

# Denis Wirtz

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/549078/denis-wirtz-publications-by-citations.pdf>

**Version:** 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

225  
papers

19,694  
citations

78  
h-index

135  
g-index

237  
ext. papers

22,634  
ext. citations

7.7  
avg. IF

7.01  
L-index

#	Paper	IF	Citations
225	Reversible hydrogels from self-assembling artificial proteins. <i>Science</i> , <b>1998</b> , 281, 389-92	33.3	903
224	The physics of cancer: the role of physical interactions and mechanical forces in metastasis. <i>Nature Reviews Cancer</i> , <b>2011</b> , 11, 512-22	31.3	814
223	Hypoxia and the extracellular matrix: drivers of tumour metastasis. <i>Nature Reviews Cancer</i> , <b>2014</b> , 14, 430-9	31.3	785
222	Micro- and macrorheology of mucus. <i>Advanced Drug Delivery Reviews</i> , <b>2009</b> , 61, 86-100	18.5	690
221	A distinctive role for focal adhesion proteins in three-dimensional cell motility. <i>Nature Cell Biology</i> , <b>2010</b> , 12, 598-604	23.4	440
220	Particle-tracking microrheology of living cells: principles and applications. <i>Annual Review of Biophysics</i> , <b>2009</b> , 38, 301-26	21.1	436
219	Mechanics of living cells measured by laser tracking microrheology. <i>Biophysical Journal</i> , <b>2000</b> , 78, 1736-47.9	21.1	430
218	A perinuclear actin cap regulates nuclear shape. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 19017-22	11.5	413
217	Micromechanical mapping of live cells by multiple-particle-tracking microrheology. <i>Biophysical Journal</i> , <b>2002</b> , 83, 3162-76	2.9	328
216	Efficient active transport of gene nanocarriers to the cell nucleus. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 3878-82	11.5	318
215	Hypoxia-inducible factor 1 (HIF-1) promotes extracellular matrix remodeling under hypoxic conditions by inducing P4HA1, P4HA2, and PLOD2 expression in fibroblasts. <i>Journal of Biological Chemistry</i> , <b>2013</b> , 288, 10819-29	5.4	309
214	Water permeation drives tumor cell migration in confined microenvironments. <i>Cell</i> , <b>2014</b> , 157, 611-23	56.2	299
213	Hypoxia-inducible factor 1 is a master regulator of breast cancer metastatic niche formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 16369-74	11.5	296
212	A comparison of methods to assess cell mechanical properties. <i>Nature Methods</i> , <b>2018</b> , 15, 491-498	21.6	265
211	Nuclear lamin A/C deficiency induces defects in cell mechanics, polarization, and migration. <i>Biophysical Journal</i> , <b>2007</b> , 93, 2542-52	2.9	238
210	Cell migration without a lamellipodium: translation of actin dynamics into cell movement mediated by tropomyosin. <i>Journal of Cell Biology</i> , <b>2005</b> , 168, 619-31	7.3	236
209	Transient Opening of the Mitochondrial Permeability Transition Pore Induces Microdomain Calcium Transients in Astrocyte Processes. <i>Neuron</i> , <b>2017</b> , 93, 587-605.e7	13.9	220

208	Enhanced viscoelasticity of human cystic fibrotic sputum correlates with increasing microheterogeneity in particle transport. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 50393-401	5.4	216
207	Focal adhesion size uniquely predicts cell migration. <i>FASEB Journal</i> , <b>2013</b> , 27, 1351-61	0.9	215
206	Micro-organization and visco-elasticity of the interphase nucleus revealed by particle nanotracking. <i>Journal of Cell Science</i> , <b>2004</b> , 117, 2159-67	5.3	208
205	Structural requirements for the assembly of LINC complexes and their function in cellular mechanical stiffness. <i>Experimental Cell Research</i> , <b>2008</b> , 314, 1892-905	4.2	207
204	Collagen prolyl hydroxylases are essential for breast cancer metastasis. <i>Cancer Research</i> , <b>2013</b> , 73, 3285-96	10.1	198
203	Three-dimensional cell migration does not follow a random walk. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 3949-54	11.5	197
202	Multiple-particle tracking measurements of heterogeneities in solutions of actin filaments and actin bundles. <i>Biophysical Journal</i> , <b>2000</b> , 79, 1095-106	2.9	190
201	Dynamics of individual flexible polymers in a shear flow. <i>Nature</i> , <b>1999</b> , 399, 564-6	50.4	189
200	Single-molecule analysis of cadherin-mediated cell-cell adhesion. <i>Journal of Cell Science</i> , <b>2006</b> , 119, 66-74	5.3	179
199	Procollagen lysyl hydroxylase 2 is essential for hypoxia-induced breast cancer metastasis. <i>Molecular Cancer Research</i> , <b>2013</b> , 11, 456-66	6.6	175
198	Strain hardening of actin filament networks. Regulation by the dynamic cross-linking protein alpha-actinin. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 35886-92	5.4	174
197	Diffusing wave spectroscopy microrheology of actin filament networks. <i>Biophysical Journal</i> , <b>1999</b> , 76, 1063-71	2.9	174
196	MinC spatially controls bacterial cytokinesis by antagonizing the scaffolding function of FtsZ. <i>Current Biology</i> , <b>2008</b> , 18, 235-44	6.3	171
195	Fibronectin fibrillogenesis regulates three-dimensional neovessel formation. <i>Genes and Development</i> , <b>2008</b> , 22, 1231-43	12.6	164
194	Dysfunctional connections between the nucleus and the actin and microtubule networks in laminopathic models. <i>Biophysical Journal</i> , <b>2008</b> , 95, 5462-75	2.9	157
193	Magnetic tweezers for DNA micromanipulation. <i>Review of Scientific Instruments</i> , <b>2000</b> , 71, 4561	1.7	152
192	Dynamic cross-linking by alpha-actinin determines the mechanical properties of actin filament networks. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 9570-6	5.4	152
191	Single molecule characterization of P-selectin/ligand binding. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 10556-61	5.4	149

