

Christopher S Chen

List of Publications by Year in Descending Order

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Version: 2024-04-17

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

255
papers

36,386
citations

91
h-index

189
g-index

330
ext. papers

40,999
ext. citations

9.8
avg, IF

7.55
L-index

#	Paper	IF	Citations
255	Engineering a living cardiac pump on a chip using high-precision fabrication.. <i>Science Advances</i> , 2022 , 8, eabm3791	14.3	4
254	A multi-organ chip with matured tissue niches linked by vascular flow.. <i>Nature Biomedical Engineering</i> , 2022 , 6, 351-371	19	13
253	Engineered patterns of Notch ligands Jag1 and Dll4 elicit differential spatial control of endothelial sprouting. <i>IScience</i> , 2022 , 25, 104306	6.1	0
252	Directing Cholangiocyte Morphogenesis in Natural Biomaterial Scaffolds. <i>Advanced Science</i> , 2021 , e2102698	6.9	2
251	Plakophilin-2 truncating variants impair cardiac contractility by disrupting sarcomere stability and organization. <i>Science Advances</i> , 2021 , 7, eabh3995	14.3	1
250	Sarc-Graph: Automated segmentation, tracking, and analysis of sarcomeres in hiPSC-derived cardiomyocytes. <i>PLoS Computational Biology</i> , 2021 , 17, e1009443	5	2
249	Controlled Cell Alignment Using Two-Photon Direct Laser Writing-Patterned Hydrogels in 2D and 3D. <i>Macromolecular Bioscience</i> , 2021 , 21, e2100051	5.5	4
248	Reconstituting the dynamics of endothelial cells and fibroblasts in wound closure. <i>APL Bioengineering</i> , 2021 , 5, 016102	6.6	9
247	Force-FAK signaling coupling at individual focal adhesions coordinates mechanosensing and microtissue repair. <i>Nature Communications</i> , 2021 , 12, 2359	17.4	10
246	Mechanisms of Congenital Heart Disease Caused by NAA15 Haploinsufficiency. <i>Circulation Research</i> , 2021 , 128, 1156-1169	15.7	2
245	Extracellular Matrix Alignment Directs Provisional Matrix Assembly and Three Dimensional Fibrous Tissue Closure. <i>Tissue Engineering - Part A</i> , 2021 ,	3.9	2
244	REPLY. <i>Hepatology</i> , 2021 , 73, 872-873	11.2	
243	. <i>Journal of Microelectromechanical Systems</i> , 2021 , 30, 96-104	2.5	2
242	Probing the subcellular nanostructure of engineered human cardiomyocytes in 3D tissue. <i>Microsystems and Nanoengineering</i> , 2021 , 7, 10	7.7	1
241	Harnessing Mechanobiology for Tissue Engineering. <i>Developmental Cell</i> , 2021 , 56, 180-191	10.2	18
240	Direct laser writing for cardiac tissue engineering: a microfluidic heart on a chip with integrated transducers. <i>Lab on A Chip</i> , 2021 , 21, 1724-1737	7.2	10
239	Fast, multiplane line-scan confocal microscopy using axially distributed slits. <i>Biomedical Optics Express</i> , 2021 , 12, 1339-1350	3.5	2

