Dennis E Discher

List of Publications by Year in Descending Order

269 papers	51,889 citations	84 h-index	227 g-index
301 ext. papers	57,194 ext. citations	8 avg, IF	7.85 L-index

#	Paper	IF	Citations
269	Gaussian curvature dilutes the nuclear lamina, favoring nuclear rupture, especially at high strain rate.. *Nucleus*, **2022**, 13, 129-143	3.9	1
268	Piezo1 and Piezo2 foster mechanical gating of K channels. *Cell Reports*, **2021**, 37, 110070	10.6	1
267	Scaling concepts in 'omics: Nuclear lamin-B scales with tumor growth and often predicts poor prognosis, unlike fibrosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
266	Macrophage checkpoint blockade: results from initial clinical trials, binding analyses, and CD47-SIRP□structure-function. *Antibody Therapeutics*, **2020**, 3, 80-94	5.8	35
265	Macrophages show higher levels of engulfment after disruption of interactions between CD47 and the checkpoint receptor SIRP□*Journal of Cell Science*, **2020**, 133,	5.3	19
264	Multivalent, Soluble Nano-Self Peptides Increase Phagocytosis of Antibody-Opsonized Targets while Suppressing "Self" Signaling. *ACS Nano*, **2020**, 14, 15083-15093	16.7	2
263	Tension in fibrils suppresses their enzymatic degradation - A molecular mechanism for 'use it or lose it'. *Matrix Biology*, **2020**, 85-86, 34-46	11.4	15
262	Nuclear failure, DNA damage, and cell cycle disruption after migration through small pores: a brief review. *Essays in Biochemistry*, **2019**, 63, 569-577	7.6	14
261	Constricted migration modulates stem cell differentiation. *Molecular Biology of the Cell*, **2019**, 30, 1985-1999	3.9	13
260	Mechanosensing by the Lamina Protects against Nuclear Rupture, DNA Damage, and Cell-Cycle Arrest. *Developmental Cell*, **2019**, 49, 920-935.e5	10.2	129
259	Scaling laws indicate distinct nucleation mechanisms of holes in the nuclear lamina. *Nature Physics*, **2019**, 15, 823-829	16.2	15
258	Inhibiting Tumor Fibrosis and Actomyosin through GPCR activation. *Trends in Cancer*, **2019**, 5, 197-199	12.5	4
257	Nuclear mechanics during and after constricted migration. *Acta Mechanica Sinica/Lixue Xuebao*, **2019**, 35, 299-308	2	10
256	From DNA damage to epithelial integrity: new roles for cell forces. *Molecular Biology of the Cell*, **2019**, 30, 1879-1881	3.5	2
255	Pulling the Roof Down on Anchored Nuclei. *Developmental Cell*, **2019**, 50, 130-131	10.2	
254	Rescue of DNA damage after constricted migration reveals a mechano-regulated threshold for cell cycle. *Journal of Cell Biology*, **2019**, 218, 2545-2563	7.3	44
253	The macrophage checkpoint CD47 : SIRP□for recognition of 'self' cells: from clinical trials of blocking antibodies to mechanobiological fundamentals. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2019**, 374, 20180217	5.8	21

252	Polymersomes **2019**, 537-550		
251	Nuclear Mechanics and Cancer Cell Migration. *Advances in Experimental Medicine and Biology*, **2019**, 1146, 117-130	3.6	9
250	Forced Unfolding of Proteins Directs Biochemical Cascades. *Biochemistry*, **2019**, 58, 4893-4902	3.2	10
249	Mesenchymal stem cell perspective: cell biology to clinical progress. *Npj Regenerative Medicine*, **2019**, 4, 22	15.8	532
248	Static and time-dependent mechanical response of organic matrix of bone. *Journal of the Mechanical Behavior of Biomedical Materials*, **2019**, 91, 315-325	4.1	6
247	Manipulating the mechanics of extracellular matrix to study effects on the nucleus and its structure. *Methods*, **2019**, 157, 3-14	4.6	2
