional Analysis of Carnivorous Plant Mucilage by Atomic Force Microscopy. IEEE Nanotechnology Magazine, 2020, 19, 579-593.	1.1	3
3901	Focal adhesion displacement magnitude is a unifying feature of tensional homeostasis. Acta Biomaterialia, 2020, 113, 372-379.	4.1	7
3902	Glycation alters the mechanical behavior of kidney extracellular matrix. Matrix Biology Plus, 2020, 8, 100035.	1.9	13
3903	Multiscale SAXS/WAXD characterisation of the deformation mechanisms of electrospun PCL scaffolds. Polymer, 2020, 203, 122775.	1.8	10
3904	Stiffness-matched biomaterial implants for cell delivery: clinical, intraoperative ultrasound elastography provides a †target' stiffness for hydrogel synthesis in spinal cord injury. Journal of Tissue Engineering, 2020, 11, 204173142093480.	2.3	25
3905	Device for Cell Culture under Variable Mechanical Stress by Controlling Deformation on its Substrate. IEEE Latin America Transactions, 2020, 18, 1448-1454.	1.2	1
3906	Adhesion of a cell on a prestretched elastomer incorporating gravity effect. European Journal of Mechanics, A/Solids, 2020, 84, 104077.	2.1	2

#	Article	IF	CITATIONS
3907	Effects of Mechanical Forces on Cells and Tissues. , 2020, , 717-733.		3
3908	Micromechanical Design Criteria for Tissue-Engineering Biomaterials. , 2020, , 1335-1350.		0
3909	Inflammatory Cytokines Alter Mesenchymal Stem Cell Mechanosensing and Adhesion on Stiffened Infarct Heart Tissue After Myocardial Infarction. Frontiers in Cell and Developmental Biology, 2020, 8, 583700.	1.8	3
3910	Trends in biomaterials for three-dimensional cancer modeling. , 2020, , 3-41.		3
3911	Tissue-scale tensional homeostasis in skin regulates structure and physiological function. Communications Biology, 2020, 3, 637.	2.0	22
3912	A biodegradable block polyurethane nerve-guidance scaffold enhancing rapid vascularization and promoting reconstruction of transected sciatic nerve in Sprague-Dawley rats. Journal of Materials Chemistry B, 2020, 8, 11063-11073.	2.9	11
3913	Biosensors for Studies on Adhesion-Mediated Cellular Responses to Their Microenvironment. Frontiers in Bioengineering and Biotechnology, 2020, 8, 597950.	2.0	5
3914	Intelligent Microfluidics: The Convergence of Machine Learning and Microfluidics in Materials Science and Biomedicine. Matter, 2020, 3, 1893-1922.	5.0	85
3915	Cell Adhesion and Migration Behaviors on Patterned Thermoresponsive Microgel Stripes. ACS Applied Bio Materials, 2020, 3, 8551-8558.	2.3	3
3916	Smooth Muscle Cell Responses to Poly(ε-Caprolactone) Triacrylate Networks with Different Crosslinking Time. International Journal of Molecular Sciences, 2020, 21, 8932.	1.8	O
3917	Rotational constraint contributes to collective cell durotaxis. Applied Physics Letters, 2020, 117, .	1.5	4
3918	Large-deformation strain energy density function for vascular smooth muscle cells. Journal of Biomechanics, 2020, 111, 110005.	0.9	10
3919	A 3D Model of Human Trabecular Meshwork for the Research Study of Glaucoma. Frontiers in Neurology, 2020, 11, 591776.	1.1	7
3920	Effects of nanofibers on mesenchymal stem cells: environmental factors affecting cell adhesion and osteogenic differentiation and their mechanisms. Journal of Zhejiang University: Science B, 2020, 21, 871-884.	1.3	20
3921	Synthesis of aligned porous polyethylene glycol/silk fibroin/hydroxyapatite scaffolds for osteoinduction in bone tissue engineering. Stem Cell Research and Therapy, 2020, 11, 522.	2.4	16
3922	The Human Epidermal Basement Membrane: A Shaped and Cell Instructive Platform That Aging Slowly Alters. Biomolecules, 2020, 10, 1607.	1.8	53
3923	Fabrication of tough, anisotropic, chemical-crosslinker-free poly(vinyl alcohol) nanofibrous cryogels <i>via</i> electrospinning. RSC Advances, 2020, 10, 38045-38054.	1.7	15
3924	Natural Biomaterials for Cardiac Tissue Engineering: A Highly Biocompatible Solution. Frontiers in Cardiovascular Medicine, 2020, 7, 554597.	1.1	74

#	Article	IF	Citations
3925	Mechanisms of endothelial stiffening in dyslipidemia and aging: Oxidized lipids and shear stress. Current Topics in Membranes, 2020, 86, 185-215.	0.5	12
3926	Mechanics of the cell: Interaction mechanisms and mechanobiological models. Current Topics in Membranes, 2020, 86, 143-184.	0.5	6
3927	3D neuroblastoma in vitro models using engineered cell-derived matrices. , 2020, , 107-130.		0
3928	Development of Nascent Focal Adhesions in Spreading Cells. Biophysical Journal, 2020, 119, 2063-2073.	0.2	14
3929	3D Bioprinting in Tissue Engineering for Medical Applications: The Classic and the Hybrid. Polymers, 2020, 12, 1717.	2.0	76
3930	Coculture techniques for modeling retinal development and disease, and enabling regenerative medicine. Stem Cells Translational Medicine, 2020, 9, 1531-1548.	1.6	15
3931	Alginate-based hydrogels show the same complex mechanical behavior as brain tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 111, 103979.	1.5	30
3932	Microfluidic lumen-based systems for advancing tubular organ modeling. Chemical Society Reviews, 2020, 49, 6402-6442.	18.7	54
3933	Tailoring the spatial filament organization within nanofibrous tissue engineering scaffolds. International Journal of Polymeric Materials and Polymeric Biomaterials, 2022, 71, 24-33.	1.8	1
3934	Mechanotransduction and Stiffness-Sensing: Mechanisms and Opportunities to Control Multiple Molecular Aspects of Cell Phenotype as a Design Cornerstone of Cell-Instructive Biomaterials for Articular Cartilage Repair. International Journal of Molecular Sciences, 2020, 21, 5399.	1.8	41
3935	Multicomponent DNA Polymerization Motor Gels. Small, 2020, 16, e2002946.	5.2	14
3936	Nuclear deformation mediates liver cell mechanosensing in cirrhosis. JHEP Reports, 2020, 2, 100145.	2.6	35
3937	What Caging Force Cells Feel in 3D Hydrogels: A Rheological Perspective. Advanced Healthcare Materials, 2020, 9, e2000517.	3.9	23
3938	Mechanobiology of neural development. Current Opinion in Cell Biology, 2020, 66, 104-111.	2.6	32
3939	Dual alginate crosslinking for local patterning of biophysical and biochemical properties. Acta Biomaterialia, 2020, 115, 185-196.	4.1	15
3940	Microfluidic Skinâ€onâ€aâ€Chip Models: Toward Biomimetic Artificial Skin. Small, 2020, 16, e2002515.	5.2	70
3941	Role of TRPV4 in matrix stiffness-induced expression of EMT-specific LncRNA. Molecular and Cellular Biochemistry, 2020, 474, 189-197.	1.4	3
3942	Mechanical stimulation of cell microenvironment for cardiac muscle tissue regeneration: a 3D in-silico model. Computational Mechanics, 2020, 66, 1003-1023.	2.2	7

#	Article	IF	CITATIONS
3943	Regulation of Keratocyte Phenotype and Cell Behavior by Substrate Stiffness. ACS Biomaterials Science and Engineering, 2020, 6, 5162-5171.	2.6	22
3944	Distinct phenotypes of cancer cells on tissue matrix gel. Breast Cancer Research, 2020, 22, 82.	2.2	16
3945	Design of Hydrolytically Degradable Polyethylene Glycol Crosslinkers for Facile Control of Hydrogel Degradation. Macromolecular Bioscience, 2020, 20, 2000085.	2.1	14
3946	Two- and three-dimensional de-drifting algorithms for fiducially marked image stacks. Journal of Biomechanics, 2020, 110, 109967.	0.9	3
3947	Structural Insights into the Mechanism of Heatâ€Set Gel Formation of Polyisocyanopeptide Polymers. Macromolecular Rapid Communications, 2020, 41, e2000304.	2.0	6
3948	Development of a Dual Hydrogel Model System for Vascularization. Macromolecular Bioscience, 2020, 20, e2000204.	2.1	9
3949	Two-Photon Polymerized Poly(2-Ethyl-2-Oxazoline) Hydrogel 3D Microstructures with Tunable Mechanical Properties for Tissue Engineering. Molecules, 2020, 25, 5066.	1.7	15
3950	Cellulose Mesh with Charged Nanocellulose Coatings as a Promising Carrier of Skin and Stem Cells for Regenerative Applications. Biomacromolecules, 2020, 21, 4857-4870.	2.6	19
3951	Viscoelasticity and Volume of Cortical Neurons under Glutamate Excitotoxicity and Osmotic Challenges. Biophysical Journal, 2020, 119, 1712-1723.	0.2	10
3952	Cell membrane mechanics and mechanosensory transduction. Current Topics in Membranes, 2020, 86, 83-141.	0.5	31
3953	Mechanosensing through YAP controls T cell activation and metabolism. Journal of Experimental Medicine, 2020, 217, .	4.2	57
3954	Impact of extracellular matrix stiffness on genomic heterogeneity in MYCN-amplified neuroblastoma cell line. Journal of Experimental and Clinical Cancer Research, 2020, 39, 226.	3.5	25
3955	Cell biophysical stimuli in lobodopodium formation: a computer based approach. Computer Methods in Biomechanics and Biomedical Engineering, 2020, 24, 1-10.	0.9	2
3956	Elliptical supra-cellular topographies regulate stem cells migratory pattern and osteogenic differentiation. Materialia, 2020, 14, 100870.	1.3	4
3957	Simultaneous time-varying viscosity, elasticity, and mass measurements of single adherent cancer cells across cell cycle. Scientific Reports, 2020, 10, 12803.	1.6	19
3958	Highly Permeable Gelatin/Poly(lactic acid) Fibrous Scaffolds with a Three-Dimensional Spatial Structure for Efficient Cell Infiltration, Mineralization and Bone Regeneration. ACS Applied Bio Materials, 2020, 3, 6932-6943.	2.3	5
3959	Scaffold-supported extracellular matrices preserved by magnesium hydroxide nanoparticles for renal tissue regeneration. Biomaterials Science, 2020, 8, 5427-5440.	2.6	11
3960	Infarct Collagen Topography Regulates Fibroblast Fate via p38-Yes-Associated Protein Transcriptional Enhanced Associate Domain Signals. Circulation Research, 2020, 127, 1306-1322.	2.0	40

#	Article	IF	CITATIONS
3961	Methods with Nanoarchitectonics for Small Molecules and Nanostructures to Regulate Living Cells. Small Methods, 2020, 4, 2000500.	4.6	23
3962	Quantifying topography-guided actin dynamics across scales using optical flow. Molecular Biology of the Cell, 2020, 31, 1753-1764.	0.9	26
3963	Chitin-Based Double-Network Hydrogel as Potential Superficial Soft-Tissue-Repairing Materials. Biomacromolecules, 2020, 21, 4220-4230.	2.6	35
3964	Modeling and analysis of adipocytes dynamic with a differentiation process. ESAIM Proceedings and Surveys, 2020, 67, 210-241.	0.5	1
3965	Universal Statistical Laws for the Velocities of Collective Migrating Cells. Advanced Biology, 2020, 4, e2000065.	3.0	13
3966	Crosslinked Extracellular Matrix Stiffens Human Trabecular Meshwork Cells Via Dysregulating β-catenin and YAP/TAZ Signaling Pathways. , 2020, 61, 41.		29
3967	Tracking Single Cells Motility on Different Substrates. Methods and Protocols, 2020, 3, 56.	0.9	5
3968	Effects of extracellular matrix viscoelasticity on cellular behaviour. Nature, 2020, 584, 535-546.	13.7	1,045
3969	Maintenance of viability and proliferation of 3T3 cell aggregates incorporating fibroin microspheres into cultures. Cytotechnology, 2020, 72, 579-587.	0.7	0
3970	Live-cell super-resolved PAINT imaging of piconewton cellular traction forces. Nature Methods, 2020, 17, 1018-1024.	9.0	85
3971	A review: silicate ceramic-polymer composite scaffold for bone tissue engineering. International Journal of Polymeric Materials and Polymeric Biomaterials, 2022, 71, 180-195.	1.8	29
3972	Propagation and attenuation of mechanical signals in ultrasoft 2D solids. Science Advances, 2020, 6, .	4.7	3
3973	Progress and Challenges in Microengineering the Dental Pulp Vascular Microenvironment. Journal of Endodontics, 2020, 46, S90-S100.	1.4	19
3974	Chitinase-3 like-protein-1 function and its role in diseases. Signal Transduction and Targeted Therapy, 2020, 5, 201.	7.1	212
3975	Effects of Constant Magnetic Field to the Proliferation Rate of Human Fibroblasts Grown onto Different Substrates: Tissue Culture Polystyrene, Polyacrylamide Hydrogel and Ferrogels Î ³ -Fe2O3 Magnetic Nanoparticles. Nanomaterials, 2020, 10, 1697.	1.9	13
3976	Effect of Stereolithography 3D Printing on the Properties of PEGDMA Hydrogels. Polymers, 2020, 12, 2015.	2.0	22
3977	Architected mechanical designs in tissue engineering. MRS Communications, 2020, 10, 379-390.	0.8	2
3978	Intestinal Regeneration: Regulation by the Microenvironment. Developmental Cell, 2020, 54, 435-446.	3.1	91

#	ARTICLE	IF	Citations
3979	A novel method to make viscoelastic polyacrylamide gels for cell culture and traction force microscopy. APL Bioengineering, 2020, 4, 036104.	3.3	36
3980	Nanoengineering in Cardiac Regeneration: Looking Back and Going Forward. Nanomaterials, 2020, 10, 1587.	1.9	14
3981	Evolution of the Experimental Models of Cholangiocarcinoma. Cancers, 2020, 12, 2308.	1.7	76
3982	Paramagnetic Functionalization of Biocompatible Scaffolds for Biomedical Applications: A Perspective. Bioengineering, 2020, 7, 153.	1.6	9
3983	Exploration of the Effects of Substrate Stiffness on Biological Responses of Neural Cells and Their Mechanisms. ACS Omega, 2020, 5, 31115-31125.	1.6	9
3984	Actin-ring segment switching drives nonadhesive gap closure. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 33263-33271.	3.3	12
3985	The Collagen-Based Medical Device MD-Tissue Acts as a Mechanical Scaffold Influencing Morpho-Functional Properties of Cultured Human Tenocytes. Cells, 2020, 9, 2641.	1.8	6
3986	Recent Advances in Cell Adhesive Force Microscopy. Sensors, 2020, 20, 7128.	2.1	6
3987	Modulating Functionalized Poly(ethylene glycol) Diacrylate Hydrogel Mechanical Properties through Competitive Crosslinking Mechanics for Soft Tissue Applications. Polymers, 2020, 12, 3000.	2.0	19
3988	Impact of crosslink heterogeneity on extracellular matrix mechanics and remodeling. Computational and Structural Biotechnology Journal, 2020, 18, 3969-3976.	1.9	15
3989	Study on Development of Composite Hydrogels With Tunable Structures and Properties for Tumor-on-a-Chip Research. Frontiers in Bioengineering and Biotechnology, 2020, 8, 611796.	2.0	9
3990	A Tissue Engineering Approach to Metastatic Colon Cancer. IScience, 2020, 23, 101719.	1.9	15
3991	Tension Causes Unfolding of Intracellular Vimentin Intermediate Filaments. Advanced Biology, 2020, 4, e2000111.	3.0	7
3992	High-Fat Diet Promotes Macrophage-Mediated Hepatic Inflammation and Aggravates Diethylnitrosamine-Induced Hepatocarcinogenesis in Mice. Frontiers in Nutrition, 2020, 7, 585306.	1.6	23
3993	Deciphering the Relevance of Bone ECM Signaling. Cells, 2020, 9, 2630.	1.8	39
3994	A Review of Bioactive Glass/Natural Polymer Composites: State of the Art. Materials, 2020, 13, 5560.	1.3	86
3995	Elastin-like Proteins to Support Peripheral Nerve Regeneration in Guidance Conduits. ACS Biomaterials Science and Engineering, 2021, 7, 4209-4220.	2.6	16
3996	Fluid Shear Stress Induces EMT of Circulating Tumor Cells via JNK Signaling in Favor of Their Survival during Hematogenous Dissemination. International Journal of Molecular Sciences, 2020, 21, 8115.	1.8	34

#	Article	IF	CITATIONS
3997	A Computational Model for Cardiomyocytes Mechano-Electric Stimulation to Enhance Cardiac Tissue Regeneration. Mathematics, 2020, 8, 1875.	1.1	9
3998	Design of hydrogel-based scaffolds for the treatment of spinal cord injuries. Journal of Materials Chemistry B, 2020, 8, 10712-10738.	2.9	37
3999	Real-Time Impedance Monitoring of Epithelial Cultures with Inkjet-Printed Interdigitated-Electrode Sensors. Sensors, 2020, 20, 5711.	2.1	21
4000	Temporary/Permanent Dual Crossâ€Link Gels Formed of a Bioactive Lactoseâ€Modified Chitosan. Macromolecular Bioscience, 2020, 20, e2000236.	2.1	8
4001	An in vitro assessment of the response of THPâ€1 macrophages to varying stiffness of a glycolâ€chitosan hydrogel for vocal fold tissue engineering applications. Journal of Biomedical Materials Research - Part A, 2021, 109, 1337-1352.	2.1	13
4002	Endomembranes: Unsung Heroes of Mechanobiology?. Frontiers in Bioengineering and Biotechnology, 2020, 8, 597721.	2.0	7
4003	Enhanced Osteogenic Potential of Phosphonated-Siloxane Hydrogel Scaffolds. Biomacromolecules, 2020, 21, 5189-5199.	2.6	9
4004	Material-driven fibronectin assembly rescues matrix defects due to mutations in collagen IV in fibroblasts. Biomaterials, 2020, 252, 120090.	5.7	9
4005	Aqueous surface gels as low friction interfaces to mitigate implant-associated inflammation. Journal of Materials Chemistry B, 2020, 8, 6782-6791.	2.9	8
4006	Investigating materials and orientation parameters for the creation of a 3D musculoskeletal interface co-culture model. International Journal of Energy Production and Management, 2020, 7, 413-425.	1.9	6
4007	Biocompatible contactless electrically responsive hydrogelâ€based force maker. Polymer International, 2020, 69, 912-919.	1.6	0
4008	Photoactive Interfaces for Spatioâ€Temporal Guidance of Mesenchymal Stem Cell Fate. Advanced Healthcare Materials, 2020, 9, e2000470.	3.9	16
4009	Structural and mechanical remodeling of the cytoskeleton maintains tensional homeostasis in 3D microtissues under acute dynamic stretch. Scientific Reports, 2020, 10, 7696.	1.6	49
4010	Platelet-like particles improve fibrin network properties in a hemophilic model of provisional matrix structural defects. Journal of Colloid and Interface Science, 2020, 577, 406-418.	5.0	8
4011	Inducing mesenchymal stem cell attachment on non-cell adhesive hydrogels through click chemistry. Chemical Communications, 2020, 56, 7661-7664.	2.2	6
4012	Integrating Biophysics in Toxicology. Cells, 2020, 9, 1282.	1.8	6
4013	Cell-Laden Agarose-Collagen Composite Hydrogels for Mechanotransduction Studies. Frontiers in Bioengineering and Biotechnology, 2020, 8, 346.	2.0	41
4014	3D anisotropic photocatalytic architectures as bioactive nerve guidance conduits for peripheral neural regeneration. Biomaterials, 2020, 253, 120108.	5.7	83

#	Article	IF	CITATIONS
4015	A viscoelastic PEGylated poly(glycerol sebacate)-based bilayer scaffold for cartilage regeneration in full-thickness osteochondral defect. Biomaterials, 2020, 253, 120095.	5.7	63
4016	The "labile―chemical bond: A perspective on mechanochemistry in polymers. Polymer, 2020, 202, 122639.	1.8	34
4017	Stimuli-responsive hydrogels as a model of the dynamic cellular microenvironment. Polymer Journal, 2020, 52, 861-870.	1.3	55
4018	Influence of myosin activity and mechanical impact on keratocyte polarization. Soft Matter, 2020, 16, 5177-5194.	1.2	3
4019	Biomimetic and estrogenic fibers promote tissue repair in mice and human skin via estrogen receptor \hat{l}^2 . Biomaterials, 2020, 255, 120149.	5.7	15
4020	Dynamic crosslinked and injectable biohydrogels as extracellular matrix mimics for the delivery of antibiotics and 3D cell culture. RSC Advances, 2020, 10, 19587-19599.	1.7	13
4021	Magnetic Nanoparticles as a Strong Contributor to the Biocompatibility of Ferrogels. Physics of Metals and Metallography, 2020, 121, 299-304.	0.3	10
4022	A Comparison of Bioactive Glass Scaffolds Fabricated ‎by Robocasting from Powders Made by Sol–Gel and Melt-Quenching Methods. Processes, 2020, 8, 615.	1.3	20
4023	Micromechanobiology: Focusing on the Cardiac Cell–Substrate Interface. Annual Review of Biomedical Engineering, 2020, 22, 257-284.	5.7	10
4024	Interfacial Self-Assembly to Spatially Organize Graphene Oxide Into Hierarchical and Bioactive Structures. Frontiers in Materials, 2020, 7, .	1.2	4
4025	Identification and Analysis of Key Parameters for the Ossification on Particle Functionalized Composites Hydrogel Materials. ACS Applied Materials & Samp; Interfaces, 2020, 12, 38862-38872.	4.0	17
4026	Biological molecules in dental applications: hyaluronic acid as a companion biomaterial for diverse dental applications. Heliyon, 2020, 6, e03722.	1.4	35
4027	Development of a 3-D Physical Dynamics Monitoring System Using OCM with DVC for Quantification of Sprouting Endothelial Cells Interacting with a Collagen Matrix. Materials, 2020, 13, 2693.	1.3	2
4028	A review of co-culture models to study the oral microenvironment and disease. Journal of Oral Microbiology, 2020, 12, 1773122.	1.2	29
4029	Improvement of Endothelial Cell Performance in an Optimized Electrospun Pre-polyglycerol Sebacate-Poly Lactic Acid Scaffold for Reconstruction of Intima in Coronary Arteries. Journal of Polymers and the Environment, 2020, 28, 2352-2363.	2.4	10
4030	Substrate Dissipation Energy Regulates Cell Adhesion and Spreading. Advanced Functional Materials, 2020, 30, 2001977.	7.8	27
4031	Use of nanoparticulate systems to salvage the myocardium. , 2020, , 89-111.		0
4032	<p>An AFM-Based Nanomechanical Study of Ovarian Tissues with Pathological Conditions</p> . International Journal of Nanomedicine, 2020, Volume 15, 4333-4350.	3.3	19

