Jochen Guck

List of Publications by Year
in descending order

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198 papers	15,974 citations	25034 57 h-index	19749 117 g-index
239 all docs	239 docs citations	239 times ranked	16221 citing authors

#	Article	IF	Citations
1	Epithelial RAC1-dependent cytoskeleton dynamics controls cell mechanics, cell shedding and barrier integrity in intestinal inflammation. Gut, 2023, 72, 275-294.	12.1	18
2	Matrix stiffness mechanosensing modulates the expression and distribution of transcription factors in Schwann cells. Bioengineering and Translational Medicine, 2022, 7, e10257.	7.1	18
3	Machine learning assisted real-time deformability cytometry of CD34+ cells allows to identify patients with myelodysplastic syndromes. Scientific Reports, 2022, 12, 870.	3.3	11
4	Nonlinear microscopy using impulsive stimulated Brillouin scattering for high-speed elastography. Optics Express, 2022, 30, 4748.	3.4	10
5	Correlative all-optical quantification of mass density and mechanics of subcellular compartments with fluorescence specificity. ELife, 2022, 11, .	6.0	37
6	Label-free imaging flow cytometry for analysis and sorting of enzymatically dissociated tissues. Scientific Reports, 2022, 12, 963.	3.3	12
7	Unbiased retrieval of frequency-dependent mechanical properties from noisy time-dependent signals. Biophysical Reports, 2022, , 100054.	1.2	0
8	Depressive disorders are associated with increased peripheral blood cell deformability: a cross-sectional case-control study (Mood-Morph). Translational Psychiatry, 2022, 12, 150.	4.8	13
9	Quantitative imaging of Caenorhabditis elegans dauer larvae during cryptobiotic transition. Biophysical Journal, 2022, 121, 1219-1229.	0.5	6
10	An explicit model to extract viscoelastic properties of cells from AFM force-indentation curves. IScience, 2022, 25, 104016.	4.1	13
11	Changes in Blood Cell Deformability in Chorea-Acanthocytosis and Effects of Treatment With Dasatinib or Lithium. Frontiers in Physiology, 2022, 13, 852946.	2.8	7
12	Microfluidic Microcirculation Mimetic as a Tool for the Study of Rheological Characteristics of Red Blood Cells in Patients with Sickle Cell Anemia. Applied Sciences (Switzerland), 2022, 12, 4394.	2.5	1
13	mRNA Subtype of Cancer-Associated Fibroblasts Significantly Affects Key Characteristics of Head and Neck Cancer Cells. Cancers, 2022, 14, 2286.	3.7	4
14	Best practices for reporting throughput in biomedical research. Nature Methods, 2022, 19, 633-634.	19.0	9
15	In vivoassessment of mechanical properties during axolotl development and regeneration using confocal Brillouin microscopy. Open Biology, 2022, 12, .	3.6	6
16	PNIPAAm microgels with defined network architecture as temperature sensors in optical stretchers. Materials Advances, 2022, 3, 6179-6190.	5.4	5
17	Quantitative phase imaging through an ultra-thin lensless fiber endoscope. Light: Science and Applications, 2022, 11, .	16.6	29
18	Cell Mechanics Based Computational Classification of Red Blood Cells Via Machine Intelligence Applied to Morpho-Rheological Markers. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2021, 18, 1405-1415.	3.0	4