238	Optogenetic current in myofibroblasts acutely alters electrophysiology and conduction of co-cultured cardiomyocytes. <i>Scientific Reports</i> , 2021 , 11, 4430	4.9	8
237	Filamin C Cardiomyopathy Variants Cause Protein and Lysosome Accumulation. <i>Circulation Research</i> , 2021 , 129, 751-766	15.7	2
236	SARS-CoV-2 Disrupts Proximal Elements in the JAK-STAT Pathway. <i>Journal of Virology</i> , 2021 , 95, e00862316	13	
235	Distinct effects of different matrix proteoglycans on collagen fibrillogenesis and cell-mediated collagen reorganization. <i>Scientific Reports</i> , 2020 , 10, 19065	4.9	14
234	Controlled Apoptosis of Stromal Cells to Engineer Human Microivers. <i>Advanced Functional Materials</i> , 2020 , 30, 1910442	15.6	4
233	Uncovering mutation-specific morphogenic phenotypes and paracrine-mediated vessel dysfunction in a biomimetic vascularized mammary duct platform. <i>Nature Communications</i> , 2020 , 11, 3377	17.4	8
232	Transient Support from Fibroblasts is Sufficient to Drive Functional Vascularization in Engineered Tissues. <i>Advanced Functional Materials</i> , 2020 , 30, 2003777	15.6	19
231	Myosin Sequestration Regulates Sarcomere Function, Cardiomyocyte Energetics, and Metabolism, Informing the Pathogenesis of Hypertrophic Cardiomyopathy. <i>Circulation</i> , 2020 , 141, 828-842	16.7	66
230	Recovery of Traction Exerted by Single Cells in Three-Dimensional Nonlinear Matrices. <i>Journal of Biomechanical Engineering</i> , 2020 , 142,	2.1	5
229	Mechanical regulation of glycolysis via cytoskeleton architecture. <i>Nature</i> , 2020 , 578, 621-626	50.4	137
228	From Simple to Architecturally Complex Hydrogel Scaffolds for Cell and Tissue Engineering Applications: Opportunities Presented by Two-Photon Polymerization. <i>Advanced Healthcare Materials</i> , 2020 , 9, e1901217	10.1	43
227	Voltage Imaging of Cardiac Cells and Tissue Using the Genetically Encoded Voltage Sensor Archon1. <i>iScience</i> , 2020 , 23, 100974	6.1	3
226	Controlled Strain of Cardiac Microtissue via Magnetic Actuation 2020 ,		2
225	Genetic Studies of Hypertrophic Cardiomyopathy in Singaporeans Identify Variants in and That Are Common in Chinese Patients. <i>Circulation Genomic and Precision Medicine</i> , 2020 , 13, 424-434	5.2	4
224	A Bile Duct-on-a-Chip With Organ-Level Functions. <i>Hepatology</i> , 2020 , 71, 1350-1363	11.2	26
223	A biomimetic pancreatic cancer on-chip reveals endothelial ablation via ALK7 signaling. <i>Science Advances</i> , 2019 , 5, eaav6789	14.3	60
222	SarcTrack. <i>Circulation Research</i> , 2019 , 124, 1172-1183	15.7	56
221	Studies of 3D directed cell migration enabled by direct laser writing of curved wave topography. <i>Biofabrication</i> , 2019 , 11, 021001	10.5	19

220	Modulation of chromatin remodeling proteins SMYD1 and SMARCD1 promotes contractile function of human pluripotent stem cell-derived ventricular cardiomyocyte in 3D-engineered cardiac tissues. <i>Scientific Reports</i> , 2019 , 9, 7502	4.9	6
219	A BMP/activin A chimera is superior to native BMPs and induces bone repair in nonhuman primates when delivered in a composite matrix. <i>Science Translational Medicine</i> , 2019 , 11,	17.5	27
218	Microfabricated blood vessels for modeling the vascular transport barrier. <i>Nature Protocols</i> , 2019 , 14, 1425-1454	18.8	61
217	Epstein-Barr virus-encoded EBNA2 alters immune checkpoint PD-L1 expression by downregulating miR-34a in B-cell lymphomas. <i>Leukemia</i> , 2019 , 33, 132-147	10.7	81
216	Modeling Monogenic Diabetes using Human ESCs Reveals Developmental and Metabolic Deficiencies Caused by Mutations in HNF1A. <i>Cell Stem Cell</i> , 2019 , 25, 273-289.e5	18	35
215	Sarco/endoplasmic reticulum Ca-ATPase is a more effective calcium remover than sodium-calcium exchanger in human embryonic stem cell-derived cardiomyocytes. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2019 , 317, H1105-H1115	5.2	3
214	Myosin IIA-mediated forces regulate multicellular integrity during vascular sprouting. <i>Molecular Biology of the Cell</i> , 2019 , 30, 1974-1984	3.5	17
213	Effects of Geometry on the Mechanics and Alignment of Three-Dimensional Engineered Microtissues. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 3843-3855	5.5	13
212	Vascular Tissue Engineering: Progress, Challenges, and Clinical Promise. <i>Cell Stem Cell</i> , 2018 , 22, 340-354	18	185
211	Cell-geometry-dependent changes in plasma membrane order direct stem cell signalling and fate. <i>Nature Materials</i> , 2018 , 17, 237-242	27	108
210	Fabrication and Mechanical Properties Measurements of 3D Microtissues for the Study of Cell-Matrix Interactions. <i>Methods in Molecular Biology</i> , 2018 , 1722, 303-328	1.4	1
209	Force Generation via β -Cardiac Myosin, Titin, and β -Actinin Drives Cardiac Sarcomere Assembly from Cell-Matrix Adhesions. <i>Developmental Cell</i> , 2018 , 44, 87-96.e5	10.2	75
208	Proliferation-independent role of NF2 (merlin) in limiting biliary morphogenesis. <i>Development (Cambridge)</i> , 2018 , 145,	6.6	10
207	Amino Acid Restriction Triggers Angiogenesis via GCN2/ATF4 Regulation of VEGF and HS Production. <i>Cell</i> , 2018 , 173, 117-129.e14	56.2	144
206	Extracellular matrix alignment dictates the organization of focal adhesions and directs uniaxial cell migration. <i>APL Bioengineering</i> , 2018 , 2, 046107	6.6	47
205	Motile Dendritic Cells Sense and Respond to Substrate Geometry. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 1348-1361	4.7	6
204	Inhibition of α 5 Integrin Attenuates Vascular Permeability and Protects against Renal Ischemia-Reperfusion Injury. <i>Journal of the American Society of Nephrology: JASN</i> , 2017 , 28, 1741-1752	12.7	23
203	Multiscale model predicts increasing focal adhesion size with decreasing stiffness in fibrous matrices. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E4549-E4555	11.5	60