#	ARTICLE	IF	CITATIONS
4033	Regulation of the Viscoelastic Properties of Hyaluronate–Alginate Hybrid Hydrogel as an Injectable for Chondrocyte Delivery. ACS Omega, 2020, 5, 15567-15575.	1.6	21
4034	Heavy Metal Exposure Leads to Rapid Changes in Cellular Biophysical Properties. ACS Biomaterials Science and Engineering, 2020, 6, 1965-1976.	2.6	6
4035	Double power-law viscoelastic relaxation of living cells encodes motility trends. Scientific Reports, 2020, 10, 4749.	1.6	34
4036	Engineered Biomaterial Platforms to Study Fibrosis. Advanced Healthcare Materials, 2020, 9, e1901682.	3.9	53
4037	Bioactive micropatterning of biomaterials for induction of endothelial progenitor cell differentiation: Acceleration of in situ endothelialization. Journal of Biomedical Materials Research - Part A, 2020, 108, 1479-1492.	2.1	4
4038	Predicting Bone Formation in Mesenchymal Stromal Cell-Seeded Hydrogels Using Experiment-Based Mathematical Modeling. Tissue Engineering - Part A, 2020, 26, 1014-1023.	1.6	3
4039	TRPV4—A Missing Link Between Mechanosensation and Immunity. Frontiers in Immunology, 2020, 11, 413.	2.2	69
4040	Adjustment of Cell Adhesion on Polyurethane Structures via Control of the Hard/Soft Segment Ratio. Macromolecular Materials and Engineering, 2020, 305, 2000093.	1.7	7
4041	Biological Interfaces, Modulation, and Sensing with Inorganic Nanoâ€Bioelectronic Materials. Small Methods, 2020, 4, 1900868.	4.6	13
4042	Elastinâ€Like Recombinamers: Deconstructing and Recapitulating the Functionality of Extracellular Matrix Proteins Using Recombinant Protein Polymers. Advanced Functional Materials, 2020, 30, 1909050.	7.8	29
4043	Novel Silicon Titanium Diboride Micropatterned Substrates for Cellular Patterning. Biomaterials, 2020, 244, 119927.	5.7	18
4044	Stiffness of the aligned fibers affects structural and functional integrity of the oriented endothelial cells. Acta Biomaterialia, 2020, 108, 237-249.	4.1	37
4045	In Situ 3D-Printing using a Bio-ink of Protein–photosensitizer Conjugates for Single-cell Manipulation. ACS Applied Bio Materials, 2020, 3, 2378-2384.	2.3	8
4046	Nuclear Mechanics within Intact Cells Is Regulated by Cytoskeletal Network and Internal Nanostructures. Small, 2020, 16, e1907688.	5 . 2	52
4047	Characterization and Application of Carboxymethyl Chitosan-Based Bioink in Cartilage Tissue Engineering. Journal of Nanomaterials, 2020, 2020, 1-11.	1.5	33
4048	Influence of Microenvironment on Mesenchymal Stem Cell Therapeutic Potency: From Planar Culture to Microcarriers. Frontiers in Bioengineering and Biotechnology, 2020, 8, 640.	2.0	61
4049	Intrinsic Color Sensing System Allows for Real-Time Observable Functional Changes on Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes. ACS Nano, 2020, 14, 8232-8246.	7.3	29
4050	Role of Changes in State of Bound Water and Tissue Stiffness in Development of Age-Related Diseases. Polymers, 2020, 12, 1362.	2.0	10

#	ARTICLE	IF	CITATIONS
4051	Mechanical Shielding in Plant Nuclei. Current Biology, 2020, 30, 2013-2025.e3.	1.8	26
4052	Soy Protein Nanofiber Scaffolds for Uniform Maturation of Human Induced Pluripotent Stem Cell-Derived Retinal Pigment Epithelium. Tissue Engineering - Part C: Methods, 2020, 26, 433-446.	1.1	16
4053	Methacrylation increase growth and differentiation of primary human osteoblasts for gelatin hydrogels. Emergent Materials, 2020, 3, 559-566.	3.2	4
4054	The biology of vascular calcification. International Review of Cell and Molecular Biology, 2020, 354, 261-353.	1.6	32
4055	Nanocomposite scaffolds composed of Apacite (apatite-calcite) nanostructures, poly ($\hat{l}\mu$ -caprolactone) and poly (2-hydroxyethylmethacrylate): The effect of nanostructures on physico-mechanical properties and osteogenic differentiation of human bone marrow mesenchymal stem cells in vitro. Materials Science and Engineering C, 2020, 117, 111271.	3.8	10
4056	Methods for studying MLO-Y4 osteocytes in collagen-hydroxyapatite scaffolds in the rotary cell culture system. Connective Tissue Research, 2021, 62, 436-453.	1.1	11
4057	An integrated 3D fluidic device with bubble guidance mechanism for long-term primary and secondary cell recordings on multi-electrode array platform. Biofabrication, 2020, 12, 045019.	3.7	2
4058	Continuum mechanics of a cellular tissue model. Journal of the Mechanics and Physics of Solids, 2020, 143, 104085.	2.3	7
4059	Perspectives on Synthetic Materials to Guide Tissue Regeneration for Osteochondral Defect Repair. ACS Biomaterials Science and Engineering, 2020, 6, 4324-4336.	2.6	30
4060	A low-cost paper-based platform for fast and reliable screening of cellular interactions with materials. Journal of Materials Chemistry B, 2020, 8, 1146-1156.	2.9	6
4061	In Vitro Evaluation of the Influence of Substrate Mechanics on Matrix-Assisted Human Chondrocyte Transplantation. Journal of Functional Biomaterials, 2020, 11, 5.	1.8	7
4062	Simple Rho GTPase Dynamics Generate a Complex Regulatory Landscape Associated with Cell Shape. Biophysical Journal, 2020, 118, 1438-1454.	0.2	21
4063	Ratiometric Nanoviscometers: Applications for Measuring Cellular Physical Properties in 3D Cultures. SLAS Technology, 2020, 25, 234-246.	1.0	1
4064	Identifying the viscoelastic properties of soft matter from the indentation response of a hard film-soft substrate system. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	2.0	6
4065	A comparative analysis of detachment forces and energies in initial and mature cell-material interaction. Colloids and Surfaces B: Biointerfaces, 2020, 190, 110894.	2.5	18
4066	Microfluidics for the study of mechanotransduction. Journal Physics D: Applied Physics, 2020, 53, 224004.	1.3	21
4067	Convergent extension in the amphibian, Xenopus laevis. Current Topics in Developmental Biology, 2020, 136, 271-317.	1.0	43
4068	GHz Ultrasonic Chip-Scale Device Induces Ion Channel Stimulation in Human Neural Cells. Scientific Reports, 2020, 10, 3075.	1.6	14

#	Article	IF	CITATIONS
4069	DNA-mediated biomineralization of calcium-deficient hydroxyapatite for bone tissue engineering. New Journal of Chemistry, 2020, 44, 4755-4761.	1.4	5
4070	Tailoring PEDOT properties for applications in bioelectronics. Materials Science and Engineering Reports, 2020, 140, 100546.	14.8	140
4071	Prediction of glass transition temperature and Young's modulus of an inaccessible polymer substrate in changing environment. Polymer, 2020, 191, 122274.	1.8	5
4072	Modeling the Tumor Microenvironment and Pathogenic Signaling in Bone Sarcoma. Tissue Engineering - Part B: Reviews, 2020, 26, 249-271.	2.5	16
4073	Synthesis of borax cross-linked Jhingan gum hydrogel for remediation of Remazol Brilliant Blue R (RBBR) dye from water: Adsorption isotherm, kinetic, thermodynamic and biodegradation studies. International Journal of Biological Macromolecules, 2020, 151, 677-690.	3.6	108
4074	3D printing of hydrogels: Rational design strategies and emerging biomedical applications. Materials Science and Engineering Reports, 2020, 140, 100543.	14.8	494
4075	The stiffness of living tissues and its implications for tissue engineering. Nature Reviews Materials, 2020, 5, 351-370.	23.3	756
4076	Molecular interactions and forces of adhesion between single human neural stem cells and gelatin methacrylate hydrogels of varying stiffness. Acta Biomaterialia, 2020, 106, 156-169.	4.1	31
4077	Bioprinting 101: Design, Fabrication, and Evaluation of Cell-Laden 3D Bioprinted Scaffolds. Tissue Engineering - Part A, 2020, 26, 318-338.	1.6	104
4078	Substrate mechanics dictate cell-cell communication by gap junctions in stem cells from human apical papilla. Acta Biomaterialia, 2020, 107, 178-193.	4.1	35
4079	Dimensionality changes actin network through lamin A/C and zyxin. Biomaterials, 2020, 240, 119854.	5.7	15
4080	Nucleotide lipid-based hydrogel as a new biomaterial ink for biofabrication. Scientific Reports, 2020, 10, 2850.	1.6	18
4081	Selfâ€Healing, High Adherent, and Antioxidative LbL Multilayered Film for Enhanced Cell Adhesion. Advanced Materials Interfaces, 2020, 7, 1901873.	1.9	20
4082	Nanomechanics of the Endothelial Glycocalyx. American Journal of Pathology, 2020, 190, 732-741.	1.9	69
4083	Spider Silk for Tissue Engineering Applications. Molecules, 2020, 25, 737.	1.7	120
4084	Myofibroblast activation in synthetic fibrous matrices composed of dextran vinyl sulfone. Acta Biomaterialia, 2020, 105, 78-86.	4.1	36
4085	Engineering Smart Hybrid Tissues with Built-In Electronics. IScience, 2020, 23, 100833.	1.9	16
4086	The use of mixed collagen-Matrigel matrices of increasing complexity recapitulates the biphasic role of cell adhesion in cancer cell migration: ECM sensing, remodeling and forces at the leading edge of cancer invasion. PLoS ONE, 2020, 15, e0220019.	1.1	62

#	ARTICLE	IF	CITATIONS
4087	Fiber Diameter Differentially Regulates Function of Retinal Pigment and Corneal Epithelial Cells on Nanofibrous Tissue Scaffolds. ACS Applied Bio Materials, 2020, 3, 823-837.	2.3	14
4088	Porous titanium fiber mesh with tailored elasticity and its effect on stromal cells. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 2180-2191.	1.6	7
4089	<i>In situ</i> forming oxidized salecan/gelatin injectable hydrogels for vancomycin delivery and 3D cell culture. Journal of Biomaterials Science, Polymer Edition, 2020, 31, 762-780.	1.9	15
4090	Cyber–Physiochemical Interfaces. Advanced Materials, 2020, 32, e1905522.	11.1	64
4091	A mechanobiological model to study upstream cell migration guided by tensotaxis. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1537-1549.	1.4	7
4092	T-cell activation is modulated by the 3D mechanical microenvironment. Biomaterials, 2020, 252, 120058.	5 . 7	60
4093	Cytoskeleton Architecture Regulates Glycolysis Coupling Cellular Metabolism to Mechanical Cues. Trends in Biochemical Sciences, 2020, 45, 637-638.	3.7	24
4094	Human Organ-Specific 3D Cancer Models Produced by the Stromal Self-Assembly Method of Tissue Engineering for the Study of Solid Tumors. BioMed Research International, 2020, 2020, 1-23.	0.9	28
4095	On the mechanical response of the actomyosin cortex during cell indentations. Biomechanics and Modeling in Mechanobiology, 2020, 19, 2061-2079.	1.4	1
4096	Wound repair: basic biology to tissue engineering. , 2020, , 1309-1329.		4
4097	Principles of bioreactor design for tissue engineering. , 2020, , 179-203.		4
4098	Mechanobiology, tissue development, and tissue engineering. , 2020, , 237-256.		3
4100	Decellularized scaffolds for tissue engineering: Current status and future perspective. Artificial Organs, 2020, 44, 1031-1043.	1.0	52
4101	Biomimetic human small muscular pulmonary arteries. Science Advances, 2020, 6, eaaz2598.	4.7	16
4102	Single-Cell Probe Force Studies to Identify Sox2 Overexpression-Promoted Cell Adhesion in MCF7 Breast Cancer Cells. Cells, 2020, 9, 935.	1.8	9
4103	Bioactive hydrogel coatings of complex substrates using diffusion-mediated redox initiation. Journal of Materials Chemistry B, 2020, 8, 4289-4298.	2.9	12
4104	Cell attachment area of rat mesenchymal stem cells correlates with their osteogenic differentiation level on substrates without osteoconductive property. Biochemical and Biophysical Research Communications, 2020, 525, 1081-1086.	1.0	2
4105	Altered mechanics of vaginal smooth muscle cells due to the lysyl oxidase-like1 knockout. Acta Biomaterialia, 2020, 110, 175-187.	4.1	8

#	Article	IF	Citations
4106	Amino-functionalized polymers by gamma radiation and their influence on macrophage polarization. Reactive and Functional Polymers, 2020, 151, 104568.	2.0	10
4107	Threeâ€dimensional culture models to study drug resistance in breast cancer. Biotechnology and Bioengineering, 2020, 117, 2262-2278.	1.7	32
4108	Biomaterials and Microfluidics for Liver Models. Advances in Experimental Medicine and Biology, 2020, 1230, 65-86.	0.8	3
4109	Multifunctional Biomaterials: Combining Material Modification Strategies for Engineering of Cell-Contacting Surfaces. ACS Applied Materials & Samp; Interfaces, 2020, 12, 21342-21367.	4.0	43
4110	Cells-Grab-on Particles: A Novel Approach to Control Cell Focal Adhesion on Hybrid Thermally Annealed Hydrogels. ACS Biomaterials Science and Engineering, 2020, 6, 3933-3944.	2.6	31
4111	The Balance between Actomyosin Contractility and Microtubule Polymerization Regulates Hierarchical Protrusions That Govern Efficient Fibroblast–Collagen Interactions. ACS Nano, 2020, 14, 7868-7879.	7.3	37
4112	Association of extracellular matrix microarchitecture and three-dimensional collective invasion of cancer cells. Biotechnic and Histochemistry, 2020, 95, 605-612.	0.7	2
4113	Nanoparticle elasticity regulates phagocytosis and cancer cell uptake. Science Advances, 2020, 6, eaaz4316.	4.7	143
4114	<p>Advanced Black Phosphorus Nanomaterials for Bone Regeneration</p> . International Journal of Nanomedicine, 2020, Volume 15, 2045-2058.	3.3	50
4115	Interplays of Interfacial Forces Modulate Structure and Function of Soft and Biological Matters in Aquatic Environments. Frontiers in Chemistry, 2020, 8, 165.	1.8	1
4116	Nanomaterials combination for wound healing and skin regeneration., 2020,, 159-217.		3
4117	Progress in Nanorobotics for Advancing Biomedicine. IEEE Transactions on Biomedical Engineering, 2021, 68, 130-147.	2.5	32
4118	Extraction of pectin from albedo of lemon peels for preparation of tissue engineering scaffolds. Polymer Bulletin, 2021, 78, 2211-2226.	1.7	38
4119	Alginate Microencapsulation for Three-Dimensional In Vitro Cell Culture. ACS Biomaterials Science and Engineering, 2021, 7, 2864-2879.	2.6	41
4120	The influence of substrate stiffness on osteogenesis of vascular smooth muscle cells. Colloids and Surfaces B: Biointerfaces, 2021, 197, 111388.	2.5	7
4121	Optimization of hyaluronic acid-tyramine/silk-fibroin composite hydrogels for cartilage tissue engineering and delivery of anti-inflammatory and anabolic drugs. Materials Science and Engineering C, 2021, 120, 111701.	3.8	72
4122	Tethering, evagination, and vesiculation via cell–cell interactions in microvascular flow. Biomechanics and Modeling in Mechanobiology, 2021, 20, 31-53.	1.4	6
4123	A modular polymer microbead angiogenesis scaffold to characterize the effects of adhesion ligand density on angiogenic sprouting. Biomaterials, 2021, 264, 120231.	5.7	11

#	Article	IF	CITATIONS
4124	Fibronectin in development and wound healing. Advanced Drug Delivery Reviews, 2021, 170, 353-368.	6.6	123
4125	Materials control of the epigenetics underlying cell plasticity. Nature Reviews Materials, 2021, 6, 69-83.	23.3	49
4126	Materials roles for promoting angiogenesis in tissue regeneration. Progress in Materials Science, 2021, 117, 100732.	16.0	81
4127	Let's Talk About Sexâ€"Biological Sex Is Underreported in Biomaterial Studies. Advanced Healthcare Materials, 2021, 10, e2001034.	3.9	26
4128	Stiffness Tomography of Ultraâ€Soft Nanogels by Atomic Force Microscopy. Angewandte Chemie, 2021, 133, 2310-2317.	1.6	4
4129	Stiffness Tomography of Ultraâ€Soft Nanogels by Atomic Force Microscopy. Angewandte Chemie - International Edition, 2021, 60, 2280-2287.	7.2	39
4130	A Cellular Potts energy-based approach to analyse the influence of the surface topography on single cell motility. Journal of Theoretical Biology, 2021, 509, 110487.	0.8	2
4131	Substrate stiffness differentially impacts autophagy of endothelial cells and smooth muscle cells. Bioactive Materials, 2021, 6, 1413-1422.	8.6	30
4132	Substrate loss modulus promotes the differentiation of SHSY-5Y neuroblastoma cells. Materialia, 2021, 15, 100968.	1.3	4
4133	A unified numerical model for wetting of soft substrates. International Journal for Numerical Methods in Engineering, 2021, 122, 903-918.	1.5	13
4134	Mechanical characterization of native and sugar-modified decellularized kidneys. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 114, 104220.	1.5	8
4135	Bioactive 3D porous cobalt-doped alginate/waterborne polyurethane scaffolds with a coral reef-like rough surface for nerve tissue engineering application. Journal of Materials Chemistry B, 2021, 9, 322-335.	2.9	25
4136	Inverse method based on 3D nonlinear physically constrained minimisation in the framework of traction force microscopy. Soft Matter, 2021, 17, 10210-10222.	1.2	14
4137	Effect of alginate matrix engineered to mimic the pancreatic microenvironment on encapsulated islet function. Biotechnology and Bioengineering, 2021, 118, 1177-1185.	1.7	24
4138	Differentiated Daughter Cells Regulate Stem Cell Proliferation and Fate through Intra-tissue Tension. Cell Stem Cell, 2021, 28, 436-452.e5.	5.2	40
4139	Controllable ligand spacing stimulates cellular mechanotransduction and promotes stem cell osteogenic differentiation on soft hydrogels. Biomaterials, 2021, 268, 120543.	5.7	48
4140	The Integrin Interactome. Methods in Molecular Biology, 2021, , .	0.4	0
4141	Alter macrophage adhesion and modulate their response on hydrophobically modified hydrogels. Biochemical Engineering Journal, 2021, 165, 107821.	1.8	13

#	Article	IF	CITATIONS
4142	3D culture of HepaRG cells in GelMa and its application to bioprinting of a multicellular hepatic model. Biomaterials, 2021, 269, 120611.	5.7	68
4143	DNA damage alters nuclear mechanics through chromatin reorganization. Nucleic Acids Research, 2021, 49, 340-353.	6.5	38
4144	TiO2 nanoparticles synergize with substrate mechanics to improve dental pulp stem cells proliferation and differentiation. Materials Science and Engineering C, 2021, 118, 111366.	3.8	12
4145	Targeting transforming growth factor- \hat{l}^2 signaling for enhanced cancer chemotherapy. Theranostics, 2021, 11, 1345-1363.	4. 6	33
4146	Biomimetic mineralized microenvironment stiffness regulated BMSCs osteogenic differentiation through cytoskeleton mediated mechanical signaling transduction. Materials Science and Engineering C, 2021, 119, 111613.	3.8	20
4147	Biomimetic algal polysaccharide coated 3D nanofibrous scaffolds promote skin extracellular matrix formation. Materials Science and Engineering C, 2021, 119, 111580.	3.8	13
4148	Energy expenditure during cell spreading influences the cellular response to matrix stiffness. Biomaterials, 2021, 267, 120494.	5.7	38
4149	Multilayer platform to model the bioactivity of hyaluronic acid in gastric cancer. Materials Science and Engineering C, 2021, 119, 111616.	3.8	7
4150	Extracellular Matrix Remodeling and Development of Cancer. Stem Cell Reviews and Reports, 2021, 17, 739-747.	1.7	36
4151	3D Microwell Platforms for Control of Single Cell 3D Geometry and Intracellular Organization. Cellular and Molecular Bioengineering, 2021, 14, 1-14.	1.0	4
4152	Effects of biophysical cues of 3D hydrogels on mesenchymal stem cells differentiation. Journal of Cellular Physiology, 2021, 236, 2268-2275.	2.0	15
4153	A review on microwell and microfluidic geometric array fabrication techniques and its potential applications in cellular studies. Canadian Journal of Chemical Engineering, 2021, 99, 61-96.	0.9	20
4154	Peak force tapping atomic force microscopy for advancing cell and molecular biology. Nanoscale, 2021, 13, 8358-8375.	2.8	20
4155	Tunable Hydrogels: Introduction to the World of Smart Materials for Biomedical Applications. Advances in Biochemical Engineering/Biotechnology, 2021, 178, 1-35.	0.6	1
4156	Advances in Engineering Human Tissue Models. Frontiers in Bioengineering and Biotechnology, 2020, 8, 620962.	2.0	72
4157	Probing tissue mechanics at the cellular-length scale in cancer microenvironments., 2021,, 71-103.		2
4158	Hydrogels for 3D Cell Culture. Learning Materials in Biosciences, 2021, , 105-123.	0.2	1
4159	A comparative study of tough hydrogen bonding dissipating hydrogels made with different network structures. Nanoscale Advances, 2021, 3, 2934-2947.	2.2	14

#	Article	IF	CITATIONS
4160	Electrospun nanofibers promote wound healing: theories, techniques, and perspectives. Journal of Materials Chemistry B, 2021, 9, 3106-3130.	2.9	109
4161	Post-decellularization techniques ameliorate cartilage decellularization process for tissue engineering applications. Journal of Tissue Engineering, 2021, 12, 204173142098356.	2.3	20
4162	Injectable biomaterials as minimal invasive strategy towards soft tissue regeneration—an overview. JPhys Materials, 2021, 4, 022001.	1.8	6
4164	Introduction to 3D Cell Culture. Learning Materials in Biosciences, 2021, , 1-26.	0.2	1
4165	3D Bioprinting Methods and Techniques – A Information. , 2021, 01, .		0
4166	Design and Creation of Micro/Nano Environment in Regenerative and Restorative Medicine. Nanotechnology in the Life Sciences, 2021, , 237-255.	0.4	O
4167	Current Advances in 3D Tissue and Organ Reconstruction. International Journal of Molecular Sciences, 2021, 22, 830.	1.8	30
4168	Alginate Hydrogels with Tuneable Properties. Advances in Biochemical Engineering/Biotechnology, 2021, 178, 37-61.	0.6	6
4169	Effect of surface energy and roughness on cell adhesion and growth $\hat{a} \in \text{``facile surface modification}$ for enhanced cell culture. RSC Advances, 2021, 11, 15467-15476.	1.7	124
4170	Conductive chitosan/polyaniline hydrogel with cell-imprinted topography as a potential substrate for neural priming of adipose derived stem cells. RSC Advances, 2021, 11, 15795-15807.	1.7	16
4171	Mechanically tunable elastomer and cellulose nanocrystal composites as scaffolds for <i>in vitro</i> cell studies. Materials Advances, 2021, 2, 464-476.	2.6	15
4172	PLLA Porous Microsphere-Reinforced Silk-Based Scaffolds for Auricular Cartilage Regeneration. ACS Omega, 2021, 6, 3372-3383.	1.6	11
4173	Nuclear Stiffness Decreases with Disruption of the Extracellular Matrix in Living Tissues. Small, 2021, 17, e2006699.	5 . 2	20
4174	Nanomaterial-Based Bio Scaffolds for Enhanced Biomedical Applications. , 2021, , 125-160.		1
4175	Shc and the Control of Small GTPase Dynamics in Cellular Anchorage. , 2021, , 69-94.		0
4176	Electrospun Scaffold for Biomimic Culture of Caco-2 Cell Monolayer as an In Vitro Intestinal Model. ACS Applied Bio Materials, 2021, 4, 1340-1349.	2.3	11
4177	Tailoring Cellular Function: The Contribution of the Nucleus in Mechanotransduction. Frontiers in Bioengineering and Biotechnology, 2020, 8, 596746.	2.0	16
4178	Molecular mobility of polyrotaxane-based biointerfaces alters inflammatory responses and polarization in Kupffer cell lines. Biomaterials Science, 2021, 9, 2271-2278.	2.6	7