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19	Proteomic, biomechanical and functional analyses define neutrophil heterogeneity in systemic lupus erythematosus. Annals of the Rheumatic Diseases, 2021, 80, 209-218.	0.9	43
20	Mechanical Adaptability of Tumor Cells in Metastasis. Developmental Cell, 2021, 56, 164-179.	7.0	94
21	Optical quantification of intracellular mass density and cell mechanics in 3D mechanical confinement. Soft Matter, 2021, 17, 853-862.	2.7	18
22	Mechanical properties of cell- and microgel bead-laden oxidized alginate-gelatin hydrogels. Biomaterials Science, 2021, 9, 3051-3068.	5.4	20
23	A switch in pdgfrb cell-derived ECM composition prevents inhibitory scarring and promotes axon regeneration in the zebrafish spinal cord. Developmental Cell, 2021, 56, 509-524.e9.	7.0	40
24	Compliant Substrates Enhance Macrophage Cytokine Release and NLRP3 Inflammasome Formation During Their Pro-Inflammatory Response. Frontiers in Cell and Developmental Biology, 2021, 9, 639815.	3.7	26
25	AIDeveloper: Deep Learning Image Classification in Life Science and Beyond. Advanced Science, 2021, 8, e2003743.	11.2	31
26	Toward Deep Biophysical Cytometry: Prospects and Challenges. Trends in Biotechnology, 2021, 39, 1249-1262.	9.3	39
27	The Xenopus spindle is as dense as the surrounding cytoplasm. Developmental Cell, 2021, 56, 967-975.e5.	7.0	14
28	Real-Time Deformability Cytometry Detects Leukocyte Stiffening After Gadolinium-Based Contrast Agent Exposure. Investigative Radiology, 2021, Publish Ahead of Print, .	6.2	2
29	Rapid computational cell-rotation around arbitrary axes in 3D with multi-core fiber. Biomedical Optics Express, 2021, 12, 3423.	2.9	16
30	HIF2Î± is a direct regulator of neutrophil motility. Blood, 2021, 137, 3416-3427.	1.4	13
31	Physical phenotype of blood cells is altered in COVID-19. Biophysical Journal, 2021, 120, 2838-2847.	0.5	118
32	Efficient and gentle delivery of molecules into cells with different elasticity via Progressive Mechanoporation. Lab on A Chip, 2021, 21, 2437-2452.	6.0	16
33	Mapping Tumor Spheroid Mechanics in Dependence of 3D Microenvironment Stiffness and Degradability by Brillouin Microscopy. Cancers, 2021, 13, 5549.	3.7	23
34	Passive coupling of membrane tension and cell volume during active response of cells to osmosis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	65
35	The mechanics of myeloid cells. Biology of the Cell, 2020, 112, 103-112.	2.0	12
36	Zebrafish Spinal Cord Repair Is Accompanied by Transient Tissue Stiffening. Biophysical Journal, 2020, 118, 448-463.	0.5	37

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37	Estrogens Determine Adherens Junction Organization and E-Cadherin Clustering in Breast Cancer Cells via Amphiregulin. IScience, 2020, 23, 101683.	4.1	14
38	The Relative Densities of Cytoplasm and Nuclear Compartments Are Robust against Strong Perturbation. Biophysical Journal, 2020, 119, 1946-1957.	0.5	53
39	Buckling of an Epithelium Growing under Spherical Confinement. Developmental Cell, 2020, 54, 655-668.e6.	7.0	75
40	Maturation of Monocyte-Derived DCs Leads to Increased Cellular Stiffness, Higher Membrane Fluidity, and Changed Lipid Composition. Frontiers in Immunology, 2020, 11, 590121.	4.8	24
41	Recent progress and current opinions in Brillouin microscopy for life science applications. Biophysical Reviews, 2020, 12, 615-624.	3.2	84
42	DryMass: handling and analyzing quantitative phase microscopy images of spherical, cell-sized objects. BMC Bioinformatics, 2020, 21, 226.	2.6	11
43	Stretching and heating cells with lightâ€"nonlinear photothermal cell rheology. New Journal of Physics, 2020, 22, 085003.	2.9	4
44	Oncogenic Signaling Alters Cell Shape and Mechanics to Facilitate Cell Division under Confinement. Developmental Cell, 2020, 52, 563-573.e3.	7.0	65
45	A comparison of microfluidic methods for high-throughput cell deformability measurements. Nature Methods, 2020, 17, 587-593.	19.0	148
46	RNA-Induced Conformational Switching and Clustering of G3BP Drive Stress Granule Assembly by Condensation. Cell, 2020, 181, 346-361.e17.	28.9	557
47	Acquired demyelination but not genetic developmental defects in myelination leads to brain tissue stiffness changes. Brain Multiphysics, 2020, 1, 100019.	2.3	7
48	Intelligent image-based deformation-assisted cell sorting with molecular specificity. Nature Methods, 2020, 17, 595-599.	19.0	109
49	High-throughput fabrication of right-angle prism mirrors with selective metalization by two-step 3D printing and computer vision alignment. , 2020, , .		1
50	Effects of rigosertib on the osteo-hematopoietic niche in myelodysplastic syndromes. Annals of Hematology, 2019, 98, 2063-2072.	1.8	10
51	3D Microenvironment Stiffness Regulates Tumor Spheroid Growth and Mechanics via p21 and ROCK. Advanced Biology, 2019, 3, e1900128.	3.0	84
52	CASP1 variants influence subcellular caspase-1 localization, pyroptosome formation, pro-inflammatory cell death and macrophage deformability. Clinical Immunology, 2019, 208, 108232.	3.2	9
53	High-Throughput Microfluidic Characterization of Erythrocyte Shapes and Mechanical Variability. Biophysical Journal, 2019, 117, 14-24.	0.5	46
54	Mechanical changes of peripheral nerve tissue microenvironment and their structural basis during development. APL Bioengineering, 2019, 3, 036107.	6.2	38