246	Filomicelles Deliver a Chemo-Differentiation Combination of Paclitaxel and Retinoic Acid That Durably Represses Carcinomas in Liver to Prolong Survival. *Bioconjugate Chemistry*, **2018**, 29, 914-927	6.3	10
245	Progerin phosphorylation in interphase is lower and less mechanosensitive than lamin-A,C in iPS-derived mesenchymal stem cells. *Nucleus*, **2018**, 9, 230-245	3.9	28
244	Glassy worm-like micelles in solvent and shear mediated shape transitions. *Soft Matter*, **2018**, 14, 4194-4203	3.63	6
243	Constricted migration increases DNA damage and independently represses cell cycle. *Molecular Biology of the Cell*, **2018**, 29, 1948-1962	3.5	59
242	Stem Cell Differentiation is Regulated by Extracellular Matrix Mechanics. *Physiology*, **2018**, 33, 16-25	9.8	116
241	Cell-Extracellular Matrix Mechanobiology: Forceful Tools and Emerging Needs for Basic and Translational Research. *Nano Letters*, **2018**, 18, 1-8	11.5	67
240	Rationally engineered advances in cancer research. *APL Bioengineering*, **2018**, 2, 031601	6.6	0
239	Biomembrane Mechanical Properties Direct Diverse Cell Functions **2018**, 263-285		1
238	Nuclear mechanosensing. *Emerging Topics in Life Sciences*, **2018**, 2, 713-725	3.5	10
237	Biomembrane Adhesion to Substrates Topographically Patterned with Nanopits. *Biophysical Journal*, **2018**, 115, 1292-1306	2.9	4
236	Nuclear rupture at sites of high curvature compromises retention of DNA repair factors. *Journal of Cell Biology*, **2018**, 217, 3796-3808	7.3	78
235	Membrane fluctuations and acidosis regulate cooperative binding of 'marker of self' protein CD47 with the macrophage checkpoint receptor SIRP *Journal of Cell Science*, **2018**, 132,	5.3	33

234	Mechanosensing by the nucleus: From pathways to scaling relationships. *Journal of Cell Biology*, **2017**, 216, 305-315	7.3	212
233	Persistence-Driven Durotaxis: Generic, Directed Motility in Rigidity Gradients. *Physical Review Letters*, **2017**, 118, 078103	7.4	39
232	Genome variation across cancers scales with tissue stiffness - an invasion-mutation mechanism and implications for immune cell infiltration. *Current Opinion in Systems Biology*, **2017**, 2, 103-114	3.2	29
231	Spray stability of self-assembled filaments for delivery. *Journal of Controlled Release*, **2017**, 263, 162-171	11.7	5
230	Engineering macrophages to eat cancer: from "marker of self" CD47 and phagocytosis to differentiation. *Journal of Leukocyte Biology*, **2017**, 102, 31-40	6.5	32
229	Mechanosensing of matrix by stem cells: From matrix heterogeneity, contractility, and the nucleus in pore-migration to cardiogenesis and muscle stem cells in vivo. *Seminars in Cell and Developmental Biology*, **2017**, 71, 84-98	7.5	45
228	Matrix Mechanosensing: From Scaling Concepts in 'Omics Data to Mechanisms in the Nucleus, Regeneration, and Cancer. *Annual Review of Biophysics*, **2017**, 46, 295-315	21.1	62
227	Elastic-Fluid Model for DNA Damage and Mutation from Nuclear Fluid Segregation Due to Cell Migration. *Biophysical Journal*, **2017**, 112, 2271-2279	2.9	20
226	Matrix rigidity regulates microtubule network polarization in migration. *Cytoskeleton*, **2017**, 74, 114-124	2.4	24
225	DNA Damage Follows Repair Factor Depletion and Portends Genome Variation in Cancer Cells after Pore Migration. *Current Biology*, **2017**, 27, 210-223	6.3	163
224	Optimal Contractile Forces for a Mesenchymal Engine. *Developmental Cell*, **2017**, 42, 313-315	10.2	