202	Cdc42 regulates branching in angiogenic sprouting in vitro. <i>Microcirculation</i> , 2017 , 24, e12372	2.9	9
201	Cell-Cell Contact Area Affects Notch Signaling and Notch-Dependent Patterning. <i>Developmental Cell</i> , 2017 , 40, 505-511.e6	10.2	86
200	Human Organ Chip Models Recapitulate Orthotopic Lung Cancer Growth, Therapeutic Responses, and Tumor Dormancy In Vitro. <i>Cell Reports</i> , 2017 , 21, 508-516	10.6	204
199	Making bone via nanoscale kicks. <i>Nature Biomedical Engineering</i> , 2017 , 1, 689-690	19	3
198	Matrix degradability controls multicellularity of 3D cell migration. <i>Nature Communications</i> , 2017 , 8, 371	17.4	145
197	The Arp2/3 complex binding protein HS1 is required for efficient dendritic cell random migration and force generation. <i>Integrative Biology (United Kingdom)</i> , 2017 , 9, 695-708	3.7	9
196	Three-dimensional biomimetic vascular model reveals a RhoA, Rac1, and -cadherin balance in mural cell-endothelial cell-regulated barrier function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 8758-8763	11.5	71
195	In situ expansion of engineered human liver tissue in a mouse model of chronic liver disease. <i>Science Translational Medicine</i> , 2017 , 9,	17.5	99
194	Designer biomaterials for mechanobiology. <i>Nature Materials</i> , 2017 , 16, 1164-1168	27	103
193	A non-canonical Notch complex regulates adherens junctions and vascular barrier function. <i>Nature</i> , 2017 , 552, 258-262	50.4	163
192	Forces as regulators of cell adhesions. <i>Nature Reviews Molecular Cell Biology</i> , 2017 , 18, 715	48.7	1
191	Laminar flow downregulates Notch activity to promote lymphatic sprouting. <i>Journal of Clinical Investigation</i> , 2017 , 127, 1225-1240	15.9	77
190	3D culture models of tissues under tension. <i>Journal of Cell Science</i> , 2017 , 130, 63-70	5.3	33
189	3D Biomimetic Cultures: The Next Platform for Cell Biology. <i>Trends in Cell Biology</i> , 2016 , 26, 798-800	18.3	22
188	Non-cell autonomous cues for enhanced functionality of human embryonic stem cell-derived cardiomyocytes via maturation of sarcolemmal and mitochondrial K channels. <i>Scientific Reports</i> , 2016 , 6, 34154	4.9	4
187	Cellular forces and matrix assembly coordinate fibrous tissue repair. <i>Nature Communications</i> , 2016 , 7, 11036	17.4	74
186	Matrix viscoplasticity and its shielding by active mechanics in microtissue models: experiments and mathematical modeling. <i>Scientific Reports</i> , 2016 , 6, 33919	4.9	29
185	The mechanical regulation of integrin-cadherin crosstalk organizes cells, signaling and forces. <i>Journal of Cell Science</i> , 2016 , 129, 1093-100	5.3	157