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55	Targeting Mechanoresponsive Proteins in Pancreatic Cancer: 4-Hydroxyacetophenone Blocks Dissemination and Invasion by Activating MYH14. Cancer Research, 2019, 79, 4665-4678.	0.9	44
56	nanite: using machine learning to assess the quality of atomic force microscopy-enabled nano-indentation data. BMC Bioinformatics, 2019, 20, 465.	2.6	29
57	Some thoughts on the future of cell mechanics. Biophysical Reviews, 2019, 11, 667-670.	3.2	41
58	Controlling distinct signaling states in cultured cancer cells provides a new platform for drug discovery. FASEB Journal, 2019, 33, 9235-9249.	0.5	7
59	Analysis of Biomechanical Properties of Hematopoietic Stem and Progenitor Cells Using Real-Time Fluorescence and Deformability Cytometry. Methods in Molecular Biology, 2019, 2017, 135-148.	0.9	8
60	Morphoâ€Rheological Fingerprinting of Rod Photoreceptors Using Realâ€Time Deformability Cytometry. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2019, 95, 1145-1157.	1.5	10
61	Targeting Mechanoresponsive Proteins in Pancreatic Cancer: 4-Hydroxyacetophenone Blocks Dissemination and Invasion by Activating MYH14. Biophysical Journal, 2019, 116, 260a.	0.5	2
62	Real-time deformability cytometry reveals sequential contraction and expansion during neutrophil priming. Journal of Leukocyte Biology, 2019, 105, 1143-1153.	3.3	34
63	Biomechanical and Structural Investigation of Peripheral Nervous System Microenvironment During Development. Biophysical Journal, 2019, 116, 549a.	0.5	0
64	The relationship between metastatic potential and in vitro mechanical properties of osteosarcoma cells. Molecular Biology of the Cell, 2019, 30, 887-898.	2.1	39
65	Photonic Platform for Detailed Physical Characterization of Liquid Protein Droplets. Biophysical Journal, 2019, 116, 458a.	0.5	0
66	Spheroid Culture of Mesenchymal Stromal Cells Results in Morphorheological Properties Appropriate for Improved Microcirculation. Advanced Science, 2019, 6, 1802104.	11.2	31
67	Polyacrylamide Bead Sensors for in vivo Quantification of Cell-Scale Stress in Zebrafish Development. Scientific Reports, 2019, 9, 17031.	3.3	47
68	Colloidal crystals of compliant microgel beads to study cell migration and mechanosensitivity in 3D. Soft Matter, 2019, 15, 9776-9787.	2.7	8
69	Response to Comment on â€œCell nuclei have lower refractive index and mass density than cytoplasmâ€. Journal of Biophotonics, 2018, 11, e201800095.	2.3	4
70	Real-time fluorescence and deformability cytometry. Nature Methods, 2018, 15, 355-358.	19.0	127
71	Real-Time Deformability Cytometry: Label-Free Functional Characterization of Cells. Methods in Molecular Biology, 2018, 1678, 347-369.	0.9	40
72	Toll-Like Receptor-Mediated Upregulation of CXCL16 in Psoriasis Orchestrates Neutrophil Activation. Journal of Investigative Dermatology, 2018, 138, 344-354.	0.7	28