223	Coordinated increase of nuclear tension and lamin-A with matrix stiffness outcompetes lamin-B receptor that favors soft tissue phenotypes. *Molecular Biology of the Cell*, **2017**, 28, 3333-3348	3.5	66
222	Rupture Dynamics and Chromatin Herniation in Deformed Nuclei. *Biophysical Journal*, **2017**, 113, 1060-1071	2.9	26
221	Mitotic progression following DNA damage enables pattern recognition within micronuclei. *Nature*, **2017**, 548, 466-470	50.4	659
220	Cover Image, Volume 74, Issue 3. *Cytoskeleton*, **2017**, 74, C1-C1	2.4	
219	SIRPA-Inhibited, Marrow-Derived Macrophages Engorge, Accumulate, and Differentiate in Antibody-Targeted Regression of Solid Tumors. *Current Biology*, **2017**, 27, 2065-2077.e6	6.3	65
218	As a Nucleus Enters a Small Pore, Chromatin Stretches and Maintains Integrity, Even with DNA Breaks. *Biophysical Journal*, **2017**, 112, 446-449	2.9	29
217	Cross-linked matrix rigidity and soluble retinoids synergize in nuclear lamina regulation of stem cell differentiation. *Molecular Biology of the Cell*, **2017**, 28, 2010-2022	3.5	43

216	The Nuclear Lamina: From Mechanosensing in Differentiation to Cancer Cell Migration **2016**, 175-195		2
215	Leishmania major Infection-Induced VEGF-A/VEGFR-2 Signaling Promotes Lymphangiogenesis That Controls Disease. *Journal of Immunology*, **2016**, 197, 1823-31	5.3	18
214	Mechanical signaling coordinates the embryonic heartbeat. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 8939-44	11.5	34
213	Nuclear constriction segregates mobile nuclear proteins away from chromatin. *Molecular Biology of the Cell*, **2016**, 27, 4011-4020	3.5	80
212	SnapShot: Mechanosensing Matrix. *Cell*, **2016**, 165, 1820-1820.e1	56.2	39
211	Nuclear lamins in cancer. *Cellular and Molecular Bioengineering*, **2016**, 9, 258-267	3.9	71
210	"Marker of Self" CD47 on lentiviral vectors decreases macrophage-mediated clearance and increases delivery to SIRPA-expressing lung carcinoma tumors. *Molecular Therapy - Methods and Clinical Development*, **2016**, 3, 16080	6.4	12
209	Filomicelles from aromatic diblock copolymers increase paclitaxel-induced tumor cell death and aneuploidy compared with aliphatic copolymers. *Nanomedicine*, **2016**, 11, 1551-69	5.6	12
208	Mechanotransduction in cancer. *Current Opinion in Chemical Engineering*, **2016**, 11, 77-84	5.4	92
207	Fractal heterogeneity in minimal matrix models of scars modulates stiff-niche stem-cell responses via nuclear exit of a mechanorepressor. *Nature Materials*, **2015**, 14, 951-60	27	91
206	Blood and immune cell engineering: Cytoskeletal contractility and nuclear rheology impact cell lineage and localization: Biophysical regulation of hematopoietic differentiation and trafficking. *BioEssays*, **2015**, 37, 633-42	4.1	3
205	Macrophage engulfment of a cell or nanoparticle is regulated by unavoidable opsonization, a species-specific 'Marker of Self' CD47, and target physical properties. *Current Opinion in Immunology*, **2015**, 35, 107-12	7.8	64
204	Molecular Modeling of Block Copolymer Self-Assembly and Micellar Drug Delivery **2015**, 53-80		6
203	Myosin-II repression favors pre/proplatelets but shear activation generates platelets and fails in macrothrombocytopenia. *Blood*, **2015**, 125, 525-33	2.2	34
202	Cell rigidity and shape override CD47's "self"-signaling in phagocytosis by hyperactivating myosin-II. *Blood*, **2015**, 125, 542-52	2.2	86
201	The reason sickle reticulocytes expose PS. *Blood*, **2015**, 126, 1737-8	2.2	5
