Andrew E Pelling

List of Publications by Year
in descending order

66 papers	3,728 citations	159585 30 h-index	138484 58 g-index
94 all docs	94 docs citations	94 times ranked	5378 citing authors

#	Article	IF	Citations
1	Moesin Controls Cortical Rigidity, Cell Rounding, and Spindle Morphogenesis during Mitosis. Current Biology, 2008, 18, 91-101.	3.9	381
2	Local Nanomechanical Motion of the Cell Wall of Saccharomyces cerevisiae. Science, 2004, 305, 1147-1150.	12.6	328
3	Characterization of the interface between normal and transformed epithelial cells. Nature Cell Biology, 2009, 11, 460-467.	10.3	307
4	Cellulose Biomaterials for Tissue Engineering. Frontiers in Bioengineering and Biotechnology, 2019, 7, 45.	4.1	291
5	Investigating cell mechanics with atomic force microscopy. Journal of the Royal Society Interface, 2015, 12, 20140970.	3.4	288
6	Biocompatibility of Subcutaneously Implanted Plant-Derived Cellulose Biomaterials. PLoS ONE, 2016, 11, e0157894.	2.5	164
7	Apple Derived Cellulose Scaffolds for 3D Mammalian Cell Culture. PLoS ONE, 2014, 9, e97835.	2.5	162
8	Nanoscale visualization and characterization of Myxococcus xanthus cells with atomic force microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6484-6489.	7.1	112
9	Force nanoscopy of cell mechanics and cell adhesion. Nanoscale, 2013, 5, 4094.	5.6	85
10	Extracellular Forces Cause the Nucleus to Deform in a Highly Controlled Anisotropic Manner. Scientific Reports, 2016, 6, 21300.	3.3	85
11	Mechanical dynamics of single cells during early apoptosis. Cytoskeleton, 2009, 66, 409-422.	4.4	80
12	Scaffolds for 3D Cell Culture and Cellular Agriculture Applications Derived From Non-animal Sources. Frontiers in Sustainable Food Systems, 2019, 3, .	3.9	70
13	Customizing the Shape and Microenvironment Biochemistry of Biocompatible Macroscopic Plant-Derived Cellulose Scaffolds. ACS Biomaterials Science and Engineering, 2018, 4, 3726-3736.	5.2	69
14	DNA base pair resolution by single molecule force spectroscopy. Nucleic Acids Research, 2004, 32, 4876-4883.	14.5	68
15	Mechanical cues in cellular signalling and communication. Cell and Tissue Research, 2013, 352, 77-94.	2.9	68
16	Distinct contributions of microtubule subtypes to cell membrane shape and stability. Nanomedicine: Nanotechnology, Biology, and Medicine, 2007, 3, 43-52.	3.3	58
17	Complementary TEM and AFM Force Spectroscopy to Characterize the Nanomechanical Properties of Nanoparticle Chain Aggregates. Nano Letters, 2004, 4, 2287-2292.	9.1	57
18	Force transduction and strain dynamics in actin stress fibres in response to nanonewton forces. Journal of Cell Science, 2012, 125, 603-613.	2.0	56

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19	Time dependence of the frequency and amplitude of the local nanomechanical motion of yeast. Nanomedicine: Nanotechnology, Biology, and Medicine, 2005, 1, 178-183.	3.3	53
20	Integrated Confocal and Scanning Probe Microscopy for Biomedical Research. Scientific World Journal, The, 2006, 6, 1609-1618.	2.1	51
21	Structural and mechanical remodeling of the cytoskeleton maintains tensional homeostasis in 3D microtissues under acute dynamic stretch. Scientific Reports, 2020, 10, 7696.	3.3	49
22	Atomic force microscopy study of the structureâ€"function relationships of the biofilm-forming bacteriumStreptococcus mutans. Nanotechnology, 2006, 17, S1-S7.	2.6	46
23	An historical perspective on cell mechanics. Pflugers Archiv European Journal of Physiology, 2008, 456, 3-12.	2.8	45
24	The effect of Youngâ€™s modulus on the neuronal differentiation of mouse embryonic stem cells. Acta Biomaterialia, 2015, 25, 253-267.	8.3	44
25	Three dimensional spatial separation of cells in response to microtopography. Biomaterials, 2013, 34, 8097-8104.	11.4	43
26	A microscale anisotropic biaxial cell stretching device for applications in mechanobiology. Biotechnology Letters, 2014, 36, 657-665.	2.2	43
27	Mapping correlated membrane pulsations and fluctuations in human cells. Journal of Molecular Recognition, 2007, 20, 467-475.	2.1	41
28	Chronic Over-Expression of Heat Shock Protein 27 Attenuates Atherogenesis and Enhances Plaque Remodeling: A Combined Histological and Mechanical Assessment of Aortic Lesions. PLoS ONE, 2013, 8, e55867.	2.5	37
29	Resiliency of the plasma membrane and actin cortex to largeâ€scale deformation. Cytoskeleton, 2013, 70, 494-514.	2.0	36
30	Mitochondrial displacements in response to nanomechanical forces. Journal of Molecular Recognition, 2008, 21, 30-36.	2.1	35
31	Actin and microtubules play distinct roles in governing the anisotropic deformation of cell nuclei in response to substrate strain. Cytoskeleton, 2013, 70, 837-848.	2.0	35
32	Femtosecond laser induced surface swelling in poly-methyl methacrylate. Optics Express, 2013, 21, 12527.	3.4	33
33	Cross talk between matrix elasticity and mechanical force regulates myoblast traction dynamics. Physical Biology, 2013, 10, 066003.	1.8	30
34	Cellular orientation is guided by strain gradients. Integrative Biology (United Kingdom), 2017, 9, 607-618.	1.3	27
35	Analysis of type IV pilus and its associated motility in Myxococcus xanthus using an antibody reactive with native pilin and pili. Microbiology (United Kingdom), 2005, 151, 353-360.	1.8	25
36	Self-organized and highly ordered domain structures within swarms ofMyxococcus xanthus. Cytoskeleton, 2006, 63, 141-148.	4.4	22