190	The TnsTand TutsTof intermediate filament organization. <i>Trends in Cell Biology</i> , <b>2000</b> , 10, 420-8	18.3	148
189	Intracellular mechanics of migrating fibroblasts. <i>Molecular Biology of the Cell</i> , <b>2005</b> , 16, 328-38	3.5	145
188	Towards a regional approach to cell mechanics. <i>Trends in Cell Biology</i> , <b>2004</b> , 14, 160-6	18.3	142
187	Hypoxia-inducible factors mediate coordinated RhoA-ROCK1 expression and signaling in breast cancer cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, E384-93	11.5	139
186	Mechanics and dynamics of actin-driven thin membrane protrusions. <i>Biophysical Journal</i> , <b>2006</b> , 90, 65-76.2.9		139
185	Probing single-cell micromechanics in vivo: the microrheology of <i>C. elegans</i> developing embryos. <i>Biophysical Journal</i> , <b>2006</b> , 90, 4712-9	2.9	135
184	Three-dimensional matrix fiber alignment modulates cell migration and MT1-MMP utility by spatially and temporally directing protrusions. <i>Scientific Reports</i> , <b>2015</b> , 5, 14580	4.9	132
183	Actin cap associated focal adhesions and their distinct role in cellular mechanosensing. <i>Scientific Reports</i> , <b>2012</b> , 2, 555	4.9	132
182	Mechanics and multiple-particle tracking microheterogeneity of alpha-actinin-cross-linked actin filament networks. <i>Biophysical Journal</i> , <b>2001</b> , 81, 1643-56	2.9	131
181	A Hot-spotTmutation alters the mechanical properties of keratin filament networks. <i>Nature Cell Biology</i> , <b>2001</b> , 3, 503-6	23.4	130
180	The LINC-anchored actin cap connects the extracellular milieu to the nucleus for ultrafast mechanotransduction. <i>Scientific Reports</i> , <b>2013</b> , 3, 1087	4.9	125
179	High-throughput secretomic analysis of single cells to assess functional cellular heterogeneity. <i>Analytical Chemistry</i> , <b>2013</b> , 85, 2548-56	7.8	122
178	The Mechanobiology of Aging. <i>Annual Review of Biomedical Engineering</i> , <b>2015</b> , 17, 113-141	12	120
177	Condensation of FtsZ filaments can drive bacterial cell division. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 121-6	11.5	118
176	Mapping local matrix remodeling induced by a migrating tumor cell using three-dimensional multiple-particle tracking. <i>Biophysical Journal</i> , <b>2008</b> , 95, 4077-88	2.9	118
175	The distinct roles of the nucleus and nucleus-cytoskeleton connections in three-dimensional cell migration. <i>Scientific Reports</i> , <b>2012</b> , 2, 488	4.9	116
174	A direct interaction between actin and vimentin filaments mediated by the tail domain of vimentin. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 30393-9	5.4	116
173	A physical sciences network characterization of non-tumorigenic and metastatic cells. <i>Scientific Reports</i> , <b>2013</b> , 3, 1449	4.9	113