200	Stem cell mechanobiology: diverse lessons from bone marrow. *Trends in Cell Biology*, **2015**, 25, 523-32	18.3	80
199	Engineered Donor Marrow Macrophages Phagocytose Cancer Cells and Aggressively Shrink Solid Tumor Xenografts Compared to Tumor Associated Macrophages. *Blood*, **2015**, 126, 2214-2214	2.2	

198	Combining insoluble and soluble factors to steer stem cell fate. *Nature Materials*, **2014**, 13, 532-7	27	72
197	Nuclear lamin stiffness is a barrier to 3D migration, but softness can limit survival. *Journal of Cell Biology*, **2014**, 204, 669-82	7.3	388
196	Material control of stem cell differentiation: challenges in nano-characterization. *Current Opinion in Biotechnology*, **2014**, 28, 46-50	11.4	23
195	Contractile forces sustain and polarize hematopoiesis from stem and progenitor cells. *Cell Stem Cell*, **2014**, 14, 81-93	18	91
194	The nuclear lamina is mechano-responsive to ECM elasticity in mature tissue. *Journal of Cell Science*, **2014**, 127, 3005-15	5.3	143
193	From stealthy polymersomes and filomicelles to "self" Peptide-nanoparticles for cancer therapy. *Annual Review of Chemical and Biomolecular Engineering*, **2014**, 5, 281-99	8.9	57
192	Matrix elasticity regulates lamin-A,C phosphorylation and turnover with feedback to actomyosin. *Current Biology*, **2014**, 24, 1909-17	6.3	234
191	Stress sensitivity and mechanotransduction during heart development. *Current Biology*, **2014**, 24, R495-501	10.3	49
190	How deeply cells feel? **2014**,		1
189	Highly cited research articles in Journal of Controlled Release: Commentaries and perspectives by authors. *Journal of Controlled Release*, **2014**, 190, 29-74	11.7	47
188	Nuclear lamin stiffness is a barrier to 3D-migration, but softness can limit survival **2014**,		1
187	Systems mechanobiology: tension-inhibited protein turnover is sufficient to physically control gene circuits. *Biophysical Journal*, **2014**, 107, 2734-43	2.9	32
186	Simple insoluble cues specify stem cell differentiation. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 18104-5	11.5	7
185	TCR triggering by pMHC ligands tethered on surfaces via poly(ethylene glycol) depends on polymer length. *PLoS ONE*, **2014**, 9, e112292	3.7	25
184	Mechanobiology of bone marrow stem cells: from myosin-II forces to compliance of matrix and nucleus in cell forms and fates. *Differentiation*, **2013**, 86, 77-86	3.5	53
183	Osmotic challenge drives rapid and reversible chromatin condensation in chondrocytes. *Biophysical Journal*, **2013**, 104, 759-69	2.9	77
182	Domain formation in cholesterol/phospholipid membranes exposed to adhesive surfaces or environments. *Soft Matter*, **2013**, 9, 8438	3.6	19
181	Nuclear lamin-A scales with tissue stiffness and enhances matrix-directed differentiation. *Science*, **2013**, 341, 1240104	33.3	1188

180	Lamins regulate cell trafficking and lineage maturation of adult human hematopoietic cells. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 18892-7	11.5	134
179	Filomicelles in nanomedicine - from flexible, fragmentable, and ligand-targetable drug carrier designs to combination therapy for brain tumors. *Journal of Materials Chemistry B*, **2013**, 1, 5177-5185	7.3	47
178	Probing the structure of PEGylated-lipid assemblies by coarse-grained molecular dynamics. *Soft Matter*, **2013**, 9, 11549	3.6	23
177	Heart-specific stiffening in early embryos parallels matrix and myosin expression to optimize beating. *Current Biology*, **2013**, 23, 2434-9	6.3	137