#	Article	IF	CITATIONS
4179	Enhanced Piezoelectric Fibered Extracellular Matrix to Promote Cardiomyocyte Maturation and Tissue Formation: A 3D Computational Model. Biology, 2021, 10, 135.	1.3	6
4182	Transparent Conductive Silk Film with a PEDOT–OH Nano Layer as an Electroactive Cell Interface. ACS Biomaterials Science and Engineering, 2021, 7, 1202-1215.	2.6	8
4183	Bioinspired hydrogel surfaces to augment corneal endothelial cell monolayer formation. Journal of Tissue Engineering and Regenerative Medicine, 2021, 15, 244-255.	1.3	6
4184	Fast Stereolithography Printing of Largeâ€Scale Biocompatible Hydrogel Models. Advanced Healthcare Materials, 2021, 10, e2002103.	3.9	48
4185	Modeling ternary fluids in contact with elastic membranes. Physical Review E, 2021, 103, 022112.	0.8	3
4186	Extracellular matrix density regulates the formation of tumour spheroids through cell migration. PLoS Computational Biology, 2021, 17, e1008764.	1.5	29
4187	Challenges and Innovations in Osteochondral Regeneration: Insights from Biology and Inputs from Bioengineering toward the Optimization of Tissue Engineering Strategies. Journal of Functional Biomaterials, 2021, 12, 17.	1.8	18
4188	Magnetic Nanocomposite Hydrogels for Directing Myofibroblast Activity in Adiposeâ€Derived Stem Cells. Advanced NanoBiomed Research, 2021, 1, 2000072.	1.7	5
4189	Investigating the nature of active forces in tissues reveals how contractile cells can form extensile monolayers. Nature Materials, 2021, 20, 1156-1166.	13.3	69
4190	Hydrogel-Forming Algae Polysaccharides: From Seaweed to Biomedical Applications. Biomacromolecules, 2021, 22, 1027-1052.	2.6	138
4191	Modulating the physico-mechanical properties of polyacrylamide/gelatin hydrogels for tissue engineering application. Polymer Bulletin, 2022, 79, 1821-1842.	1.7	4
4192	Vimentin tunes cell migration on collagen by controlling \hat{l}^21 integrin activation and clustering. Journal of Cell Science, 2021, 134, .	1.2	30
4193	Evolving roles and dynamics for catch and slip bonds during adhesion cluster maturation. Physical Review E, 2021, 103, 032402.	0.8	6
4194	3D printing novel in vitro cancer cell culture model systems for lung cancer stem cell study. Materials Science and Engineering C, 2021, 122, 111914.	3.8	32
4195	The focal mechanical properties of normal and diseased porcine aortic valve tissue measured by a novel microindentation device. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 115, 104245.	1.5	0
4196	The Current Challenges for Drug Discovery in CNS Remyelination. International Journal of Molecular Sciences, 2021, 22, 2891.	1.8	11
4197	Understanding the influence of substrate when growing tumorspheres. BMC Cancer, 2021, 21, 276.	1.1	2
4198	Critical Frequency and Critical Stretching Rate for Reorientation of Cells on a Cyclically Stretched Polymer in a Microfluidic Chip. ACS Applied Materials & Samp; Interfaces, 2021, 13, 13934-13948.	4.0	36

#	Article	IF	CITATIONS
4199	In Vitro Mineralization of Collagen. Advanced Materials, 2021, 33, e2004418.	11.1	102
4200	Cell Cytoskeleton and Stiffness Are Mechanical Indicators of Organotropism in Breast Cancer. Biology, 2021, 10, 259.	1.3	16
4201	Viscoelastic substrate decouples cellular traction force from other related phenotypes. Biochemical and Biophysical Research Communications, 2021, 543, 38-44.	1.0	5
4203	Large-Area Vertical Silicon Nanocolumn Arrays for Versatile Cell Interfaces. ACS Applied Nano Materials, 2021, 4, 2528-2537.	2.4	1
4204	High-Throughput Methods in the Discovery and Study of Biomaterials and Materiobiology. Chemical Reviews, 2021, 121, 4561-4677.	23.0	89
4205	Pre-complexation of talin and vinculin without tension is required for efficient nascent adhesion maturation. ELife, 2021, 10, .	2.8	36
4206	3D-microtissue derived secretome as a cell-free approach for enhanced mineralization of scaffolds in the chorioallantoic membrane model. Scientific Reports, 2021, 11, 5418.	1.6	5
4207	Mechanical Properties of Soft Biological Membranes for Organ-on-a-Chip Assessed by Bulge Test and AFM. ACS Biomaterials Science and Engineering, 2021, 7, 2990-2997.	2.6	32
4208	Peptide-based scaffolds for the culture and maintenance of primary human hepatocytes. Scientific Reports, 2021, 11, 6772.	1.6	25
4209	A Review of Single-Cell Adhesion Force Kinetics and Applications. Cells, 2021, 10, 577.	1.8	33
4210	The Future of Neuroscience: Flexible and Wireless Implantable Neural Electronics. Advanced Science, 2021, 8, 2002693.	5.6	47
4211	Biophysical and Biochemical Cues of Biomaterials Guide Mesenchymal Stem Cell Behaviors. Frontiers in Cell and Developmental Biology, 2021, 9, 640388.	1.8	56
4212	Evaluating Poly(Acrylamide―co â€Acrylic Acid) Hydrogels Stress Relaxation to Direct the Osteogenic Differentiation of Mesenchymal Stem Cells. Macromolecular Bioscience, 2021, 21, 2100069.	2.1	8
4213	Expression of cell type incongruent alpha-cardiac actin 1 subunit in medulloblastoma reveals a novel mechanism for cancer cell survival and control of migration. Neuro-Oncology Advances, 2021, 3, vdab064.	0.4	1
4214	Measuring the elastic modulus of soft culture surfaces and three-dimensional hydrogels using atomic force microscopy. Nature Protocols, 2021, 16, 2418-2449.	5.5	64
4215	Three-Dimensional Bioprinting Scaffolding for Nasal Cartilage Defects: A Systematic Review. Tissue Engineering and Regenerative Medicine, 2021, 18, 343-353.	1.6	15
4216	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. Chemical Reviews, 2021, 121, 4309-4372.	23.0	472
4217	A single stiffened nucleus alters cell dynamics and coherence in a monolayer. Cytoskeleton, 2021, 78, 277-283.	1.0	3

#	Article	IF	CITATIONS
4219	Matrix Stiffness Modulates Mechanical Interactions and Promotes Contact between Motile Cells. Biomedicines, 2021, 9, 428.	1.4	10
4220	The Potential of Fibroblast Transdifferentiation to Neuron Using Hydrogels. Processes, 2021, 9, 632.	1.3	1
4221	Recursive feedback between matrix dissipation and chemo-mechanical signaling drives oscillatory growth of cancer cell invadopodia. Cell Reports, 2021, 35, 109047.	2.9	14
4222	Comparative Analysis Carried Out on Modern Indentation Techniques for the Measurement of Mechanical Properties: A Review., 0,,.		1
4223	Cellulose cryogels prepared by regeneration from phosphoric acid solutions. Cellulose, 2021, 28, 4975-4989.	2.4	17
4224	Spatiotemporal patterning of photoresponsive DNA-based hydrogels to tune local cell responses. Nature Communications, 2021, 12, 2364.	5.8	63
4226	Bioinspired electrospun dECM scaffolds guide cell growth and control the formation of myotubes. Science Advances, 2021, 7, .	4.7	30
4227	Dynamic real-time imaging of living cell traction force by piezo-phototronic light nano-antenna array. Science Advances, 2021, 7, .	4.7	65
4228	Surface characterization and biocompatibility of isotropic microstructure prepared by UV laser. Journal of Materials Science and Technology, 2021, 94, 136-146.	5.6	7
4229	There Is Plenty of Room in The Folded Globular Proteins: Tandem Modular Elastomeric Proteins Offer New Opportunities in Engineering Proteinâ∈Based Biomaterials. Advanced NanoBiomed Research, 2021, 1, 2100028.	1.7	6
4230	Protein Micropatterning in 2.5D: An Approach to Investigate Cellular Responses in Multi-Cue Environments. ACS Applied Materials & Samp; Interfaces, 2021, 13, 25589-25598.	4.0	18
4232	Efficacy of graphene nanosheets on the plasma sprayed hydroxyapatite coating: Improved strength, toughness and in-vitro bioperformance with osteoblast. Materials and Design, 2021, 203, 109585.	3.3	14
4233	Designing Hydrogels for 3D Cell Culture Using Dynamic Covalent Crosslinking. Advanced Healthcare Materials, 2021, 10, e2100234.	3.9	84
4234	Tuning Viscoelasticity in Alginate Hydrogels for 3D Cell Culture Studies. Current Protocols, 2021, 1, e124.	1.3	34
4235	Foam Replica Method in the Manufacturing of Bioactive Glass Scaffolds: Out-of-Date Technology or Still Underexploited Potential?. Materials, 2021, 14, 2795.	1.3	29
4236	Cellulose-based scaffolds enhance pseudoislets formation and functionality. Biofabrication, 2021, 13, 035044.	3.7	13
4237	Delineating the heterogeneity of matrix-directed differentiation toward soft and stiff tissue lineages via single-cell profiling. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	22
4238	Advanced in silico validation framework for three-dimensional traction force microscopy and application to an in vitro model of sprouting angiogenesis. Acta Biomaterialia, 2021, 126, 326-338.	4.1	13

#	Article	IF	Citations
4239	Shear viscoelasticity of electrospinning PCL nanofibers reinforced alginate hydrogels. Materials Research Express, 2021, 8, 055402.	0.8	6
4240	A ternary phaseâ€field model for wetting of soft elastic structures. International Journal for Numerical Methods in Engineering, 2021, 122, 4114-4128.	1.5	6
4241	Mechanoregulation of YAP and TAZ in Cellular Homeostasis and Disease Progression. Frontiers in Cell and Developmental Biology, 2021, 9, 673599.	1.8	108
4242	Multifunctional Scaffolds and Synergistic Strategies in Tissue Engineering and Regenerative Medicine. Pharmaceutics, 2021, 13, 792.	2.0	29
4243	Regulation and mechanism of YAP/TAZ in theÂmechanical microenvironment of stem cells (Review). Molecular Medicine Reports, 2021, 24, .	1.1	16
4244	Reconstruction of Ultraâ€thin Alveolarâ€capillary Basement Membrane Mimics. Advanced Biology, 2021, 5, e2000427.	1.4	9
4245	AFM Force Relaxation Curve Reveals That the Decrease of Membrane Tension Is the Essential Reason for the Softening of Cancer Cells. Frontiers in Cell and Developmental Biology, 2021, 9, 663021.	1.8	13
4246	(Macro)molecular self-assembly for hydrogel drug delivery. Advanced Drug Delivery Reviews, 2021, 172, 275-295.	6.6	92
4247	Decreased Substrate Stiffness Promotes a Hypofibrotic Phenotype in Cardiac Fibroblasts. International Journal of Molecular Sciences, 2021, 22, 6231.	1.8	8
4248	From Residues to Added-Value Bacterial Biopolymers as Nanomaterials for Biomedical Applications. Nanomaterials, 2021, 11, 1492.	1.9	19
4250	Protein Adsorption Enhances Energy Dissipation in Networks of Lysozyme Amyloid Fibrils. Langmuir, 2021, 37, 7349-7355.	1.6	4
4251	Mechanical stimulation induces rapid fibroblast proliferation and accelerates the early maturation of human skin substitutes. Biomaterials, 2021, 273, 120779.	5.7	39
4252	Structurally Dynamic Hydrogels for Biomedical Applications: Pursuing a Fine Balance between Macroscopic Stability and Microscopic Dynamics. Chemical Reviews, 2021, 121, 11149-11193.	23.0	161
4253	Pancreatic Ductal Adenocarcinoma: Relating Biomechanics and Prognosis. Journal of Clinical Medicine, 2021, 10, 2711.	1.0	16
4254	Protein Hydrogels: The Swiss Army Knife for Enhanced Mechanical and Bioactive Properties of Biomaterials. Nanomaterials, 2021, 11, 1656.	1.9	27
4255	Caveolin-1 mediates soft scaffold-enhanced adipogenesis of human mesenchymal stem cells. Stem Cell Research and Therapy, 2021, 12, 347.	2.4	11
4256	A story of fibers and stress: <scp>Matrixâ€embedded</scp> signals for fibroblast activation in the skin. Wound Repair and Regeneration, 2021, 29, 515-530.	1.5	17
4257	Fabrication of Ultra-Thin Micro-Porous PDMS Membrane for Cell Co-Culture in Blood Brain Barrier Model on Chip., 2021,,.		1

#	Article	IF	Citations
4258	Advances in Extracellular Matrix-Mimetic Hydrogels to Guide Stem Cell Fate. Cells Tissues Organs, 2022, 211, 703-720.	1.3	11
4259	Dynamic cellular biomechanics in responses to chemotherapeutic drug in hypoxia probed by atomic force spectroscopy. Oncotarget, 2021, 12, 1165-1177.	0.8	6
4261	Suppression of Breast Cancer Cell Migration and Epithelial-Mesenchymal Transition by Atmospheric Pressure Plasma. Frontiers in Physics, 2021, 9, .	1.0	3
4262	Biomechanical and biological responses of periodontium in orthodontic tooth movement: up-date in a new decade. International Journal of Oral Science, 2021, 13, 20.	3.6	84
4263	Electroactive Biomaterials and Systems for Cell Fate Determination and Tissue Regeneration: Design and Applications. Advanced Materials, 2021, 33, e2007429.	11.1	153
4265	Nanofibrillar Hydrogels by Temperature Driven Selfâ€Assembly: New Structures for Cell Growth and Their Biological and Medical Implications. Advanced Materials Interfaces, 2021, 8, 2002202.	1.9	12
4266	Biomechanical cues as master regulators of hematopoietic stem cell fate. Cellular and Molecular Life Sciences, 2021, 78, 5881-5902.	2.4	18
4268	Modelling cell guidance and curvature control in evolving biological tissues. Journal of Theoretical Biology, 2021, 520, 110658.	0.8	9
4270	TRPV Protein Family—From Mechanosensing to Cancer Invasion. Biomolecules, 2021, 11, 1019.	1.8	36
4271	Budding epithelial morphogenesis driven by cell-matrix versus cell-cell adhesion. Cell, 2021, 184, 3702-3716.e30.	13.5	67
4272	Fighting Like Cats and Dogs: Challenges in Domestic Carnivore Oocyte Development and Promises of Innovative Culture Systems. Animals, 2021, 11, 2135.	1.0	6
4273	A review of regulated self-organizing approaches for tissue regeneration. Progress in Biophysics and Molecular Biology, 2021, 167, 63-78.	1.4	5
4274	Non-mulberry silk fiber-based scaffolds reinforced by PLLA porous microspheres for auricular cartilage: An in vitro study. International Journal of Biological Macromolecules, 2021, 182, 1704-1712.	3.6	8
4276	A practical guide to quartz crystal microbalance with dissipation monitoring of thin polymer films. Journal of Polymer Science, 2022, 60, 1090-1107.	2.0	76
4277	Structure and Dynamics of a Temperature-Sensitive Hydrogel. Journal of Physical Chemistry B, 2021, 125, 8219-8224.	1.2	4
4278	Morphogenesis and cell ordering in confined bacterial biofilms. Proceedings of the National Academy of Sciences of the United States of America, $2021, 118, \ldots$	3.3	47
4279	Mechanosensation Mediates Longâ€Range Spatial Decisionâ€Making in an Aneural Organism. Advanced Materials, 2021, 33, e2008161.	11.1	11
4280	The Evolving Roles of Cardiac Macrophages in Homeostasis, Regeneration, and Repair. International Journal of Molecular Sciences, 2021, 22, 7923.	1.8	33

#	Article	IF	CITATIONS
4281	Spatial micro-variation of 3D hydrogel stiffness regulates the biomechanical properties of hMSCs. Biofabrication, 2021, 13, 035051.	3.7	10
4282	Technical requirements for cultured meat production: a review. Journal of Animal Science and Technology, 2021, 63, 681-692.	0.8	14
4283	Independent and Synergistic Modulations of Viscoelasticity and Stiffness of Dynamically Cross-Linked Cell-Encapsulating ClickGels by Covalently Tethered Polymer Brushes. Biomacromolecules, 2021, 22, 3408-3415.	2.6	2
4284	Inhomogeneity of stiffness and density of the extracellular matrix within the leukoplakia of human oral mucosa as potential physicochemical factors leading to carcinogenesis. Translational Oncology, 2021, 14, 101105.	1.7	7
4285	Fast photocurable thiol-ene elastomers with tunable biodegradability, mechanical and surface properties enhance myoblast differentiation and contractile function. Bioactive Materials, 2021, 6, 2120-2133.	8.6	11
4286	Design and validation of a modular micro-robotic system for the mechanical characterization of soft tissues. Acta Biomaterialia, 2021, 134, 466-476.	4.1	4
4287	Modelling Nuclear Morphology and Shape Transformation: A Review. Membranes, 2021, 11, 540.	1.4	0
4288	Biodegradable polymeric occluder for closure of atrial septal defect with interventional treatment of cardiovascular disease. Biomaterials, 2021, 274, 120851.	5.7	37
4289	Importance of axial stretch on the determination of Young's modulus of electrospun poly(ε-caprolactone) nanofibres by atomic force microscopy. Canadian Journal of Physics, 2021, 99, 709-718.	0.4	1
4290	Direct measurement of nearâ€nanoâ€Newton forces developed by selfâ€organizing actomyosin fibers bound αâ€catenin. Biology of the Cell, 2021, 113, 441-449.	0.7	1
4291	Theory and Simulations of Hybrid Networks. Macromolecules, 2021, 54, 7337-7346.	2.2	3
4292	Chirality in peptideâ€based materials: From chirality effects to potential applications. Chirality, 2021, 33, 618-642.	1.3	9
4293	Mechanical Pressure Driving Proteoglycan Expression in Mammographic Density: a Self-perpetuating Cycle?. Journal of Mammary Gland Biology and Neoplasia, 2021, 26, 277-296.	1.0	2
4295	Degradable RGD-Functionalized 3D-Printed Scaffold Promotes Osteogenesis. Journal of Dental Research, 2021, 100, 1109-1117.	2.5	8
4296	Mechanotropism of single cells adhering to elastic substrates subject to exogenous forces. Journal of the Mechanics and Physics of Solids, 2021, 153, 104475.	2.3	2
4297	Soft Polymer-Based Technique for Cellular Force Sensing. Polymers, 2021, 13, 2672.	2.0	3
4299	The Fibrillar Matrix: Novel Avenues for Breast Cancer Detection and Treatment. Engineering, 2021, 7, 1375-1380.	3.2	1
4300	How Do Mechanics Guide Fibroblast Activity? Complex Disruptions during Emphysema Shape Cellular Responses and Limit Research. Bioengineering, 2021, 8, 110.	1.6	6

#	Article	IF	CITATIONS
4301	Molecular tension in syndecan-1 is regulated by extracellular mechanical cues and fluidic shear stress. Biomaterials, 2021, 275, 120947.	5.7	12
4302	Isolating and characterizing lymphatic endothelial progenitor cells for potential therapeutic lymphangiogenic applications. Acta Biomaterialia, 2021, 135, 191-202.	4.1	7
4303	Mechanosensitive turnover of phosphoribosyl pyrophosphate synthetases regulates nucleotide metabolism. Cell Death and Differentiation, 2022, 29, 206-217.	5.0	6
4304	Biomimetic Lamellar Chitosan Scaffold for Soft Gingival Tissue Regeneration. Advanced Functional Materials, 2021, 31, 2105348.	7.8	28
4305	Spinal Cord Neuronal Network Formation in a 3D Printed Reinforced Matrix—A Model System to Study Disease Mechanisms. Advanced Healthcare Materials, 2021, 10, e2100830.	3.9	12
4306	Cell-matrix reciprocity in 3D culture models with nonlinear elasticity. Bioactive Materials, 2022, 9, 316-331.	8.6	36
4307	Transwellâ€Integrated 2 µm Thick Transparent Polydimethylsiloxane Membranes with Controlled Pore Sizes and Distribution to Model the Bloodâ€Brain Barrier. Advanced Materials Technologies, 2021, 6, 2100138.	3.0	17
4308	Carbohydrate-Based Macromolecular Biomaterials. Chemical Reviews, 2021, 121, 10950-11029.	23.0	122
4309	Extrusion-based 3D (Bio)Printed Tissue Engineering Scaffolds: Process–Structure–Quality Relationships. ACS Biomaterials Science and Engineering, 2021, 7, 4694-4717.	2.6	12
4310	Evaluation of in vitro human skin models for studying effects of external stressors and stimuli and developing treatment modalities. View, 2022, 3, 20210012.	2.7	16
4312	Synthetic hydrogels as blood clot mimicking wound healing materials. Progress in Biomedical Engineering, 2021, 3, 042006.	2.8	11
4313	Adipose Tissue-Derived Stromal Cells Alter the Mechanical Stability and Viscoelastic Properties of Gelatine Methacryloyl Hydrogels. International Journal of Molecular Sciences, 2021, 22, 10153.	1.8	14
4314	Model of spontaneous droplet transport on a soft viscoelastic substrate with nonuniform thickness. Physical Review E, 2021, 104, 034611.	0.8	7
4316	Effect of Elasticity of Silica Capsules on Cellular Uptake. Langmuir, 2021, 37, 11688-11694.	1.6	9
4317	Assessment of structural, biological and drug release properties of electro-sprayed poly lactic acid-dexamethasone coating for biomedical applications. Biomedical Engineering Letters, 2021, 11, 393-406.	2.1	5
4319	Dissecting the Inorganic Nanoparticle-Driven Interferences on Adhesome Dynamics. Journal of Nanotheranostics, 2021, 2, 174-195.	1.7	1
4321	Multifunctional Thermoresponsive Microcarriers for Highâ€Throughput Cell Culture and Enzymeâ€Free Cell Harvesting. Small, 2021, 17, e2103192.	5.2	15
4322	3D Printing of Polysaccharide-Based Self-Healing Hydrogel Reinforced with Alginate for Secondary Cross-Linking. Biomedicines, 2021, 9, 1224.	1.4	15