184	Biomimetic on-a-chip platforms for studying cancer metastasis. <i>Current Opinion in Chemical Engineering</i> , 2016 , 11, 20-27	5.4	41
183	Tumor vessel normalization after aerobic exercise enhances chemotherapeutic efficacy. <i>Oncotarget</i> , 2016 , 7, 65429-65440	3.3	89
182	Differentiation alters stem cell nuclear architecture, mechanics, and mechano-sensitivity. <i>ELife</i> , 2016 , 5,	8.9	86
181	Full-Length Fibronectin Drives Fibroblast Accumulation at the Surface of Collagen Microtissues during Cell-Induced Tissue Morphogenesis. <i>PLoS ONE</i> , 2016 , 11, e0160369	3.7	12
180	Integrative Analysis of PRKAG2 Cardiomyopathy iPS and Microtissue Models Identifies AMPK as a Regulator of Metabolism, Survival, and Fibrosis. <i>Cell Reports</i> , 2016 , 17, 3292-3304	10.6	51
179	Forces and mechanotransduction in 3D vascular biology. <i>Current Opinion in Cell Biology</i> , 2016 , 42, 73-79	9	41
178	Measuring cell-generated forces: a guide to the available tools. <i>Nature Methods</i> , 2016 , 13, 415-23	21.6	274
177	Endothelial Thermotolerance Impairs Nanoparticle Transport in Tumors. <i>Cancer Research</i> , 2015 , 75, 3255-61	6.7	25
176	Degradable hydrogels derived from PEG-diacrylamide for hepatic tissue engineering. <i>Journal of Biomedical Materials Research - Part A</i> , 2015 , 103, 3331-8	5.4	49
175	Proteomic Analysis of Human Pluripotent Stem Cell-Derived, Fetal, and Adult Ventricular Cardiomyocytes Reveals Pathways Crucial for Cardiac Metabolism and Maturation. <i>Circulation: Cardiovascular Genetics</i> , 2015 , 8, 427-36		29
174	A proteomic approach reveals integrin activation state-dependent control of microtubule cortical targeting. <i>Nature Communications</i> , 2015 , 6, 6135	17.4	50
173	Cell-mediated fibre recruitment drives extracellular matrix mechanosensing in engineered fibrillar microenvironments. <i>Nature Materials</i> , 2015 , 14, 1262-8	27	356
172	HEART DISEASE. Titin mutations in iPS cells define sarcomere insufficiency as a cause of dilated cardiomyopathy. <i>Science</i> , 2015 , 349, 982-6	33.3	379
171	Protrusive and Contractile Forces of Spreading Human Neutrophils. <i>Biophysical Journal</i> , 2015 , 109, 699-709	10.9	13
170	Phospholamban as a crucial determinant of the inotropic response of human pluripotent stem cell-derived ventricular cardiomyocytes and engineered 3-dimensional tissue constructs. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2015 , 8, 193-202	6.4	23
169	Cooperative contractility: the role of stress fibres in the regulation of cell-cell junctions. <i>Journal of Biomechanics</i> , 2015 , 48, 520-8	2.9	10
168	ATF4 licenses C/EBP β activity in human mesenchymal stem cells primed for adipogenesis. <i>ELife</i> , 2015 , 4, e06821	8.9	31
167	N-Cadherin Induction by ECM Stiffness and FAK Overrides the Spreading Requirement for Proliferation of Vascular Smooth Muscle Cells. <i>Cell Reports</i> , 2015 , 10, 1477-1486	10.6	38