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73	Threeâ€dimensional correlative singleâ€cell imaging utilizing fluorescence and refractive index tomography. Journal of Biophotonics, 2018, 11, e201700145.	2.3	75
74	Intracellular Mass Density Increase Is Accompanying but Not Sufficient for Stiffening and Growth Arrest of Yeast Cells. Frontiers in Physics, 2018, 6, .	2.1	23
75	Biophysical Techniques for the Study of Phase Transitions in Protein Droplets and Cells. Biophysical Journal, 2018, 114, 204a.	0.5	0
76	Single-Cell Mechanical Phenotype is an Intrinsic Marker of Reprogramming and Differentiation along the Neural Lineage. Biophysical Journal, 2018, 114, 516a-517a.	0.5	1
77	High-throughput single-cell mechanical phenotyping with real-time deformability cytometry. Methods in Cell Biology, 2018, 147, 175-198.	1.1	26
78	Droplet-Assisted Microfluidic Fabrication and Characterization of Multifunctional Polysaccharide Microgels Formed by Multicomponent Reactions. Polymers, 2018, 10, 1055.	4.5	32
79	Axonal Transport, Phase-Separated Compartments, and Neuron Mechanics - A New Approach to Investigate Neurodegenerative Diseases. Frontiers in Cellular Neuroscience, 2018, 12, 358.	3.7	10
80	Alterations in Cell Mechanics by Actin Cytoskeletal Changes Correlate with Strain-Specific Rubella Virus Phenotypes for Cell Migration and Induction of Apoptosis. Cells, 2018, 7, 136.	4.1	26
81	Standardized microgel beads as elastic cell mechanical probes. Journal of Materials Chemistry B, 2018, 6, 6245-6261.	5.8	78
82	Detection of human disease conditions by single-cell morpho-rheological phenotyping of blood. ELife, 2018, 7, .	6.0	125
83	Accurate evaluation of size and refractive index for spherical objects in quantitative phase imaging. Optics Express, 2018, 26, 10729.	3.4	19
84	Metabolic Profiling of Human Eosinophils. Frontiers in Immunology, 2018, 9, 1404.	4.8	33
85	Mechanical Mapping of Spinal Cord Growth and Repair in Living Zebrafish Larvae by Brillouin Imaging. Biophysical Journal, 2018, 115, 911-923.	0.5	133
86	A comparison of methods to assess cell mechanical properties. Nature Methods, 2018, 15, 491-498.	19.0	448
87	Abstract 3154: Harnessing the adaptive potential of mechanoresponsive proteins to overwhelm pancreatic cancer dissemination and invasion. , 2018, , .		0
88	Numerical Simulation of Real-Time Deformability Cytometry To Extract Cell Mechanical Properties. ACS Biomaterials Science and Engineering, 2017, 3, 2962-2973.	5.2	115
89	Initiation of acute graft-versus-host disease by angiogenesis. Blood, 2017, 129, 2021-2032.	1.4	56
90	Actin stress fiber organization promotes cell stiffening and proliferation of pre-invasive breast cancer cells. Nature Communications, 2017, 8, 15237.	12.8	132