172	Keratin filament suspensions show unique micromechanical properties. <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 19145-51	5.4	113
171	Compliance of actin filament networks measured by particle-tracking microrheology and diffusing wave spectroscopy. <i>Rheologica Acta</i> , <b>1998</b> , 37, 387-398	2.3	110
170	Micromechanics and ultrastructure of actin filament networks crosslinked by human fascin: a comparison with alpha-actinin. <i>Journal of Molecular Biology</i> , <b>2001</b> , 310, 351-66	6.5	109
169	Modeling the two-way feedback between contractility and matrix realignment reveals a nonlinear mode of cancer cell invasion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E1617-E1626	11.5	105
168	The bimodal role of filamin in controlling the architecture and mechanics of F-actin networks. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 1819-26	5.4	104
167	Distinct kinetic and mechanical properties govern selectin-leukocyte interactions. <i>Journal of Cell Science</i> , <b>2004</b> , 117, 2503-11	5.3	100
166	Transport of polymeric nanoparticle gene carriers in gastric mucus. <i>Biotechnology Progress</i> , <b>2004</b> , 20, 851-7	2.8	100
165	Altering mucus rheology to "solidify" human mucus at the nanoscale. <i>PLoS ONE</i> , <b>2009</b> , 4, e4294	3.7	99
164	Rheology and Microrheology of Semiflexible Polymer Solutions: Actin Filament Networks. <i>Macromolecules</i> , <b>1998</b> , 31, 6486-6492	5.5	98
163	Magnetic tweezers measurement of single molecule torque. <i>Nano Letters</i> , <b>2009</b> , 9, 1720-5	11.5	97
162	Inhibition of Spleen Tyrosine Kinase Potentiates Paclitaxel-Induced Cytotoxicity in Ovarian Cancer Cells by Stabilizing Microtubules. <i>Cancer Cell</i> , <b>2015</b> , 28, 82-96	24.3	96
161	The assembly of MreB, a prokaryotic homolog of actin. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 2628-354	3.4	95
160	Cytoskeletal tension induces the polarized architecture of the nucleus. <i>Biomaterials</i> , <b>2015</b> , 48, 161-72	15.6	91
159	How actin crosslinking and bundling proteins cooperate to generate an enhanced cell mechanical response. <i>Biochemical and Biophysical Research Communications</i> , <b>2005</b> , 334, 183-92	3.4	91
158	Ballistic intracellular nanorheology reveals ROCK-hard cytoplasmic stiffening response to fluid flow. <i>Journal of Cell Science</i> , <b>2006</b> , 119, 1760-8	5.3	90
157	Synergistic IL-6 and IL-8 paracrine signalling pathway infers a strategy to inhibit tumour cell migration. <i>Nature Communications</i> , <b>2017</b> , 8, 15584	17.4	87
156	Direct measurement of the transport properties of a single DNA molecule. <i>Physical Review Letters</i> , <b>1995</b> , 75, 2436-2439	7.4	86
155	Confinement Sensing and Signal Optimization via Piezo1/PKA and Myosin II Pathways. <i>Cell Reports</i> , <b>2016</b> , 15, 1430-1441	10.6	86

154	Structure of the actin crosslinking core of fimbrin. <i>Structure</i> , <b>2004</b> , 12, 999-1013	5.2	84
153	Tight coupling between nucleus and cell migration through the perinuclear actin cap. <i>Journal of Cell Science</i> , <b>2014</b> , 127, 2528-41	5.3	83
152	Microrheology and ROCK signaling of human endothelial cells embedded in a 3D matrix. <i>Biophysical Journal</i> , <b>2006</b> , 91, 3499-507	2.9	83
151	Nuclear lamin A/C harnesses the perinuclear apical actin cables to protect nuclear morphology. <i>Nature Communications</i> , <b>2017</b> , 8, 2123	17.4	81
150	A mechanism of coupling RCC1 mobility to RanGTP production on the chromatin in vivo. <i>Journal of Cell Biology</i> , <b>2003</b> , 160, 635-44	7.3	80
149	Cdc42 mediates nucleus movement and MTOC polarization in Swiss 3T3 fibroblasts under mechanical shear stress. <i>Molecular Biology of the Cell</i> , <b>2005</b> , 16, 871-80	3.5	78
148	Pairwise assembly determines the intrinsic potential for self-organization and mechanical properties of keratin filaments. <i>Molecular Biology of the Cell</i> , <b>2002</b> , 13, 382-91	3.5	78
147	Rho kinase regulates the intracellular micromechanical response of adherent cells to rho activation. <i>Molecular Biology of the Cell</i> , <b>2004</b> , 15, 3475-84	3.5	77
146	Engineered Models of Confined Cell Migration. <i>Annual Review of Biomedical Engineering</i> , <b>2016</b> , 18, 159-80	8.2	75
145	PEG-based hydrogels with collagen mimetic peptide-mediated and tunable physical cross-links. <i>Biomacromolecules</i> , <b>2010</b> , 11, 2336-44	6.9	74
144	Dimensional and temporal controls of three-dimensional cell migration by zyxin and binding partners. <i>Nature Communications</i> , <b>2012</b> , 3, 719	17.4	73
143	High-frequency viscoelasticity of crosslinked actin filament networks measured by diffusing wave spectroscopy. <i>Rheologica Acta</i> , <b>1998</b> , 37, 97-106	2.3	72
142	Morphology of the lamellipodium and organization of actin filaments at the leading edge of crawling cells. <i>Biophysical Journal</i> , <b>2005</b> , 89, 3589-602	2.9	72
141	Hypoxia Selectively Enhances Integrin $\beta$ Receptor Expression in Breast Cancer to Promote Metastasis. <i>Molecular Cancer Research</i> , <b>2017</b> , 15, 723-734	6.6	71
140	Cross-linking FtsZ polymers into coherent Z rings. <i>Molecular Microbiology</i> , <b>2010</b> , 78, 651-68	4.1	68
139	Volume regulation and shape bifurcation in the cell nucleus. <i>Journal of Cell Science</i> , <b>2015</b> , 128, 3375-85	5.3	67
138	One-dimensional patterns and wavelength selection in magnetic fluids. <i>Physical Review Letters</i> , <b>1994</b> , 72, 2294-2297	7.4	67
137	Mismatch in mechanical and adhesive properties induces pulsating cancer cell migration in epithelial monolayer. <i>Biophysical Journal</i> , <b>2012</b> , 102, 2731-41	2.9	66