#	Article	IF	CITATIONS
4323	Study on Processing Parameters of Polycaprolactone Electrospinning for Fibrous Scaffold using Factorial Design. Regenerative Engineering and Translational Medicine, 0, , 1.	1.6	0
4324	Anchorage-Dependent Living Supramolecular Self-Assembly of Polymeric Micelles. Journal of the American Chemical Society, 2021, 143, 14684-14693.	6.6	13
4325	Visualizing the Invisible: Advanced Optical Microscopy as a Tool to Measure Biomechanical Forces. Frontiers in Cell and Developmental Biology, 2021, 9, 706126.	1.8	6
4326	Engineered Biocompatible and Stable Dipeptide Hydrogel with Tunable Mechanical and Cell Growth Properties to Embolden Neuroglial Cell Growth. International Journal of Peptide Research and Therapeutics, 2021, 27, 2795-2808.	0.9	1
4327	3D-printed dermis-specific extracellular matrix mitigates scar contraction via inducing early angiogenesis and macrophage M2 polarization. Bioactive Materials, 2022, 10, 236-246.	8.6	25
4328	The Multiple Faces of Integrin–ECM Interactions in Inflammatory Bowel Disease. International Journal of Molecular Sciences, 2021, 22, 10439.	1.8	4
4329	Preparation, characterization and cell response studies on bioconjugated 3D protein hydrogels with wide-range stiffness: An approach on cell therapy and cell storage. Colloids and Surfaces B: Biointerfaces, 2021, 205, 111843.	2.5	3
4331	Tethering Cells via Enzymatic Oxidative Crosslinking Enables Mechanotransduction in Nonâ€Cellâ€Adhesive Materials. Advanced Materials, 2021, 33, e2102660.	11.1	10
4332	Combining Automated Organoid Workflows with Artificial Intelligenceâ€Based Analyses: Opportunities to Build a New Generation of Interdisciplinary Highâ€Throughput Screens for Parkinson's Disease and Beyond. Movement Disorders, 2021, 36, 2745-2762.	2.2	10
4333	MicroRNA-activated hydrogel scaffold generated by 3D printing accelerates bone regeneration. Bioactive Materials, 2022, 10, 1-14.	8.6	18
4334	Extracellular matrix stiffness modulates host-bacteria interactions and antibiotic therapy of bacterial internalization. Biomaterials, 2021, 277, 121098.	5.7	11
4335	PlateFlo – A software-controllable plate-scale perfusion system for culture of adherent cells. HardwareX, 2021, 10, e00222.	1.1	1
4336	Strain-induced mechanoresponse depends on cell contractility and BAG3-mediated autophagy. Molecular Biology of the Cell, 2021, 32, ar9.	0.9	2
4337	The functional cross talk between cancer cells and cancer associated fibroblasts from a cancer mechanics perspective. Biochimica Et Biophysica Acta - Molecular Cell Research, 2021, 1868, 119103.	1.9	17
4338	Advanced electrospun hydrogel fibers for wound healing. Composites Part B: Engineering, 2021, 223, 109101.	5.9	81
4339	Subcellular Force Quantification of Endothelial Using Silicone Pillar Arrays. Methods in Molecular Biology, 2022, 2375, 229-245.	0.4	1
4340	Collagen- and hyaluronic acid-based hydrogels and their biomedical applications. Materials Science and Engineering Reports, 2021, 146, 100641.	14.8	93
4341	Substrate stiffness modulates endothelial cell function via the YAP-Dll4-Notch1 pathway. Experimental Cell Research, 2021, 408, 112835.	1.2	9

#	Article	IF	CITATIONS
4342	Mechanical interactions of invasive cancer cells through their substrate evolve from additive to synergistic. Journal of Biomechanics, 2021, 129, 110759.	0.9	3
4343	Tissue engineering, 3D-Bioprinting, morphogenesis modelling and simulation of biostructures: Relevance, underpinning biological principles and future trends. Bioprinting, 2021, 24, e00171.	2.9	5
4344	Tracking cell migration by cellular force footprint recorded with a mechano-optical biosensor. Biosensors and Bioelectronics, 2021, 193, 113533.	5.3	2
4346	Retinal glia. , 2022, , 51-66.		O
4347	Matrix stiffness modulates tip cell formation through the p-PXN-Rac1-YAP signaling axis. Bioactive Materials, 2022, 7, 364-376.	8.6	25
4348	Biomechanical Properties of the Trabecular Meshwork in Aqueous Humor Outflow Resistance. , 2021, , 147-167.		1
4349	Click-functionalized hydrogel design for mechanobiology investigations. Molecular Systems Design and Engineering, 2021, 6, 670-707.	1.7	15
4350	A designer cell culture insert with a nanofibrous membrane toward engineering an epithelial tissue model validated by cellular nanomechanics. Nanoscale Advances, 2021, 3, 4714-4725.	2.2	9
4351	Mapping mechanical properties of biological materials via an add-on Brillouin module to confocal microscopes. Nature Protocols, 2021, 16, 1251-1275.	5.5	38
4352	Biophysical phenotyping of mesenchymal stem cells along the osteogenic differentiation pathway. Cell Biology and Toxicology, 2021, 37, 915-933.	2.4	8
4353	Photodegradable Polyacrylamide Gels for Dynamic Control of Cell Functions. ACS Applied Materials & Samp; Interfaces, 2021, 13, 5929-5944.	4.0	24
4354	Tissue Engineering Concept., 2021,,.		3
4355	Mechanical Regulation of Microvascular Growth and Remodeling. Reference Series in Biomedical Engineering, 2021, , 33-76.	0.1	0
4356	Polymeric Tissue Adhesives. Chemical Reviews, 2021, 121, 11336-11384.	23.0	306
4357	Site-Directed Differentiation of Human Adipose-Derived Mesenchymal Stem Cells to Nucleus Pulposus Cells Using an Injectable Hydroxyl-Functional Diblock Copolymer Worm Gel. Biomacromolecules, 2021, 22, 837-845.	2.6	13
4358	Micro systems for probing cellular forces and cellular mechanical properties. , 2021, , 1-22.		0
4359	Mechanical Control of Epithelial Tissue Morphogenesis by Apoptosis and Non-Professional Efferocytosis. SSRN Electronic Journal, O, , .	0.4	0
4361	Durch Polymeraseâ€Kettenreaktion erzeugte DNAâ€Peptidâ€Netzwerke als kýnstliche extrazellulÃÆ Matrix. Angewandte Chemie, 2016, 128, 10291-10295.	1.6	8

#	Article	IF	CITATIONS
4362	Biomimetic and Bio-responsive Materials in Regenerative Medicine., 2009, , 1-58.		4
4363	Characterizing Bioinks for Extrusion Bioprinting: Printability and Rheology. Methods in Molecular Biology, 2020, 2140, 111-133.	0.4	32
4364	The Cytoskeleton of the Living Cell as an Out-of-Equilibrium System. , 2008, , 111-141.		3
4365	Microbioreactors for Stem Cell Research. Biological and Medical Physics Series, 2011, , 203-225.	0.3	1
4366	Responses of Cells to Adhesion-Mediated Signals: A Universal Mechanism. , 2011, , 1-10.		5
4367	Cell-Generated Forces in Tissue Assembly, Function, and Disease. , 2011, , 47-74.		2
4368	Tissue Engineering Strategies for Vocal Fold Repair and Regeneration. , 2012, , 253-284.		1
4369	Pressure Gradients in Solid Tumors. , 2013, , 241-272.		2
4370	Mechanisms of Nuclear Size Regulation in Model Systems and Cancer. Advances in Experimental Medicine and Biology, 2014, 773, 537-569.	0.8	71
4371	Development of Microfluidic Devices for the Manipulation of Neuronal Synapses. Neuromethods, 2015, , 127-137.	0.2	3
4372	Filamins and Disease. , 2012, , 141-158.		1
4373	Biomimetic Multiscale Topography for Cell Alignment. , 2013, , 471-483.		2
4374	Encapsulation and Culture of Mammalian Cells Including Corneal Cells in Alginate Hydrogels. Methods in Molecular Biology, 2013, 1014, 201-210.	0.4	10
4375	Remodelling of the Extracellular Matrix: Implications for Cancer. , 2013, , 65-90.		2
4376	Continuum Models of Collective Cell Migration. Advances in Experimental Medicine and Biology, 2019, 1146, 45-66.	0.8	24
4377	Cell Migration in Microfluidic Devices: Invadosomes Formation in Confined Environments. Advances in Experimental Medicine and Biology, 2019, 1146, 79-103.	0.8	3
4378	The Tumor Microenvironments of Lethal Prostate Cancer. Advances in Experimental Medicine and Biology, 2019, 1210, 149-170.	0.8	7
4379	Stiffness and Hepatocytes Function In Vitro. , 2020, , 645-660.		2

#	Article	IF	CITATIONS
4380	Mechanotransduction, Metastasis and Genomic Instability. Cancer Metastasis - Biology and Treatment, 2015, , 139-158.	0.1	8
4381	Gellan. , 2015, , 1627-1682.		7
4382	Mechanical Regulation of Microvascular Growth and Remodeling. , 2019, , 1-45.		3
4383	Biomimetic Surfaces for Cell Engineering. Springer Series in Biomaterials Science and Engineering, 2016, , 543-569.	0.7	1
4384	Photopolymerizable Materials for Cell Encapsulation. , 2017, , 1-43.		2
4386	Biomaterial-Related Approaches: Surface Structuring. , 2009, , 469-484.		8
4387	Biomechanical Function in Regenerative Medicine. , 2009, , 693-703.		1
4388	Multiscale Biomechanical Modeling of Stem Cell-Extracellular Matrix Interactions. , 2011, , 27-53.		3
4389	Soft Matter Modeling of Biological Cells. , 2012, , 95-117.		3
4390	Finite Element Quantification of the Compressive Forces Induced by Keratinocyte on a Liquid Crystal Substrate. Advanced Structured Materials, 2012, , 79-99.	0.3	4
4391	Gravitational Force: Triggered Stress in Cells of the Immune System. , 2012, , 187-202.		9
4392	Bioelastomers in Tissue Engineering. , 2011, , 75-118.		8
4393	Mechanostransduction in Cardiac and Stem-Cell Derived Cardiac Cells., 2010,, 99-139.		3
4394	Pattern Formation and Force Generation by Cell Ensembles in a Filamentous Matrix. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 203-213.	0.1	2
4395	Carbon Nanotubes as Electrical Interfaces with Neurons. , 2010, , 325-340.		2
4396	Investigation of Cell Adhesion, Contraction and Physical Restructuring on Shear Sensitive Liquid Crystals. Lecture Notes in Electrical Engineering, 2011, , 623-635.	0.3	2
4397	Rational Design of Artificial Cellular Niches for Tissue Engineering. Computational Methods in Applied Sciences (Springer), 2014, , 129-147.	0.1	2
4398	Reproducible preparation method of hydrogels for cell culture applications – case study with spermidine crosslinked gellan gum. IFMBE Proceedings, 2018, , 811-814.	0.2	2

#	Article	IF	CITATIONS
4399	Role of Nanoparticles and Nanomaterials in Drug Delivery: An Overview., 2020, , 247-265.		16
4400	Epithelial machines of morphogenesis and their potential application in organ assembly and tissue engineering., 2012, 11, 1109.		1
4401	Cellular mechanisms of skin repair in humans and other mammals. , 2016, 10, 103.		1
4402	Effect of Substrate Modulus on Cell Function and Differentiation. , 2011, , 51-63.		7
4403	From Single Cells to Engineered and Explanted Tissues. International Review of Cell and Molecular Biology, 2015, 319, 1-44.	1.6	27
4404	Effects of substrate stiffness on the tenoinduction of human mesenchymal stem cells. Acta Biomaterialia, 2017, 58, 244-253.	4.1	56
4405	The Cell Adaptation Time Sets a Minimum Length Scale for Patterned Substrates. Biophysical Journal, 2020, 119, 2299-2306.	0.2	7
4406	The fifth sense: Mechanosensory regulation of alpha-actinin-4 and its relevance for cancer metastasis. Seminars in Cell and Developmental Biology, 2017, 71, 68-74.	2.3	26
4407	Cortical cell stiffness is independent of substrate mechanics. Nature Materials, 2020, 19, 1019-1025.	13.3	89
4408	Mechanical regulation of glycolysis via cytoskeleton architecture. Nature, 2020, 578, 621-626.	13.7	327
4409	Scaffold-based 3D cellular models mimicking the heterogeneity of osteosarcoma stem cell niche. Scientific Reports, 2020, 10, 22294.	1.6	46
4410	Viscoelastic hydrogels for 3D cell culture. Biomaterials Science, 2017, 5, 1480-1490.	2.6	230
4411	Influence of nanomedicine mechanical properties on tumor targeting delivery. Chemical Society Reviews, 2020, 49, 2273-2290.	18.7	123
4412	Amphiphilic cationic cyclodextrin nanovesicles: a versatile cue for guiding cell adhesion. Nanoscale Advances, 2020, 2, 5897-5904.	2.2	4
4413	Hydrogels as artificial matrices for cell seeding in microfluidic devices. RSC Advances, 2020, 10, 43682-43703.	1.7	62
4414	Extracellular matrix stiffness and Wnt/ \hat{l}^2 -catenin signaling in physiology and disease. Biochemical Society Transactions, 2020, 48, 1187-1198.	1.6	41
4415	Microrheology for biomaterial design. APL Bioengineering, 2020, 4, 041508.	3.3	20
4416	Biomechanical factors in three-dimensional tissue bioprinting. Applied Physics Reviews, 2020, 7, 041319.	5.5	30

#	Article	IF	CITATIONS
4417	SCWISh network is essential for survival under mechanical pressure. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13465-13470.	3.3	24
4418	Cradle-to-cradle: designing biomaterials to fit as truly biomimetic cell scaffolds– a review. Liquid Crystals Today, 2020, 29, 40-52.	2.3	11
4419	Tissue Engineering, Cardiovascular: Biodegradable Polymers., 0,, 7957-7971.		3
4420	Designer substrates and devices for mechanobiology study. Journal of Semiconductors, 2020, 41, 041607.	2.0	2
4421	3D porous collagen scaffolds reinforced by glycation with ribose for tissue engineering application. Biomedical Materials (Bristol), 2017, 12, 055002.	1.7	25
4422	Fiber diameter, porosity and functional group gradients in electrospun scaffolds. Biomedical Materials (Bristol), 2020, 15, 045020.	1.7	8
4423	1D and 2D error assessment and correction for extrusion-based bioprinting using process sensing and control strategies. Biofabrication, 2020, 12, 045023.	3.7	22
4424	Ultra-stiff compressed collagen for corneal perforation patch graft realized by in situ photochemical crosslinking. Biofabrication, 2020, 12, 045030.	3.7	8
4425	Spatial patterning of nanofibrous collagen scaffolds modulates fibroblast morphology. Biofabrication, 2021, 13, 015007.	3.7	7
4426	Organ-specific ECM arrays for investigating cell-ECM interactions during stem cell differentiation. Biofabrication, 2021, 13, 015015.	3.7	4
4427	MECHANICALLY INDUCED REACTIVE GLIOSIS CAUSES ATP-MEDIATED ALTERATIONS IN ASTROCYTE STIFFNESS. Journal of Neurotrauma, 2009, 26, 090330061141047.	1.7	30
4428	Cross-linked matrix rigidity and soluble retinoids synergize in nuclear lamina regulation of stem cell differentiation. Molecular Biology of the Cell, 2017, 28, 2010-2022.	0.9	59
4429	In vivo characterization of chick embryo mesoderm by optical coherence tomographyâ€essisted microindentation. FASEB Journal, 2020, 34, 12269-12277.	0.2	8
4430	A novel approach for mechanical tissue characterization indicates decreased elastic strength in brain areas affected by experimental thromboembolic stroke. NeuroReport, 2015, 26, 583-587.	0.6	10
4456	Stability of heterogeneous parallel-bond adhesion clusters under load. Physical Review Research, 2020, 2, .	1.3	3
4457	Singular Nature of the Elastocapillary Ridge. Physical Review X, 2020, 10, .	2.8	11
4458	Cells into Systems. Mechanical Engineering, 2010, 132, 30-34.	0.0	3
4459	Recovery of Tractions Exerted by Single Cells in Three-Dimensional Nonlinear Matrices. Journal of Biomechanical Engineering, 2020, 142, .	0.6	14

#	ARTICLE	IF	Citations
4460	Substrate Stiffness Modulates the Crosstalk Between Mesenchymal Stem Cells and Macrophages. Journal of Biomechanical Engineering, 2021, 143, .	0.6	18
4461	Multifunctional microfluidic devices from tailored photopolymer formulations. , 2019, , .		2
4462	Distal vessel stiffening is an early and pivotal mechanobiological regulator of vascular remodeling and pulmonary hypertension. JCl Insight, $2016, 1, .$	2.3	58
4463	Hydrodynamics in Porous Media with Applications to Tissue Engineering. , 2010, , 75-119.		2
4464	CLASP1 regulates endothelial cell branching morphology and directed migration. Biology Open, 2017, 6, 1502-1515.	0.6	4
4465	Recent advances in lineage differentiation from stem cells: hurdles and opportunities?. F1000Research, 2018, 7, 220.	0.8	16
4466	Actomyosin stress fiber mechanosensing in 2D and 3D. F1000Research, 2016, 5, 2261.	0.8	61
4467	Quantifying cellular forces and biomechanical properties by correlative micropillar traction force and Brillouin microscopy. Biomedical Optics Express, 2019, 10, 2202.	1.5	16
4468	Measurements on ATP induced cellular fluctuations using real-time dual view transport of intensity phase microscopy. Biomedical Optics Express, 2019, 10, 2337.	1.5	11
4469	Microrheological quantification of viscoelastic properties with photonic force optical coherence elastography. Optics Express, 2019, 27, 22615.	1.7	13
4470	Active Vertex Model for cell-resolution description of epithelial tissue mechanics. PLoS Computational Biology, 2017, 13, e1005569.	1.5	180
4471	Differential Matrix Rigidity Response in Breast Cancer Cell Lines Correlates with the Tissue Tropism. PLoS ONE, 2009, 4, e6361.	1.1	132
4472	Matrix Rigidity Induces Osteolytic Gene Expression of Metastatic Breast Cancer Cells. PLoS ONE, 2010, 5, e15451.	1.1	70
4473	Stiffness Gradients Mimicking In Vivo Tissue Variation Regulate Mesenchymal Stem Cell Fate. PLoS ONE, 2011, 6, e15978.	1.1	392
4474	Mesenchymal Stem Cell Responses to Bone-Mimetic Electrospun Matrices Composed of Polycaprolactone, Collagen I and Nanoparticulate Hydroxyapatite. PLoS ONE, 2011, 6, e16813.	1.1	86
4475	Paracrine Interactions between Mesenchymal Stem Cells Affect Substrate Driven Differentiation toward Tendon and Bone Phenotypes. PLoS ONE, 2012, 7, e31504.	1.1	63
4476	Macromolecular Crowding Directs Extracellular Matrix Organization and Mesenchymal Stem Cell Behavior. PLoS ONE, 2012, 7, e37904.	1.1	101
4477	Redirecting Valvular Myofibroblasts into Dormant Fibroblasts through Light-mediated Reduction in Substrate Modulus. PLoS ONE, 2012, 7, e39969.	1.1	146

#	Article	IF	Citations
4478	Phenotypic Characterization of Prostate Cancer LNCaP Cells Cultured within a Bioengineered Microenvironment. PLoS ONE, 2012, 7, e40217.	1.1	75
4479	Effect of Substrate Stiffness on Early Mouse Embryo Development. PLoS ONE, 2012, 7, e41717.	1.1	84
4480	Human Lung Cancer Cells Grown in an Ex Vivo 3D Lung Model Produce Matrix Metalloproteinases Not Produced in 2D Culture. PLoS ONE, 2012, 7, e45308.	1.1	66
4481	Fabrication of Hydrogels with Steep Stiffness Gradients for Studying Cell Mechanical Response. PLoS ONE, 2012, 7, e46107.	1.1	179
4482	Collagen Osteoid-Like Model Allows Kinetic Gene Expression Studies of Non-Collagenous Proteins in Relation with Mineral Development to Understand Bone Biomineralization. PLoS ONE, 2013, 8, e57344.	1.1	24
4483	Fluid-Flow Induced Wall Shear Stress and Epithelial Ovarian Cancer Peritoneal Spreading. PLoS ONE, 2013, 8, e60965.	1.1	45
4484	The Mechanical Environment Modulates Intracellular Calcium Oscillation Activities of Myofibroblasts. PLoS ONE, 2013, 8, e64560.	1.1	64
4485	Geometry-Driven Cell Organization Determines Tissue Growths in Scaffold Pores: Consequences for Fibronectin Organization. PLoS ONE, 2013, 8, e73545.	1.1	66
4486	How Changes in Extracellular Matrix Mechanics and Gene Expression Variability Might Combine to Drive Cancer Progression. PLoS ONE, 2013, 8, e76122.	1.1	32
4487	Ultra-Soft PDMS-Based Magnetoactive Elastomers as Dynamic Cell Culture Substrata. PLoS ONE, 2013, 8, e76196.	1.1	46
4488	Matrix Stiffness Affects Endocytic Uptake of MK2-Inhibitor Peptides. PLoS ONE, 2014, 9, e84821.	1.1	12
4489	Independent Adipogenic and Contractile Properties of Fibroblasts in Graves' Orbitopathy: An In Vitro Model for the Evaluation of Treatments. PLoS ONE, 2014, 9, e95586.	1.1	21
4490	Image Analysis for the Quantitative Comparison of Stress Fibers and Focal Adhesions. PLoS ONE, 2014, 9, e107393.	1.1	30
4491	Undifferentiated Bronchial Fibroblasts Derived from Asthmatic Patients Display Higher Elastic Modulus than Their Non-Asthmatic Counterparts. PLoS ONE, 2015, 10, e0116840.	1.1	33
4492	The Filament Sensor for Near Real-Time Detection of Cytoskeletal Fiber Structures. PLoS ONE, 2015, 10, e0126346.	1.1	64
4493	Non-Muscle Myosin II Isoforms Have Different Functions in Matrix Rearrangement by MDA-MB-231 Cells. PLoS ONE, 2015, 10, e0131920.	1.1	9
4494	Normal and Fibrotic Rat Livers Demonstrate Shear Strain Softening and Compression Stiffening: A Model for Soft Tissue Mechanics. PLoS ONE, 2016, 11, e0146588.	1.1	97
4495	Three-Dimensional Reflectance Traction Microscopy. PLoS ONE, 2016, 11, e0156797.	1.1	19

