

Appreciating force and shape “ the rise of mechanotransduction

Nature Reviews Molecular Cell Biology

15, 825-833

DOI: [10.1038/nrm3903](https://doi.org/10.1038/nrm3903)

Citation Report

#	ARTICLE	IF	CITATIONS
2	Interplay Between Mechanochemistry and Sonochemistry. <i>Topics in Current Chemistry</i> , 2014, 369, 239-284.	4.0	31
3	Stretching the boundaries of extracellular matrix research. <i>Nature Reviews Molecular Cell Biology</i> , 2014, 15, 761-763.	16.1	91
4	High-content imaging with micropatterned multiwell plates reveals influence of cell geometry and cytoskeleton on chromatin dynamics. <i>Biotechnology Journal</i> , 2015, 10, 1555-1567.	1.8	24
5	Extracellular Stiffness Modulates the Expression of Functional Proteins and Growth Factors in Endothelial Cells. <i>Advanced Healthcare Materials</i> , 2015, 4, 2056-2063.	3.9	31
6	Human Pluripotent Stem Cell Mechanobiology: Manipulating the Biophysical Microenvironment for Regenerative Medicine and Tissue Engineering Applications. <i>Stem Cells</i> , 2015, 33, 3187-3196.	1.4	38
7	Interkinetic nuclear migration generates and opposes ventricular-zone crowding: insight into tissue mechanics. <i>Frontiers in Cellular Neuroscience</i> , 2014, 8, 473.	1.8	64
8	Tension-driven axon assembly: a possible mechanism. <i>Frontiers in Cellular Neuroscience</i> , 2015, 9, 316.	1.8	21
9	Generation of contractile actomyosin bundles depends on mechanosensitive actin filament assembly and disassembly. <i>ELife</i> , 2015, 4, e06126.	2.8	118
10	The shifting geography and language of cell biology. <i>Journal of Cell Biology</i> , 2015, 209, 323-325.	2.3	1
11	Traction force microscopy on soft elastic substrates: A guide to recent computational advances. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2015, 1853, 3095-3104.	1.9	150
12	Nascent Integrin Adhesions Form on All Matrix Rigidities after Integrin Activation. <i>Developmental Cell</i> , 2015, 35, 614-621.	3.1	142
13	Feeling Force: Physical and Physiological Principles Enabling Sensory Mechanotransduction. <i>Annual Review of Cell and Developmental Biology</i> , 2015, 31, 347-371.	4.0	128
14	Role of physical forces in embryonic development. <i>Seminars in Cell and Developmental Biology</i> , 2015, 47-48, 88-91.	2.3	29
15	Age-associated reduction of cell spreading induces mitochondrial DNA common deletion by oxidative stress in human skin dermal fibroblasts: implication for human skin connective tissue aging. <i>Journal of Biomedical Science</i> , 2015, 22, 62.	2.6	60
16	Micropatterning of TCR and LFA-1 ligands reveals complementary effects on cytoskeleton mechanics in T cells. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 1272-1284.	0.6	90
17	Simulating tissue mechanics with agent-based models: concepts, perspectives and some novel results. <i>Computational Particle Mechanics</i> , 2015, 2, 401-444.	1.5	210
18	Mechanotransduction: Feeling the Squeeze in the <i>C.Âlegans</i> Reproductive System. <i>Current Biology</i> , 2015, 25, R74-R75.	1.8	4
19	Spatio-Temporal Control of LbL Films for Biomedical Applications: From 2D to 3D. <i>Advanced Healthcare Materials</i> , 2015, 4, 811-830.	3.9	69

#	ARTICLE	IF	CITATIONS
20	Active gel physics. <i>Nature Physics</i> , 2015, 11, 111-117.	6.5	538
21	p53 regulates cytoskeleton remodeling to suppress tumor progression. <i>Cellular and Molecular Life Sciences</i> , 2015, 72, 4077-4094.	2.4	33
22	Mechanotransduction in neutrophil activation and deactivation. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2015, 1853, 3105-3116.	1.9	44
23	Mechanical link between durotaxis, cell polarity and anisotropy during cell migration. <i>Physical Biology</i> , 2015, 12, 026008.	0.8	17
24	Age-Associated Increase in Skin Fibroblast-Derived Prostaglandin E 2 Contributes to Reduced Collagen Levels in Elderly Human Skin. <i>Journal of Investigative Dermatology</i> , 2015, 135, 2181-2188.	0.3	51
25	The mechanotransduction machinery at work at adherens junctions. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 113-118.	0.6	113
26	Knowing one's place: a free-energy approach to pattern regulation. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20141383.	1.5	153
27	Integrin-beta3 clusters recruit clathrin-mediated endocytic machinery in the absence of traction force. <i>Nature Communications</i> , 2015, 6, 8672.	5.8	75
28	Measuring Cell Mechanics. <i>Colloquium Series on Quantitative Cell Biology</i> , 2015, 2, 1-75.	0.5	3
29	Mechanobiology: chemical origin of membrane mechanical resistance and force-dependent signaling. <i>Current Opinion in Chemical Biology</i> , 2015, 29, 87-93.	2.8	15
30	Differences in the Mechanical Properties of the Developing Cerebral Cortical Proliferative Zone between Mice and Ferrets at both the Tissue and Single-Cell Levels. <i>Frontiers in Cell and Developmental Biology</i> , 2016, 4, 139.	1.8	28
31	Exposure to Varying Strain Magnitudes Influences the Conversion of Normal Skin Fibroblasts Into Hypertrophic Scar Cells. <i>Annals of Plastic Surgery</i> , 2016, 76, 388-393.	0.5	18
32	Nanoscale Mechanical Stimulation Method for Quantifying <i>C. elegans</i> Mechanosensory Behavior and Memory. <i>Analytical Sciences</i> , 2016, 32, 1159-1164.	0.8	13
33	Highly efficient and gentle trapping of single cells in large microfluidic arrays for time-lapse experiments. <i>Biomicrofluidics</i> , 2016, 10, 014120.	1.2	23
35	Overview and Translational Impact of Space Cell Biology Research. , 2016, , 3-37.		0
36	Design and functionalization of responsive hydrogels for photonic crystal biosensors. <i>Molecular Systems Design and Engineering</i> , 2016, 1, 225-241.	1.7	31
38	Integrating concepts of material mechanics, ligand chemistry, dimensionality and degradation to control differentiation of mesenchymal stem cells. <i>Current Opinion in Solid State and Materials Science</i> , 2016, 20, 171-179.	5.6	28
39	A Mechanogenetic Toolkit for Interrogating Cell Signaling in Space and Time. <i>Cell</i> , 2016, 165, 1507-1518.	13.5	143

#	ARTICLE	IF	CITATIONS
40	3D bioprinting of skin: a state-of-the-art review on modelling, materials, and processes. <i>Biofabrication</i> , 2016, 8, 032001.	3.7	198
41	Combined optical micromanipulation and interferometric topography (COMMIT). <i>Biomedical Optics Express</i> , 2016, 7, 1365.	1.5	9
42	The nucleus is a conserved mechanosensation and mechanoresponse organelle. <i>Cytoskeleton</i> , 2016, 73, 59-67.	1.0	29
43	Mechanosensing Controlled Directly by Tyrosine Kinases. <i>Nano Letters</i> , 2016, 16, 5951-5961.	4.5	74
44	Autophagy transduces physical constraints into biological responses. <i>International Journal of Biochemistry and Cell Biology</i> , 2016, 79, 419-426.	1.2	16
45	Cell sheet mechanics: How geometrical constraints induce the detachment of cell sheets from concave surfaces. <i>Acta Biomaterialia</i> , 2016, 45, 85-97.	4.1	38
46	Rheological properties of cells measured by optical tweezers. <i>BMC Biophysics</i> , 2016, 9, 5.	4.4	64
47	The role of stretch-activated ion channels in acute respiratory distress syndrome: finally a new target?. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2016, 311, L639-L652.	1.3	26
48	Reduction of fibroblast size/mechanical force downregulates $TGF\beta$ type II receptor: implications for human skin aging. <i>Aging Cell</i> , 2016, 15, 67-76.	3.0	84
49	Glycomics: New Challenges and Opportunities in Regenerative Medicine. <i>Chemistry - A European Journal</i> , 2016, 22, 13380-13388.	1.7	39
50	Geometric control and modeling of genome reprogramming. <i>Bioarchitecture</i> , 2016, 6, 76-84.	1.5	15
51	Engineered Models of Confined Cell Migration. <i>Annual Review of Biomedical Engineering</i> , 2016, 18, 159-180.	5.7	115
52	Matrix mechanics controls FHL2 movement to the nucleus to activate p21 expression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E6813-E6822.	3.3	57
53	Linearized texture of three-dimensional extracellular matrix is mandatory for bladder cancer cell invasion. <i>Scientific Reports</i> , 2016, 6, 36128.	1.6	19
54	Multiscale View of Cytoskeletal Mechanoregulation of Cell and Tissue Polarity. <i>Handbook of Experimental Pharmacology</i> , 2016, 235, 263-284.	0.9	8
55	On-Chip Quantitative Measurement of Mechanical Stresses During Cell Migration with Emulsion Droplets. <i>Scientific Reports</i> , 2016, 6, 29113.	1.6	18
56	Evidence for the mechanosensor function of filamin in tissue development. <i>Scientific Reports</i> , 2016, 6, 32798.	1.6	29
57	The actin crosslinking protein palladin modulates force generation and mechanosensitivity of tumor associated fibroblasts. <i>Scientific Reports</i> , 2016, 6, 28805.	1.6	18