166	Mechanically stimulated contraction of engineered cardiac constructs using a microcantilever. <i>IEEE Transactions on Biomedical Engineering</i> , 2015 , 62, 438-42	5	18
165	Myosin II controls cellular branching morphogenesis and migration in three dimensions by minimizing cell-surface curvature. <i>Nature Cell Biology</i> , 2015 , 17, 137-47	23.4	84
164	Hypoxia increases the abundance but not the assembly of extracellular fibronectin during epithelial cell transdifferentiation. <i>Journal of Cell Science</i> , 2015 , 128, 1083-9	5.3	14
163	Patterning vascular networks in vivo for tissue engineering applications. <i>Tissue Engineering - Part C: Methods</i> , 2015 , 21, 509-17	2.9	39
162	Substrates with engineered step changes in rigidity induce traction force polarity and durotaxis. <i>Cellular and Molecular Bioengineering</i> , 2014 , 7, 26-34	3.9	36
161	Computational and experimental investigation of local stress fiber orientation in uniaxially and biaxially constrained microtissues. <i>Biomechanics and Modeling in Mechanobiology</i> , 2014 , 13, 1053-63	3.8	10
160	Augmentation of integrin-mediated mechanotransduction by hyaluronic acid. <i>Biomaterials</i> , 2014 , 35, 71-82	15.6	86
159	Force measurement tools to explore cadherin mechanotransduction. <i>Cell Communication and Adhesion</i> , 2014 , 21, 193-205		12
158	Stem cell differentiation: sticky mechanical memory. <i>Nature Materials</i> , 2014 , 13, 542-3	27	13
157	"Stamp-off" to micropattern sparse, multicomponent features. <i>Methods in Cell Biology</i> , 2014 , 119, 3-16	1.8	10
156	A DNA-based molecular probe for optically reporting cellular traction forces. <i>Nature Methods</i> , 2014 , 11, 1229-32	21.6	133
155	Remodeling of fibrous extracellular matrices by contractile cells: predictions from discrete fiber network simulations. <i>Biophysical Journal</i> , 2014 , 107, 1829-1840	2.9	112
154	Micropatterned multicolor dynamically adhesive substrates to control cell adhesion and multicellular organization. <i>Langmuir</i> , 2014 , 30, 1327-35	4	21
153	Tissue-engineered, hydrogel-based endothelial progenitor cell therapy robustly revascularizes ischemic myocardium and preserves ventricular function. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2014 , 148, 1090-7; discussion 1097-8	1.5	36
152	Fluid shear stress threshold regulates angiogenic sprouting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 7968-73	11.5	237
151	An EMMPRIN-Eatenin-Nm23 complex drives ATP production and actomyosin contractility at endothelial junctions. <i>Journal of Cell Science</i> , 2014 , 127, 3768-81	5.3	20
150	Jostling for position in angiogenic sprouts: continuous rearrangement of cells explained by differential adhesion dynamics. <i>EMBO Journal</i> , 2014 , 33, 1089-90	13	2
149	Forms, forces, and stem cell fate. <i>Current Opinion in Cell Biology</i> , 2014 , 31, 92-7	9	61

148	Long-range force transmission in fibrous matrices enabled by tension-driven alignment of fibers. <i>Biophysical Journal</i> , 2014 , 107, 2592-603	2.9	190
147	Magnetic approaches to study collective three-dimensional cell mechanics in long-term cultures (invited). <i>Journal of Applied Physics</i> , 2014 , 115, 172616	2.5	9
146	Label-free evaluation of angiogenic sprouting in microengineered devices using ultrahigh-resolution optical coherence microscopy. <i>Journal of Biomedical Optics</i> , 2014 , 19, 16006	3.5	13
145	Microfabrication of a platform to measure and manipulate the mechanics of engineered microtissues. <i>Methods in Cell Biology</i> , 2014 , 121, 191-211	1.8	23
144	Acute slowing of cardiac conduction in response to myofibroblast coupling to cardiomyocytes through N-cadherin. <i>Journal of Molecular and Cellular Cardiology</i> , 2014 , 68, 29-37	5.8	32
143	Force-driven evolution of mesoscale structure in engineered 3D microtissues and the modulation of tissue stiffening. <i>Biomaterials</i> , 2014 , 35, 5056-64	15.6	45
142	Microfluidics embedded within extracellular matrix to define vascular architectures and pattern diffusive gradients. <i>Lab on A Chip</i> , 2013 , 13, 3246-52	7.2	126
141	How vinculin regulates force transmission. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 9788-93	11.5	175
140	Fibrous hyaluronic acid hydrogels that direct MSC chondrogenesis through mechanical and adhesive cues. <i>Biomaterials</i> , 2013 , 34, 5571-80	15.6	177
139	Cell biology. Deconstructing dimensionality. <i>Science</i> , 2013 , 339, 402-4	33.3	76
138	Cell adhesion and mechanical stimulation in the regulation of mesenchymal stem cell differentiation. <i>Journal of Cellular and Molecular Medicine</i> , 2013 , 17, 823-32	5.6	152
137	Three-dimensional, automated magnetic biomanipulation with subcellular resolution 2013 ,		4
136	Mapping calcium phosphate activated gene networks as a strategy for targeted osteoinduction of human progenitors. <i>Biomaterials</i> , 2013 , 34, 4612-21	15.6	44
135	How cells sense extracellular matrix stiffness: a material@ perspective. <i>Current Opinion in Biotechnology</i> , 2013 , 24, 948-53	11.4	140
134	Decoupling cell and matrix mechanics in engineered microtissues using magnetically actuated microcantilevers. <i>Advanced Materials</i> , 2013 , 25, 1699-705	24	74
133	Necking and failure of constrained 3D microtissues induced by cellular tension. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 20923-8	11.5	38
132	Degradation-mediated cellular traction directs stem cell fate in covalently crosslinked three-dimensional hydrogels. <i>Nature Materials</i> , 2013 , 12, 458-65	27	837
131	Activation of beta 1 but not beta 3 integrin increases cell traction forces. <i>FEBS Letters</i> , 2013 , 587, 763-9	3.8	58