136	Real-time intracellular transport of gene nanocarriers studied by multiple particle tracking. <i>Biotechnology Progress</i> , <b>2004</b> , 20, 598-602	2.8	66
135	Mechanics of enveloped virus entry into host cells. <i>Biophysical Journal</i> , <b>2006</b> , 90, L10-2	2.9	66
134	Phase transitions induced by electric fields in near-critical polymer solutions. <i>Physical Review Letters</i> , <b>1993</b> , 71, 2236-2239	7.4	66
133	Single-molecule analysis of human immunodeficiency virus type 1 gp120-receptor interactions in living cells. <i>Journal of Virology</i> , <b>2005</b> , 79, 14748-55	6.6	64
132	Statistical analysis of cell migration in 3D using the anisotropic persistent random walk model. <i>Nature Protocols</i> , <b>2015</b> , 10, 517-27	18.8	63
131	Nuclear envelope breakdown requires overcoming the mechanical integrity of the nuclear lamina. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 43462-7	5.4	62
130	The nonhelical tail domain of keratin 14 promotes filament bundling and enhances the mechanical properties of keratin intermediate filaments in vitro. <i>Journal of Cell Biology</i> , <b>2001</b> , 155, 747-54	7.3	62
129	Receptor-ligand binding: TatchTbonds finally caught. <i>Current Biology</i> , <b>2003</b> , 13, R611-3	6.3	58
128	{alpha}-Catenin mediates initial E-cadherin-dependent cell-cell recognition and subsequent bond strengthening. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 18331-6	11.5	57
127	The mechanical properties of simple epithelial keratins 8 and 18: discriminating between interfacial and bulk elasticities. <i>Journal of Structural Biology</i> , <b>2003</b> , 143, 45-55	3.4	57
126	GTPase activity, structure, and mechanical properties of filaments assembled from bacterial cytoskeleton protein MreB. <i>Journal of Bacteriology</i> , <b>2006</b> , 188, 968-76	3.5	55
125	Effect of length, topology, and concentration on the microviscosity and microheterogeneity of DNA solutions. <i>Journal of Molecular Biology</i> , <b>2002</b> , 323, 199-215	6.5	55
124	The multi-faceted role of the actin cap in cellular mechanosensation and mechanotransduction. <i>Soft Matter</i> , <b>2013</b> , 9, 5516-5523	3.6	53
123	Functional synergy of actin filament cross-linking proteins. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 25609-16	5.4	53
122	The perinuclear actin cap in health and disease. <i>Nucleus</i> , <b>2010</b> , 1, 337-42	3.9	52
121	The Arp2/3 complex mediates multigeneration dendritic protrusions for efficient 3-dimensional cancer cell migration. <i>FASEB Journal</i> , <b>2013</b> , 27, 4089-99	0.9	51
120	Polymerization and bundling kinetics of FtsZ filaments. <i>Biophysical Journal</i> , <b>2008</b> , 95, 4045-56	2.9	51
119	Alpha-actinin and filamin cooperatively enhance the stiffness of actin filament networks. <i>PLoS ONE</i> , <b>2009</b> , 4, e4411	3.7	50