#	ARTICLE	IF	CITATIONS
58	In-situ coupling between kinase activities and protein dynamics within single focal adhesions. <i>Scientific Reports</i> , 2016, 6, 29377.	1.6	22
59	Small but Mighty: Nanoparticles Probe Cellular Signaling Pathways. <i>Developmental Cell</i> , 2016, 37, 397-398.	3.1	3
60	Permeabilization of the nuclear envelope following nanosecond pulsed electric field exposure. <i>Biochemical and Biophysical Research Communications</i> , 2016, 470, 35-40.	1.0	31
61	Î±-Actinin links extracellular matrix rigidity-sensing contractile units with periodic cell-edge retractions. <i>Molecular Biology of the Cell</i> , 2016, 27, 3471-3479.	0.9	68
62	Elastic hydrogel as a sensor for detection of mechanical stress generated by single cells grown in three-dimensional environment. <i>Biomaterials</i> , 2016, 98, 103-112.	5.7	31
63	Conversion of nanoscale topographical information of cluster-assembled zirconia surfaces into mechanotransductive events promotes neuronal differentiation. <i>Journal of Nanobiotechnology</i> , 2016, 14, 18.	4.2	95
64	Beyond Turing: mechanochemical pattern formation in biological tissues. <i>Biology Direct</i> , 2016, 11, 22.	1.9	26
65	Biomechanical Origins of Muscle Stem Cell Signal Transduction. <i>Journal of Molecular Biology</i> , 2016, 428, 1441-1454.	2.0	22
66	Nanoscale optomechanical actuators for controlling mechanotransduction in living cells. <i>Nature Methods</i> , 2016, 13, 143-146.	9.0	113
67	The interplay of extracellular matrix and microbiome in urothelial bladder cancer. <i>Nature Reviews Urology</i> , 2016, 13, 77-90.	1.9	89
68	âˆ’1 Programmed Ribosomal Frameshifting as a Force-Dependent Process. <i>Progress in Molecular Biology and Translational Science</i> , 2016, 139, 45-72.	0.9	4
69	Primary cilia are not calcium-responsive mechanosensors. <i>Nature</i> , 2016, 531, 656-660.	13.7	300
70	Endocytic control of signaling at the plasma membrane. <i>Current Opinion in Cell Biology</i> , 2016, 39, 21-27.	2.6	73
71	Super-Resolved Traction Force Microscopy (STFM). <i>Nano Letters</i> , 2016, 16, 2633-2638.	4.5	86
72	Shaping tissues by balancing active forces and geometric constraints. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 053001.	1.3	21
73	The Importance and Clinical Relevance of Surfaces in Tissue Culture. <i>ACS Biomaterials Science and Engineering</i> , 2016, 2, 152-164.	2.6	15
74	Uncovering mechanosensing mechanisms at the single protein level using magnetic tweezers. <i>Methods</i> , 2016, 94, 13-18.	1.9	45
75	Pushing, pulling, and squeezing our way to understanding mechanotransduction. <i>Methods</i> , 2016, 94, 4-12.	1.9	27

#	ARTICLE	IF	CITATIONS
76	Electrical and mechanical stimulation of cardiac cells and tissue constructs. <i>Advanced Drug Delivery Reviews</i> , 2016, 96, 135-155.	6.6	210
77	Soft matrices downregulate FAK activity to promote growth of tumor-repopulating cells. <i>Biochemical and Biophysical Research Communications</i> , 2017, 483, 456-462.	1.0	11
78	Bacterial mechanotransduction. <i>Current Opinion in Microbiology</i> , 2017, 36, 1-6.	2.3	55
79	Contractile forces at tricellular contacts modulate epithelial organization and monolayer integrity. <i>Nature Communications</i> , 2017, 8, 13998.	5.8	68
80	<i>In Vivo</i> Multiscale and Spatially-Dependent Biomechanics Reveals Differential Strain Transfer Hierarchy in Skeletal Muscle. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2798-2805.	2.6	13
81	High-resolution traction force microscopy on small focal adhesions - improved accuracy through optimal marker distribution and optical flow tracking. <i>Scientific Reports</i> , 2017, 7, 41633.	1.6	38
82	Optogenetic control of cellular forces and mechanotransduction. <i>Nature Communications</i> , 2017, 8, 14396.	5.8	183
83	Dynamic microtubules regulate cellular contractility during T-cell activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E4175-E4183.	3.3	70
84	Cell geometry dictates TNF α -induced genome response. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E3882-E3891.	3.3	41
85	Biofilms and mechanics: a review of experimental techniques and findings. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 223002.	1.3	61
86	Biocompatibility Pathways: Biomaterials-Induced Sterile Inflammation, Mechanotransduction, and Principles of Biocompatibility Control. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2-35.	2.6	76
87	Orientation and repositioning of chromosomes correlate with cell geometry-dependent gene expression. <i>Molecular Biology of the Cell</i> , 2017, 28, 1997-2009.	0.9	94
88	Cellular mechanosensing of the biophysical microenvironment: A review of mathematical models of biophysical regulation of cell responses. <i>Physics of Life Reviews</i> , 2017, 22-23, 88-119.	1.5	67
89	Mechanosensing of shear by <i>Pseudomonas aeruginosa</i> leads to increased levels of the cyclic-di-GMP signal initiating biofilm development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 5906-5911.	3.3	136
90	Multiscale force sensing in development. <i>Nature Cell Biology</i> , 2017, 19, 581-588.	4.6	185
91	Optogenetic control of RhoA reveals zyxin-mediated elasticity of stress fibres. <i>Nature Communications</i> , 2017, 8, 15817.	5.8	123
92	Dissection of mechanoresponse elements in promoter sites of the mechanoresponsive CYR61 gene. <i>Experimental Cell Research</i> , 2017, 354, 103-111.	1.2	7
93	Imag(in)ing growth and form. <i>Mechanisms of Development</i> , 2017, 145, 13-21.	1.7	2

#	ARTICLE	IF	CITATIONS
94	Integrin and cadherin clusters: A robust way to organize adhesions for cell mechanics. <i>BioEssays</i> , 2017, 39, 1-12.	1.2	101
95	The Actin Cytoskeleton. <i>Handbook of Experimental Pharmacology</i> , 2017, , .	0.9	2
96	Receptor-mediated cell mechanosensing. <i>Molecular Biology of the Cell</i> , 2017, 28, 3134-3155.	0.9	168
97	Large Amplitude Oscillatory Shear Rheology of Living Fibroblasts: Path-Dependent Steady States. <i>Biophysical Journal</i> , 2017, 113, 1561-1573.	0.2	6
98	The Biophysics of Cell Membranes. <i>Springer Series in Biophysics</i> , 2017, , .	0.4	9
99	Principles of Mechanosensing at the Membrane Interface. <i>Springer Series in Biophysics</i> , 2017, , 85-119.	0.4	15
100	Single-cell study of the extracellular matrix effect on cell growth by <i>in situ</i> imaging of gene expression. <i>Chemical Science</i> , 2017, 8, 8019-8024.	3.7	19
101	An elastomeric micropillar platform for the study of protrusive forces in hyphal invasion. <i>Lab on A Chip</i> , 2017, 17, 3643-3653.	3.1	32
102	Mechanobiology of YAP and TAZ in physiology and disease. <i>Nature Reviews Molecular Cell Biology</i> , 2017, 18, 758-770.	16.1	879
103	Adaptation trajectories during adhesion and spreading affect future cell states. <i>Scientific Reports</i> , 2017, 7, 12308.	1.6	6
104	Force-Induced Calpain Cleavage of Talin Is Critical for Growth, Adhesion Development, and Rigidity Sensing. <i>Nano Letters</i> , 2017, 17, 7242-7251.	4.5	44
105	Epidermal growth factor as a mechanosensitizer in human bone marrow stromal cells. <i>Stem Cell Research</i> , 2017, 24, 69-76.	0.3	18
106	Low-affinity binding in <i>cis</i> to P2Y ₂ R mediates force-dependent integrin activation during hantavirus infection. <i>Molecular Biology of the Cell</i> , 2017, 28, 2887-2903.	0.9	18
107	Î±-Actinin Induces a Kink in the Transmembrane Domain of Î²3-Integrin and Impairs Activation via Talin. <i>Biophysical Journal</i> , 2017, 113, 948-956.	0.2	16
108	The mechano-sensing role of the unique SH3 insertion in plakin domains revealed by Molecular Dynamics simulations. <i>Scientific Reports</i> , 2017, 7, 11669.	1.6	28
109	Diversity and Evolution of Butterfly Wing Patterns. , 2017, , .		23
110	Chromosome Intermingling: Mechanical Hotspots for Genome Regulation. <i>Trends in Cell Biology</i> , 2017, 27, 810-819.	3.6	36
111	Nanoscale mechanobiology of cell adhesions. <i>Seminars in Cell and Developmental Biology</i> , 2017, 71, 53-67.	2.3	35

#	ARTICLE	IF	CITATIONS
112	Mechanical forces in the immune system. <i>Nature Reviews Immunology</i> , 2017, 17, 679-690.	10.6	297
113	<sup />A Paradigm for the Evaluation of Tissue-Engineering Biomaterials and Templates. <i>Tissue Engineering - Part C: Methods</i> , 2017, 23, 926-937.	1.1	14
114	Multiscale dynamics of the biophysical and biochemical microenvironment. <i>Physics of Life Reviews</i> , 2017, 22-23, 127-129.	1.5	2
115	Reversible control of cell membrane receptor function using DNA nano-spring multivalent ligands. <i>Chemical Science</i> , 2017, 8, 7098-7105.	3.7	62
116	Studying the mechanical responses of proteins using magnetic tweezers. <i>Nanotechnology</i> , 2017, 28, 414002.	1.3	54
117	Mechanical signals activate p38 MAPK pathway-dependent reinforcement of actin via mechanosensitive HspB1. <i>Molecular Biology of the Cell</i> , 2017, 28, 2661-2675.	0.9	68
118	EFA6 regulates lumen formation through alpha-actinin 1. <i>Journal of Cell Science</i> , 2018, 131, .	1.2	13
119	Designer biomaterials for mechanobiology. <i>Nature Materials</i> , 2017, 16, 1164-1168.	13.3	144
120	Novel peptide probes to assess the tensional state of fibronectin fibers in cancer. <i>Nature Communications</i> , 2017, 8, 1793.	5.8	31
121	Fibronectin-bound $\alpha 5 \beta 1$ integrins sense load and signal to reinforce adhesion in less than a second. <i>Nature Materials</i> , 2017, 16, 1262-1270.	13.3	109
122	Mechanobiology by the numbers: a close relationship between biology and physics. <i>Nature Reviews Molecular Cell Biology</i> , 2017, 18, 711-712.	16.1	17
123	Substrate rigidity-dependent positive feedback regulation between YAP and ROCK2. <i>Cell Adhesion and Migration</i> , 2018, 12, 00-00.	1.1	12
124	E-cadherin and LGN align epithelial cell divisions with tissue tension independently of cell shape. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E5845-E5853.	3.3	87
125	How cells channel their stress: Interplay between Piezo1 and the cytoskeleton. <i>Seminars in Cell and Developmental Biology</i> , 2017, 71, 3-12.	2.3	180
126	Computational simulation of formin-mediated actin polymerization predicts homologue-dependent mechanosensitivity. <i>Cytoskeleton</i> , 2017, 74, 29-39.	1.0	14
127	Maxed out macs: physiologic cell clearance as a function of macrophage phagocytic capacity. <i>FEBS Journal</i> , 2017, 284, 1021-1039.	2.2	61
128	Cellular adaptation to biomechanical stress across length scales in tissue homeostasis and disease. <i>Seminars in Cell and Developmental Biology</i> , 2017, 67, 141-152.	2.3	43
129	The emerging role of ECM crosslinking in T cell mobility as a hallmark of immunosenescence in humans. <i>Ageing Research Reviews</i> , 2017, 35, 322-335.	5.0	45