#	Article	IF	CITATIONS
4496	Multi-Channel Optical Coherence Elastography Using Relative and Absolute Shear-Wave Time of Flight. PLoS ONE, 2017, 12, e0169664.	1.1	4
4497	Morphological adaptations in breast cancer cells as a function of prolonged passaging on compliant substrates. PLoS ONE, 2017, 12, e0187853.	1.1	14
4498	Physicochemical Characterization of PEG Hydrogel to Estimate Biocompatibility. Transactions of the Materials Research Society of Japan, 2008, 33, 775-777.	0.2	1
4499	Cell softness regulates tumorigenicity and stemness of cancer cells. EMBO Journal, 2021, 40, e106123.	3.5	77
4500	Nano-mechanical Phenotype as a Promising Biomarker to Evaluate Cancer Development, Progression, and Anti-cancer Drug Efficacy. Journal of Cancer Prevention, 2016, 21, 73-80.	0.8	13
4501	T lymphocytes against solid malignancies: winning ways to defeat tumours. Cell Stress, 2018, 2, 200-212.	1.4	22
4502	Investigation of the effect of nozzle design on rheological bioprinting properties using computational fluid dynamics. Revista Materia, 2019, 24, .	0.1	6
4504	Attachment, Proliferation, and Morphological Properties of Human Dermal Fibroblasts on Ovine Tendon Collagen Scaffolds: A Comparative Study. The Malaysian Journal of Medical Sciences, 2017, 24, 33-43.	0.3	23
4505	The Crosstalk between Tissue Engineering and Pharmaceutical Biotechnology: Recent Advances and Future Directions. Current Pharmaceutical Biotechnology, 2015, 16, 1012-1023.	0.9	9
4506	Bone: A Fertile Soil for Cancer Metastasis. Current Drug Targets, 2017, 18, 1281-1295.	1.0	27
4507	Biomaterials and Fabrication to Optimise Scaffold Properties for Musculoskeletal Tissue Engineering. Current Stem Cell Research and Therapy, 2016, 11, 578-584.	0.6	17
4508	Bioreactors Design, Types, Influencing Factors and Potential Application in Dentistry. A Literature Review. Current Stem Cell Research and Therapy, 2019, 14, 351-366.	0.6	6
4509	Substrate stiffness affects early differentiation events in embryonic stem cells., 2009, 18, 1-14.		387
4510	Correlating cell architecture with osteogenesis: first steps towards live single cell monitoring., 2009, 18, 59-62.		29
4511	Suppression of adverse angiogenesis in an albumin-based hydrogel for articular cartilage and intervertebral disc regeneration., 2010, 20, 24-37.		52
4512	Visible light photoinitiation of mesenchymal stem cell-laden bioresponsive hydrogels., 2011, 22, 43-55.		182
4513	How can cells sense the elasticity of a substrate? An analysis using a cell tensegrity model. , 2011, 22, 202-213.		62
4514	A review of decellularized stem cell matrix: a novel cell expansion system for cartilage tissue engineering., 2011, 22, 333-343.		89

#	Article	IF	CITATIONS
4515	Cell-scaffold interactions in the bone tissue engineering triad., 2013, 26, 120-132.		228
4516	Validation of an in vitro 3D bone culture model with perfused and mechanically stressed ceramic scaffold., 2015, 29, 250-267.		26
4517	Cyclical Cell Stretching of Skin-Derived Fibroblasts Downregulates Connective Tissue Growth Factor (CTGF) Production. Connective Tissue Research, 2009, 50, 323-329.	1.1	9
4518	Optimizing the neuron-electrode interface for chronic bioelectronic interfacing. Neurosurgical Focus, 2020, 49, E7.	1.0	8
4519	Polysaccharides as Cell Carriers for Tissue Engineering: the Use of Cellulose in Vascular Wall Reconstruction. Physiological Research, 2014, 63, S29-S47.	0.4	98
4520	N-(2-Hydroxypropyl) Methacrylamide Based Cryogels – Synthesis and Biomimetic Modification for Stem Cell Applications. Physiological Research, 2015, 64, S19-S27.	0.4	8
4521	Production and Mechanical Characterisation of TEMPO-Oxidised Cellulose Nanofibrils \hat{l}^2 -Cyclodextrin Films and Cryogels. Molecules, 2020, 25, 2381.	1.7	8
4522	Does pressure cause liver cirrhosis? The sinusoidal pressure hypothesis. World Journal of Gastroenterology, 2016, 22, 10482.	1.4	67
4523	Polydopamine Particles Effect on Melanoma Cells Proliferation and Melanin Secretion. Advances in Chemical Engineering and Science, 2013, 03, 1-10.	0.2	3
4524	How Polydopamine Modulates Biological Responses to PTFE Prostheses. Materials Sciences and Applications, 2019, 10, 377-392.	0.3	3
4525	The Integrative Five-Fluid Circulation System in the Human Body. Open Journal of Molecular and Integrative Physiology, 2016, 06, 45-97.	0.6	11
4526	Enhancing survival, engraftment, and osteogenic potential of mesenchymal stem cells. World Journal of Stem Cells, 2019, 11, 748-763.	1.3	56
4527	Engineering stem cell niches in bioreactors. World Journal of Stem Cells, 2013, 5, 124.	1.3	34
4528	Traction Force Microscopy for Understanding Cellular Mechanotransduction. BMB Reports, 2020, 53, 74-081.	1.1	39
4529	The effect of nano-scale topography on osteogenic differentiation of mesenchymal stem cells. Biomedical Papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 2014, 158, 005-016.	0.2	23
4530	The Use of Stem Cells in the Treatment of Parkinsons Disease. Insciences Journal, 0, , 136-156.	0.7	4
4531	Biomimetic Topography: Bioinspired Cell Culture Substrates and Scaffolds. , 0, , .		11
4532	Novel Insights Into the Role of Inflammation in Promoting Breast Cancer Development. , 0, , .		1

#	Article	IF	Citations
4533	Tensegrity model hypothesis: may this paradigm be useful to explain hepatic and pancreatic carcinogenesis in patients with persistent hepatitis B or hepatitis C virus infection?. JOP: Journal of the Pancreas, 2014, 15, 151-64.	1.5	8
4534	3D Bioprinting Methods and Techniques: Applications on Artificial Blood Vessel Fabrication. Acta Cardiologica Sinica, 2019, 35, 284-289.	0.1	47
4535	Mouse T cell priming is enhanced by maturation-dependent stiffening of the dendritic cell cortex. ELife, 2020, 9, .	2.8	58
4536	Biofilms deform soft surfaces and disrupt epithelia. ELife, 2020, 9, .	2.8	37
4537	KATANIN-dependent mechanical properties of the stigmatic cell wall mediate the pollen tube path in Arabidopsis. ELife, 2020, 9, .	2.8	30
4539	Blood vessels sense dermal stiffness via a novel mechanotransducer, APJ. Angiogenesis, 2021, , 1.	3.7	1
4540	Extracellular Matrix-Derived Hydrogels to Augment Dermal Wound Healing: A Systematic Review. Tissue Engineering - Part B: Reviews, 2022, 28, 1093-1108.	2.5	8
4541	Two nondimensional parameters for characterizing the nuclear morphology. Biophysical Journal, 2021, 120, 4698-4709.	0.2	4
4542	Biomimetic double network hydrogels: Combining dynamic and static crosslinks to enable biofabrication and control cellâ€matrix interactions. Journal of Polymer Science, 2021, 59, 2832-2843.	2.0	18
4543	Dynamic self-reinforcement of gene expression determines acquisition of cellular mechanical memory. Biophysical Journal, 2021, 120, 5074-5089.	0.2	23
4544	Programmable stiffness and stress–relaxation of crossâ€linked selfâ€assembling peptide hydrogels. Journal of Applied Polymer Science, 0, , 51759.	1.3	2
4545	Tuning Hydrogels by Mixing Dynamic Crossâ€Linkers: Enabling Cellâ€Instructive Hydrogels and Advanced Bioinks. Advanced Healthcare Materials, 2022, 11, e2101576.	3.9	34
4546	Physical and chemical properties of carbon nanotubes in view of mechanistic neuroscience investigations. Some outlook from condensed matter, materials science and physical chemistry. Materials Science and Engineering C, 2021, 131, 112480.	3.8	16
4547	Predicting the In Vivo Performance of Cardiovascular Biomaterials: Current Approaches In Vitro Evaluation of Blood-Biomaterial Interactions. International Journal of Molecular Sciences, 2021, 22, 11390.	1.8	9
4548	Long-term maintenance of functional primary human hepatocytes in 3D gelatin matrices produced by solution blow spinning. Scientific Reports, 2021, 11, 20165.	1.6	9
4549	Visible light-induced crosslinking of unmodified gelatin with PEGDA for DLP-3D printable hydrogels. European Polymer Journal, 2021, 160, 110813.	2.6	18
4550	Photopolymerizable chitosan hydrogels with improved strength and 3D printability. International Journal of Biological Macromolecules, 2021, 193, 109-116.	3.6	22
4551	Synthesis and evaluation of PEG hydrogel incoorporating two dimensionally dispersed cell spheroid. Transactions of the Materials Research Society of Japan, 2007, 32, 773-776.	0.2	0

#	Article	IF	CITATIONS
4552	Microscopic mechanics of biomolecules in living cells. Lecture Notes in Computational Science and Engineering, 2008, , 339-362.	0.1	0
4553	Laser trapping and laser interferometry for high-bandwidth micromechanical probing of biomaterials. , 2008, , .		0
4554	Control and Monitoring of Scaffold Architecture for Tissue Engineering. , 2008, , 69-94.		0
4555	Stammzellen. , 2009, , 443-471.		0
4556	Nanoscale Bioactive Surfaces and Endosseous Implantology. , 2009, , 428-450.		1
4557	Universal Temporal Response of Fibroblasts Adhering on Cyclically Stretched Substrates. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 103-109.	0.1	O
4558	Orientational Polarizability and Stress Response of Biological Cells. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 91-101.	0.1	0
4559	Mechano-Chemical Coupling in Shell Adhesion. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 215-225.	0.1	1
4560	Cancer Cell Migration on 2-D Deformable Substrates. Chapman & Hall/CRC Mathematical and Computational Biology Series, 2010, , 243-263.	0.1	1
4561	Role of Spatial Distribution of Matricellular Cues in Controlling Cell Functions. NATO Science for Peace and Security Series A: Chemistry and Biology, 2010, , 207-232.	0.5	O
4562	Material Physical Property and Force Microenvironmental Factors., 2010,, 169-205.		0
4563	Microtechnology for Stem Cell Culture. Pancreatic Islet Biology, 2011, , 465-482.	0.1	O
4564	Progenitor Cell Tissue Engineering., 2011,, 19-46.		0
4566	Engineering of Adipose Tissue. , 2011, , 349-370.		O
4567	Stem Cells in Cardiac Tissue Engineering. , 2010, , 611-635.		1
4568	On the Application of Multiphasic Theories to the Problem of Cellsubstrate Mechanical Interactions. , 2011, , 189-224.		O
4569	Stem Cells for Cardiac Tissue Engineering. , 2011, , 95-114.		0
4570	Formidable Challenges in the Search for Biomarkers of Psychiatric Disorders. Journal of Tissue Science & Engineering, 2011, 02, .	0.2	0

#	Article	IF	CITATIONS
4571	Retina Reconstruction., 2011,, 501-516.		0
4572	Differentiation of Human Embryonic Stem Cells Encapsulated in Hydrogel Matrix Materials. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 415-421.	0.3	0
4573	Exploring the Physical Calibration Mechanism for Cellular Mechano-sensing. Seibutsu Butsuri, 2011, 51, 014-017.	0.0	0
4574	Effect of Substrate Rigidity on the Growth of Nascent Adhesion Sites. , 2011, , 225-238.		O
4575	On the Effect of Substrate Compliance on Cellular Motility. Journal of Biosensors & Bioelectronics, 2011, 02, .	0.4	3
4577	A Role for Integrin-ECM Bonds as Mechanotransducers that Modulate Adult Stem Cell Fate. , 2011, , 23-46.		1
4579	Cell and Tissue Organization in Soft Materials: Insight from Mathematical and Biophysical Modelling. , 2012, , $119-134$.		0
4580	Fabrication and Application of Gradient Hydrogels in Cell and Tissue Engineering. , 2012, , 55-78.		0
4583	Cell Mechanobiology in Regenerative Medicine. , 2012, , 1-16.		0
4585	Modeling the Impact of Cell Type and Substrate Stiffness on Cell Traction. Open Journal of Biophysics, 2013, 03, 222-231.	0.7	0
4586	Simulations of Cell Behavior on Substrates of Variegated Stiffness and Architecture. , 2013, , 25-41.		0
4587	Cell Motility. Springer Series in Synergetics, 2014, , 209-244.	0.2	O
4588	The Instructive Role of Biomaterials in Cell-Based Therapy and Tissue Engineering. RSC Soft Matter, 2014, , 73-94.	0.2	0
4589	Gellan. , 2014, , 1-46.		1
4590	Cellular Stiffness Measurement for 3D Biological Printing. , 2014, , .		0
4591	Microrheology of Biopolymers at Non-thermal Regimes. Computational Methods in Applied Sciences (Springer), 2014, , 97-111.	0.1	0
4592	Mechanical Characterization of Hydrogels and its Implications for Cellular Activities. RSC Soft Matter, 2014, , 171-190.	0.2	2
4593	Biophysical Mechanisms That Govern the Vascularization of Microfluidic Scaffolds., 2014,, 128-143.		0

#	Article	IF	CITATIONS
4594	Fascia., 2015, , 3-26.		0
4595	3D Nanoimaging and Detection of Molecular Flow using the nSPIRO Method., 2015,,.		0
4596	Gellan., 2015, , 1-48.		0
4598	Microfluidic Modeling of Cancer Metastasis. , 2015, , 253-274.		O
4599	Biodegradable Comb-like Dendritic Tri-block Copolymer Promotes Nerve Cell Functions. Postdoc Journal, 2015, 3, .	0.4	0
4601	Evolving Concepts for Use of Stem Cells and Tissue Engineering for Cardiac Regeneration. Advances in Medical Technologies and Clinical Practice Book Series, 2016, , 279-313.	0.3	0
4602	3D Modelling and Structural Simulation of Scaffolds for Cardiovascular Implants. , 2016, , .		0
4603	How a Single Cell Sense its Mechanical Environment?. Journal of Biosensors & Bioelectronics, 2016, 07,	0.4	0
4604	Physical biology of bacterial motility. Wuli Xuebao/Acta Physica Sinica, 2016, 65, 178703.	0.2	0
4605	In vitro experimental models and their molding technology of tumor cell. Wuli Xuebao/Acta Physica Sinica, 2016, 65, 188705.	0.2	0
4606	Nanomaterials: Tissue Regeneration. , 0, , 5379-5392.		0
4607	Films: Stimuli-Responsive Biothin Films. , 0, , 3409-3419.		0
4611	Natural Bone and Tooth: Structure and Properties. Indian Institute of Metals Series, 2017, , 45-85.	0.2	2
4612	Physico-Chemical Properties of the Stem Cell Niche. , 2017, , 61-80.		0
4613	The Biocompatibility of the Scaffolds Reinforced by Fibers or Tubes for Tissue Repair., 2017, , 145-177.		0
4614	Overview—Cell Migration Models. International Journal of Mechanics Research, 2017, 06, 24-36.	0.1	0
4615	Manipulating the Angiogenesis by Inflammation. The Korean Journal of Urological Oncology, 2017, 15, 1-10.	0.1	0
4619	Biomimetic Materials., 2017,, 189-213.		0

#	ARTICLE	IF	CITATIONS
4630	Modeling of the mesenchymal stem cell microenvironment as a prospective approach to tissue bioengineering and regenerative medicine (a short review). Bulletin of Siberian Medicine, 2018, 17, 217-228.	0.1	3
4631	Mechanisms of Fibrosis in IPF. Respiratory Medicine, 2019, , 133-182.	0.1	0
4632	Modeling Traumatic Brain Injuries, Aneurysms, and Strokes. Fields Institute Monographs, 2019, , 75-126.	0.4	0
4633	Hard Material Modulation for (Skeletal) Tissue Engineering Purposes. , 2019, , 1-18.		0
4634	Biological Properties of Biomedical Materials. , 2019, , 411-420.		0
4635	Silk Fibroin-Decorin Engineered Biologics to Repair Musculofascial Defects. , 2019, , 325-346.		0
4636	Contour Models of Cellular Adhesion. Advances in Experimental Medicine and Biology, 2019, 1146, 13-29.	0.8	3
4637	Stromal Barriers Within the Tumor Microenvironment and Obstacles to Nanomedicine. , 2019, , 57-89.		3
4638	Evolving Concepts for Use of Stem Cells and Tissue Engineering for Cardiac Regeneration. , 2019, , 509-543.		0
4644	Additive manufacturing of catalytically active living material hydrogels., 2019,,.		1
4647	Hybrid Nanofiber Scaffold-Based Direct Conversion of Neural Precursor Cells/Dopamine Neurons. International Journal of Stem Cells, 2019, 12, 340-346.	0.8	2
4648	Visual Cell : Image Analysis and Visual Retrieval System for Biology Cell Image Bigdata. The Korea Journal of BigData, 2019, 4, 53-61.	0.1	0
4649	ГЕĐĐ•ĐĐĐ¦Đ†Đ¯ ĐŸĐĐžĐ¦Đ•Đ¡Đ†Đ' Đ¡ĐĐœĐžĐžĐĐĐĐІЗĐЦІЇ Đ¢Đ•Đ¡ĐĐœĐžĐ—Đ'ĐžĐĐšĐ~ Đ' Đ'Đ	Ð †Ðž Ð>О	ÐŒ†Ð§ÐІ f
4652	Gamma Irradiated Synthesis of Polyethylene Oxide (PEO)-N, N-Dimethyacrylamide (DMA) Hydrogel and Chitosan. Asian Journal of Chemical Sciences, 0, , 1-14.	0.4	0
4655	Cellular and Molecular Responses to Gravitational Force-Triggered Stress in Cells of the Immune System., 2020,, 301-325.		0
4656	Introduction to the Molecular Basis of Liver Stiffness and Its Relation to Mechano-signaling. , 2020, , 631-643.		0
4657	Mechano-Pharmacological Testing of L-Type Ca2+ Channel Modulators via Human Vascular Celldrum Model. Cellular Physiology and Biochemistry, 2020, 54, 371-383.	1.1	2
4663	3D-printed Bioreactors for In Vitro Modeling and Analysis. International Journal of Bioprinting, 2020, 6, 267.	1.7	21

#	Article	IF	CITATIONS
4666	Hylozoic by Design: Converging Material and Biological Complexities for Cellâ€Driven Living Materials with 4D Behaviors. Advanced Functional Materials, 2022, 32, 2108057.	7.8	9
4667	Talin in mechanotransduction and mechanomemory at a glance. Journal of Cell Science, 2021, 134, .	1.2	43
4668	Extracellular matrix-inspired surface coatings functionalized with dexamethasone-loaded liposomes to induce osteo- and chondrogenic differentiation of multipotent stem cells. Materials Science and Engineering C, 2021, 131, 112516.	3.8	8
4669	Role of Sinusoidal Pressure and Arterialization in Driving Fibrosis Progression. , 2020, , 671-683.		2
4671	Tissue Engineering for Periodontal Ligament Regeneration: Biomechanical Specifications. Journal of Biomechanical Engineering, 2021, 143, .	0.6	5
4672	Engineering Biophysical Cues for Controlled 3D Differentiation of Endoderm Derivatives. Methods in Molecular Biology, 2021, 2258, 73-92.	0.4	0
4673	Enhancement the Osseo Integration Properties of Polymer for Human Body Implants. Al-Nahrain Journal for Engineering Sciences, 2020, 23, 331-337.	0.1	0
4676	Hard Material Modulation for (Skeletal) Tissue Engineering Purposes. , 2020, , 449-466.		0
4677	Physicochemical properties of biomaterials. , 2020, , 19-32.		1
4678	Biomechanical characterization of engineered tissues and implants for tissue/organ replacement applications., 2020,, 599-627.		1
4679	Focal Adhesion Displacement Magnitude is a Unifying Feature of Tensional Homeostasis. SSRN Electronic Journal, 0, , .	0.4	0
4680	A Statistical and Biophysical Toolbox to Elucidate Structure and Formation of Stress Fibers. Topics in Applied Physics, 2020, , 263-282.	0.4	1
4681	Mechanical View on the Mitochondria. Biological and Medical Physics Series, 2020, , 163-189.	0.3	0
4682	Liver Mechanics and the Profibrotic Response atÂthe Cellular Level. , 2020, , 661-670.		0
4683	Focal Adhesion Proteins Regulate Cell–Matrix and Cell–Cell Adhesion and Act as Force Sensors. Biological and Medical Physics Series, 2020, , 95-140.	0.3	0
4686	Fibrin – a promising material for vascular tissue engineering. Vestnik Transplantologii I Iskusstvennykh Organov, 2020, 22, 196-208.	0.1	3
4688	Adjusting the accuracy of PEGDA-GelMA vascular network by dark pigments via digital light processing printing. Journal of Biomaterials Applications, 2021, , 088532822110530.	1.2	7
4689	Intrinsic Mechanical Cues and Their Impact on Stem Cells and Embryogenesis. Frontiers in Cell and Developmental Biology, 2021, 9, 761871.	1.8	37

#	ARTICLE	IF	CITATIONS
4690	Novel self-assembling peptide hydrogel with pH-tunable assembly microstructure, gel mechanics and the entrapment of curcumin. Food Hydrocolloids, 2022, 124, 107338.	5.6	20
4691	Agrin-Matrix Metalloproteinase-12 axis confers a mechanically competent microenvironment in skin wound healing. Nature Communications, 2021, 12, 6349.	5.8	21
4692	Swelling of a non-vascular-plant-inspired soft composite. Matter, 2021, 4, 3991-4005.	5.0	9
4693	Quantifying cell-generated forces: Poisson's ratio matters. Communications Physics, 2021, 4, 237.	2.0	22
4694	Modeling Metastatic Colonization in a Decellularized Organ Scaffoldâ€Based Perfusion Bioreactor. Advanced Healthcare Materials, 2022, 11, e2100684.	3.9	7
4698	Stammzellen. , 2008, , 421-449.		0
4700	Influence of substrate stiffness on the cellular mechanical properties. , 2020, , .		0
4701	Growing straight through walls. ELife, 2020, 9, .	2.8	0
4702	Investigation of Biophysical Migration Parameters for Normal Tissue and Metastatic Cancer Cells After Radiotherapy Treatment. Frontiers in Physics, 2020, 8, .	1.0	2
4703	Design, Fabrication, and Validation of a Petri Dish-Compatible PDMS Bioreactor for the Tensile Stimulation and Characterization of Microtissues. Micromachines, 2020, 11, 892.	1.4	1
4704	Mechanics in biology. Europhysics News, 2020, 51, 28-30.	0.1	1
4706	Focal Adhesion Isolation Assay Using ECM-Coated Magnetic Beads. Methods in Molecular Biology, 2021, 2217, 39-44.	0.4	0
4707	Cytotoxic effect of PEI-coated magnetic nanoparticles on the regulation of cellular focal adhesions and actin stress fibres. Materialia, 2020, 13, 100848.	1.3	6
4708	Localization of TGF-beta type II receptor and ED-A fibronectin in normal conjunctiva and failed filtering blebs. Molecular Vision, 2008, 14, 136-41.	1.1	21
4710	Imaging and manipulating the structural machinery of living cells on the micro- and nanoscale. International Journal of Nanomedicine, 2007, 2, 333-44.	3.3	3
4711	Scanning probe recognition microscopy investigation of tissue scaffold properties. International Journal of Nanomedicine, 2007, 2, 651-61.	3.3	4
4714	Cancer associated fibroblasts: the dark side of the coin. American Journal of Cancer Research, 2011, 1, 482-97.	1.4	269
4715	Elevated pressure downregulates ZO-1 expression and disrupts cytoskeleton and focal adhesion in human trabecular meshwork cells. Molecular Vision, 2011, 17, 2978-85.	1.1	10