176	Minimal "Self" peptides that inhibit phagocytic clearance and enhance delivery of nanoparticles. *Science*, **2013**, 339, 971-5	33.3	667
175	Dynamic domains in polymersomes: mixtures of polyanionic and neutral diblocks respond more rapidly to changes in calcium than to pH. *Langmuir*, **2013**, 29, 7499-508	4	9
174	Adhesion-induced phase behavior of two-component membranes and vesicles. *International Journal of Molecular Sciences*, **2013**, 14, 2203-29	6.3	8
173	Label-free mass spectrometry exploits dozens of detected peptides to quantify lamins in wildtype and knockdown cells. *Nucleus*, **2013**, 4, 450-9	3.9	14
172	How Does CD47-SIRPÐDon□Eat Me Signal□Physically Signal Self. *Blood*, **2013**, 122, 953-953	2.2	1
171	RhoA is essential for maintaining normal megakaryocyte ploidy and platelet generation. *PLoS ONE*, **2013**, 8, e69315	3.7	31
170	Enhancing the efficacy of drug-loaded nanocarriers against brain tumors by targeted radiation therapy. *Oncotarget*, **2013**, 4, 64-79	3.3	43
169	Platelet-Like-Particles Sheared From Myosin-II-Inhibited Megakaryocytes Highlights The Elevated Thrombocrit Of May-Hegglin Anomaly. *Blood*, **2013**, 122, 2426-2426	2.2	
168	Polymersomes and Filomicelles **2013**, 183-210		1
167	Subcellular organization: change of phase in partitioning the cellular milieu. *Current Biology*, **2012**, 22, R188-90	6.3	
166	Nanoparticle shape improves delivery: rational coarse grain molecular dynamics (rCG-MD) of taxol in worm-like PEG-PCL micelles. *Advanced Materials*, **2012**, 24, 3823-30	24	124
165	Marker-of-self becomes marker-of-senescence. *Blood*, **2012**, 119, 5343-4	2.2	3
164	Crawling from soft to stiff matrix polarizes the cytoskeleton and phosphoregulates myosin-II heavy chain. *Journal of Cell Biology*, **2012**, 199, 669-83	7.3	210
163	Degradable Poly(ethylene oxide)-block-polycaprolactone Worm-like Micelles: From Phase Transitions and Molecular Simulation to Persistent Circulation and Shrinking Tumors. *ACS Symposium Series*, **2012**, 255-285	0.4	

162	Cardiomyocytes from late embryos and neonates do optimal work and striate best on substrates with tissue-level elasticity: metrics and mathematics. *Biomechanics and Modeling in Mechanobiology*, **2012**, 11, 1219-25	3.8	17
161	Hyaluronic acid matrices show matrix stiffness in 2D and 3D dictates cytoskeletal order and myosin-II phosphorylation within stem cells. *Integrative Biology (United Kingdom)*, **2012**, 4, 422-30	3.7	95
160	Mechanical force in T cell receptor signal initiation. *Frontiers in Immunology*, **2012**, 3, 217	8.4	20
159	Shear-Optimized Platelet-Like-Particles From High Ploidy Mks: From Segregation to Composition and Activation. *Blood*, **2012**, 120, 3456-3456	2.2	
158	RhoA Is Essential for Maintaining Normal Megakaryocyte Ploidy Distribution and Platelet Generation. *Blood*, **2012**, 120, 385-385	2.2	
157	Hierarchical Determination of Nuclear Deformability by Lamin Isoforms During Adult Hematopoiesis: Implications in Blood Cell Trafficking. *Blood*, **2012**, 120, 1200-1200	2.2	
156	Striated acto-myosin fibers can reorganize and register in response to elastic interactions with the matrix. *Biophysical Journal*, **2011**, 100, 2706-15	2.9	37
155	Divalent cation-dependent formation of electrostatic PIP2 clusters in lipid monolayers. *Biophysical Journal*, **2011**, 101, 2178-84	2.9	65
154	Endothelial targeting of antibody-decorated polymeric filomicelles. *ACS Nano*, **2011**, 5, 6991-9	16.7	95