#	ARTICLE	IF	CITATIONS
130	Cell shape information is transduced through tension-independent mechanisms. <i>Nature Communications</i> , 2017, 8, 2145.	5.8	47
131	Machine Learning for Nuclear Mechano-Morphometric Biomarkers in Cancer Diagnosis. <i>Scientific Reports</i> , 2017, 7, 17946.	1.6	41
132	Roles of the cytoskeleton, cell adhesion and rho signalling in mechanosensing and mechanotransduction. <i>Journal of Biochemistry</i> , 2017, 161, mw082.	0.9	136
133	Synergistic Damage Response of the Double-Focus Eyespot in the Hindwing of the Peacock Pansy Butterfly. , 2017, , .		6
134	Contact-Mediated Eyespot Color-Pattern Changes in the Peacock Pansy Butterfly: Contributions of Mechanical Force and Extracellular Matrix to Morphogenic Signal Propagation. , 2017, , .		6
135	How to Train a Cellâ€“Cutting-Edge Molecular Tools. <i>Frontiers in Chemistry</i> , 2017, 5, 12.	1.8	8
136	Progress in Integrative Biomaterial Systems to Approach Three-Dimensional Cell Mechanotransduction. <i>Bioengineering</i> , 2017, 4, 72.	1.6	12
137	Simple agarose micro-confinement array and machine-learning-based classification for analyzing the patterned differentiation of mesenchymal stem cells. <i>PLoS ONE</i> , 2017, 12, e0173647.	1.1	22
138	mDia1 senses both force and torque during F-actin filament polymerization. <i>Nature Communications</i> , 2017, 8, 1650.	5.8	83
139	Emerging views of the nucleus as a cellular mechanosensor. <i>Nature Cell Biology</i> , 2018, 20, 373-381.	4.6	415
140	Mechanical hysteresis in actin networks. <i>Soft Matter</i> , 2018, 14, 2052-2058.	1.2	32
141	The life of proteins under mechanical force. <i>Chemical Society Reviews</i> , 2018, 47, 3558-3573.	18.7	26
142	Lamellipodium is a myosin-independent mechanosensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 2646-2651.	3.3	101
143	Tailored Polyproteins Using Sequential Staple and Cut. <i>Bioconjugate Chemistry</i> , 2018, 29, 1714-1719.	1.8	26
144	Micromechanics of root development in soil. <i>Current Opinion in Genetics and Development</i> , 2018, 51, 18-25.	1.5	24
145	Mechanobiological Mimicry of Helper T Lymphocytes to Evaluate Cellâ€“Biomaterials Crosstalk. <i>Advanced Materials</i> , 2018, 30, e1706780.	11.1	22
146	Nanopurpurin-based photodynamic therapy destructs extracellular matrix against intractable tumor metastasis. <i>Biomaterials</i> , 2018, 173, 22-33.	5.7	29
147	Biocompatibility Pathways in Tissue-Engineering Templates. <i>Engineering</i> , 2018, 4, 286-290.	3.2	8

#	ARTICLE	IF	CITATIONS
148	Cardiomyocytes Sense Matrix Rigidity through a Combination of Muscle and Non-muscle Myosin Contractions. <i>Developmental Cell</i> , 2018, 44, 326-336.e3.	3.1	101
149	Nanopillar force measurements reveal actin-cap-mediated YAP mechanotransduction. <i>Nature Cell Biology</i> , 2018, 20, 262-271.	4.6	160
150	Integrin diversity brings specificity in mechanotransduction. <i>Biology of the Cell</i> , 2018, 110, 49-64.	0.7	91
151	Unraveling the Mechanobiology of Extracellular Matrix. <i>Annual Review of Physiology</i> , 2018, 80, 353-387.	5.6	158
152	Stromal Contributions to Tumor Progression in Urothelial Carcinoma of the Bladder. <i>Molecular Pathology Library</i> , 2018, , 209-220.	0.1	0
153	Evaluation of the bioactivity of fluoride-enriched mineral trioxide aggregate on osteoblasts. <i>International Endodontic Journal</i> , 2018, 51, 912-923.	2.3	4
154	Precision Molecular Pathology of Bladder Cancer. <i>Molecular Pathology Library</i> , 2018, , .	0.1	0
155	Nanoparticle-Cell Interaction: A Cell Mechanics Perspective. <i>Advanced Materials</i> , 2018, 30, e1704463.	11.1	94
156	Tensile Forces and Mechanotransduction at Cell-Cell Junctions. <i>Current Biology</i> , 2018, 28, R445-R457.	1.8	301
157	Magnetic Nanotweezers for Interrogating Biological Processes in Space and Time. <i>Accounts of Chemical Research</i> , 2018, 51, 839-849.	7.6	41
158	Nuclear Mechanopathology and Cancer Diagnosis. <i>Trends in Cancer</i> , 2018, 4, 320-331.	3.8	106
159	Hydroxyapatite nanobelt/polylactic acid Janus membrane with osteoinduction/barrier dual functions for precise bone defect repair. <i>Acta Biomaterialia</i> , 2018, 71, 108-117.	4.1	71
160	A perspective on the physical, mechanical and biological specifications of bioinks and the development of functional tissues in 3D bioprinting. <i>Bioprinting</i> , 2018, 9, 19-36.	2.9	101
161	Intracellular Fluid Mechanics: Coupling Cytoplasmic Flow with Active Cytoskeletal Gel. <i>Annual Review of Fluid Mechanics</i> , 2018, 50, 347-370.	10.8	76
162	Engineering Hydrogel Microenvironments to Recapitulate the Stem Cell Niche. <i>Annual Review of Biomedical Engineering</i> , 2018, 20, 21-47.	5.7	108
163	Progress on the Use of Commercial Digital Optical Disc Units for Low-Power Laser Micromachining in Biomedical Applications. <i>Micromachines</i> , 2018, 9, 187.	1.4	6
164	Gas Partial Pressure in Cultured Cells: Patho-Physiological Importance and Methodological Approaches. <i>Frontiers in Physiology</i> , 2018, 9, 1803.	1.3	34
166	Cyclic Stretch Enhances Osteogenic Differentiation of Human Periodontal Ligament Cells via YAP Activation. <i>BioMed Research International</i> , 2018, 2018, 1-12.	0.9	38

#	ARTICLE	IF	CITATIONS
167	Tissue engineering the cancer microenvironmentâ€”challenges and opportunities. <i>Biophysical Reviews</i> , 2018, 10, 1695-1711.	1.5	47
168	Adhesion of Biological Membranes. , 2018, , 499-535.		8
169	Rapid coupling between gravitational forces and the transcriptome in human myelomonocytic U937 cells. <i>Scientific Reports</i> , 2018, 8, 13267.	1.6	31
171	Talin as a mechanosensitive signaling hub. <i>Journal of Cell Biology</i> , 2018, 217, 3776-3784.	2.3	174
172	Kalman Inversion Stress Microscopy. <i>Biophysical Journal</i> , 2018, 115, 1808-1816.	0.2	11
173	Thermally Responsive Microfibers Mediated Stem Cell Fate via Reversibly Dynamic Mechanical Stimulation. <i>Advanced Functional Materials</i> , 2018, 28, 1804773.	7.8	32
174	Mechanochemical feedback control of dynamin independent endocytosis modulates membrane tension in adherent cells. <i>Nature Communications</i> , 2018, 9, 4217.	5.8	106
175	EHD2 is a mechanotransducer connecting caveolae dynamics with gene transcription. <i>Journal of Cell Biology</i> , 2018, 217, 4092-4105.	2.3	63
176	Balancing forces in migration. <i>Current Opinion in Cell Biology</i> , 2018, 54, 43-49.	2.6	13
177	Structuralâ€”elastic determination of the force-dependent transition rate of biomolecules. <i>Chemical Science</i> , 2018, 9, 5871-5882.	3.7	45
178	Î²-Cateninâ€”dependent mechanotransduction dates back to the common ancestor of Cnidaria and Bilateria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6231-6236.	3.3	62
180	Cell adhesion and mechanics as drivers of tissue organization and differentiation: local cues for large scale organization. <i>Current Opinion in Cell Biology</i> , 2018, 54, 89-97.	2.6	72
181	Tunable stiffness of graphene oxide/polyacrylamide composite scaffolds regulates cytoskeleton assembly. <i>Chemical Science</i> , 2018, 9, 6516-6522.	3.7	22
182	In pursuit of the mechanics that shape cell surfaces. <i>Nature Physics</i> , 2018, 14, 648-652.	6.5	68
183	Recent Advances in Engineering the Stem Cell Microniche in 3D. <i>Advanced Science</i> , 2018, 5, 1800448.	5.6	83
184	Biophysics of Tumor Microenvironment and Cancer Metastasis - A Mini Review. <i>Computational and Structural Biotechnology Journal</i> , 2018, 16, 279-287.	1.9	190
185	Cell aggregation in monolayer culture: Clues to a universal kinetics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 510, 725-740.	1.2	5
186	Functional Toxicology and Pharmacology Test of Cell Induced Mechanical Tensile Stress in 2D and 3D Tissue Cultures. , 2018, , 157-192.		0