118	Reply: reducing background fluorescence reveals adhesions in 3D matrices. <i>Nature Cell Biology</i> , <b>2011</b> , 13, 5-7	23.4	49
117	Loss of alpha-catenin decreases the strength of single E-cadherin bonds between human cancer cells. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 18252-9	5.4	49
116	Microheterogeneity controls the rate of gelation of actin filament networks. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 18143-50	5.4	49
115	Magnetic manipulation of nanorods in the nucleus of living cells. <i>Biophysical Journal</i> , <b>2011</b> , 101, 1880-6	2.9	48
114	Resolving the role of actomyosin contractility in cell microrheology. <i>PLoS ONE</i> , <b>2009</b> , 4, e7054	3.7	48
113	Multiple scale model for cell migration in monolayers: Elastic mismatch between cells enhances motility. <i>Scientific Reports</i> , <b>2015</b> , 5, 11745	4.9	46
112	Collective cancer cell invasion induced by coordinated contractile stresses. <i>Oncotarget</i> , <b>2015</b> , 6, 43438-51	3.3	46
111	The filamentous actin cross-linking/bundling activity of mammalian formins. <i>Journal of Molecular Biology</i> , <b>2008</b> , 384, 324-34	6.5	46
110	Probing intercellular interactions between vascular endothelial cadherin pairs at single-molecule resolution and in living cells. <i>Journal of Molecular Biology</i> , <b>2006</b> , 358, 665-74	6.5	46
109	Microheterogeneity and microrheology of wheat gliadin suspensions studied by multiple-particle tracking. <i>Biomacromolecules</i> , <b>2002</b> , 3, 92-9	6.9	45
108	Evolution of cellular morpho-phenotypes in cancer metastasis. <i>Scientific Reports</i> , <b>2015</b> , 5, 18437	4.9	45
107	Biophysical and biomolecular determination of cellular age in humans. <i>Nature Biomedical Engineering</i> , <b>2017</b> , 1,	19	44
106	The differential formation of the LINC-mediated perinuclear actin cap in pluripotent and somatic cells. <i>PLoS ONE</i> , <b>2012</b> , 7, e36689	3.7	44
105	Monitoring early fusion dynamics of human immunodeficiency virus type 1 at single-molecule resolution. <i>Journal of Virology</i> , <b>2008</b> , 82, 7022-33	6.6	44
104	Single-cell morphology encodes metastatic potential. <i>Science Advances</i> , <b>2020</b> , 6, eaaw6938	14.3	43
103	Asymmetric enrichment of PIE-1 in the <i>Caenorhabditis elegans</i> zygote mediated by binary counterdiffusion. <i>Journal of Cell Biology</i> , <b>2009</b> , 184, 473-9	7.3	43
102	Extracellular vesicles in immunomodulation and tumor progression. <i>Nature Immunology</i> , <b>2021</b> , 22, 560-570	10.1	42
101	Predicting how cells spread and migrate: focal adhesion size does matter. <i>Cell Adhesion and Migration</i> , <b>2013</b> , 7, 293-6	3.2	41



100	Multi-nucleated cells use ROS to induce breast cancer chemo-resistance in vitro and in vivo. <i>Oncogene</i> , <b>2018</b> , 37, 4546-4561	9.2	40
99	High-throughput ballistic injection nanorheology to measure cell mechanics. <i>Nature Protocols</i> , <b>2012</b> , 7, 155-70	18.8	39
98	Divergent roles of CD44 and carcinoembryonic antigen in colon cancer metastasis. <i>FASEB Journal</i> , <b>2012</b> , 26, 2648-56	0.9	39
97	Programmed subcellular release for studying the dynamics of cell detachment. <i>Nature Methods</i> , <b>2009</b> , 6, 211-3	21.6	39
96	Rheological Properties of Vital Wheat Gluten Suspensions. <i>Cereal Chemistry</i> , <b>2001</b> , 78, 181-185	2.4	38
95	Differential vesicular sorting of AMPA and GABAA receptors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E922-31	11.5	37
94	Modulation of keratocyte phenotype by collagen fibril nanoarchitecture in membranes for corneal repair. <i>Biomaterials</i> , <b>2013</b> , 34, 9365-72	15.6	35
93	Supramolecular Design of Unsymmetric Reverse Bolaamphiphiles for Cell-Sensitive Hydrogel Degradation and Drug Release. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 4434-4442	16.4	34
92	Age-dependent stochastic models for understanding population fluctuations in continuously cultured cells. <i>Journal of the Royal Society Interface</i> , <b>2013</b> , 10, 20130325	4.1	33
91	Torsional mechanics of DNA are regulated by small-molecule intercalation. <i>Journal of Physical Chemistry B</i> , <b>2010</b> , 114, 16929-35	3.4	33
90	Local dynamics and viscoelastic properties of cell biological systems. <i>Current Opinion in Colloid and Interface Science</i> , <b>2002</b> , 7, 210-217	7.6	33
89	SMRT analysis of MTOC and nuclear positioning reveals the role of EB1 and LIC1 in single-cell polarization. <i>Journal of Cell Science</i> , <b>2011</b> , 124, 4267-85	5.3	32
88	Nucleation and decay initiation are the stiffness-sensitive phases of focal adhesion maturation. <i>Biophysical Journal</i> , <b>2011</b> , 101, 2919-28	2.9	31
87	Differences in the microrheology of human embryonic stem cells and human induced pluripotent stem cells. <i>Biophysical Journal</i> , <b>2010</b> , 99, 3563-70	2.9	31
86	Cell tension and mechanical regulation of cell volume. <i>Molecular Biology of the Cell</i> , <b>2018</b> , 29, 0	3.5	30
85	Fluctuation dynamics of a single magnetic chain. <i>Physical Review E</i> , <b>1996</b> , 54, 5502-5510	2.4	30
84	Single-molecule binding of CD44 to fibrin versus P-selectin predicts their distinct shear-dependent interactions in cancer. <i>Journal of Cell Science</i> , <b>2011</b> , 124, 1903-10	5.3	29
83	Metabolic and Mechanical Cues Regulating Pluripotent Stem Cell Fate. <i>Trends in Cell Biology</i> , <b>2018</b> , 28, 1014-1029	18.3	29