#	Article	IF	CITATIONS
4716	Smad7 siRNA inhibit expression of extracellular matrix in trabecular meshwork cells treated with TGF- \hat{l}^2 2. Molecular Vision, 2012, 18, 1881-4.	1.1	12
4721	Effects of Platelet-Rich Plasma & Platelet-Rich Fibrin with and without Stromal Cell-Derived Factor-1 on Repairing Full-Thickness Cartilage Defects in Knees of Rabbits. Iranian Journal of Medical Sciences, 2016, 41, 507-517.	0.3	6
4723	3D Freeform Printing of Nanocomposite Hydrogels through Precipitation in Reactive Viscous Fluid. International Journal of Bioprinting, 2020, 6, 258.	1.7	17
4724	Consistent apparent Young's modulus of human embryonic stem cells and derived cell types stabilized by substrate stiffness regulation promotes lineage specificity maintenance. Cell Regeneration, 2020, 9, 15.	1.1	2
4725	Time-dependent mechanical behavior of partially oxidized polyvinyl alcohol hydrogels for tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104966.	1.5	8
4726	Substrate stiffness modulates the viscoelastic properties of MCF-7Âcells. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104979.	1.5	15
4727	Electrospun Antibacterial Nanomaterials for Wound Dressings Applications. Membranes, 2021, 11, 908.	1.4	27
4728	High throughput interrogation of human liver stellate cells reveals microenvironmental regulation of phenotype. Acta Biomaterialia, 2022, 138, 240-253.	4.1	14
4729	Contact guidance via heterogeneity of substrate elasticity. Acta Biomaterialia, 2023, 163, 158-169.	4.1	5
4730	Micromechanical Compatibility between Cells and Scaffolds Directs the Phenotypic Transition of Stem Cells. ACS Applied Materials & Samp; Interfaces, 2021, 13, 58152-58161.	4.0	6
4731	Zyxin Is Involved in Fibroblast Rigidity Sensing and Durotaxis. Frontiers in Cell and Developmental Biology, 2021, 9, 735298.	1.8	4
4732	Controlled Glioma Cell Migration and Confinement Using Biomimeticâ€Patterned Hydrogels. Advanced NanoBiomed Research, 2022, 2, 2100131.	1.7	2
4733	A survey of physical methods for studying nuclear mechanics and mechanobiology. APL Bioengineering, 2021, 5, 041508.	3.3	17
4734	Naphthalenephenylalanine-phenylalanine-glycine-arginine-glycine-aspartic promotes self-assembly of nephron progenitor cells in decellularized scaffolds to construct bioengineered kidneys. Materials Science and Engineering C, 2022, 134, 112590.	3.8	3
4735	Mechanobiological Strategies to Enhance Stem Cell Functionality for Regenerative Medicine and Tissue Engineering. Frontiers in Cell and Developmental Biology, 2021, 9, 747398.	1.8	25
4736	Whole tissue and single cell mechanics are correlated in human brain tumors. Soft Matter, 2021, 17, 10744-10752.	1.2	9
4737	<i>In-silico</i> Modeling of the Micromechanics of Fibrous Scaffolds and Stiffness Sensing by Cells. SSRN Electronic Journal, 0, , .	0.4	1
4738	Lose the Stress: Viscoelastic Materials for Cell Engineering. SSRN Electronic Journal, 0, , .	0.4	2

#	Article	IF	CITATIONS
4741	Tracking of Endothelial Cell Migration and Stiffness Measurements Reveal the Role of Cytoskeletal Dynamics. International Journal of Molecular Sciences, 2022, 23, 568.	1.8	3
4742	Mechanical characterization of TiO2 nanowires flexible scaffold by nano-indentation/scratch. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 126, 105069.	1.5	3
4743	Consistent apparent Young's modulus of human embryonic stem cells and derived cell types stabilized by substrate stiffness regulation promotes lineage specificity maintenance. Cell Regeneration, 2020, 9, 15.	1.1	6
4744	Supramolecular Adhesive Hydrogels for Tissue Engineering Applications. Chemical Reviews, 2022, 122, 5604-5640.	23.0	238
4745	Local contractions regulate E-cadherin rigidity sensing. Science Advances, 2022, 8, eabk0387.	4.7	11
4746	Silk Protein Composite Bioinks and Their 3D Scaffolds and In Vitro Characterization. International Journal of Molecular Sciences, 2022, 23, 910.	1.8	6
4747	Regulation of cell attachment, spreading, and migration by hydrogel substrates with independently tunable mesh size. Acta Biomaterialia, 2022, 141, 178-189.	4.1	14
4748	Closer to Nature: The Role of MSCs in Recreating the Microenvironment of the Hematopoietic Stem Cell Niche in vitro. Transfusion Medicine and Hemotherapy, 2022, 49, 258-267.	0.7	1
4749	Collagen suprastructures: The data and the models. , 2022, , 77-111.		0
4750	Engineered in vitro models: mimicking in vivo physiology. , 2022, , 555-609.		0
4751	Pressure Drives Rapid Burstâ€Like Coordinated Cellular Motion from 3D Cancer Aggregates. Advanced Science, 2022, 9, e2104808.	5.6	8
4752	High Doses of Silica Nanoparticles Obtained by Microemulsion and Green Routes Compromise Human Alveolar Cells Morphology and Stiffness Differently. Bioinorganic Chemistry and Applications, 2022, 2022, 1-23.	1.8	4
4753	Directional Growth of cm-Long PLGA Nanofibers by a Simple and Fast Wet-Processing Method. Materials, 2022, 15, 687.	1.3	0
4754	Microwave-assisted methacrylation of chitosan for 3D printable hydrogels in tissue engineering. Materials Advances, 2022, 3, 514-525.	2.6	18
4755	Quantifiable correlation of ToFâ€SIMS and XPS data from polymer surfaces with controlled amino acid and peptide content. Surface and Interface Analysis, 0, , .	0.8	1
4756	The impact of biological factors, anatomy, and mechanical forces on calcification and fibrosis of cardiac and vascular structures., 2022,, 1-27.		0
4757	Dynamic and reconfigurable materials from reversible network interactions. Nature Reviews Materials, 2022, 7, 541-556.	23.3	105
4758	Vimentin Intermediate Filaments Mediate Cell Morphology on Viscoelastic Substrates. ACS Applied Bio Materials, 2022, 5, 552-561.	2.3	21

#	Article	IF	CITATIONS
4759	Cytoskeleton-mediated alterations of nuclear mechanics by extracellular mechanical signals. Biophysical Journal, 2022, 121, 1-3.	0.2	5
4760	Multiscale mechanobiology: Coupling models of adhesion kinetics and nonlinear tissue mechanics. Biophysical Journal, 2022, 121, 525-539.	0.2	15
4761	Feeder-supported in vitro exercise model using human satellite cells from patients with sporadic inclusion body myositis. Scientific Reports, 2022, 12, 1082.	1.6	5
4762	Studying Activated Fibroblast Phenotypes and Fibrosisâ€Linked Mechanosensing Using 3D Biomimetic Models. Macromolecular Bioscience, 2022, 22, e2100450.	2.1	4
4763	Using Polyacrylamide Hydrogels to Model Physiological Aortic Stiffness Reveals that Microtubules Are Critical Regulators of Isolated Smooth Muscle Cell Morphology and Contractility. Frontiers in Pharmacology, 2022, 13, 836710.	1.6	8
4765	RNA localization in confined cells depends on cellular mechanical activity and contributes to confined migration. IScience, 2022, 25, 103845.	1.9	4
4766	Elucidating the combinatorial effect of substrate stiffness and surface viscoelasticity on cellular phenotype. Journal of Biomedical Materials Research - Part A, 2022, 110, 1224-1237.	2.1	8
4767	An Overview on Recent Progress of the Hydrogels: From Material Resources, Properties, to Functional Applications. Macromolecular Rapid Communications, 2022, 43, e2100785.	2.0	36
4768	Bioorthogonally Crossâ€Linked Hyaluronan–Laminin Hydrogels for 3D Neuronal Cell Culture and Biofabrication. Advanced Healthcare Materials, 2022, 11, e2102097.	3.9	10
4769	Showing differences in viscoelastic properties of cells growing on micropattern by using very long-time high speed microrheology as a new way to measure cell mechanics. , 2022, , .		O
4770	Molecular Tension Probes to Quantify Cell-Generated Mechanical Forces. Molecules and Cells, 2022, 45, 26-32.	1.0	2
4771	Substrate elasticity and surface tension mediate the spontaneous rotation of active chiral droplet on soft substrates. Journal of the Mechanics and Physics of Solids, 2022, 161, 104788.	2.3	1
4772	Viscoelasticity, Like Forces, Plays a Role in Mechanotransduction. Frontiers in Cell and Developmental Biology, 2022, 10, 789841.	1.8	16
4773	Kidney development and function: ECM cannot be ignored. Differentiation, 2022, 124, 28-42.	1.0	3
4774	3D or not 3D: a guide to assess cell viability in 3D cell systems. Soft Matter, 2022, 18, 2222-2233.	1.2	18
4775	Core–shell microcapsules: biofabrication and potential applications in tissue engineering and regenerative medicine. Biomaterials Science, 2022, 10, 2122-2153.	2.6	11
4776	Electroconductive and injectable hydrogels based on gelatin and PEDOT:PSS for a minimally invasive approach in nervous tissue regeneration. Biomaterials Science, 2022, 10, 2040-2053.	2.6	13
4777	Controlled Metal Crumpling as an Alternative to Folding for the Fabrication of Nanopatterned Meta-Biomaterials. SSRN Electronic Journal, 0, , .	0.4	O

#	Article	IF	CITATIONS
4778	Regulation of Trafficking Vesicles by Extracellular Matrix Stiffness: Combined Data-Driven and Biophysical Insights. SSRN Electronic Journal, 0, , .	0.4	0
4779	Largely Tuning Geometrical and Mechanical Properties of Tpms-Based Lattices Independent of Volume Fraction. SSRN Electronic Journal, 0, , .	0.4	1
4780	Advancing bone tissue engineering one layer at a time: a layer-by-layer assembly approach to 3D bone scaffold materials. Biomaterials Science, 2022, 10, 2734-2758.	2.6	19
4781	Collagenâ€Tannic Acid Spheroids for βâ€Cell Encapsulation Fabricated Using a 3D Bioprinter. Advanced Materials Technologies, 2022, 7, .	3.0	8
4782	Substrate rigidity dictates colorectal tumorigenic cell stemness and metastasis via CRAD-dependent mechanotransduction. Cell Reports, 2022, 38, 110390.	2.9	13
4784	Rational design of hydrogels for immunomodulation. International Journal of Energy Production and Management, 2022, 9, .	1.9	29
4785	Cell-to-Cell Communications in Alcohol-Associated Liver Disease. Frontiers in Physiology, 2022, 13, 831004.	1.3	9
4786	Biomechanical Force and Cellular Stiffness in Lung Fibrosis. American Journal of Pathology, 2022, 192, 750-761.	1.9	23
4787	RNA-Seq analysis of a Pax3-expressing myoblast clone in-vitro and effect of culture surface stiffness on differentiation. Scientific Reports, 2022, 12, 2841.	1.6	0
4788	Nonswelling and Hydrolytically Stable Hydrogels Uncover Cellular Mechanosensing in 3D. Advanced Science, 2022, 9, e2105325.	5.6	11
4789	Cells on Hydrogels with Micron-Scaled Stiffness Patterns Demonstrate Local Stiffness Sensing. Nanomaterials, 2022, 12, 648.	1.9	2
4790	Surface-Engineered Hybrid Gelatin Methacryloyl with Nanoceria as Reactive Oxygen Species Responsive Matrixes for Bone Therapeutics. ACS Applied Bio Materials, 2022, 5, 1130-1138.	2.3	15
4791	MYH10 Governs Adipocyte Function and Adipogenesis through Its Interaction with GLUT4. International Journal of Molecular Sciences, 2022, 23, 2367.	1.8	7
4792	Chemo-Mechanical Factors That Limit Cellular Force Generation. Frontiers in Physics, 2022, 10, .	1.0	2
4794	Pharmacological Perturbation of Mechanical Contractility Enables Robust Transdifferentiation of Human Fibroblasts into Neurons. Advanced Science, 2022, 9, e2104682.	5.6	7
4795	Chronic lung diseases: entangled in extracellular matrix. European Respiratory Review, 2022, 31, 210202.	3.0	21
4796	Mechanomodulation: Physical Treatment Modalities Employ Mechanotransduction to Improve Scarring. European Journal of Burn Care, 2022, 3, 241-255.	0.4	3
4797	Biomaterials as a Vital Frontier for Stem Cell-Based Tissue Regeneration. Frontiers in Cell and Developmental Biology, 2022, 10, 713934.	1.8	7

#	Article	IF	Citations
4798	Injectable laminin-biofunctionalized gellan gum hydrogels loaded with myoblasts for skeletal muscle regeneration. Acta Biomaterialia, 2022, 143, 282-294.	4.1	13
4799	Decellularized Pig Kidney with a Micro-Nano Secondary Structure Contributes to Tumor Progression in 3D Tumor Model. Materials, 2022, 15, 1935.	1.3	4
4800	Spinal cord bioelectronic interfaces: opportunities in neural recording and clinical challenges. Journal of Neural Engineering, 2022, 19, 021003.	1.8	2
4801	A Metalâ€lonâ€lncorporated Musselâ€lnspired Poly(Vinyl Alcohol)â€Based Polymer Coating Offers Improved Antibacterial Activity and Cellular Mechanoresponse Manipulation. Angewandte Chemie - International Edition, 2022, 61, .	7.2	7
4802	Dome-arrayed chitosan/PVA hydrogel-based solar evaporator for steam generation. Scientific Reports, 2022, 12, 4403.	1.6	11
4803	Materialâ€Assisted Strategies for Osteochondral Defect Repair. Advanced Science, 2022, 9, e2200050.	5.6	25
4804	Sticking around: Cell adhesion patterning for energy minimization and substrate mechanosensing. Biophysical Journal, 2022, 121, 1777-1786.	0.2	8
4806	One-Step Synthesis of Gelatin-Conjugated Supramolecular Hydrogels for Dynamic Regulation of Adhesion Contact and Morphology of Myoblasts. ACS Applied Polymer Materials, 2022, 4, 2595-2603.	2.0	5
4807	Biomaterial–Related Cell Microenvironment in Tissue Engineering and Regenerative Medicine. Engineering, 2022, 13, 31-45.	3.2	42
4808	Tissue-Engineered Corneal Endothelial Sheets Using Ultrathin Acellular Porcine Corneal Stroma Substrates for Endothelial Keratoplasty. ACS Biomaterials Science and Engineering, 2022, 8, 1301-1311.	2.6	5
4809	Biophysics Role and Biomimetic Culture Systems of ECM Stiffness in Cancer EMT. Global Challenges, 2022, 6, .	1.8	5
4810	Correlation of nuclear pIGF-1R/IGF-1R and YAP/TAZ in a tissue microarray with outcomes in osteosarcoma patients. Oncotarget, 2022, 13, 521-533.	0.8	4
4811	Mechanical Forces Govern Interactions of Host Cells with Intracellular Bacterial Pathogens. Microbiology and Molecular Biology Reviews, 2022, 86, e0009420.	2.9	8
4812	Acoustofluidic Stimulation of Functional Immune Cells in a Microreactor. Advanced Science, 2022, 9, e2105809.	5.6	6
4813	Bioelectric Dysregulation in Cancer Initiation, Promotion, and Progression. Frontiers in Oncology, 2022, 12, 846917.	1.3	8
4814	A Metalâ€lonâ€lncorporated Musselâ€lnspired Poly(Vinyl Alcohol)â€Based Polymer Coating Offers Improved Antibacterial Activity and Cellular Mechanoresponse Manipulation. Angewandte Chemie, 0, , .	1.6	0
4815	Regulation of biomaterial implantation-induced fibrin deposition to immunological functions of dendritic cells. Materials Today Bio, 2022, 14, 100224.	2.6	3
4816	Ligand Mobility-Mediated Cell Adhesion and Spreading. ACS Applied Materials & Samp; Interfaces, 2022, 14, 12976-12983.	4.0	12

#	Article	IF	CITATIONS
4817	Microenvironmental stiffness mediates cytoskeleton re-organization in chondrocytes through laminin-FAK mechanotransduction. International Journal of Oral Science, 2022, 14, 15.	3.6	37
4818	An SCD1-dependent mechanoresponsive pathway promotes HCC invasion and metastasis through lipid metabolic reprogramming. Molecular Therapy, 2022, 30, 2554-2567.	3.7	24
4819	Mechanical control of nuclear import by Importin-7 is regulated by its dominant cargo YAP. Nature Communications, 2022, 13, 1174.	5.8	32
4820	Appreciating the role of cell shape changes in the mechanobiology of epithelial tissues. Biophysics Reviews, 2022, 3, .	1.0	10
4821	Polysaccharide-based, emulsion-templated, porous poly(urethane urea)s: Composition, catalysis, cell growth. European Polymer Journal, 2022, 169, 111140.	2.6	6
4822	Tuning surface curvatures and young's moduli of TPMS-based lattices independent of volume fraction. Materials and Design, 2022, 216, 110542.	3.3	13
4824	Heterogeneous spheroids with tunable interior morphologies by droplet-based microfluidics. Biofabrication, 2022, 14, 025024.	3.7	8
4825	Fabrication of boneâ€derived decellularized extracellular matrix/ceramicâ€based biocomposites and their osteo/odontogenic differentiation ability for dentin regeneration. Bioengineering and Translational Medicine, 2022, 7, .	3.9	12
4826	Mechanosensitive Piezo1 channels mediate renal fibrosis. JCI Insight, 2022, 7, .	2.3	39
4827	Tuning Polymer Hydrophilicity to Regulate Gel Mechanics and Encapsulated Cell Morphology. Advanced Healthcare Materials, 2022, 11, e2200011.	3.9	14
4828	Smart biomaterial platforms: Controlling and being controlled by cells. Biomaterials, 2022, 283, 121450.	5.7	12
4829	Skeletal muscle differentiation of human iPSCs meets bioengineering strategies: perspectives and challenges. Npj Regenerative Medicine, 2022, 7, 23.	2.5	33
4830	Lose the stress: Viscoelastic materials for cell engineering. Acta Biomaterialia, 2023, 163, 146-157.	4.1	10
4831	Biophysical Modulation of Mesenchymal Stem Cell Differentiation in the Context of Skeletal Repair. International Journal of Molecular Sciences, 2022, 23, 3919.	1.8	4
4833	Micro-patterned cell populations as advanced pharmaceutical drugs with precise functional control. Advanced Drug Delivery Reviews, 2022, 184, 114169.	6.6	10
4834	The Role of Substrate Topography and Stiffness on MSC Cells Functions: Key Material Properties for Biomimetic Bone Tissue Engineering. Biomimetics, 2022, 7, 7.	1.5	14
4835	Biophysical Approaches for Applying and Measuring Biological Forces. Advanced Science, 2022, 9, e2105254.	5.6	15
4836	One-Step Approach to Prepare Transparent Conductive Regenerated Silk Fibroin/PEDOT:PSS Films for Electroactive Cell Culture. ACS Applied Materials & Samp; Interfaces, 2022, 14, 123-137.	4.0	17

#	Article	IF	CITATIONS
4837	Synthesis and Potential Applications of Modified Xanthan Gum. Journal of Chemical Engineering Research Updates, 0, 8, 73-97.	0.1	2
4838	Recent Advances in Microfluidic-Based Microphysiological Systems. Biochip Journal, 2022, 16, 13-26.	2.5	20
4839	Allâ€Polymer Based Stretchable Rubbery Electronics and Sensors. Advanced Functional Materials, 2022, 32, .	7.8	14
4841	The role of adhesion on mesoscale indentation for determining moduli of hydrated materials. Mechanics of Soft Materials, 2022, 4, 1.	0.4	1
4842	Viscoelasticity Acts as a Marker for Tumor Extracellular Matrix Characteristics. Frontiers in Cell and Developmental Biology, 2021, 9, 785138.	1.8	24
4843	Two-Dimensional Cellular Patterning on a Polymer Film Based on Interfacial Stiffness. Langmuir, 2021, 37, 14911-14919.	1.6	2
4844	Vascular Smooth Muscle Cells Mechanosensitive Regulators and Vascular Remodeling. Journal of Vascular Research, 2022, 59, 90-113.	0.6	26
4845	Cell–matrix interactions, force transmission, and mechanosensation. , 2022, , 129-147.		0
4846	Dissecting and Reconstructing Matrix in Malignant Mesothelioma Through Histocell-Histochemistry Gradients for Clinical Applications. Frontiers in Medicine, 2022, 9, 871202.	1.2	1
4847	Pushing the Natural Frontier: Progress on the Integration of Biomaterial Cues toward Combinatorial Biofabrication and Tissue Engineering. Advanced Materials, 2022, 34, e2105645.	11.1	21
4848	An Artificial Tactile Neuron Enabling Spiking Representation of Stiffness and Disease Diagnosis. Advanced Materials, 2022, 34, e2201608.	11.1	20
4849	A Brief Overview of Bioinspired Robust Hydrogel Based Shape Morphing Functional Structure for Biomedical Soft Robotics. Frontiers in Materials, 2022, 9, .	1.2	4
4850	Mechanobiology of Colorectal Cancer. Cancers, 2022, 14, 1945.	1.7	5
4851	Viscoelastic Biomaterials for Tissue Regeneration. Tissue Engineering - Part C: Methods, 2022, 28, 289-300.	1.1	19
4880	Biomechanically and biochemically functional scaffold for recruitment of endogenous stem cells to promote tendon regeneration. Npj Regenerative Medicine, 2022, 7, 26.	2.5	9
4881	Effects of Titanium Implant Surface Topology on Bone Cell Attachment and Proliferation in vitro. Medical Devices: Evidence and Research, 2022, Volume 15, 103-119.	0.4	9
4882	A Co-Polymerizable Linker for the Covalent Attachment of Fibronectin Makes pHEMA Hydrogels Cell-Adhesive. Gels, 2022, 8, 258.	2.1	3
4883	Algal Polysaccharides-Based Hydrogels: Extraction, Synthesis, Characterization, and Applications. Marine Drugs, 2022, 20, 306.	2.2	24