#	ARTICLE	IF	CITATIONS
187	Nondestructive Real-Time Monitoring of Enhanced Stem Cell Differentiation Using a Graphene-Au Hybrid Nanoelectrode Array. <i>Advanced Materials</i> , 2018, 30, e1802762.	11.1	44
188	Cell polarity: having and making sense of direction” on the evolutionary significance of the primary cilium/centrosome organ in Metazoa. <i>Open Biology</i> , 2018, 8, .	1.5	23
189	A general model of focal adhesion orientation dynamics in response to static and cyclic stretch. <i>Communications Biology</i> , 2018, 1, 81.	2.0	25
190	Effects of Mechanical Stimuli on Profilin- and Formin-Mediated Actin Polymerization. <i>Nano Letters</i> , 2018, 18, 5239-5247.	4.5	39
191	Post-Turing tissue pattern formation: Advent of mechanochemistry. <i>PLoS Computational Biology</i> , 2018, 14, e1006259.	1.5	46
192	Shaping the Cell and the Future: Recent Advancements in Biophysical Aspects Relevant to Regenerative Medicine. <i>Journal of Functional Morphology and Kinesiology</i> , 2018, 3, 2.	1.1	27
193	Microfluidics-based super-resolution microscopy enables nanoscopic characterization of blood stem cell rolling. <i>Science Advances</i> , 2018, 4, eaat5304.	4.7	36
194	Nanotopography-Promoted Formation of Axon Collateral Branches of Hippocampal Neurons. <i>Small</i> , 2018, 14, e1801763.	5.2	32
195	PIEZO channel protein naturally expressed in human breast cancer cell MDA-MB-231 as probed by atomic force microscopy. <i>AIP Advances</i> , 2018, 8, 055101.	0.6	11
196	Biomechano-Interactive Materials and Interfaces. <i>Advanced Materials</i> , 2018, 30, e1800572.	11.1	93
197	Mechanical oscillations superimposed on the pelvic floor muscles during Kegel exercises reduce urine leakage in women suffering from stress urinary incontinence: A prospective cohort study with a 2-year follow up. <i>Acta Obstetrica Et Gynecologica Scandinavica</i> , 2018, 97, 1185-1191.	1.3	9
198	Mechanochemistry in cancer cell metastasis. <i>Chinese Chemical Letters</i> , 2019, 30, 7-14.	4.8	12
199	Physical properties of the photodamaged human skin dermis: Rougher collagen surface and stiffer/harder mechanical properties. <i>Experimental Dermatology</i> , 2019, 28, 914-921.	1.4	10
200	Mechanical Determinants of Tissue Development. , 2019, , 391-404.		0
201	Regulation of mechanotransduction: Emerging roles for septins. <i>Cytoskeleton</i> , 2019, 76, 115-122.	1.0	29
202	Lattice and continuum modelling of a bioactive porous tissue scaffold. <i>Mathematical Medicine and Biology</i> , 2019, 36, 325-360.	0.8	3
203	Genetic induction and mechanochemical propagation of a morphogenetic wave. <i>Nature</i> , 2019, 572, 467-473.	13.7	124
204	A surface-engineered NIR light-responsive actuator for controllable modulation of collective cell migration. <i>Journal of Materials Chemistry B</i> , 2019, 7, 5528-5534.	2.9	7

#	ARTICLE	IF	CITATIONS
205	The cilium as a force sensor—myth versus reality. <i>Journal of Cell Science</i> , 2019, 132, .	1.2	63
206	Single Cell Imaging of Nuclear Architecture Changes. <i>Frontiers in Cell and Developmental Biology</i> , 2019, 7, 141.	1.8	20
207	Biophysical regulation of epidermal fate and function. <i>Advances in Stem Cells and Their Niches</i> , 2019, 3, 1-30.	0.1	1
208	Force-Dependent Binding Constants. <i>Biochemistry</i> , 2019, 58, 4696-4709.	1.2	44
209	Elastic modulus of Dictyostelium is affected by mechanotransduction. <i>Journal of Biological Physics</i> , 2019, 45, 293-305.	0.7	0
210	3D porous chitosan-alginate scaffold stiffness promotes differential responses in prostate cancer cell lines. <i>Biomaterials</i> , 2019, 217, 119311.	5.7	64
211	Mechanotransduction in neuronal cell development and functioning. <i>Biophysical Reviews</i> , 2019, 11, 701-720.	1.5	87
212	Fabrication of Nanofibrous Scaffold Grafted with Gelatin Functionalized Polystyrene Microspheres for Manifesting Nanomechanical Cues of Stretch Stimulated Fibroblast. <i>ACS Applied Bio Materials</i> , 2019, 2, 5323-5339.	2.3	6
213	Mechanosensing during directed cell migration requires dynamic actin polymerization at focal adhesions. <i>Journal of Cell Biology</i> , 2019, 218, 4215-4235.	2.3	61
214	Single-molecule manipulation quantification of site-specific DNA binding. <i>Current Opinion in Chemical Biology</i> , 2019, 53, 106-117.	2.8	12
215	Prostaglandin E2 Induces Skin Aging via E-Prostanoid 1 in Normal Human Dermal Fibroblasts. <i>International Journal of Molecular Sciences</i> , 2019, 20, 5555.	1.8	13
216	Chiral geometry regulates stem cell fate and activity. <i>Biomaterials</i> , 2019, 222, 119456.	5.7	26
217	The Role of Stiffness in Cell Reprogramming: A Potential Role for Biomaterials in Inducing Tissue Regeneration. <i>Cells</i> , 2019, 8, 1036.	1.8	72
218	Cellular responses to beating hydrogels to investigate mechanotransduction. <i>Nature Communications</i> , 2019, 10, 4027.	5.8	60
219	Three-dimensional traction microscopy with a fiber-based constitutive model. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 357, 112579.	3.4	20
220	Biophysical Principles of Ion-Channel-Mediated Mechanosensory Transduction. <i>Cell Reports</i> , 2019, 29, 1-12.	2.9	154
221	Biosensing using arrays of vertical semiconductor nanowires: mechanosensing and biomarker detection. <i>Nanotechnology</i> , 2019, 30, 214003.	1.3	21
222	Photoreactivity Control Mediated by Molecular Force Probes in Stilbene. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 1063-1067.	2.1	14

#	ARTICLE	IF	CITATIONS
223	Extracellular matrix mechanical cues regulate lipid metabolism through Lipin-1 and SREBP. <i>Nature Cell Biology</i> , 2019, 21, 338-347.	4.6	135
224	Costameres, dense plaques and podosomes: the cell matrix adhesions in cardiovascular mechanosensing. <i>Journal of Muscle Research and Cell Motility</i> , 2019, 40, 197-209.	0.9	26
225	PCL/EUG scaffolds with tunable stiffness can regulate macrophage secretion behavior. <i>Progress in Biophysics and Molecular Biology</i> , 2019, 148, 4-11.	1.4	21
226	Mechanobiology of Macrophages: How Physical Factors Coregulate Macrophage Plasticity and Phagocytosis. <i>Annual Review of Biomedical Engineering</i> , 2019, 21, 267-297.	5.7	148
227	Are microtubules tension sensors?. <i>Nature Communications</i> , 2019, 10, 2360.	5.8	191
228	Pulmonary Endothelial Mechanical Sensing and Signaling, a Story of Focal Adhesions and Integrins in Ventilator Induced Lung Injury. <i>Frontiers in Physiology</i> , 2019, 10, 511.	1.3	18
229	Deformation Microscopy for Dynamic Intracellular and Intranuclear Mapping of Mechanics with High Spatiotemporal Resolution. <i>Cell Reports</i> , 2019, 27, 1607-1620.e4.	2.9	48
230	Design and Fabrication by Thermal Imprint Lithography and Mechanical Characterization of a Ring-Based PDMS Soft Probe for Sensing and Actuating Forces in Biological Systems. <i>Polymers</i> , 2019, 11, 424.	2.0	2
231	Cell Mechanosensing. <i>Resonance</i> , 2019, 24, 289-296.	0.2	2
232	Integrating Microfabrication into Biological Investigations: the Benefits of Interdisciplinarity. <i>Micromachines</i> , 2019, 10, 252.	1.4	14
233	Harnessing structural instability for cell durotaxis. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2019, 35, 355-364.	1.5	4
234	Mechanical stimuli control liver homeostasis. <i>Journal of Hepatology</i> , 2019, 71, 12-13.	1.8	2
235	Strain- or Stress-Sensing in Mechanochemical Patterning by the Phytohormone Auxin. <i>Bulletin of Mathematical Biology</i> , 2019, 81, 3342-3361.	0.9	6
236	F-actin dynamics regulates mammalian organ growth and cell fate maintenance. <i>Journal of Hepatology</i> , 2019, 71, 130-142.	1.8	56
237	Quantitative reconstruction of time-varying 3D cell forces with traction force optical coherence microscopy. <i>Scientific Reports</i> , 2019, 9, 4086.	1.6	34
238	Green light lithography: a general strategy to create active protein and cell micropatterns. <i>Materials Horizons</i> , 2019, 6, 1222-1229.	6.4	15
239	Simulation and evaluation of 3D traction force microscopy. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2019, 22, 853-860.	0.9	8
240	Probing the nanoscale organisation and multivalency of cell surface receptors: DNA origami nanoarrays for cellular studies with single-molecule control. <i>Faraday Discussions</i> , 2019, 219, 203-219.	1.6	36

#	ARTICLE	IF	CITATIONS
241	Keratinâ€binding ability of the Nâ€terminal Solo domain of Solo is critical for its function in cellular mechanotransduction. <i>Genes To Cells</i> , 2019, 24, 390-402.	0.5	14
242	Piezoelectric Nanotopography Induced Neuronâ€Like Differentiation of Stem Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1900372.	7.8	75
243	Integrin signaling and mechanotransduction in regulation of somatic stem cells. <i>Experimental Cell Research</i> , 2019, 378, 217-225.	1.2	40
244	A role for actomyosin contractility in Notch signaling. <i>BMC Biology</i> , 2019, 17, 12.	1.7	35
245	Disrupted mechanobiology links the molecular and cellular phenotypes in familial dilated cardiomyopathy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 17831-17840.	3.3	46
246	Direct single-molecule quantification reveals unexpectedly high mechanical stability of vinculinâ€talin/Î±-catenin linkages. <i>Science Advances</i> , 2019, 5, eaav2720.	4.7	40
247	Rheological properties of cryptococcal polysaccharide change with fiber size, antibody binding and temperature. <i>Future Microbiology</i> , 2019, 14, 867-884.	1.0	14
248	Regional biomechanical imaging of liver cancer cells. <i>Journal of Cancer</i> , 2019, 10, 4481-4487.	1.2	10
249	Active gel segment behaving as an active particle. <i>Physical Review E</i> , 2019, 100, 062403.	0.8	4
250	The plakin domain of <i>C. elegans</i> VAB-10/plectin acts as a hub in a mechanotransduction pathway to promote morphogenesis. <i>Development (Cambridge)</i> , 2019, 146, .	1.2	19
251	Steps in Mechanotransduction Pathways that Control Cell Morphology. <i>Annual Review of Physiology</i> , 2019, 81, 585-605.	5.6	169
252	Synthetic Extracellular Matrices with Nonlinear Elasticity Regulate Cellular Organization. <i>Biomacromolecules</i> , 2019, 20, 826-834.	2.6	71
253	Role of nuclear mechanosensitivity in determining cellular responses to forces and biomaterials. <i>Biomaterials</i> , 2019, 197, 60-71.	5.7	37
254	Atomic force microscopy-based mechanobiology. <i>Nature Reviews Physics</i> , 2019, 1, 41-57.	11.9	500
255	Emerging Applications of Nanotechnology for Controlling Cellâ€Surface Receptor Clustering. <i>Angewandte Chemie</i> , 2019, 131, 4840-4849.	1.6	26
256	Emerging Applications of Nanotechnology for Controlling Cellâ€Surface Receptor Clustering. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4790-4799.	7.2	103
257	Stimuli and sensors that initiate skeletal muscle hypertrophy following resistance exercise. <i>Journal of Applied Physiology</i> , 2019, 126, 30-43.	1.2	180
258	Mix and (mis-)match â€“ The mechanosensing machinery in the changing environment of the developing, healthy adult and diseased heart. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2020, 1867, 118436.	1.9	39