153	Curvature, rigidity, and pattern formation in functional polymer micelles and vesicles From dynamic visualization to molecular simulation. *Current Opinion in Solid State and Materials Science*, **2011**, 15, 277-284	12	33
152	Upregulation of paxillin and focal adhesion signaling follows Dystroglycan Complex deletions and promotes a hypertensive state of differentiation. *European Journal of Cell Biology*, **2011**, 90, 249-60	6.1	20
151	Bio-inspired, bioengineered and biomimetic drug delivery carriers. *Nature Reviews Drug Discovery*, **2011**, 10, 521-35	64.1	866
150	The effect of CD47 modified polymer surfaces on inflammatory cell attachment and activation. *Biomaterials*, **2011**, 32, 4317-26	15.6	58
149	Lung vascular targeting through inhalation delivery: insight from filamentous viruses and other shapes. *IUBMB Life*, **2011**, 63, 607-12	4.7	20
148	Raft registration across bilayers in a molecularly detailed model. *Soft Matter*, **2011**, 7, 8182	3.6	48
147	Morphologies of charged diblock copolymers simulated with a neutral coarse-grained model. *Journal of Physical Chemistry B*, **2011**, 115, 4689-95	3.4	15
146	Protein unfolding accounts for the unusual mechanical behavior of fibrin networks. *Acta Biomaterialia*, **2011**, 7, 2374-83	10.8	59
145	Myosin-II inhibition and soft 2D matrix maximize multinucleation and cellular projections typical of platelet-producing megakaryocytes. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 11458-63	11.5	66

144	Cysteine shotgun-mass spectrometry (CS-MS) reveals dynamic sequence of protein structure changes within mutant and stressed cells. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 8269-74	11.5	30
143	Myosin-II Is a Major Modulator of Human Hematopoietic Stem Cell Proliferation and Differentiation. *Blood*, **2011**, 118, 2343-2343	2.2	
142	Stem cells feel the difference. *Nature Methods*, **2010**, 7, 695-7	21.6	82
141	Polymersomes and Wormlike Micelles Made Fluorescent by Direct Modifications of Block Copolymer Amphiphiles. *International Journal of Polymer Science*, **2010**, 2010, 1-10	2.4	10
140	Mechanical Regulation of Cells by Materials and Tissues. *MRS Bulletin*, **2010**, 35, 578-583	3.2	35
139	Matrix elasticity, cytoskeletal forces and physics of the nucleus: how deeply do cells 'feel' outside and in?. *Journal of Cell Science*, **2010**, 123, 297-308	5.3	307
138	Curvature-coupled hydration of Semicrystalline Polymer Amphiphiles yields flexible Worm Micelles but favors rigid Vesicles: polycaprolactone-based block copolymers. *Macromolecules*, **2010**, 43, 9736-9746	5.5	106
137	Self inhibition of phagocytosis: the affinity of 'marker of self' CD47 for SIRPalpha dictates potency of inhibition but only at low expression levels. *Blood Cells, Molecules, and Diseases*, **2010**, 45, 67-74	2.1	102
136	Physical plasticity of the nucleus and its manipulation. *Methods in Cell Biology*, **2010**, 98, 207-20	1.8	11
135	How deeply cells feel: methods for thin gels. *Journal of Physics Condensed Matter*, **2010**, 22, 194116	1.8	223
134	Curvature-driven molecular demixing in the budding and breakup of mixed component Worm-like Micelles. *Soft Matter*, **2010**, 6, 1419-1425	3.6	56
133	Exon-skipped dystrophins for treatment of Duchenne muscular dystrophy: mass spectrometry mapping of most exons and cooperative domain designs based on single molecule mechanics. *Cytoskeleton*, **2010**, 67, 796-807	2.4	15