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37	The role of the actin cortex in maintaining cell shape. Communicative and Integrative Biology, 2013, 6, e26714.	1.4	19
38	Mechanical Cues Direct Focal Adhesion Dynamics. Progress in Molecular Biology and Translational Science, 2014, 126, 103-134.	1.7	19
39	Microtubules mediate changes in membrane cortical elasticity during contractile activation. Experimental Cell Research, 2014, 322, 21-29.	2.6	19
40	A vacuum-actuated microtissue stretcher for long-term exposure to oscillatory strain within a 3D matrix. Biomedical Microdevices, 2018, 20, 43.	2.8	18
41	Researcher engagement in policy deemed societally beneficial yet unrewarded. Frontiers in Ecology and the Environment, 2019, 17, 375-382.	4.0	17
42	Dynamic mechanical oscillations during metamorphosis of the monarch butterfly. Journal of the Royal Society Interface, 2009, 6, 29-37.	3.4	16
43	Mechanical mismatch between Ras transformed and untransformed epithelial cells. Soft Matter, 2017, 13, 8483-8491.	2.7	15
44	Mechanical stretch sustains myofibroblast phenotype and function in microtissues through latent TGF-Î²1 activation. Integrative Biology (United Kingdom), 2020, 12, 199-210.	1.3	15
45	Homemade bread: Repurposing an ancient technology for in vitro tissue engineering. Biomaterials, 2022, 280, 121267.	11.4	15
46	Cell nanomechanics and focal adhesions are regulated by retinol and conjugated linoleic acid in a dose-dependent manner. Nanotechnology, 2009, 20, 285103.	2.6	14
47	The Physical Interaction of Myoblasts with the Microenvironment during Remodeling of the Cytoarchitecture. PLoS ONE, 2012, 7, e45329.	2.5	14
48	Physical confinement signals regulate the organization of stem cells in three dimensions. Journal of the Royal Society Interface, 2016, 13, 20160613.	3.4	11
49	Time dependent stress relaxation and recovery in mechanically strained 3D microtissues. APL Bioengineering, 2020, 4, 036107.	6.2	10
50	Mechanically induced deformation and strain dynamics in actin stress fibers. Communicative and Integrative Biology, 2012, 5, 627-630.	1.4	9
51	S-Nitrosylation of Cross-Linked Hemoglobins at Î²-Cysteine-93:Â Stabilized Hemoglobins as Nitric Oxide Sources. Journal of the American Chemical Society, 2000, 122, 10734-10735.	13.7	6
52	The rotation of mouse myoblast nuclei is dependent on substrate elasticity. Cytoskeleton, 2017, 74, 184-194.	2.0	6
53	Mechanotransduction of Strain Regulates an Invasive Phenotype in Newly Transformed Epithelial Cells. Frontiers in Physics, 2021, 9, .	2.1	6
54	Tracking displacements of intracellular organelles in response to nanomechanical forces. , 2008, , .		5

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55	A Novel Stretching Platform for Applications in Cell and Tissue Mechanobiology. Journal of Visualized Experiments, 2014, , .	0.3	5
56	Cell sheet integrity and nanomechanical breakdown during programmed cell death. Medical and Biological Engineering and Computing, 2010, 48, 1015-1022.	2.8	4
57	An Approach to Visualize the Deformation of the Intermediate Filament Cytoskeleton in Response to Locally Applied Forces. , 2012, 2012, 1-9.		3
58	Measuring mechanodynamics in an unsupported epithelial monolayer grown at an airâ€"water interface. Molecular Biology of the Cell, 2017, 28, 111-119.	2.1	3
59	Rapid dynamics of cell-shape recovery in response to local deformations. Soft Matter, 2017, 13, 567-577.	2.7	3
60	Time dependence of cellular responses to dynamic and complex strain fields. Integrative Biology (United Kingdom), 2019, 11, 4-15.	1.3	3
61	Mechanosensitive osteogenesis on native cellulose scaffolds for bone tissue engineering. Journal of Biomechanics, 2022, 135, 111030.	2.1	3
62	Quantification of Intracellular Mitochondrial Displacements in Response to Nanomechanical Forces. Methods in Molecular Biology, 2013, 991, 185-193.	0.9	2
63	Re-purposing Life in an Anti-Disciplinary and Curiosity-Driven Context. Leonardo, 2015, 48, 274-275.	0.3	1
64	Seasonal changes in membrane structure and excitability in retinal neurons of goldfish (<i>Carassius) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.7	1
65	Simultaneous optical and mechanical probes to investigate complex cellular responses to physical cues. , 2015, , .		0
66	Investigating Mammalian Cell Nanomechanics with Simultaneous Optical and Atomic Force Microscopy. , 2011, , 375-403.		0