#	ARTICLE	IF	CITATIONS
259	Imaging: Gear up for mechano-immunology. Cellular Immunology, 2020, 350, 103926.	1.4	5
260	Megaesophagus Is a Major Pathological Condition in Rats With a Large Deletion in the <i>Rbm20</i> Gene. Veterinary Pathology, 2020, 57, 151-159.	0.8	0
261	Impact of PDMS surface treatment in cell-mechanics applications. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103538.	1.5	5
262	Substrate curvature as a cue to guide spatiotemporal cell and tissue organization. Biomaterials, 2020, 232, 119739.	5.7	191
263	Extracellular matrix-cell interactions: Focus on therapeutic applications. Cellular Signalling, 2020, 66, 109487.	1.7	85
264	User-friendly cell patterning methods using a polydimethylsiloxane mold with microchannels. Development Growth and Differentiation, 2020, 62, 167-176.	0.6	11
265	Mechanical regulation of formin-dependent actin polymerization. Seminars in Cell and Developmental Biology, 2020, 102, 73-80.	2.3	20
266	Progress in the mechanical modulation of cell functions in tissue engineering. Biomaterials Science, 2020, 8, 7033-7081.	2.6	36
267	Vertical nanopillar induces deformation of cancer cell and alteration of ATF3 expression. Applied Materials Today, 2020, 20, 100753.	2.3	5
268	Complementary mesoscale dynamics of spectrin and acto-myosin shape membrane territories during mechanoresponse. Nature Communications, 2020, 11, 5108.	5.8	20
269	Unraveling the mechanobiology of immune cells. Current Opinion in Biotechnology, 2020, 66, 236-245.	3.3	55
270	A glance on the role of actin in osteogenic and adipogenic differentiation of mesenchymal stem cells. Stem Cell Research and Therapy, 2020, 11, 283.	2.4	64
271	Micromechanical Design Criteria for Tissue-Engineering Biomaterials. , 2020, , 1335-1350.		0
272	Interplay between caspase, Yes-associated protein, and mechanics: A possible switch between life and death?. Current Opinion in Cell Biology, 2020, 67, 141-146.	2.6	8
273	On the correlation between material-induced cell shape and phenotypical response of human mesenchymal stem cells. Scientific Reports, 2020, 10, 18988.	1.6	19
274	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
275	Mechanisms of stretch-mediated skin expansion at single-cell resolution. Nature, 2020, 584, 268-273.	13.7	113
276	Human Microphysiological Models of Intestinal Tissue and Gut Microbiome. Frontiers in Bioengineering and Biotechnology, 2020, 8, 725.	2.0	46

#	ARTICLE	IF	CITATIONS
277	Cell stretching is amplified by active actin remodelling to deform and recruit proteins in mechanosensitive structures. <i>Nature Cell Biology</i> , 2020, 22, 1011-1023.	4.6	35
279	Crosstalk between Cell Adhesion Complexes in Regulation of Mechanotransduction. <i>BioEssays</i> , 2020, 42, e2000119.	1.2	64
280	Mechanical and Physical Regulation of Fibroblast to Myofibroblast Transition: From Cellular Mechanoresponse to Tissue Pathology. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 609653.	2.0	107
281	Binding Dynamics of \pm -Actinin-4 in Dependence of Actin Cortex Tension. <i>Biophysical Journal</i> , 2020, 119, 1091-1107.	0.2	18
282	Cellular architecture response to aspect ratio tunable nanoarrays. <i>Nanoscale</i> , 2020, 12, 12395-12404.	2.8	10
283	Three-dimensional traction microscopy accounting for cell-induced matrix degradation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 364, 112935.	3.4	11
284	Mechanical tumor microenvironment and transduction: cytoskeleton mediates cancer cell invasion and metastasis. <i>International Journal of Biological Sciences</i> , 2020, 16, 2014-2028.	2.6	92
285	Adhesion force spectroscopy with nanostructured colloidal probes reveals nanotopography-dependent early mechanotransductive interactions at the cell membrane level. <i>Nanoscale</i> , 2020, 12, 14708-14723.	2.8	14
286	Cellular processes driving gastrulation in the avian embryo. <i>Mechanisms of Development</i> , 2020, 163, 103624.	1.7	28
287	Overview of the frontiers in multi-scale mechanobiology of muscle and vascular system – Session 1SGA. <i>Biophysical Reviews</i> , 2020, 12, 267-268.	1.5	1
288	Predicting Bone Formation in Mesenchymal Stromal Cell-Seeded Hydrogels Using Experiment-Based Mathematical Modeling. <i>Tissue Engineering - Part A</i> , 2020, 26, 1014-1023.	1.6	3
289	Interactions between Muscle and Bone – Where Physics Meets Biology. <i>Biomolecules</i> , 2020, 10, 432.	1.8	79
290	In vitro Models of Breast Cancer Metastatic Dormancy. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 37.	1.8	32
291	Myosin-18B Promotes Mechanosensitive CaMKK2-AMPK-VASP Regulation of Contractile Actin Stress Fibers. <i>IScience</i> , 2020, 23, 100975.	1.9	9
292	3D Extracellular Matrix Mimics: Fundamental Concepts and Role of Materials Chemistry to Influence Stem Cell Fate. <i>Biomacromolecules</i> , 2020, 21, 1968-1994.	2.6	297
293	Matrix stiffness-regulated cellular functions under different dimensionalities. <i>Biomaterials Science</i> , 2020, 8, 2734-2755.	2.6	40
294	Poly-L-lactic Acid Nanotubes as Soft Piezoelectric Interfaces for Biology: Controlling Cell Attachment via Polymer Crystallinity. <i>ACS Applied Bio Materials</i> , 2020, 3, 2140-2149.	2.3	27
295	Three-dimensional culture systems in central nervous system research. , 2020, , 571-601.		2

#	ARTICLE	IF	CITATIONS
296	Disease-associated keratin mutations reduce traction forces and compromise adhesion and collective migration. <i>Journal of Cell Science</i> , 2020, 133, .	1.2	20
297	Mechanosensitive Piezo Channels in Cancer: Focus on altered Calcium Signaling in Cancer Cells and in Tumor Progression. <i>Cancers</i> , 2020, 12, 1780.	1.7	65
298	Biological responses to physicochemical properties of biomaterial surface. <i>Chemical Society Reviews</i> , 2020, 49, 5178-5224.	18.7	183
299	Large-Area Aligned Fullerene Nanocrystal Scaffolds as Culture Substrates for Enhancing Mesenchymal Stem Cell Self-Renewal and Multipotency. <i>ACS Applied Nano Materials</i> , 2020, 3, 6497-6506.	2.4	41
300	A complementary energy approach accommodates scale differences in soft tissues. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 138, 103895.	2.3	5
301	Biomechanical properties of anuran long bones: correlations with locomotor modes and habitat use. <i>Journal of Anatomy</i> , 2020, 236, 1112-1125.	0.9	11
302	Mechanical Regulation Underlies Effects of Exercise on Serotonin-Induced Signaling in the Prefrontal Cortex Neurons. <i>IScience</i> , 2020, 23, 100874.	1.9	10
303	The stiffness of living tissues and its implications for tissue engineering. <i>Nature Reviews Materials</i> , 2020, 5, 351-370.	23.3	756
304	“Apollo Program” in Nanoscale: Landing and Exploring Cell-Surface with DNA Nanotechnology. <i>ACS Applied Bio Materials</i> , 2020, 3, 2723-2742.	2.3	22
305	DNA-Based Reprogramming Strategy of Receptor-Mediated Cellular Behaviors: From Genetic Encoding to Nongenetic Engineering. <i>ACS Applied Bio Materials</i> , 2020, 3, 2796-2804.	2.3	20
306	A subtle relationship between substrate stiffness and collective migration of cell clusters. <i>Soft Matter</i> , 2020, 16, 1825-1839.	1.2	24
307	Mechanical Forces as Determinants of Disseminated Metastatic Cell Fate. <i>Cells</i> , 2020, 9, 250.	1.8	41
308	Pressure sensing through Piezo channels controls whether cells migrate with blebs or pseudopods. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2506-2512.	3.3	57
309	Mechanobiology Assays with Applications in Cardiomyocyte Biology and Cardiotoxicity. <i>Advanced Healthcare Materials</i> , 2020, 9, e1901656.	3.9	22
310	Response of Saos-2 osteoblast-like cells to kilohertz-resonance excitation in porous metallic scaffolds. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 106, 103726.	1.5	5
311	Cellular contractile forces are nonmechanosensitive. <i>Science Advances</i> , 2020, 6, eaaz6997.	4.7	37
312	Bioanalysis in single cells: current advances and challenges. <i>Science China Chemistry</i> , 2020, 63, 564-588.	4.2	16
313	Cyto-friendly polymerization at cell surfaces modulates cell fate by clustering cell-surface receptors. <i>Chemical Science</i> , 2020, 11, 4221-4225.	3.7	18