82	Intracellular microrheology as a tool for the measurement of the local mechanical properties of live cells. <i>Methods in Cell Biology</i> , <b>2004</b> , 78, 45-64	1.8	28
81	Micromechanical coupling between cell surface receptors and RGD peptides. <i>Biochemical and Biophysical Research Communications</i> , <b>2002</b> , 296, 771-8	3.4	27
80	Electric-field-induced structure in polymer solutions near the critical point. <i>Macromolecules</i> , <b>1992</b> , 25, 7234-7246	5.5	27
79	Morphological effects on expression of growth differentiation factor 15 (GDF15), a marker of metastasis. <i>Journal of Cellular Physiology</i> , <b>2014</b> , 229, 362-73	7	26
78	Structure-function relationship of biological gels revealed by multiple-particle tracking and differential interference contrast microscopy: the case of human lamin networks. <i>Physical Review E</i> , <b>2004</b> , 70, 041906	2.4	26
77	Shear-induced assembly of lambda-phage DNA. <i>Biophysical Journal</i> , <b>2000</b> , 79, 1530-6	2.9	26
76	The Biophysics of 3D Cell Migration. <i>Annual Review of Biophysics</i> , <b>2018</b> , 47, 549-567	21.1	25
75	NAC1 is an actin-binding protein that is essential for effective cytokinesis in cancer cells. <i>Cancer Research</i> , <b>2012</b> , 72, 4085-96	10.1	24
74	Role of membrane-tension gated Ca flux in cell mechanosensation. <i>Journal of Cell Science</i> , <b>2018</b> , 131,	5.3	23
73	Simultaneously defining cell phenotypes, cell cycle, and chromatin modifications at single-cell resolution. <i>FASEB Journal</i> , <b>2013</b> , 27, 2667-76	0.9	23
72	Dendritic branching and homogenization of actin networks mediated by arp2/3 complex. <i>Physical Review Letters</i> , <b>2004</b> , 93, 258104	7.4	23
71	Dynamic organelle distribution initiates actin-based spindle migration in mouse oocytes. <i>Nature Communications</i> , <b>2020</b> , 11, 277	17.4	22
70	Immunolabeling of Cleared Human Pancreata Provides Insights into Three-Dimensional Pancreatic Anatomy and Pathology. <i>American Journal of Pathology</i> , <b>2018</b> , 188, 1530-1535	5.8	22
69	Nuclear envelope in nuclear positioning and cell migration. <i>Advances in Experimental Medicine and Biology</i> , <b>2014</b> , 773, 471-90	3.6	22
68	Functional interplay between the cell cycle and cell phenotypes. <i>Integrative Biology (United Kingdom)</i> , <b>2013</b> , 5, 523-34	3.7	21
67	Three-dimensional visualization of cleared human pancreas cancer reveals that sustained epithelial-to-mesenchymal transition is not required for venous invasion. <i>Modern Pathology</i> , <b>2020</b> , 33, 639-647	9.8	21
66	Dimensional control of cancer cell migration. <i>Biophysical Journal</i> , <b>2013</b> , 104, 279-80	2.9	20
65	Cancer Protrusions on a Tightrope: Nanofiber Curvature Contrast Quantitates Single Protrusion Dynamics. <i>ACS Nano</i> , <b>2017</b> , 11, 12037-12048	16.7	20