#	Article	IF	CITATIONS
4884	Biomechanical Dependence of SARS-CoV-2 Infections. ACS Applied Bio Materials, 2022, 5, 2307-2315.	2.3	1
4885	Nanoscale geometry determines mechanical biocompatibility of vertically aligned nanofibers. Acta Biomaterialia, 2022, 146, 235-247.	4.1	6
4886	Natural Silk Spinningâ€Inspired Mesoâ€Assemblyâ€Processing Engineering Strategy for Fabricating Soft Tissueâ€Mimicking Biomaterials. Advanced Functional Materials, 2022, 32, .	7.8	13
4887	Mechanical regulation of cell-cycle progression and division. Trends in Cell Biology, 2022, 32, 773-785.	3.6	18
4888	Matrix stiffness regulates macrophage polarization in atherosclerosis. Pharmacological Research, 2022, 179, 106236.	3.1	15
4889	Physics of Brain Cancer: Multiscale Alterations of Glioblastoma Cells under Extracellular Matrix Stiffening. Pharmaceutics, 2022, 14, 1031.	2.0	16
4890	Gradual Stress-Relaxation of Hydrogel Regulates Cell Spreading. International Journal of Molecular Sciences, 2022, 23, 5170.	1.8	4
4891	<i>Pseudomonas aeruginosa</i> distinguishes surfaces by stiffness using retraction of type IV pili. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119434119.	3.3	16
4892	Statistical parametrization of cell cytoskeleton reveals lung cancer cytoskeletal phenotype with partial EMT signature. Communications Biology, 2022, 5, 407.	2.0	8
4893	Age Dependent Changes in Corneal Epithelial Cell Signaling. Frontiers in Cell and Developmental Biology, 2022, 10, .	1.8	7
4894	Current insights into the bone marrow niche: From biology in vivo to bioengineering ex vivo. Biomaterials, 2022, 286, 121568.	5.7	16
4895	Collagen-Binding Peptide-Enabled Supramolecular Hydrogel Design for Improved Organ Adhesion and Sprayable Therapeutic Delivery. Nano Letters, 2022, 22, 4182-4191.	4.5	16
4897	Cell adhesion strength and tractions are mechano-diagnostic features of cellular invasiveness. Soft Matter, 2022, 18, 4378-4388.	1.2	6
4898	A Facile Composite Strategy to Prepare a Biodegradable Polymer Based Radiopaque Raw Material for "Visualizable―Biomedical Implants. ACS Applied Materials & mp; Interfaces, 2022, 14, 24197-24212.	4.0	16
4899	Alginate/gelatin-based hybrid hydrogels with function of injecting and encapsulating cells in situ. International Journal of Biological Macromolecules, 2022, 212, 67-84.	3.6	12
4900	Emerging tissue engineering strategies for the corneal regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2022, 16, 683-706.	1.3	6
4902	Role of actin-binding proteins in the regulation of cellular mechanics. European Journal of Cell Biology, 2022, 101, 151241.	1.6	14
4903	Profiling of the Prognostic Role of Extracellular Matrix-Related Genes in Neuroblastoma Using Databases and Integrated Bioinformatics. Onco, 2022, 2, 85-112.	0.2	2

#	Article	IF	CITATIONS
4904	Actomyosin contractility and buckling of microtubules in nucleation, growth and disassembling of focal adhesions. Biomechanics and Modeling in Mechanobiology, 2022, 21, 1187-1200.	1.4	3
4905	Zinc-coordinated polydopamine surface with a nanostructure and superhydrophilicity for antibiofouling and antibacterial applications. Materials Advances, 2022, 3, 5476-5487.	2.6	3
4906	In Vitro and Ex Vivo Hair Follicle Models to Explore Therapeutic Options for Hair Regeneration. Pancreatic Islet Biology, 2022, , 155-203.	0.1	1
4908	Nuclear Pore Complexes Concentrate on Actin/LINC/Lamin Nuclear Lines in Response to Mechanical Stress in a SUN1 Dependent Manner. SSRN Electronic Journal, 0, , .	0.4	0
4909	Novel role of <i>Dipterocarpus tuberculatus</i> as a stimulator of focal cell adhesion through the regulation of MLC2/FAK/Akt signaling pathway. Cell Adhesion and Migration, 2022, 16, 72-93.	1.1	4
4910	Elasticity-associated rebinding rate of molecular bonds between soft elastic media. Biophysical Journal, 2022, 121, 2297-2311.	0.2	1
4911	Strong and Elastic Hydrogels from Dual-Crosslinked Composites Composed of Glycol Chitosan and Amino-Functionalized Bioactive Glass Nanoparticles. Nanomaterials, 2022, 12, 1874.	1.9	10
4912	Polyelectrolyte Complex-Covalent Interpenetrating Polymer Network Hydrogels. Macromolecules, 2022, 55, 4481-4491.	2.2	10
4913	Collagen-based shape-memory biocomposites. Applied Physics Reviews, 2022, 9, 021415.	5.5	1
4914	Basement membrane properties and their recapitulation in organ-on-chip applications. Materials Today Bio, 2022, 15, 100301.	2.6	11
4915	Effects of Different Long-Term Exercise Modalities on Tissue Stiffness. Sports Medicine - Open, 2022, 8,	1.3	7
4916	Magnetically Driven Hierarchical Alignment in Biomimetic Fibrous Hydrogels. Small, 2022, 18, .	5.2	8
4917	Thermosensitive chitosan/poly(N-isopropyl acrylamide) nanoparticles embedded in aniline pentamer/silk fibroin/polyacrylamide as an electroactive injectable hydrogel for healing critical-sized calvarial bone defect in aging rat model. International Journal of Biological Macromolecules, 2022, 213, 352-368.	3.6	12
4918	Hybrid multilayer coating as the psoralen delivery vehicle promoting bone regeneration on titanium mesh scaffolds in a Posterolateral Spinal Fusion model. Applied Materials Today, 2022, 28, 101530.	2.3	0
4919	Integrin molecular tension required for focal adhesion maturation and YAP nuclear translocation. Biochemistry and Biophysics Reports, 2022, 31, 101287.	0.7	3
4920	Oxidation-mediated scaffold engineering of hyaluronic acid-based microcarriers enhances corneal stromal regeneration. Carbohydrate Polymers, 2022, 292, 119668.	5.1	12
4921	Viscoelasticity of ECM and Cells——Origin, Measurement and Correlation. SSRN Electronic Journal, 0,	0.4	0
4922	Mechanical properties of ferrogels based on polyacrylamide filled with strontium hexaferrite microparticles studied using stress-strain and ultrasonography tests. AIP Conference Proceedings, 2022, , .	0.3	0

#	Article	IF	CITATIONS
4923	Cell motility in confluent tissues induced by substrate disorder. Physical Review Research, 2022, 4, .	1.3	1
4924	Microbial Response to Micrometer-Scale Multiaxial Wrinkled Surfaces. ACS Applied Materials & Samp; Interfaces, 2022, 14, 31463-31473.	4.0	6
4925	Fabrication of moldable chitosan gels via thermally induced phase separation in aqueous alcohol solutions. International Journal of Biological Macromolecules, 2022, , .	3.6	0
4926	Light-sheet photonic force optical coherence elastography for high-throughput quantitative 3D micromechanical imaging. Nature Communications, 2022, 13, .	5.8	6
4927	Mechanotransduction in Skin Inflammation. Cells, 2022, 11, 2026.	1.8	10
4928	Tumour invasion and dissemination. Biochemical Society Transactions, 2022, 50, 1245-1257.	1.6	8
4929	Non-equilibrium tracer dynamics in oscillating active gel. Physica A: Statistical Mechanics and Its Applications, 2022, , 127812.	1.2	2
4930	Self-Organization of the Retina during Eye Development, Retinal Regeneration In Vivo, and in Retinal 3D Organoids In Vitro. Biomedicines, 2022, 10, 1458.	1.4	8
4931	Narrow-gap Rheometry: A Novel Method for Measuring Cell Mechanics. Cells, 2022, 11, 2010.	1.8	3
4932	Electrospun Scaffolds as Cell Culture Substrates for the Cultivation of an In Vitro Blood–Brain Barrier Model Using Human Induced Pluripotent Stem Cells. Pharmaceutics, 2022, 14, 1308.	2.0	9
4933	Controlled metal crumpling as an alternative to folding for the fabrication of nanopatterned meta-biomaterials. Materials and Design, 2022, 220, 110844.	3.3	8
4935	Interplay of matrix stiffness and stress relaxation in directing osteogenic differentiation of mesenchymal stem cells. Biomaterials Science, 2022, 10, 4978-4996.	2.6	6
4936	Quantitative proteomic analysis of gingival crevicular fluids to identify novel biomarkers of gingival recession in orthodontic patients. Journal of Proteomics, 2022, 266, 104647.	1.2	3
4937	3D Interlayer Slidable Multilayer Nano-Graphene Oxide Acrylate Crosslinked Tough Hydrogel. Langmuir, 2022, 38, 8200-8210.	1.6	3
4939	Nucleoside-Derived Low-Molecular-Weight Gelators as a Synthetic Microenvironment for 3D Cell Culture. ACS Biomaterials Science and Engineering, 2022, 8, 3387-3398.	2.6	2
4940	Fabricating a Novel Three-Dimensional Skin Model Using Silica Nonwoven Fabrics (SNF). Applied Sciences (Switzerland), 2022, 12, 6537.	1.3	0
4941	Synthetic Polypeptide–Polyester PolyHIPEs Prepared by Thiol–Ene Photopolymerization. Macromolecules, 2022, 55, 5892-5900.	2.2	6
4942	In Vivo Formation and Tracking of π-Peptide Nanostructures. ACS Applied Materials & Distriction (1975).	4.0	3

#	Article	IF	CITATIONS
4943	Effect of Sulfonation Group on Polyaniline Copolymer Scaffolds for Tissue Engineering with Laminin Treatment under Electrical Stimulation. ACS Applied Bio Materials, 2022, 5, 3778-3787.	2.3	4
4944	Proper Orthogonal Decomposition Analysis Reveals Cell Migration Directionality During Wound Healing. Annals of Biomedical Engineering, 0, , .	1.3	0
4945	Mechanical Properties of the Extracellular Environment of Human Brain Cells Drive the Effectiveness of Drugs in Fighting Central Nervous System Cancers. Brain Sciences, 2022, 12, 927.	1.1	1
4946	Age-Associated Dysregulation of Integrin Function in Vascular Smooth Muscle. Frontiers in Physiology, $0,13,.$	1.3	5
4947	Mechanosensitive Channel PIEZO1 Senses Shear Force to Induce KLF2/4 Expression via CaMKII/MEKK3/ERK5 Axis in Endothelial Cells. Cells, 2022, 11, 2191.	1.8	11
4948	Edible films for cultivated meat production. Biomaterials, 2022, 287, 121659.	5.7	32
4949	Tissue mechanics coevolves with fibrillar matrisomes in healthy and fibrotic tissues. Matrix Biology, 2022, 111, 153-188.	1.5	11
4950	Data driven and biophysical insights into the regulation of trafficking vesicles by extracellular matrix stiffness. IScience, 2022, 25, 104721.	1.9	1
4951	Fibronectin anchoring to viscoelastic poly(dimethylsiloxane) elastomers controls fibroblast mechanosensing and directional motility. Biomaterials, 2022, 287, 121646.	5.7	2
4952	Micro/nanoscale surface engineering to enhance hemocompatibility and reduce bacterial adhesion for cardiovascular implants. Materials Chemistry and Physics, 2022, 289, 126445.	2.0	5
4953	Mechanical relaxations of hydrogels governed by their physical or chemical crosslinks. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 133, 105343.	1.5	11
4954	Controllable manipulation of alginate-gelatin core-shell microcarriers for HUMSCs expansion. International Journal of Biological Macromolecules, 2022, 216, 1-13.	3.6	2
4955	An internal variable model for plastic remodeling in fibrous materials. European Journal of Mechanics, A/Solids, 2022, 96, 104718.	2.1	0
4956	Enzymatic co-crosslinking of star-shaped poly(ethylene glycol) tyramine and hyaluronic acid tyramine conjugates provides elastic biocompatible and biodegradable hydrogels. Bioactive Materials, 2023, 20, 53-63.	8.6	13
4957	Materials and extracellular matrix rigidity highlighted in tissue damages and diseases: Implication for biomaterials design and therapeutic targets. Bioactive Materials, 2023, 20, 381-403.	8.6	11
4958	Advancements in Extracellular Matrix-Based Biomaterials and Biofabrication of 3D Organotypic Skin Models. ACS Biomaterials Science and Engineering, 2022, 8, 3220-3241.	2.6	12
4959	Importance of the Microenvironment and Mechanosensing in Adipose Tissue Biology. Cells, 2022, 11, 2310.	1.8	12
4960	Biomaterialâ€Based Therapeutic Approaches to Osteoarthritis and Cartilage Repair Through Macrophage Polarization. Chemical Record, 2022, 22, .	2.9	3

#	Article	IF	CITATIONS
4961	Tannic Acid-mediated Multifunctional 3D Printed Composite Hydrogel for Osteochondral Regeneration. International Journal of Bioprinting, 2022, 8, 587.	1.7	4
4962	Current progress in bionanomaterials to modulate the epigenome. Biomaterials Science, 2022, 10, 5081-5091.	2.6	2
4963	Layer-by-Layer Fabrication of PAH/PAMAM/Nano-CaCO3 Composite Films and Characterization for Enhanced Biocompatibility. International Journal of Biomaterials, 2022, 2022, 1-14.	1.1	1
4964	Antioxidant Silk Fibroin Composite Hydrogel for Rapid Healing of Diabetic Wound. Macromolecular Bioscience, 2022, 22, .	2.1	22
4965	Substrate stiffness modulates migration and local inter-cellular membrane motion in pulmonary endothelial cell monolayers. American Journal of Physiology - Cell Physiology, 0, , .	2.1	2
4966	Effect of viscoelastic properties of cellulose nanocrystal/collagen hydrogels on chondrocyte behaviors. Frontiers in Bioengineering and Biotechnology, 0, 10 , .	2.0	5
4967	Biomaterials with stiffness gradient for interface tissue engineering. Biomedical Materials (Bristol), 2022, 17, 064103.	1.7	5
4968	Unified multiscale theory of cellular mechanical adaptations to substrate stiffness. Biophysical Journal, 2022, 121, 3474-3485.	0.2	6
4969	Epithelial cells sacrifice excess area to preserve fluidity in response to external mechanical stress. Communications Biology, 2022, 5, .	2.0	1
4970	Characterization of focal adhesion proteins in rodent hepatic stellate cells. Histochemistry and Cell Biology, 0, , .	0.8	0
4971	Nanoscale Tracking Combined with Cell-Scale Microrheology Reveals Stepwise Increases in Force Generated by Cancer Cell Protrusions. Nano Letters, 2022, 22, 7742-7750.	4.5	9
4972	The multifaceted mechanisms of malignant glioblastoma progression and clinical implications. Cancer and Metastasis Reviews, 2022, 41, 871-898.	2.7	8
4973	Functionalized Electrospun Double-Layer Nanofibrous Scaffold for Wound Healing and Scar Inhibition. ACS Omega, 2022, 7, 30137-30148.	1.6	8
4974	Mechanical regulation of signal transduction in angiogenesis. Frontiers in Cell and Developmental Biology, $0,10,1$	1.8	13
4975	How do the Local Physical, Biochemical, and Mechanical Properties of an Injectable Synthetic Anisotropic Hydrogel Affect Oriented Nerve Growth?. Advanced Functional Materials, 2022, 32, .	7.8	14
4976	Gelatin/sodium alginate composite hydrogel with dynamic matrix stiffening ability for bone regeneration. Composites Part B: Engineering, 2022, 243, 110162.	5.9	24
4977	Mechanical strain stimulates <scp>COPII</scp> â€dependent secretory trafficking via Rac1. EMBO Journal, 2022, 41, .	3.5	9
4978	Alginate microfibers as therapeutic delivery scaffolds and tissue mimics. Experimental Biology and Medicine, 2022, 247, 2103-2118.	1.1	6

#	Article	IF	CITATIONS
4979	Shining a Light on Cancerâ€"Photonics in Microfluidic Tumor Modeling and Biosensing. Advanced Healthcare Materials, 2023, 12, .	3.9	6
4980	Mechanical Force Directs Proliferation and Differentiation of Stem Cells. Tissue Engineering - Part B: Reviews, 2023, 29, 141-150.	2.5	6
4981	Biomaterials directed activation of a cryostable therapeutic secretome in induced pluripotent stem cell derived mesenchymal stromal cells. Journal of Tissue Engineering and Regenerative Medicine, 2022, 16, 1008-1018.	1.3	4
4982	The influence of entropic crowding in cell monolayers. Biophysical Journal, 2022, 121, 4394-4404.	0.2	3
4985	The role of matrix stiffness in cancer stromal cell fate and targeting therapeutic strategies. Acta Biomaterialia, 2022, 150, 34-47.	4.1	11
4986	Mechanical properties and chemical stability of alginate-based anisotropic capillary hydrogels. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 134, 105397.	1.5	6
4987	Bioinspired silk fibroin materials: From silk building blocks extraction and reconstruction to advanced biomedical applications. Materials Today Bio, 2022, 16, 100381.	2.6	31
4988	Recent advances in one-dimensional nanowire-incorporated bone tissue engineering scaffolds. Materials Today Communications, 2022, 33, 104229.	0.9	2
4989	Contributions of Ti-xTa cold spray composite interface to in-vitro cell growth. , 2023, 1, 100007.		0
4990	The interplay between physical cues and mechanosensitive ion channels in cancer metastasis. Frontiers in Cell and Developmental Biology, 0, 10 , .	1.8	6
4992	Cross-evaluation of stiffness measurement methods for hydrogels. Polymer, 2022, 258, 125316.	1.8	10
4993	Injectable and fast gelling hyaluronate hydrogels with rapid self-healing ability for spinal cord injury repair. Carbohydrate Polymers, 2022, 298, 120081.	5.1	20
4994	The extracellular matrix in cardiovascular aging. , 2023, , 523-545.		0
4995	Chapter 5. Geometric Cues for Directing Cell Fate. Biomaterials Science Series, 2022, , 85-109.	0.1	O
4996	Characterization ofÂanÂInflatable Soft Actuator andÂTissue Interaction forÂIn Vitro Mechanical Stimulation ofÂTissue. Lecture Notes in Computer Science, 2022, , 105-113.	1.0	0
4997	Atomic Force Microscopy-based Measurements of Mechanical Properties of Multicellular Systems. Seibutsu Butsuri, 2022, 62, 159-164.	0.0	O
4998	Static and photoresponsive dynamic materials to dissect physical regulation of cellular functions. Biomaterials Science, 2022, 10, 6116-6134.	2.6	1
4999	Cell Adhesion to the Extracellular Matrix. , 2022, , .		0

#	Article	IF	Citations
5000	Brillouin light scattering in biological systems. Semiconductors and Semimetals, 2022, , 313-348.	0.4	2
5001	Modular mixing of benzene-1,3,5-tricarboxamide supramolecular hydrogelators allows tunable biomimetic hydrogels for control of cell aggregation in 3D. Biomaterials Science, 2022, 10, 4740-4755.	2.6	9
5002	Elastogranular Sheets. SSRN Electronic Journal, 0, , .	0.4	0
5003	Three dimensional lung models - Three dimensional extracellular matrix models. , 2022, , 109-131.		1
5004	Silk fibroin films with embedded magnetic nanoparticles: evaluation of the magneto-mechanical stimulation effect on osteogenic differentiation of stem cells. Nanoscale, 2022, 14, 14558-14574.	2.8	5
5005	The Effect of Myosin Inhibitors on the Expression of Mechano-Dependent Genes in the Early Development of the Clawed Frog. Russian Journal of Bioorganic Chemistry, 2022, 48, 854-857.	0.3	0
5006	Real and Simulated Microgravity: Focus on Mammalian Extracellular Matrix. Life, 2022, 12, 1343.	1.1	4
5008	Viscoelastic Properties of Bioprinted Alginate Microbeads Compared to Their Bulk Hydrogel Analogs. Journal of Biomechanical Engineering, 2023, 145, .	0.6	3
5009	\hat{l}_{\pm} -Actinin-4 recruits Shp2 into focal adhesions to potentiate ROCK2 activation in podocytes. Life Science Alliance, 2022, 5, e202201557.	1.3	2
5010	Dual-Crosslinked Alginate-Based Hydrogels with Tunable Mechanical Properties for Cultured Meat. Foods, 2022, 11, 2829.	1.9	8
5012	Changes in nanomechanical properties of single neuroblastoma cells as a model for oxygen and glucose deprivation (OGD). Scientific Reports, 2022, 12, .	1.6	3
5013	Nucleoli in epithelial cell collectives respond to tumorigenic, spatial, and mechanical cues. Molecular Biology of the Cell, 2022, 33, .	0.9	2
5014	Supracellular measurement of spatially varying mechanical heterogeneities in live monolayers. Biophysical Journal, 2022, 121, 3358-3369.	0.2	2
5016	Collagen Niches Affect Direct Transcriptional Conversion Towards Human Nucleus Pulposus Cells via Actomyosin Contractility. Advanced Healthcare Materials, 0, , 2201824.	3.9	0
5017	Integrated PPI- and WGCNA-retrieval of hub gene signatures for soft substrates inhibition of human fibroblasts proliferation and differentiation. Aging, 2022, 14, 6957-6974.	1.4	1
5018	Mechanical guidance of self-condensation patterns of differentiating progeny. IScience, 2022, 25, 105109.	1.9	2
5019	Kidney-on-a-Chip: Mechanical Stimulation and Sensor Integration. Sensors, 2022, 22, 6889.	2.1	12
5020	Mechanotransduction through adhesion molecules: Emerging roles in regulating the stem cell niche. Frontiers in Cell and Developmental Biology, 0, 10 , .	1.8	2

#	Article	IF	Citations
5021	Organoid-on-a-chip model of human ARPKD reveals mechanosensing pathomechanisms for drug discovery. Science Advances, 2022, 8, .	4.7	38
5022	Reversible Self-Assembled Monolayers with Tunable Surface Dynamics for Controlling Cell Adhesion Behavior. ACS Applied Materials & Samp; Interfaces, 2022, 14, 41790-41799.	4.0	8
5023	Mammalian organ regeneration in spiny mice. Journal of Muscle Research and Cell Motility, 0, , .	0.9	2
5025	Mechanotransduction in the pathogenesis of non-alcoholic fatty liver disease. Journal of Hepatology, 2022, 77, 1642-1656.	1.8	13
5026	IL-10-Functionalized Hydrogels Support Immunosuppressive Dendritic Cell Phenotype and Function. ACS Biomaterials Science and Engineering, 2022, 8, 4341-4353.	2.6	2
5028	Three-dimensional in vitro culture models in oncology research. Cell and Bioscience, 2022, 12, .	2.1	72
5030	Mechanoresponsive regulation of fibroblast-to-myofibroblast transition in three-dimensional tissue analogues: mechanical strain amplitude dependency of fibrosis. Scientific Reports, 2022, 12, .	1.6	7
5032	Rheological characterization of cell-laden alginate-gelatin hydrogels for 3D biofabrication. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 136, 105474.	1.5	4
5033	Geometry-controlled instabilities for soft–soft adhesive interfaces. Soft Matter, 2022, 18, 8098-8105.	1.2	3
5034	Interplay between substrate rigidity and tissue fluidity regulates cell monolayer spreading. Soft Matter, 2022, 18, 7877-7886.	1.2	6
5035	Mechanobiology and Applications in Biomaterials for Soft Tissue Repair and Regeneration., 2022,,.		0
5036	Cellular micromasonry: biofabrication with single cell precision. Soft Matter, 2022, 18, 8554-8560.	1.2	6
5037	Three-Dimensional Bioprinting of Naturally Derived Protein-Based Biopolymers. , 2022, , 363-377.		0
5038	Optineurin links Hace1-dependent Rac ubiquitylation to integrin-mediated mechanotransduction to control bacterial invasion and cell division. Nature Communications, 2022, 13, .	5. 8	7
5039	Circular Patterns of Dynamic Covalent Hydrogels with Gradient Stiffness for Screening of the Stem Cell Microenvironment. ACS Applied Materials & Samp; Interfaces, 2022, 14, 47461-47471.	4.0	5
5040	How dynamic prestress governs the shape of living systems, from the subcellular to tissue scale. Interface Focus, 2022, 12, .	1.5	4
5041	Hydrogel interfaces for merging humans and machines. Nature Reviews Materials, 2022, 7, 935-952.	23.3	153
5042	A hybrid cartilage extracellular matrix-based hydrogel/poly (ε-caprolactone) scaffold incorporated with Kartogenin for cartilage tissue engineering. Journal of Biomaterials Applications, 2023, 37, 1243-1258.	1.2	3