#	ARTICLE	IF	CITATIONS
314	Mechanically tuning actin filaments to modulate the action of actin-binding proteins. <i>Current Opinion in Cell Biology</i> , 2021, 68, 72-80.	2.6	28
315	Crosstalk between mechanotransduction and metabolism. <i>Nature Reviews Molecular Cell Biology</i> , 2021, 22, 22-38.	16.1	193
316	Caveolae: Mechanosensing and mechanotransduction devices linking membrane trafficking to mechanoadaptation. <i>Current Opinion in Cell Biology</i> , 2021, 68, 113-123.	2.6	52
317	Adaptive ordering and filament polymerization of cell cytoskeleton by tunable nanoarrays. <i>Nano Research</i> , 2021, 14, 620-627.	5.8	4
318	Optical plasticity of mammalian cells. <i>Journal of Biophotonics</i> , 2021, 14, e202000457.	1.1	3
319	Active biomaterials for mechanobiology. <i>Biomaterials</i> , 2021, 267, 120497.	5.7	60
320	Bioimage Analysis and Cell Motility. <i>Patterns</i> , 2021, 2, 100170.	3.1	12
321	The viscoelasticity of adherent cells follows a single power-law with distinct local variations within a single cell and across cell lines. <i>Nanoscale</i> , 2021, 13, 16339-16348.	2.8	18
322	Oscillations in collective cell migration. , 2021, , 157-192.		9
323	Magnetic triggers in biomedical applications – prospects for contact free cell sensing and guidance. <i>Journal of Materials Chemistry B</i> , 2021, 9, 1259-1271.	2.9	7
325	Complexity in genetic cardiomyopathies and new approaches for mechanism-based precision medicine. <i>Journal of General Physiology</i> , 2021, 153, .	0.9	25
326	Extracellular Tension and Tissue Morphogenesis. , 2021, , 317-325.		1
327	Quantitative confocal microscopy and calibration for measuring differences in cyclic-di-GMP signalling by bacteria on biomedical hydrogels. <i>Royal Society Open Science</i> , 2021, 8, 201453.	1.1	3
329	Sensing and Responding of Cardiomyocytes to Changes of Tissue Stiffness in the Diseased Heart. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 642840.	1.8	39
330	The Mechanical Basis of Memory – the MeshCODE Theory. <i>Frontiers in Molecular Neuroscience</i> , 2021, 14, 592951.	1.4	24
331	Mechanical regulation of tension-transmission supramolecular linkages. <i>Current Opinion in Solid State and Materials Science</i> , 2021, 25, 100895.	5.6	4
332	Determination by Relaxation Tests of the Mechanical Properties of Soft Polyacrylamide Gels Made for Mechanobiology Studies. <i>Polymers</i> , 2021, 13, 629.	2.0	8
333	Biomechanics of T Cell Dysfunctions in Chronic Diseases. <i>Frontiers in Immunology</i> , 2021, 12, 600829.	2.2	11

#	ARTICLE	IF	CITATIONS
334	Mechanobiology of Autophagy: The Unexplored Side of Cancer. <i>Frontiers in Oncology</i> , 2021, 11, 632956.	1.3	26
335	Cytoskeletal mechanics and dynamics in the <i>Drosophila</i> syncytial embryo. <i>Journal of Cell Science</i> , 2021, 134, .	1.2	18
336	The Art of Engineering Biomimetic Cellular Microenvironments. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 3997-4008.	2.6	12
337	A Fully Integrated Arduino-Based System for the Application of Stretching Stimuli to Living Cells and Their Time-Lapse Observation: A Do-It-Yourself Biology Approach. <i>Annals of Biomedical Engineering</i> , 2021, 49, 2243-2259.	1.3	1
338	Activated nanoscale actin-binding domain motion in the catenin-cadherin complex revealed by neutron spin echo spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	8
339	Manipulation of Stem Cells Fates: The Master and Multifaceted Roles of Biophysical Cues of Biomaterials. <i>Advanced Functional Materials</i> , 2021, 31, 2010626.	7.8	62
340	Reciprocal regulation of cellular mechanics and metabolism. <i>Nature Metabolism</i> , 2021, 3, 456-468.	5.1	40
341	Foreign Body Reaction to Implanted Biomaterials and Its Impact in Nerve Neuroprosthetics. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 622524.	2.0	161
343	Matrix Stiffness Modulates Mechanical Interactions and Promotes Contact between Motile Cells. <i>Biomedicines</i> , 2021, 9, 428.	1.4	10
344	Quantify the combined effects of temperature and force on the stability of DNA hairpin. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 185102.	0.7	5
345	Actin polymerization state regulates osteogenic differentiation in human adipose-derived stem cells. <i>Cellular and Molecular Biology Letters</i> , 2021, 26, 15.	2.7	19
347	Quantitative Methodologies to Dissect Immune Cell Mechanobiology. <i>Cells</i> , 2021, 10, 851.	1.8	2
348	Piezoelectric polymers: theory, challenges and opportunities. <i>International Materials Reviews</i> , 2022, 67, 65-88.	9.4	103
349	Emerging biofabrication approaches for gastrointestinal organoids towards patient specific cancer models. <i>Cancer Letters</i> , 2021, 504, 116-124.	3.2	5
350	Evaluation of the effect of 3D porous Chitosan-alginate scaffold stiffness on breast cancer proliferation and migration. <i>Journal of Biomedical Materials Research - Part A</i> , 2021, 109, 1990-2000.	2.1	17
351	Estrogen Modulates Epithelial Breast Cancer Cell Mechanics and Cell-to-Cell Contacts. <i>Materials</i> , 2021, 14, 2897.	1.3	7
352	Biomechanical modelling of cancer: Agent-based force-based models of solid tumours within the context of the tumour microenvironment. <i>Computational and Systems Oncology</i> , 2021, 1, e1018.	1.1	13
353	A reversible shearing DNA probe for visualizing mechanically strong receptors in living cells. <i>Nature Cell Biology</i> , 2021, 23, 642-651.	4.6	35

#	ARTICLE	IF	CITATIONS
354	How Physical Interactions Shape Bacterial Biofilms. <i>Annual Review of Biophysics</i> , 2021, 50, 401-417.	4.5	30
355	Fascin1 empowers YAP mechanotransduction and promotes cholangiocarcinoma development. <i>Communications Biology</i> , 2021, 4, 763.	2.0	6
356	Mechanical Forces in Nuclear Organization. <i>Cold Spring Harbor Perspectives in Biology</i> , 2022, 14, a039685.	2.3	28
357	Electroactive Biomaterials and Systems for Cell Fate Determination and Tissue Regeneration: Design and Applications. <i>Advanced Materials</i> , 2021, 33, e2007429.	11.1	153
358	Role of integrin-linked kinase in static compressive stress-induced autophagy via phosphatidylinositol 3-kinase in human periodontal ligament cells. <i>International Journal of Molecular Medicine</i> , 2021, 48, .	1.8	3
359	Microfluidic models of the human circulatory system: versatile platforms for exploring mechanobiology and disease modeling. <i>Biophysical Reviews</i> , 2021, 13, 769-786.	1.5	17
360	An Easy-to-Fabricate Cell Stretcher Reveals Density-Dependent Mechanical Regulation of Collective Cell Movements in Epithelia. <i>Cellular and Molecular Bioengineering</i> , 2021, 14, 569-581.	1.0	5
361	Feeling the force: Multiscale force sensing and transduction at the cell-cell interface. <i>Seminars in Cell and Developmental Biology</i> , 2021, 120, 53-65.	2.3	15
362	TRPV Protein Family—From Mechanosensing to Cancer Invasion. <i>Biomolecules</i> , 2021, 11, 1019.	1.8	36
363	Understanding the effect of mechanical forces on ovarian cancer progression. <i>Gynecologic Oncology</i> , 2021, 162, 154-162.	0.6	12
364	A review of regulated self-organizing approaches for tissue regeneration. <i>Progress in Biophysics and Molecular Biology</i> , 2021, 167, 63-78.	1.4	5
365	Synthetic dysmobility screen unveils an integrated STK40-YAP-MAPK system driving cell migration. <i>Science Advances</i> , 2021, 7, .	4.7	4
366	Dose-independent threshold illumination for non-invasive time-lapse fluorescence imaging of live cells. <i>Extreme Mechanics Letters</i> , 2021, 46, 101249.	2.0	6
367	Mechano-induced cell metabolism promotes microtubule glutamylation to force metastasis. <i>Cell Metabolism</i> , 2021, 33, 1342-1357.e10.	7.2	66
368	Calcium signaling mediates a biphasic mechanoadaptive response of endothelial cells to cyclic mechanical stretch. <i>Molecular Biology of the Cell</i> , 2021, 32, 1724-1736.	0.9	16
369	The impact of biomechanics on corneal endothelium tissue engineering. <i>Experimental Eye Research</i> , 2021, 209, 108690.	1.2	5
370	Mechanotropism of single cells adhering to elastic substrates subject to exogenous forces. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 153, 104475.	2.3	2
371	Stress fiber strain recognition by the LIM protein testin is cryptic and mediated by RhoA. <i>Molecular Biology of the Cell</i> , 2021, 32, 1758-1771.	0.9	14

#	ARTICLE	IF	CITATIONS
372	Emerging Principles in the Transcriptional Control by YAP and TAZ. <i>Cancers</i> , 2021, 13, 4242.	1.7	25
373	Cardiovascular mechanobiology—a Special Issue to look at the state of the art and the newest insights into the role of mechanical forces in cardiovascular development, physiology and disease. <i>Biophysical Reviews</i> , 2021, 13, 575-577.	1.5	2
374	Mechanobiological conceptual framework for assessing stem cell bioprocess effectiveness. <i>Biotechnology and Bioengineering</i> , 2021, 118, 4537-4549.	1.7	3
375	Matrix stiffness drives stromal autophagy and promotes formation of a protumorigenic niche. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	47
377	Brick Strex: a robust device built of LEGO bricks for mechanical manipulation of cells. <i>Scientific Reports</i> , 2021, 11, 18520.	1.6	6
378	Correlative cryo-ET identifies actin/tropomyosin filaments that mediate cell—substrate adhesion in cancer cells and mechanosensitivity of cell proliferation. <i>Nature Materials</i> , 2022, 21, 120-128.	13.3	19
379	A contraction-reaction-diffusion model for circular pattern formation in embryogenesis. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 157, 104630.	2.3	2
382	Modulation of Mechanical Stress Mitigates Anti—Dsg3 Antibody—Induced Dissociation of Cell—Cell Adhesion. <i>Advanced Biology</i> , 2021, 5, 2000159.	1.4	4
383	Go with the flow: modeling unique biological flows in engineered <i>in vitro</i> platforms. <i>Lab on A Chip</i> , 2021, 21, 2095-2120.	3.1	16
384	Force balancing ACT-IN the tumor microenvironment: Cytoskeletal modifications in cancer and stromal cells to promote malignancy. <i>International Review of Cell and Molecular Biology</i> , 2021, 360, 1-31.	1.6	2
386	Self-Similarity, Distortion Waves, and the Essence of Morphogenesis: A Generalized View of Color Pattern Formation in Butterfly Wings. , 2017, , 119-152.		13
387	Single-Base Resolution Mapping of 5-Hydroxymethylcytosine Modifications in Hippocampus of Alzheimer’s Disease Subjects. <i>Journal of Molecular Neuroscience</i> , 2017, 63, 185-197.	1.1	28
388	Cell response to substrate rigidity is regulated by active and passive cytoskeletal stress. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12817-12825.	3.3	122
389	Hemidesmosomes modulate force generation via focal adhesions. <i>Journal of Cell Biology</i> , 2020, 219, .	2.3	87
400	Hepatic C9 cells switch their behaviour in short or long exposure to soft substrates. <i>Biology of the Cell</i> , 2020, 112, 265-279.	0.7	4
401	Recovery of Tractions Exerted by Single Cells in Three-Dimensional Nonlinear Matrices. <i>Journal of Biomechanical Engineering</i> , 2020, 142, .	0.6	14
402	Fabrication and characterization of silicone-based dielectric elastomer actuators for mechanical stimulation of living cells. , 2018, , .		5
403	Î²1 Integrin regulates adult lung alveolar epithelial cell inflammation. <i>JCI Insight</i> , 2020, 5, .	2.3	39