130	Fluid shear stress on endothelial cells modulates mechanical tension across VE-cadherin and PECAM-1. <i>Current Biology</i> , 2013 , 23, 1024-30	6.3	350
129	Development and characterization of a 3D multicell microtissue culture model of airway smooth muscle. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2013 , 304, L4-16	5.8	43
128	Contact inhibition of locomotion probabilities drive solitary versus collective cell migration. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20130717	4.1	58
127	Endothelial cell sensing of flow direction. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2013 , 33, 2130-6	9.4	181
126	Rac1 is deactivated at integrin activation sites through an IQGAP1-filamin-A-RacGAP1 pathway. <i>Journal of Cell Science</i> , 2013 , 126, 4121-35	5.3	51
125	Geometric control of vascular networks to enhance engineered tissue integration and function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 7586-91	11.5	197
124	Biomimetic model to reconstitute angiogenic sprouting morphogenesis in vitro. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 6712-7	11.5	335
123	Multidimensional traction force microscopy reveals out-of-plane rotational moments about focal adhesions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 881-6	11.5	198
122	Design and formulation of functional pluripotent stem cell-derived cardiac microtissues. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E4698-707	11.5	209
121	HeLiVa platform: integrated heart-liver-vascular systems for drug testing in human health and disease. <i>Stem Cell Research and Therapy</i> , 2013 , 4 Suppl 1, S8	8.3	60
120	The emerin-binding transcription factor Lmo7 is regulated by association with p130Cas at focal adhesions. <i>PeerJ</i> , 2013 , 1, e134	3.1	18
119	Measuring cell-cell tugging forces using bowtie-patterned mPADs (microarray post detectors). <i>Methods in Molecular Biology</i> , 2013 , 1066, 157-68	1.4	7
118	Delineating 3D Angiogenic Sprouting in OCT Images via Multiple Active Contours. <i>Lecture Notes in Computer Science</i> , 2013 , 231-240	0.9	1
117	Bone morphogenetic protein-2-induced signaling and osteogenesis is regulated by cell shape, RhoA/ROCK, and cytoskeletal tension. <i>Stem Cells and Development</i> , 2012 , 21, 1176-86	4.4	177
116	Deconstructing the third dimension: how 3D culture microenvironments alter cellular cues. <i>Journal of Cell Science</i> , 2012 , 125, 3015-24	5.3	1055
115	Formation and optogenetic control of engineered 3D skeletal muscle bioactuators. <i>Lab on A Chip</i> , 2012 , 12, 4976-85	7.2	198
114	Bioengineering methods for analysis of cells in vitro. <i>Annual Review of Cell and Developmental Biology</i> , 2012 , 28, 385-410	12.6	31
113	Forcing stem cells to behave: a biophysical perspective of the cellular microenvironment. <i>Annual Review of Biophysics</i> , 2012 , 41, 519-42	21.1	319