64	Senescent stromal cells induce cancer cell migration via inhibition of RhoA/ROCK/myosin-based cell contractility. <i>Oncotarget</i> , <b>2015</b> , 6, 30516-31	3.3	20
63	Distinct kinetic and molecular requirements govern CD44 binding to hyaluronan versus fibrin(ogen). <i>Biophysical Journal</i> , <b>2012</b> , 103, 415-423	2.9	19
62	Probing cellular mechanical responses to stimuli using ballistic intracellular nanorheology. <i>Methods in Cell Biology</i> , <b>2007</b> , 83, 115-40	1.8	19
61	COX-2 dependent regulation of mechanotransduction in human breast cancer cells. <i>Cancer Biology and Therapy</i> , <b>2015</b> , 16, 430-7	4.6	17
60	Dynamics of the bacterial intermediate filament crescentin in vitro and in vivo. <i>PLoS ONE</i> , <b>2010</b> , 5, e88537	3.7	17
59	A robust unsupervised machine-learning method to quantify the morphological heterogeneity of cells and nuclei. <i>Nature Protocols</i> , <b>2021</b> , 16, 754-774	18.8	17
58	YAP and TAZ regulate cell volume. <i>Journal of Cell Biology</i> , <b>2019</b> , 218, 3472-3488	7.3	16
57	Biophysical changes reduce energetic demand in growth factor-deprived lymphocytes. <i>Journal of Cell Biology</i> , <b>2016</b> , 212, 439-47	7.3	16
56	Chapter 15: Live-cell single-molecule force spectroscopy. <i>Methods in Cell Biology</i> , <b>2008</b> , 89, 411-32	1.8	16
55	Inhibition of ovarian tumor cell invasiveness by targeting SYK in the tyrosine kinase signaling pathway. <i>Oncogene</i> , <b>2018</b> , 37, 3778-3789	9.2	15
54	Triggering cell detachment from patterned electrode arrays by programmed subcellular release. <i>Nature Protocols</i> , <b>2010</b> , 5, 1273-80	18.8	15
53	Organization of cellular receptors into a nanoscale junction during HIV-1 adhesion. <i>PLoS Computational Biology</i> , <b>2010</b> , 6, e1000855	5	15
52	Dorsoventral polarity directs cell responses to migration track geometries. <i>Science Advances</i> , <b>2020</b> , 6, eaba6505	14.3	15
51	Tumor cell density regulates matrix metalloproteinases for enhanced migration. <i>Oncotarget</i> , <b>2018</b> , 9, 32556-32569	3.3	15
50	Recapitulation of molecular regulators of nuclear motion during cell migration. <i>Cell Adhesion and Migration</i> , <b>2019</b> , 13, 50-62	3.2	14
49	EB1 and cytoplasmic dynein mediate protrusion dynamics for efficient 3-dimensional cell migration. <i>FASEB Journal</i> , <b>2018</b> , 32, 1207-1221	0.9	14
48	Loss of giant obscurins alters breast epithelial cell mechanosensing of matrix stiffness. <i>Oncotarget</i> , <b>2017</b> , 8, 54004-54020	3.3	14
47	Pluri-IQ: Quantification of Embryonic Stem Cell Pluripotency through an Image-Based Analysis Software. <i>Stem Cell Reports</i> , <b>2017</b> , 9, 697-709	8	13

46	Local 3D matrix confinement determines division axis through cell shape. <i>Oncotarget</i> , <b>2016</b> , 7, 6994-7013,3	13.3	13
45	In situ characterization of the 3D microanatomy of the pancreas and pancreatic cancer at single cell resolution		13
44	Inactivation of Arid1a in the endometrium is associated with endometrioid tumorigenesis through transcriptional reprogramming. <i>Nature Communications</i> , <b>2020</b> , 11, 2717	17.4	12
43	Micro-heterogeneity and micro-rheological properties of high-viscosity oat $\beta$ -glucan solutions. <i>Food Chemistry</i> , <b>2007</b> , 103, 1192-1198	8.5	12
42	The rapid onset of elasticity during the assembly of the bacterial cell-division protein FtsZ. <i>Biochemical and Biophysical Research Communications</i> , <b>2005</b> , 333, 508-16	3.4	12
41	Adhesion and fusion efficiencies of human immunodeficiency virus type 1 (HIV-1) surface proteins. <i>Scientific Reports</i> , <b>2013</b> , 3, 3014	4.9	11
40	Periodic structures and substructures in magnetic suspensions. <i>Langmuir</i> , <b>1995</b> , 11, 398-400	4	11
39	Dissecting cellular mechanics: Implications for aging, cancer, and immunity. <i>Seminars in Cell and Developmental Biology</i> , <b>2019</b> , 93, 16-25	7.5	11
38	Going with the Flow: Water Flux and Cell Shape during Cytokinesis. <i>Biophysical Journal</i> , <b>2017</b> , 113, 2487-2495	2.95	10
37	Structure and dynamics of actin filament solutions in the presence of latrunculin A. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>1998</b> , 36, 3007-3015	2.6	10
36	Normal mammary epithelial cells promote carcinoma basement membrane invasion by inducing microtubule-rich protrusions. <i>Oncotarget</i> , <b>2015</b> , 6, 32634-45	3.3	10
35	Mechanics of the Cell Nucleus. <i>Advances in Experimental Medicine and Biology</i> , <b>2018</b> , 1092, 41-55	3.6	10
34	E-catenin serves as a clutch between low and high intercellular E-cadherin bond strengths. <i>Biophysical Journal</i> , <b>2013</b> , 105, 2289-300	2.9	9
33	Interplay of RhoA and motility in the programmed spreading of daughter cells postmitosis. <i>Biophysical Journal</i> , <b>2010</b> , 99, 3526-34	2.9	9
32	Recapitulating cancer cell invasion in vitro. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 6693-4	11.5	9
31	High-frequency dynamics and microrheology of macromolecular solutions probed by diffusing wave spectroscopy: the case of concentrated solutions of F-actin. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>1999</b> , 82, 303-314	2.7	9
30	Flow-induced scattering peak in the structure factor of polymer solutions. <i>Physical Review E</i> , <b>1994</b> , 50, R1755-R1758	2.4	9
29	Distinct kinetic and mechanical properties govern mucin 16- and podocalyxin-mediated tumor cell adhesion to E- and L-selectin in shear flow. <i>Oncotarget</i> , <b>2015</b> , 6, 24842-55	3.3	9