#	ARTICLE	IF	CITATIONS
404	YAP/TAZ functions and their regulation at a glance. <i>Journal of Cell Science</i> , 2020, 133, .	1.2	204
405	Force transduction by cadherin adhesions in morphogenesis. <i>F1000Research</i> , 2019, 8, 1044.	0.8	43
406	Factors influencing the determination of cell traction forces. <i>PLoS ONE</i> , 2017, 12, e0172927.	1.1	12
407	Integrin signaling via FAK-Src controls cytokinetic abscission by decelerating PLK1 degradation and subsequent recruitment of CEP55 at the midbody. <i>Oncotarget</i> , 2016, 7, 30820-30830.	0.8	24
408	MicroRNA-1253 Regulation of WASF2 (WAVE2) and its Relevance to Racial Health Disparities. <i>Genes</i> , 2020, 11, 572.	1.0	3
410	Response of Bacteria to Mechanical Stimuli. <i>Microbiology</i> , 2021, 90, 558-568.	0.5	1
411	3D Bioprinting of Cell-Laden Hydrogels for Improved Biological Functionality. <i>Advanced Materials</i> , 2022, 34, e2103691.	11.1	88
428	Cellular and Molecular Responses to Gravitational Force-Triggered Stress in Cells of the Immune System. , 2020, , 301-325.		0
430	An in vitro DNA Sensor-based Assay to Measure Receptor-specific Adhesion Forces of Eukaryotic Cells and Pathogens. <i>Bio-protocol</i> , 2020, 10, e3733.	0.2	0
434	Non-muscle myosin II isoforms orchestrate substrate stiffness sensing to promote cancer cell contractility and migration. <i>Cancer Letters</i> , 2022, 524, 245-258.	3.2	16
435	Focal Adhesion Proteins Regulate Cell-Matrix and Cell-Cell Adhesion and Act as Force Sensors. <i>Biological and Medical Physics Series</i> , 2020, , 95-140.	0.3	0
436	Biomimetic DNA Nanotechnology to Understand and Control Cellular Responses. <i>ChemBioChem</i> , 2022, 23, .	1.3	5
438	Forces generated by lamellipodial actin filament elongation regulate the WAVE complex during cell migration. <i>Nature Cell Biology</i> , 2021, 23, 1148-1162.	4.6	30
441	Fluid shear stress and tumor metastasis. <i>American Journal of Cancer Research</i> , 2018, 8, 763-777.	1.4	58
442	Conventional rigid 2D substrates cause complex contractile signals in monolayers of human induced pluripotent stem cell-derived cardiomyocytes. <i>Journal of Physiology</i> , 2022, 600, 483-507.	1.3	8
443	Matrix Stiffening Enhances DNCB-Induced IL-6 Secretion in Keratinocytes Through Activation of ERK and PI3K/Akt Pathway. <i>Frontiers in Immunology</i> , 2021, 12, 759992.	2.2	5
444	Multiscale Characterization of the Mechanical Properties of Fibrin and Polyethylene Glycol (PEG) Hydrogels for Tissue Engineering Applications. <i>Macromolecular Chemistry and Physics</i> , 2022, 223, 2100366.	1.1	13
445	The Emerging Role of Decellularized Plant-Based Scaffolds as a New Biomaterial. <i>International Journal of Molecular Sciences</i> , 2021, 22, 12347.	1.8	25

#	ARTICLE	IF	CITATIONS
446	Cell adhesion in renal tubular epithelial cells: Biochemistry, biophysics or both. <i>Biocell</i> , 2022, 46, 937-940.	0.4	0
447	Local contractions regulate E-cadherin rigidity sensing. <i>Science Advances</i> , 2022, 8, eabk0387.	4.7	11
448	Organ-Specific Endothelial Cell Differentiation and Impact of Microenvironmental Cues on Endothelial Heterogeneity. <i>International Journal of Molecular Sciences</i> , 2022, 23, 1477.	1.8	32
449	Comparison of direct and inverse methods for 2.5D traction force microscopy. <i>PLoS ONE</i> , 2022, 17, e0262773.	1.1	2
450	Nucleic Acid-Based Cell Surface Engineering Strategies and Their Applications. <i>ACS Applied Bio Materials</i> , 2022, 5, 1901-1915.	2.3	11
452	Factoring in the force: A novel role for eIF6. <i>Journal of Cell Biology</i> , 2022, 221, .	2.3	2
453	Bridging pico-to-nanonewtons with a ratiometric force probe for monitoring nanoscale polymer physics before damage. <i>Nature Communications</i> , 2022, 13, 303.	5.8	43
454	The revolutionary developmental biology of <i>W</i> ilhelm <i>H</i> eis, <i>Sr.</i> <i>Biological Reviews</i> , 2022, 97, 1131-1160.	4.7	5
455	Nano-Precision Tweezers for Mechanosensitive Proteins and Beyond. <i>Molecules and Cells</i> , 2022, 45, 16-25.	1.0	6
456	Extracellular Adhesive Cues Physically Define Nucleolar Structure and Function. <i>Advanced Science</i> , 2022, 9, e2105545.	5.6	8
457	Engineering Bright and Mechanosensitive Alkaline-Earth Rare-Earth Upconverting Nanoparticles. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1547-1553.	2.1	10
458	Recent Advances and Emerging Challenges in the Molecular Modeling of Mechanobiological Processes. <i>Journal of Physical Chemistry B</i> , 2022, 126, 1365-1374.	1.2	14
459	Piezoelectric nanogenerators for personalized healthcare. <i>Chemical Society Reviews</i> , 2022, 51, 3380-3435.	18.7	145
460	Metabo-reciprocity in cell mechanics: feeling the demands/feeding the demand. <i>Trends in Cell Biology</i> , 2022, 32, 624-636.	3.6	11
461	Mitochondrial fission links ECM mechanotransduction to metabolic redox homeostasis and metastatic chemotherapy resistance. <i>Nature Cell Biology</i> , 2022, 24, 168-180.	4.6	68
462	A Multisensory Network Drives Nuclear Mechanoadaptation. <i>Biomolecules</i> , 2022, 12, 404.	1.8	3
464	Sticking around: Cell adhesion patterning for energy minimization and substrate mechanosensing. <i>Biophysical Journal</i> , 2022, 121, 1777-1786.	0.2	8
465	A primer to traction force microscopy. <i>Journal of Biological Chemistry</i> , 2022, 298, 101867.	1.6	18

#	ARTICLE	IF	CITATIONS
466	Controlled transfer of transverse orbital angular momentum to optically trapped birefringent microparticles. <i>Nature Photonics</i> , 2022, 16, 346-351.	15.6	28
467	Delivering Mechanical Stimulation to Cells: State of the Art in Materials and Devices Design. <i>Advanced Materials</i> , 2022, 34, e2110267.	11.1	15
468	The effect of extracorporeal shock wave therapy in acute traumatic spinal cord injury on motor and sensory function within 6 months post-injury: a study protocol for a two-arm three-stage adaptive, prospective, multi-center, randomized, blinded, placebo-controlled clinical trial. <i>Trials</i> , 2022, 23, 245.	0.7	6
469	Biophysical Approaches for Applying and Measuring Biological Forces. <i>Advanced Science</i> , 2022, 9, e2105254.	5.6	15
470	<i>Egr1</i> is a 3D matrix-specific mediator of mechanosensitive stem cell lineage commitment. <i>Science Advances</i> , 2022, 8, eabm4646.	4.7	20
471	Pushing the Natural Frontier: Progress on the Integration of Biomaterial Cues toward Combinatorial Biofabrication and Tissue Engineering. <i>Advanced Materials</i> , 2022, 34, e2105645.	11.1	21
472	Pressure and stiffness sensing together regulate vascular smooth muscle cell phenotype switching. <i>Science Advances</i> , 2022, 8, eabm3471.	4.7	19
479	Functions and clinical significance of mechanical tumor microenvironment: cancer cell sensing, mechanobiology and metastasis. <i>Cancer Communications</i> , 2022, 42, 374-400.	3.7	21
480	Piezo1 regulates the regenerative capacity of skeletal muscles via orchestration of stem cell morphological states. <i>Science Advances</i> , 2022, 8, eabn0485.	4.7	44
482	Engineered assistive materials for 3D bioprinting: support baths and sacrificial inks. <i>Biofabrication</i> , 2022, 14, 032001.	3.7	23
483	The interface between biochemical signaling and cell mechanics shapes T lymphocyte migration and activation. <i>European Journal of Cell Biology</i> , 2022, 101, 151236.	1.6	8
484	Mechanical regulation of chromatin and transcription. <i>Nature Reviews Genetics</i> , 2022, 23, 624-643.	7.7	64
485	Mechanoautophagy: Synergies Between Autophagy and Cell Mechanotransduction at Adhesive Complexes. <i>Frontiers in Cell and Developmental Biology</i> , 2022, 10, .	1.8	7
486	Pneumatic equiaxial compression device for mechanical manipulation of epithelial cell packing and physiology. <i>PLoS ONE</i> , 2022, 17, e0268570.	1.1	8
487	β -Catenin links integrin adhesions to F-actin to regulate ECM mechanosensing and rigidity dependence. <i>Journal of Cell Biology</i> , 2022, 221, .	2.3	2
488	Arp2/3 complex activity is necessary for mouse ESC differentiation, times formative pluripotency, and enables lineage specification. <i>Stem Cell Reports</i> , 2022, 17, 1318-1333.	2.3	4
490	Molecular interpretation of single-molecule force spectroscopy experiments with computational approaches. <i>Chemical Communications</i> , 2022, 58, 7110-7119.	2.2	5
491	Cell motility in confluent tissues induced by substrate disorder. <i>Physical Review Research</i> , 2022, 4, .	1.3	1