132	Polymer Vesicles with a Red Cell-like Surface Charge: Microvascular Imaging and in vivo Tracking with Near-Infrared Fluorescence. *Macromolecular Rapid Communications*, **2010**, 31, 135-41	4.8	31
131	Preparation of collagen-coated gels that maximize in vitro myogenesis of stem cells by matching the lateral elasticity of in vivo muscle. *Methods in Molecular Biology*, **2010**, 621, 185-202	1.4	25
130	Myosin-II Plays Central Roles In Cell Life and Death Decisions During Adult Hematopoiesis.. *Blood*, **2010**, 116, 1595-1595	2.2	
129	The Foldome in cellular force transduction. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 3341-2	0.9	1
128	Nanopolymeric Therapeutics. *MRS Bulletin*, **2009**, 34, 422-431	3.2	48
127	Polymersome delivery of siRNA and antisense oligonucleotides. *Journal of Controlled Release*, **2009**, 134, 132-40	11.7	154

126	Conformational changes and signaling in cell and matrix physics. *Current Biology*, **2009**, 19, R781-9	6.3	69
125	Stem cells, microenvironment mechanics, and growth factor activation. *Current Opinion in Cell Biology*, **2009**, 21, 630-5	9	78
124	Biomechanics: cell research and applications for the next decade. *Annals of Biomedical Engineering*, **2009**, 37, 847-59	4.7	147
123	Matrix strains induced by cells: Computing how far cells can feel. *Cellular and Molecular Bioengineering*, **2009**, 2, 39-48	3.9	150
122	Spotted vesicles, striped micelles and Janus assemblies induced by ligand binding. *Nature Materials*, **2009**, 8, 843-9	27	255
121	Filamentous polymer nanocarriers of tunable stiffness that encapsulate the therapeutic enzyme catalase. *Biomacromolecules*, **2009**, 10, 1324-30	6.9	38
120	Flexible filaments for in vivo imaging and delivery: persistent circulation of filomicelles opens the dosage window for sustained tumor shrinkage. *Molecular Pharmaceutics*, **2009**, 6, 1343-52	5.6	227
119	Calcium-dependent lateral organization in phosphatidylinositol 4,5-bisphosphate (PIP2)- and cholesterol-containing monolayers. *Biochemistry*, **2009**, 48, 8241-8	3.2	78
118	Polymersome carriers: from self-assembly to siRNA and protein therapeutics. *European Journal of Pharmaceutics and Biopharmaceutics*, **2009**, 71, 463-74	5.7	317
117	Growth factors, matrices, and forces combine and control stem cells. *Science*, **2009**, 324, 1673-7	33.3	2065
116	Cross-correlated TIRF/AFM reveals asymmetric distribution of force-generating heads along self-assembled, "synthetic" myosin filaments. *Biophysical Journal*, **2009**, 96, 1952-60	2.9	26
115	Multiscale mechanics of fibrin polymer: gel stretching with protein unfolding and loss of water. *Science*, **2009**, 325, 741-4	33.3	285
114	Cell differentiation through tissue elasticity-coupled, myosin-driven remodeling. *Current Opinion in Cell Biology*, **2008**, 20, 609-15	9	78
113	Cys shotgun labeling of macrophages adhering to and engulfing Ig-opsonized cells. *Transfusion Clinique Et Biologique*, **2008**, 15, 58-61	1.9	1
112	Organization of Self-Assembled Peptide−Polymer Nanofibers in Solution. *Macromolecules*, **2008**, 41, 1430-1437	5.5	54
111	Inhibition of "self" engulfment through deactivation of myosin-II at the phagocytic synapse between human cells. *Journal of Cell Biology*, **2008**, 180, 989-1003	7.3	278
110	Embryonic cardiomyocytes beat best on a matrix with heart-like elasticity: scar-like rigidity inhibits beating. *Journal of Cell Science*, **2008**, 121, 3794-802	5.3	668
109	Matrix elasticity, cytoskeletal tension, and TGF-beta: the insoluble and soluble meet. *Science Signaling*, **2008**, 1, pe13	8.8	136