112	Adhesion regulates MAP kinase/ternary complex factor exchange to control a proliferative transcriptional switch. <i>Current Biology</i> , 2012 , 22, 2017-26	6.3	28
111	Manipulation of 3D Cluster Size and Geometry by Release from 2D Micropatterns. <i>Cellular and Molecular Bioengineering</i> , 2012 , 5, 299-306	3.9	13
110	Force-induced fibronectin assembly and matrix remodeling in a 3D microtissue model of tissue morphogenesis. <i>Integrative Biology (United Kingdom)</i> , 2012 , 4, 1164-74	3.7	62
109	miR-125b Is an adhesion-regulated microRNA that protects mesenchymal stem cells from anoikis. <i>Stem Cells</i> , 2012 , 30, 956-64	5.8	36
108	Heterotypic cell pair co-culturing on patterned microarrays. <i>Lab on A Chip</i> , 2012 , 12, 3117-26	7.2	19
107	Rapid casting of patterned vascular networks for perfusable engineered three-dimensional tissues. <i>Nature Materials</i> , 2012 , 11, 768-74	27	1402
106	Structural Mechanics Based Model for the Force-Bearing Elements Within the Cytoskeleton of a Cell Adhered on a Bed of Posts. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2012 , 79,	2.7	10
105	Matrix rigidity regulates a switch between TGF- β -induced apoptosis and epithelial-mesenchymal transition. <i>Molecular Biology of the Cell</i> , 2012 , 23, 781-91	3.5	322
104	Probing cellular traction forces with magnetic nanowires and microfabricated force sensor arrays. <i>Nanotechnology</i> , 2012 , 23, 075101	3.4	26
103	A microfabricated platform to measure and manipulate the mechanics of engineered cardiac microtissues. <i>Tissue Engineering - Part A</i> , 2012 , 18, 910-9	3.9	289
102	Adhesive and mechanical regulation of mesenchymal stem cell differentiation in human bone marrow and periosteum-derived progenitor cells. <i>Biology Open</i> , 2012 , 1, 1058-68	2.2	47
101	A Microfabricated Platform to Measure and Manipulate the Mechanics of Engineered Cardiac Microtissues 2012 ,		2
100	Cell shape and substrate rigidity both regulate cell stiffness. <i>Biophysical Journal</i> , 2011 , 100, L25-7	2.9	298
99	Measuring traction forces of motile dendritic cells on micropost arrays. <i>Biophysical Journal</i> , 2011 , 101, 2620-8	2.9	68
98	The Cdc42 guanine nucleotide exchange factor FGD1 regulates osteogenesis in human mesenchymal stem cells. <i>American Journal of Pathology</i> , 2011 , 178, 969-74	5.8	15
97	A hitchhiker's guide to mechanobiology. <i>Developmental Cell</i> , 2011 , 21, 35-47	10.2	343
96	Bioresponsive mesoporous silica nanoparticles for triggered drug release. <i>Journal of the American Chemical Society</i> , 2011 , 133, 19582-5	16.4	303
95	Assaying stem cell mechanobiology on microfabricated elastomeric substrates with geometrically modulated rigidity. <i>Nature Protocols</i> , 2011 , 6, 187-213	18.8	190

94	Decreased cell adhesion promotes angiogenesis in a Pyk2-dependent manner. <i>Experimental Cell Research</i> , 2011 , 317, 1860-71	4.2	30
93	Measurement and analysis of traction force dynamics in response to vasoactive agonists. <i>Integrative Biology (United Kingdom)</i> , 2011 , 3, 663-74	3.7	31
92	Subcellular spatial segregation of integrin subtypes by patterned multicomponent surfaces. <i>Integrative Biology (United Kingdom)</i> , 2011 , 3, 560-7	3.7	50
91	Micron-scale spatially patterned, covalently immobilized vascular endothelial growth factor on hydrogels accelerates endothelial tubulogenesis and increases cellular angiogenic responses. <i>Tissue Engineering - Part A</i> , 2011 , 17, 221-9	3.9	80
90	Control of surface chemistry, substrate stiffness, and cell function in a novel terpolymer methacrylate library. <i>Langmuir</i> , 2011 , 27, 1891-9	4	44
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4 Micro- and Nanoscale Force Techniques for Mechanotransduction 377-402

3 A Bile Duct-on-a-Chip with Organ-Level Functions

1

2 Optogenetic currents in myofibroblasts acutely alter electrophysiology and conduction of co-cultured cardiomyocytes

2

1 Directing Cholangiocyte Morphogenesis in Natural Biomaterial Scaffolds

1