#	ARTICLE	IF	CITATIONS
492	Tuning Myogenesis by Controlling Gelatin Hydrogel Properties through Hydrogen Peroxide-Mediated Cross-Linking and Degradation. <i>Gels</i> , 2022, 8, 387.	2.1	7
494	Measuring biological materials mechanics with atomic force microscopy â€•Determination of viscoelastic cell properties from stress relaxation experiments. <i>Microscopy Research and Technique</i> , 2022, 85, 3284-3295.	1.2	8
495	Well-orchestrated physico-chemical and biological factors for enhanced secretion of osteogenic and angiogenic extracellular vesicles by mesenchymal stem cells in a 3D culture format. <i>Biomaterials Science</i> , 0, , .	2.6	4
496	The Extracellular Matrix Stiffening: A Trigger of Prostate Cancer Progression and Castration Resistance?. <i>Cancers</i> , 2022, 14, 2887.	1.7	13
497	Mechanical force modulates macrophage proliferation via $\langle \text{Piezo1} \rightarrow \text{AKT} \rightarrow \text{Cyclin D1} \rangle$ axis. <i>FASEB Journal</i> , 2022, 36, .	0.2	16
498	Cell mediated remodeling of stiffness matched collagen and fibrin scaffolds. <i>Scientific Reports</i> , 2022, 12, .	1.6	5
499	Exploring the Overlooked Roles and Mechanisms of Fibroblasts in the Foreign Body Response. <i>Advances in Wound Care</i> , 2023, 12, 85-96.	2.6	4
500	Mechanical forces directing intestinal form and function. <i>Current Biology</i> , 2022, 32, R791-R805.	1.8	9
501	Mechanomodulatory biomaterials prospects in scar prevention and treatment. <i>Acta Biomaterialia</i> , 2022, 150, 22-33.	4.1	15
502	Review old bone, new tricks. <i>Clinical and Experimental Metastasis</i> , 2022, 39, 727-742.	1.7	3
503	How do the Local Physical, Biochemical, and Mechanical Properties of an Injectable Synthetic Anisotropic Hydrogel Affect Oriented Nerve Growth?. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	14
504	Pulling, failing, and adaptive mechanotransduction of macrophage filopodia. <i>Biophysical Journal</i> , 2022, , .	0.2	3
506	Mechanotransduction at the Cell Surface and Methods to Study Receptor Forces. <i>Biomaterials Science Series</i> , 2022, , 44-63.	0.1	0
507	Au nanoflower film-based stretchable biosensors for <i>in situ</i> monitoring of superoxide anion release in cell mechanotransduction. <i>Analyst, The</i> , 2022, 147, 4055-4062.	1.7	0
508	Novel imaging methods and force probes for molecular mechanobiology of cytoskeleton and adhesion. <i>Trends in Cell Biology</i> , 2023, 33, 204-220.	3.6	5
509	Chiral Hydrogel Accelerates Reâ€•Epithelization in Chronic Wounds via Mechanoregulation. <i>Advanced Healthcare Materials</i> , 2022, 11, .	3.9	20
512	Mechanotransduction in the pathogenesis of non-alcoholic fatty liver disease. <i>Journal of Hepatology</i> , 2022, 77, 1642-1656.	1.8	13
513	The role of the dystrophin glycoprotein complex in muscle cell mechanotransduction. <i>Communications Biology</i> , 2022, 5, .	2.0	14

#	ARTICLE	IF	CITATIONS
514	Organization, dynamics and mechanoregulation of integrin-mediated cell-ECM adhesions. <i>Nature Reviews Molecular Cell Biology</i> , 2023, 24, 142-161.	16.1	91
516	Mechanobiology and Applications in Biomaterials for Soft Tissue Repair and Regeneration. , 2022, , .		0
517	The role of single-protein elasticity in mechanobiology. <i>Nature Reviews Materials</i> , 2023, 8, 10-24.	23.8	9
518	4D live imaging and computational modeling of a functional gut-on-a-chip evaluate how peristalsis facilitates enteric pathogen invasion. <i>Science Advances</i> , 2022, 8, .	4.7	12
519	Enhanced Tumor Accumulation of Multimodal Magneto-Plasmonic Nanoparticles via an Implanted Micromagnet-Assisted Delivery Strategy. <i>Advanced Healthcare Materials</i> , 2023, 12, .	3.9	2
520	Crosstalk between Extracellular Matrix Stiffness and ROS Drives Endometrial Repair via the HIF-1 α /YAP Axis during Menstruation. <i>Cells</i> , 2022, 11, 3162.	1.8	2
521	TNS1: Emerging Insights into Its Domain Function, Biological Roles, and Tumors. <i>Biology</i> , 2022, 11, 1571.	1.3	6
522	Stretchable Electrochemical Sensors: From Electrode Fabrication to Cell Mechanotransduction Monitoring. <i>Chinese Journal of Chemistry</i> , 2023, 41, 443-457.	2.6	4
523	Deep learning for complex displacement field measurement. <i>Science China Technological Sciences</i> , 2022, 65, 3039-3056.	2.0	7
524	Aptamer-Based Cancer Cell Analysis and Treatment. <i>ChemistryOpen</i> , 2022, 11, .	0.9	3
525	TRPV3 inhibits colorectal cancer cell proliferation and migration by regulating the MAPK signaling pathway. <i>Journal of Gastrointestinal Oncology</i> , 2022, 13, 2447-2457.	0.6	1
528	Hydrogel platform capable of molecularly resolved pulling on cells for mechanotransduction. <i>Materials Today Bio</i> , 2022, 17, 100476.	2.6	1
529	Super-resolution traction force microscopy with enhanced tracer density enables capturing molecular scale traction. <i>Biomaterials Science</i> , 0, , .	2.6	1
530	ZO-1 Guides Tight Junction Assembly and Epithelial Morphogenesis via Cytoskeletal Tension-Dependent and -Independent Functions. <i>Cells</i> , 2022, 11, 3775.	1.8	10
532	STRAINS: A big data method for classifying cellular response to stimuli at the tissue scale. <i>PLoS ONE</i> , 2022, 17, e0278626.	1.1	0
533	Engineered hydrogels for mechanobiology. <i>Nature Reviews Methods Primers</i> , 2022, 2, .	11.8	37
534	Alterations of Cytoskeleton Networks in Cell Fate Determination and Cancer Development. <i>Biomolecules</i> , 2022, 12, 1862.	1.8	3
535	Simulating 3D Cell Shape with the Cellular Potts Model. <i>Methods in Molecular Biology</i> , 2023, , 323-339.	0.4	0

#	ARTICLE	IF	CITATIONS
536	Single-Cell Quantification of the Mechanical Stability of Cellâ€“Cell Adherens Junction Using Glass Micropipettes. <i>Methods in Molecular Biology</i> , 2023, , 267-280.	0.4	2
537	Unraveling mechanotransduction in T cells with DNA nanotechnology. <i>Trends in Chemistry</i> , 2023, , .	4.4	0
538	The Potential Role of Integrin Signaling in Memory and Cognitive Impairment. <i>Biomolecules</i> , 2023, 13, 108.	1.8	2
539	Measuring Cellular Traction Forces with Micropillar Arrays. <i>Methods in Molecular Biology</i> , 2023, , 197-206.	0.4	0
540	Targeting integrin pathways: mechanisms and advances in therapy. <i>Signal Transduction and Targeted Therapy</i> , 2023, 8, .	7.1	95
541	Molecular Modeling Insights into the Structure and Behavior of Integrins: A Review. <i>Cells</i> , 2023, 12, 324.	1.8	9
542	Multifunctional barrier membranes promote bone regeneration by scavenging H ₂ O ₂ , generating O ₂ , eliminating inflammation, and regulating immune response. <i>Colloids and Surfaces B: Biointerfaces</i> , 2023, 222, 113147.	2.5	0
543	Mechanics of the cellular microenvironment as probed by cells in vivo during zebrafish presomitic mesoderm differentiation. <i>Nature Materials</i> , 2023, 22, 135-143.	13.3	21
544	Cardiovascular Mechano-Epigenetics: Force-Dependent Regulation of Histone Modifications and Gene Regulation. <i>Cardiovascular Drugs and Therapy</i> , 0, , .	1.3	1
545	Regulation and functions of cell division in the intestinal tissue. <i>Seminars in Cell and Developmental Biology</i> , 2023, 150-151, 3-14.	2.3	3
547	Bioprinting of skin. , 2023, , 119-172.		3
549	Tension Gauge Tethers as Tension Threshold and Duration Sensors. <i>ACS Sensors</i> , 2023, 8, 704-711.	4.0	8
550	Editorial - Cell mechanics and mechanobiology. <i>European Journal of Cell Biology</i> , 2023, , 151304.	1.6	0
551	Function follows form: How cell size is harnessed for developmental decisions. <i>European Journal of Cell Biology</i> , 2023, 102, 151312.	1.6	1
552	The Actin Network Interfacing Diverse Integrin-Mediated Adhesions. <i>Biomolecules</i> , 2023, 13, 294.	1.8	3
553	Phospholipase B Is Critical for <i>Cryptococcus neoformans</i> Survival in the Central Nervous System. <i>MBio</i> , 2023, 14, .	1.8	3
554	Black and gray box learning of amplitude equations: Application to phase field systems. <i>Physical Review E</i> , 2023, 107, .	0.8	4
555	Compressional stress stiffening & softening of soft hydrogels â€“ how to avoid artefacts in their rheological characterisation. <i>Soft Matter</i> , 2023, 19, 2053-2057.	1.2	2

#	ARTICLE	IF	CITATIONS
557	Matrix Metalloproteinase-1 Expression in Fibroblasts Accelerates Dermal Aging and Promotes Papilloma Development in Mouse Skin. <i>Journal of Investigative Dermatology</i> , 2023, 143, 1700-1707.e1.	0.3	7
558	Thinking in 3 dimensions: philosophies of the microenvironment in organoids and organs-on-chip. <i>History and Philosophy of the Life Sciences</i> , 2023, 45, .	0.6	0
560	Real-time Quantification of Cell Mechanics and Functions by Double Resonator Piezoelectric Cytometry – Theory and Study of Cellular Adhesion of HUVECs. <i>Advanced Materials Interfaces</i> , 2023, 10, .	1.9	1
566	Cell characterization by nanonewton force sensing. , 2023, , 245-270.		1
612	Magnetic tweezers in cell mechanics. <i>Methods in Enzymology</i> , 2024, , 321-354.	0.4	0
624	Magnetic nano-tweezer for interrogating mechanosensitive signaling proteins in space and time. <i>Methods in Enzymology</i> , 2024, , 303-320.	0.4	0
628	Decoding the forces that shape muscle stem cell function. <i>Current Topics in Developmental Biology</i> , 2024, , .	1.0	0