108	Inhibition of self-engulfment through deactivation of myosin-II at the phagocytic synapse between human cells. *Journal of Experimental Medicine*, **2008**, 205, i8-i8	16.6	
107	Multiscale Mechanics of Fibrin Clots. *Blood*, **2008**, 112, 3089-3089	2.2	
106	Forced unfolding of coiled-coils in fibrinogen by single-molecule AFM. *Biophysical Journal*, **2007**, 92, L39-41	4.9	117
105	Microscopic methods for measuring the elasticity of gel substrates for cell culture: microspheres, microindenters, and atomic force microscopy. *Methods in Cell Biology*, **2007**, 83, 47-65	1.8	54
104	Emerging Applications of Polymersomes in Delivery: from Molecular Dynamics to Shrinkage of Tumors. *Progress in Polymer Science*, **2007**, 32, 838-857	29.6	332
103	Shape effects of filaments versus spherical particles in flow and drug delivery. *Nature Nanotechnology*, **2007**, 2, 249-55	28.7	2056
102	Crosslinked actin networks show liquid crystal elastomer behaviour, including soft-mode elasticity. *Nature Physics*, **2007**, 3, 354-360	16.2	41
101	Cell responses to the mechanochemical microenvironment--implications for regenerative medicine and drug delivery. *Advanced Drug Delivery Reviews*, **2007**, 59, 1329-39	18.5	315
100	Micelles of different morphologies--advantages of worm-like filomicelles of PEO-PCL in paclitaxel delivery. *Pharmaceutical Research*, **2007**, 24, 2099-109	4.5	240
99	Phylogenetic divergence of CD47 interactions with human signal regulatory protein alpha reveals locus of species specificity. Implications for the binding site. *Journal of Biological Chemistry*, **2007**, 282, 1805-18	5.4	52
98	Physical plasticity of the nucleus in stem cell differentiation. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 15619-24	11.5	616
97	Soft Filaments Circulate Longer Than Spherical Particles - Shape Effects in Flow and Drug Delivery **2007**, 125		
96	Pathogenic proline mutation in the linker between spectrin repeats: disease caused by spectrin unfolding. *Blood*, **2007**, 109, 3538-43	2.2	30
95	Forced unfolding of proteins within cells. *Science*, **2007**, 317, 663-6	33.3	295
94	Nuclear mechanics and methods. *Methods in Cell Biology*, **2007**, 83, 269-94	1.8	45
93	Nuclear pores and membrane holes: generic models for confined chains and entropic barriers in pore stabilization. *Soft Matter*, **2007**, 3, 364-371	3.6	14
92	Microtissue elasticity: measurements by atomic force microscopy and its influence on cell differentiation. *Methods in Cell Biology*, **2007**, 83, 521-45	1.8	138
91	Effect of polymer amphiphilicity on loading of a therapeutic enzyme into protective filamentous and spherical polymer nanocarriers. *Biomacromolecules*, **2007**, 8, 3914-21	6.9	50

90	Biodegradable polymersomes loaded with both paclitaxel and doxorubicin permeate and shrink tumors, inducing apoptosis in proportion to accumulated drug. *Journal of Controlled Release*, **2006**, 116, 150-8	11.7	473
89	Post-translational regulation of expression and conformation of an immunoglobulin domain in yeast surface display. *Biotechnology and Bioengineering*, **2006**, 93, 159-68	4.9	22
88	Grafting short peptides onto polybutadiene-block-poly(ethylene oxide): a platform for self-assembling hybrid amphiphiles. *Angewandte Chemie - International Edition*, **2006**, 45, 7578-81	16.4	99
87	Polymersomes as viral capsid mimics. *Drug Development Research*, **2006**, 67, 4-14	5.1	54
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