28	Structure and optical anisotropies of critical polymer solutions in electric fields. <i>Journal of Chemical Physics</i> , <b>1994</b> , 101, 1679-1686	3.9	8
27	Exploiting Nucleation and Growth in the Synthesis and Electrical Passivation of CdSe Quantum Dots. <i>Science of Advanced Materials</i> , <b>2009</b> , 1, 93-100	2.3	8
26	Form-finding model shows how cytoskeleton network stiffness is realized. <i>PLoS ONE</i> , <b>2013</b> , 8, e77417	3.7	7
25	Affine and non-affine deformations quantified in cytoskeletal networks through three-dimensional form-finding model. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2017</b> , 72, 52-65	4.1	6
24	Particle tracking microrheology of cancer cells in living subjects. <i>Materials Today</i> , <b>2020</b> , 39, 98-109	21.8	6
23	A robust nonlinear tissue-component discrimination method for computational pathology. <i>Laboratory Investigation</i> , <b>2016</b> , 96, 450-8	5.9	6
22	Use of the p-values as a size-dependent function to address practical differences when analyzing large datasets. <i>Scientific Reports</i> , <b>2021</b> , 11, 20942	4.9	6
21	Isomeric control of the mechanical properties of supramolecular filament hydrogels. <i>Biomaterials Science</i> , <b>2017</b> , 6, 216-224	7.4	6
20	Supramolecular Design of Unsymmetric Reverse Bolaamphiphiles for Cell-Sensitive Hydrogel Degradation and Drug Release. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 4464-4472	3.6	5
19	Enabling migration by moderation: YAP/TAZ are essential for persistent migration. <i>Journal of Cell Biology</i> , <b>2019</b> , 218, 1092-1093	7.3	4
18	Three-dimensional analysis of extrahepatic cholangiocarcinoma and tumor budding. <i>Journal of Pathology</i> , <b>2020</b> , 251, 400-410	9.4	4
17	Mammalian Cell Division in 3D Matrices via Quantitative Confocal Reflection Microscopy. <i>Journal of Visualized Experiments</i> , <b>2017</b> ,	1.6	4
16	Dominant Diffusing Mode in the Self-Similar Phase Separation of a Magnetic Suspension in a Magnetic Field. <i>Langmuir</i> , <b>1998</b> , 14, 578-581	4	4
15	Switching from protease-independent to protease-dependent cancer cell invasion. <i>Biophysical Journal</i> , <b>2014</b> , 107, 2484-5	2.9	3
14	Fluctuation Enhancement and Reduction in Sheared Polymer Solutions. <i>Macromolecules</i> , <b>1994</b> , 27, 5639-5642	5.42	3
13	Chapter 18: Sensing cytoskeletal mechanics by ballistic intracellular nanorheology (BIN) coupled with cell transfection. <i>Methods in Cell Biology</i> , <b>2008</b> , 89, 467-86	1.8	2
12	Use of the p-value as a size-dependent function to address practical differences when analyzing large datasets		2
11	Effect of an alkyl spacer on the morphology and internalization of MUC1 aptamer-naphthalimide amphiphiles for targeting and imaging triple negative breast cancer cells. <i>Bioengineering and Translational Medicine</i> , <b>2021</b> , 6, e10194	14.8	2

10	Fractional re-distribution among cell motility states during ageing. <i>Communications Biology</i> , <b>2021</b> , 4, 81	6.7	2
9	Interstitial friction greatly impacts membrane mechanics. <i>Biophysical Journal</i> , <b>2013</b> , 104, 1217-8	2.9	1
8	Single Cell Volume Measurement Utilizing the Fluorescence Exclusion Method (FXm). <i>Bio-protocol</i> , <b>2020</b> , 10, e3652	0.9	1
7	Characterization of tumor-associated macrophages in prostate cancer transgenic mouse models. <i>Prostate</i> , <b>2021</b> , 81, 629-647	4.2	1
6	Intra- and Extracellular Microrheology of Endothelial Cells in a 3D Matrix <b>2011</b> , 69-87		0
5	Mechanical tension mobilizes Lgr6 epidermal stem cells to drive skin growth.. <i>Science Advances</i> , <b>2022</b> , 8, eabl8698	14.3	0
4	Deep learning identification of stiffness markers in breast cancer.. <i>Biomaterials</i> , <b>2022</b> , 285, 121540	15.6	0
3	Solid Stress in Brain Tumors. <i>Trends in Cancer</i> , <b>2019</b> , 5, 266-268	12.5	
2	Single-Molecule Analysis of Cell-Virus Binding Interactions <b>2011</b> , 153-166		
1	Completing the Great Unfinished Symphony of Cancer Together: The Importance of Immigrants in Cancer Research. <i>Cancer Cell</i> , <b>2020</b> , 38, 301-305	24.3	