#	Article	IF	Citations
5043	Electroconductive scaffolds based on gelatin and PEDOT:PSS for cardiac regeneration. International Journal of Biological Macromolecules, 2023, 224, 266-280.	3.6	12
5044	Rheology of marine sponges reveals anisotropic mechanics and tuned dynamics. Journal of the Royal Society Interface, 2022, 19, .	1.5	4
5045	TRPV3 inhibits colorectal cancer cell proliferation and migration by regulating the MAPK signaling pathway. Journal of Gastrointestinal Oncology, 2022, 13, 2447-2457.	0.6	1
5046	SUN2 regulates mitotic duration in response to extracellular matrix rigidity. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	11
5047	Extracellular fluid viscosity enhances cell migration and cancer dissemination. Nature, 2022, 611, 365-373.	13.7	94
5048	Primary hepatocyte urea assessment in the sodium-alginate patterned hydrogel by electrochemical procedure containing umbilical cord conditioned media. Journal of Biomaterials Applications, 2023, 37, 1470-1485.	1.2	1
5049	Fluid shear stress promotes osteogenesis of bone mesenchymal stem cells at early matrix maturity phase through Lamin A/ METTL3 signal axis. Biochemical Engineering Journal, 2022, 188, 108685.	1.8	2
5050	Matrix-bound growth factors in tissue repair. Swiss Medical Weekly, 0, , .	0.8	9
5052	Biomaterial inks and bioinks for fabricating 3D biomimetic lung tissue: A delicate balancing act between biocompatibility and mechanical printability. Bioprinting, 2023, 29, e00255.	2.9	10
5053	Fluidic Force Microscopy and Atomic Force Microscopy Unveil New Insights into the Interactions of Preosteoblasts with 3Dâ€Printed Submicron Patterns. Small, 2023, 19, .	5.2	2
5054	The basement membrane in epidermal polarity, stemness, and regeneration. American Journal of Physiology - Cell Physiology, 2022, 323, C1807-C1822.	2.1	8
5055	Lipoplexâ€Functionalized Thinâ€Film Surface Coating Based on Extracellular Matrix Components as Local Gene Delivery System to Control Osteogenic Stem Cell Differentiation. Advanced Healthcare Materials, 2023, 12, .	3.9	4
5056	Poly(acrylamide) Spheroids with Tunable Elasticity for Scalable Cell Culture Applications. Macromolecular Chemistry and Physics, 0, , 2200246.	1.1	0
5057	Cardiac fibroblasts and mechanosensation in heart development, health and disease. Nature Reviews Cardiology, 2023, 20, 309-324.	6.1	27
5058	Hydrogel platform capable of molecularly resolved pulling on cells for mechanotransduction. Materials Today Bio, 2022, 17, 100476.	2.6	1
5061	Mechanosensing model of fibroblast cells adhered on a substrate with varying stiffness and thickness. Journal of the Mechanics and Physics of Solids, 2023, 171, 105137.	2.3	7
5062	Stiff matrix induced srGAP2 tension gradients control migration direction in triple-negative breast cancer. Theranostics, 2023, 13, 59-76.	4.6	1
5063	Recent advances in regenerative biomaterials. Regenerative Biomaterials, 2022, 9, .	2.4	54

#	Article	IF	CITATIONS
5064	Effects of surface patterning and topography on the cellular functions of tissue engineered scaffolds with special reference to 3D bioprinting. Biomaterials Science, 2023, 11, 1236-1269.	2.6	5
5065	Extracting, quantifying, and comparing dynamical and biomechanical properties of living matter through single particle tracking. Physical Chemistry Chemical Physics, 2023, 25, 1513-1537.	1.3	8
5066	Immediate stress dissipation in dual cross-link hydrogels controls osteogenic commitment of mesenchymal stem cells. Carbohydrate Polymers, 2023, 302, 120369.	5.1	3
5067	The mechanical behavior of silk-fibroin reinforced alginate hydrogel biocomposites - Toward functional tissue biomimetics. Journal of the Mechanical Behavior of Biomedical Materials, 2023, 138, 105598.	1.5	5
5068	A Torsion-Based Rheometer for Measuring Viscoelastic Material Properties. The Biophysicist, 2022, 3, 94-105.	0.1	1
5069	Probing Local Force Propagation in Tensed Fibrous Gels. Small, 2023, 19, .	5.2	5
5070	High-speed non-contact measurement of elasto-optic coefficient via laser-induced phonons. Applied Physics Letters, 2022, 121, .	1.5	4
5071	The Forces behind Directed Cell Migration. Biophysica, 2022, 2, 548-563.	0.6	3
5072	New Insights into the Phenotype Switching of Melanoma. Cancers, 2022, 14, 6118.	1.7	7
5073	Mechanobiology of the cell nucleus. APL Bioengineering, 2022, 6, .	3.3	4
5074	Chitin whiskers enhanced methacrylated hydroxybutyl chitosan hydrogels as anti-deformation scaffold for 3D cell culture. Carbohydrate Polymers, 2023, 304, 120483.	5.1	8
5075	Selfâ€Forming Norborneneâ€Tetrazine Hydrogels with Independently Tunable Properties. Macromolecular Bioscience, 2023, 23, .	2.1	2
5076	Stiffness-Controlled Hydrogels for 3D Cell Culture Models. Polymers, 2022, 14, 5530.	2.0	4
5077	Substrate stiffness promotes dentinogenesis via <scp>LAMB1</scp> – <scp>FAK</scp> – <scp>MEK1</scp> /2 signaling axis. Oral Diseases, 0, , .	1.5	0
5078	Development of Poly(Glycerol Sebacate) and Its Derivatives: A Review of the Progress over the past Two Decades. Polymer Reviews, 2023, 63, 613-678.	5.3	5
5079	Interactive mechanisms between caveolin-1 and actin filaments or vimentin intermediate filaments instruct cell mechanosensing and migration. Journal of Molecular Cell Biology, 0, , .	1.5	2
5079 5080	Interactive mechanisms between caveolin-1 and actin filaments or vimentin intermediate filaments instruct cell mechanosensing and migration. Journal of Molecular Cell Biology, 0, , . A kidney proximal tubule model to evaluate effects of basement membrane stiffening on renal tubular epithelial cells. Integrative Biology (United Kingdom), 0, , .	0.6	2

#	Article	IF	CITATIONS
5083	Plectin Downregulation Inhibits Migration and Suppresses Epithelial Mesenchymal Transformation of Hepatocellular Carcinoma Cells via ERK1/2 Signaling. International Journal of Molecular Sciences, 2023, 24, 73.	1.8	3
5084	Engineered Microenvironments for 3D Cell Culture and Regenerative Medicine: Challenges, Advances, and Trends. Bioengineering, 2023, 10, 17.	1.6	1
5085	Paxillin Tunes the Relationship between Cell–Matrix and Cell–Cell Adhesions to Regulate Stiffness-Dependent Dentinogenesis. International Journal of Energy Production and Management, 0, , .	1.9	3
5086	Recent advances in optical elastography and emerging opportunities in the basic sciences and translational medicine [Invited]. Biomedical Optics Express, 2023, 14, 208.	1.5	5
5087	The Stiffnessâ€Sensitive Transcriptome of Human Tendon Stromal Cells. Advanced Healthcare Materials, 2023, 12, .	3.9	3
5088	Steering Stem Cell Fate within 3D Living Composite Tissues Using Stimuliâ€Responsive Cellâ€Adhesive Micromaterials. Advanced Science, 2023, 10, .	5.6	6
5089	Simulating 3D Cell Shape with the Cellular Potts Model. Methods in Molecular Biology, 2023, , 323-339.	0.4	0
5090	Interplay of Fluid Mechanics and Matrix Stiffness in Tuning the Mechanical Behaviors of Single Cells Probed by Atomic Force Microscopy. Langmuir, 2023, 39, 1309-1319.	1.6	4
5091	Regulators, functions, and mechanotransduction pathways of matrix stiffness in hepatic disease. Frontiers in Physiology, 0, 14, .	1.3	2
5092	Modulating the Mechanical Resonance of Huh-7 Cells Based on Elasticity of Adhesion Proteins. IEEE Transactions on Nanobioscience, 2023, 22, 664-672.	2.2	1
5093	Electron Beam Irradiation Cross-Linked Hydrogel Patches Loaded with Red Onion Peel Extract for Transdermal Drug Delivery: Formulation, Characterization, Cytocompatibility, and Skin Permeation. Gels, 2023, 9, 52.	2.1	0
5094	A dual organelle-targeting mechanosensitive probe. Science Advances, 2023, 9, .	4.7	7
5095	Paradigms of endothelial stiffening in cardiovascular disease and vascular aging. Frontiers in Physiology, 0, 13 , .	1.3	6
5096	Extrafibrillarly Demineralized Dentin Matrix for Bone Regeneration. Advanced Healthcare Materials, 2023, 12, .	3.9	2
5097	Alternative lung cell model systems for toxicology testing strategies: Current knowledge and future outlook. Seminars in Cell and Developmental Biology, 2023, 147, 70-82.	2.3	3
5098	Stimuli-responsive Multilayers Based on Thiol Chemistry Controlling Adhesion and Growth of Fibroblasts. Engineering Materials, 2023, , 85-113.	0.3	0
5099	Biomaterial Based Stem Cells Therapy for Cancer. Current Stem Cell Research and Therapy, 2023, 18, 1041-1055.	0.6	0
5100	Transcriptomic Changes toward Osteogenic Differentiation of Mesenchymal Stem Cells on 3Dâ€Printed GelMA/CNC Hydrogel under Pulsatile Pressure Environment. Advanced Healthcare Materials, 2023, 12, .	3.9	4

#	ARTICLE	IF	CITATIONS
5101	In Search of an Imaging Classification of Adenomyosis: A Role for Elastography?. Journal of Clinical Medicine, 2023, 12, 287.	1.0	5
5102	Mechanics of the cellular microenvironment as probed by cells in vivo during zebrafish presomitic mesoderm differentiation. Nature Materials, 2023, 22, 135-143.	13.3	21
5104	The actin cytoskeleton: Morphological changes in pre- and fully developed lung cancer. Biophysics Reviews, 2022, 3, 041304.	1.0	0
5105	The role of glycans in the mechanobiology of cancer. Journal of Biological Chemistry, 2023, 299, 102935.	1.6	2
5106	Peptide–Protein Coassemblies into Hierarchical and Bioactive Tubular Membranes. Biomacromolecules, 2023, 24, 4419-4429.	2.6	1
5107	Mesenchymal Stem Cells Sense the Toughness of Nanomaterials and Interfaces. Advanced Healthcare Materials, 2023, 12, .	3.9	7
5108	Vascular and Neural Response to Focal Vibration, Sensory Feedback, and Piezo Ion Channel Signaling. , 2023, 2, 42-90.		0
5109	Single-cell based models for cell–cell and cell–extracellular matrix interactions. , 2023, , 547-590.		0
5111	Scribble and E-cadherin cooperate to control symmetric daughter cell positioning by multiple mechanisms. Journal of Cell Science, 2023, 136, .	1.2	2
5112	Suggesting a mechanism for acupuncture as a global percutaneous needle fasciotomy that respects tensegrity principles for treating fibromyalgia. Frontiers in Medicine, 0, 9, .	1.2	2
5113	Hierarchical Topography with Tunable Micro―and Nanoarchitectonics for Highly Enhanced Cardiomyocyte Maturation via Multi‧cale Mechanotransduction. Advanced Healthcare Materials, 2023, 12, .	3.9	2
5114	Fabrication of Cu2+-loaded phase-transited lysozyme nanofilm on bacterial cellulose: Antibacterial, anti-inflammatory, and pro-angiogenesis for bacteria-infected wound healing. Carbohydrate Polymers, 2023, 309, 120681.	5.1	18
5115	Evaluation of Local and Internal Elasticity of Hydrogel Materials by Using Light-Driven Gel Actuator. , 2023, , .		0
5116	Role of noncoding RNAs in orthodontic tooth movement: new insights into periodontium remodeling. Journal of Translational Medicine, 2023, 21, .	1.8	3
5117	Supramolecular reactions of polypeptide micelles: polymerization, cyclization, and living growth. Scientia Sinica Chimica, 2023, 53, 664-677.	0.2	0
5119	Spatio-temporal patterning of extensile active stresses in microtubule-based active fluids. , 2023, 2, .		6
5120	Traction force reconstruction assessment on real three-dimensional matrices and cellular morphologies. International Journal of Engineering Science, 2023, 186, 103828.	2.7	0
5121	Incorporation of strontium-containing bioactive particles into PEOT/PBT electrospun scaffolds for bone tissue regeneration., 2023, 149, 213406.		1

#	Article	IF	CITATIONS
5122	Matrix stiffness regulates osteoclast fate through integrin-dependent mechanotransduction. Bioactive Materials, 2023, 27, 138-153.	8.6	2
5123	Steering phase-separated droplets to control fibrillar network evolution of supramolecular peptide hydrogels. Matter, 2023, 6, 1945-1963.	5.0	17
5126	Synthesis and evaluation of alginate, gelatin, and hyaluronic acid hybrid hydrogels for tissue engineering applications. International Journal of Biological Macromolecules, 2023, 233, 123438.	3.6	34
5127	3D printed fiber-optic nanomechanical bioprobe. International Journal of Extreme Manufacturing, 2023, 5, 015005.	6.3	7
5128	Novel hydrogels: are they poised to transform 3D cell-based assay systems in early drug discovery?. Expert Opinion on Drug Discovery, 2023, 18, 335-346.	2.5	1
5129	Nanotechnology in tissue engineering and regenerative medicine. Korean Journal of Chemical Engineering, 2023, 40, 286-301.	1.2	2
5130	Substrate Stiffness Regulates the Proliferation and Apoptosis of Periodontal Ligament Cells through Integrin-Linked Kinase ILK. ACS Biomaterials Science and Engineering, 2023, 9, 662-670.	2.6	1
5131	Stiffness-Modulation of Collagen Gels by Genipin-Crosslinking for Cell Culture. Gels, 2023, 9, 148.	2.1	3
5133	A Gelatin Methacrylate-Based Hydrogel as a Potential Bioink for 3D Bioprinting and Neuronal Differentiation. Pharmaceutics, 2023, 15, 627.	2.0	3
5134	Inhomogeneous mechanotransduction defines the spatial pattern of apoptosis-induced compensatory proliferation. Developmental Cell, 2023, 58, 267-277.e5.	3.1	9
5135	Ultralow and Dynamic Flow Field Generator Composed of Microfluidic Peristaltic Pump. Advanced Intelligent Systems, 2023, 5, .	3.3	1
5136	Metabolic reprogramming in response to cell mechanics. Biology of the Cell, 2023, 115, .	0.7	4
5137	Cell-Friendly Chitosan-Xanthan Gum Membranes Incorporating Hydroxyapatite Designed for Periodontal Tissue Regeneration. Pharmaceutics, 2023, 15, 705.	2.0	6
5138	Growth of mesenchymal stem cells at the surface of silicone, mineral and plant-based oils. Biomedical Materials (Bristol), 2023, 18, 035005.	1.7	3
5139	Elastogranular sheets. Matter, 2023, 6, 1217-1230.	5.0	2
5140	Controlled degradation of polycaprolactone-based micropillar arrays. Biomaterials Science, 2023, 11, 3077-3091.	2.6	2
5141	Fundamentals and methods of atomic force microscopy for biophysics., 2023,, 1-42.		0
5142	Cell–extracellular matrix mechanotransduction in 3D. Nature Reviews Molecular Cell Biology, 2023, 24, 495-516.	16.1	72

#	Article	IF	CITATIONS
5143	Emergent collective organization of bone cells in complex curvature fields. Nature Communications, 2023, 14, .	5.8	16
5144	Coordination of non-professional efferocytosis and actomyosin contractility during epithelial tissue morphogenesis. Cell Reports, 2023, 42, 112202.	2.9	0
5145	Biomechanical Modulation of Dental Pulp Stem Cell (DPSC) Properties for Soft Tissue Engineering. Bioengineering, 2023, 10, 323.	1.6	3
5146	Mechanobiology of cancer cell responsiveness to chemotherapy and immunotherapy: Mechanistic insights and biomaterial platforms. Advanced Drug Delivery Reviews, 2023, 196, 114771.	6.6	2
5147	3D Electrospun Polycaprolactone Scaffolds to Assess Human Periodontal Ligament Cells Mechanobiological Behaviour. Biomimetics, 2023, 8, 108.	1.5	3
5148	Recent Advances on Cell Culture Platforms for In Vitro Drug Screening and Cell Therapies: From Conventional to Microfluidic Strategies. Advanced Healthcare Materials, 2023, 12, .	3.9	12
5149	Caveolae Mechanotransduction at the Interface between Cytoskeleton and Extracellular Matrix. Cells, 2023, 12, 942.	1.8	10
5150	Mechanical Properties and Functions of Elastin: An Overview. Biomolecules, 2023, 13, 574.	1.8	9
5151	Active Transport in Complex Environments. , 2023, , 151-218.		2
5153	Challenges and Perspectives for Future Considerations in the Bioengineering of a Bioartificial Pancreas. Annals of Biomedical Engineering, 0, , .	1.3	2
5154	Effect of different decellularization protocols on reendothelialization with human cells for a perfused renal bioscaffold of the rat. BMC Biotechnology, 2023, 23, .	1.7	0
5155	A 3D culture system for evaluating the combined effects of cisplatin and anti-fibrotic drugs on the growth and invasion of lung cancer cells co-cultured with fibroblasts. APL Bioengineering, 2023, 7, 016117.	3.3	1
5156	Mechanical Regulation of Mitochondrial Dynamics and Function in a 3D-Engineered Liver Tumor Microenvironment. ACS Biomaterials Science and Engineering, 2023, 9, 2408-2425.	2.6	2
5157	Matrix Stiffness Influences Tubular Formation in Renal Tissue Engineering. Applied Sciences (Switzerland), 2023, 13, 4510.	1.3	2
5158	Cell Decision Making through the Lens of Bayesian Learning. Entropy, 2023, 25, 609.	1.1	1
5159	Computational study of biomechanical drivers of renal cystogenesis. Biomechanics and Modeling in Mechanobiology, 2023, 22, 1113-1127.	1.4	1
5160	Stiff Substrate Induces Nucleus Pulposus Cell Ferroptosis via YAP and N adherin Mediated Mechanotransduction. Advanced Healthcare Materials, 2023, 12, .	3.9	4
5161	Insights in Cell Biomechanics through Atomic Force Microscopy. Materials, 2023, 16, 2980.	1.3	2

#	Article	IF	CITATIONS
5162	Characterization of Biocompatibility of Functional Bioinks for 3D Bioprinting. Bioengineering, 2023, 10, 457.	1.6	4
5163	Low Forces Push the Maturation of Neural Precursors into Neurons. Small, 2023, 19, .	5.2	2
5164	How Hydrogel Stiffness Affects Adipogenic Differentiation of Mesenchymal Stem Cells under Controlled Morphology. ACS Applied Bio Materials, 2023, 6, 3441-3450.	2.3	2
5165	The effects of mechanical force on fibroblast behavior in cutaneous injury. Frontiers in Surgery, 0, 10,	0.6	4
5166	Mechanical homeostasis imbalance in hepatic stellate cells activation and hepatic fibrosis. Frontiers in Molecular Biosciences, 0, 10, .	1.6	5
5175	Biological Safety and Cellular Interactions of Nanoparticles. , 2023, , 559-587.		0
5195	3D printable nanocomposite hydrogels for biomedical applications. , 2023, , 429-451.		0
5196	Engineered Nano–Bio Interfaces for Stem Cell Therapy. , 2023, 1, 341-356.		1
5203	Polycomb Bodies Detection in Murine Fibromuscular Stroma from Skin, Skeletal Muscles, and Aortic Tissues. Methods in Molecular Biology, 2023, , 125-146.	0.4	0
5216	A novel cross-communication of HIF-1 \hat{l} ± and HIF-2 \hat{l} ± with Wnt signaling in TNBC and influence of hypoxic microenvironment in the formation of an organ-on-chip model of breast cancer., 2023, 40, .		1
5228	Assessing the Viscosity of Alginate – Cellulose-Based Hydrogels: A Comparison Among Different Type of Solutes, Mediums Culture, and Gelatin Influence. Lecture Notes in Networks and Systems, 2023, , 510-522.	0.5	0
5238	Antimicrobial Peptide Nanomaterials. , 2023, , 475-514.		0
5245	Surface nanotopography and cell shape modulate tumor cell susceptibility to NK cell cytotoxicity. Materials Horizons, 2023, 10, 4532-4540.	6.4	0
5251	Synthetic living materials in cancer biology. , 2023, 1, 972-988.		2
5266	Cellular interactions and molecular signaling at the interface of cells and polymeric biomaterials., 2023,, 33-56.		0
5267	Development of the Avian Respiratory System. Zoological Monographs, 2023, , 99-189.	1.1	0
5274	Fatty tissue as a modulator of cancer cell mechanics. , 2023, , .		0
5281	Pathophysiology of Ethanol and Unexplained Observations. , 2023, , 903-927.		0

#	Article	IF	CITATIONS
5284	Application of Bioactive Compounds and Biomaterials in Promoting Cell Differentiation, Proliferation, and Tissue Regeneration., 2023, , 365-409.		0
5294	Structural engineered living materials. Nano Research, 2024, 17, 715-733.	5.8	1
5295	Fabrication of micro-nano patterned materials mimicking the topological structure of extracellular matrix for biomedical applications. Nano Research, 0 , , .	5.8	0
5301	Perceptual Dimensions of the Haptic System. , 2023, , 1-41.		O
5312	Biophysical Changes in Local Onco-Sphere. , 2023, , 201-220.		0
5322	Fatigue-resistant Hydrogels. Chemical Research in Chinese Universities, 0, , .	1.3	O
5357	3D Cell Culture: Techniques For and Beyond Organoid Applications. Methods in Molecular Biology, 2024, , 1-12.	0.4	0