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91	Highâ€throughput cell mechanical phenotyping for labelâ€free titration assays of cytoskeletal modifications. Cytoskeleton, 2017, 74, 283-296.	2.0	49
92	Plasmodium falciparum erythrocyte-binding antigen 175 triggers a biophysical change in the red blood cell that facilitates invasion. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4225-4230.	7.1	71
93	Chemotherapy Impedes In Vitro Microcirculation and Promotes Migration of Leukemic Cells with Impact on Metastasis. Biophysical Journal, 2017, 112, 124a.	0.5	0
94	Volume Transitions of Isolated Cell Nuclei Induced by Rapid Temperature Increase. Biophysical Journal, 2017, 112, 1063-1076.	0.5	32
95	Enlightening discriminative network functional modules behind Principal Component Analysis separation in differential-omic science studies. Scientific Reports, 2017, 7, 43946.	3.3	45
96	Niche WNT5A regulates the actin cytoskeleton during regeneration of hematopoietic stem cells. Journal of Experimental Medicine, 2017, 214, 165-181.	8.5	41
97	Mechanical mismatch between Ras transformed and untransformed epithelial cells. Soft Matter, 2017, 13, 8483-8491.	2.7	15
98	Roadmap for optofluidics. Journal of Optics (United Kingdom), 2017, 19, 093003.	2.2	78
99	Mechanical deformation induces depolarization of neutrophils. Science Advances, 2017, 3, e1602536.	10.3	68
100	Bone marrow niche-mimetics modulate HSPC function via integrin signaling. Scientific Reports, 2017, 7, 2549.	3.3	30
101	Single-cell mechanical phenotype is an intrinsic marker of reprogramming and differentiation along the mouse neural lineage. Development (Cambridge), 2017, 144, 4313-4321.	2.5	34
102	Mechanical Strain Promotes Oligodendrocyte Differentiation by Global Changes of Gene Expression. Frontiers in Cellular Neuroscience, 2017, 11, 93.	3.7	59
103	V-ATPase inhibition increases cancer cell stiffness and blocks membrane related Ras signaling - a new option for HCC therapy. Oncotarget, 2017, 8, 9476-9487.	1.8	37
104	Mechanical phenotyping of primary human skeletal stem cells in heterogeneous populations by real-time deformability cytometry. Integrative Biology (United Kingdom), 2016, 8, 616-623.	1.3	42
105	Feeling for Cell Function - Mechanical Phenotyping at 1,000 Cells/Sec. Biophysical Journal, 2016, 110, 342a.	0.5	1
106	Brain tissue stiffness is a sensitive marker for acidosis. Journal of Neuroscience Methods, 2016, 271, 50-54.	2.5	36
107	Chemotherapy impedes inÂvitro microcirculation and promotes migration of leukemic cells with impact on metastasis. Biochemical and Biophysical Research Communications, 2016, 479, 841-846.	2.1	16
108	Cell nuclei have lower refractive index and mass density than cytoplasm. Journal of Biophotonics, 2016, 9, 1068-1076.	2.3	139

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109	Mechanosensing is critical for axon growth in the developing brain. Nature Neuroscience, 2016, 19, 1592-1598.	14.8	478
110	Materials and technologies for soft implantable neuroprostheses. Nature Reviews Materials, 2016, 1, .	48.7	485
111	A Nanoprinted Model of Interstitial Cancer Migration Reveals a Link between Cell Deformability and Proliferation. ACS Nano, 2016, 10, 6437-6448.	14.6	34
112	The F-actin modifier villin regulates insulin granule dynamics and exocytosis downstream of islet cell autoantigen 512. Molecular Metabolism, 2016, 5, 656-668.	6.5	19
113	3D extracellular matrix interactions modulate tumour cell growth, invasion and angiogenesis in engineered tumour microenvironments. Acta Biomaterialia, 2016, 36, 73-85.	8.3	112
114	A pH-driven transition of the cytoplasm from a fluid- to a solid-like state promotes entry into dormancy. ELife, 2016, 5, .	6.0	355
115	Initiation of Acute Graft-Versus-Host Disease By Angiogenesis. Blood, 2016, 128, 4533-4533.	1.4	0
116	Real-Time Deformability Cytometry: High-Throughput Mechanical Phenotyping for Changes in Cell Function. Biophysical Journal, 2015, 108, 140a.	0.5	0
117	Extracting Cell Stiffness from Real-Time Deformability Cytometry: Theory and Experiment. Biophysical Journal, 2015, 109, 2023-2036.	0.5	193
118	Unique Mechanical Properties of Cell Nuclei Regulated by Chromatin. Biophysical Journal, 2015, 108, 540a.	0.5	0
119	ODTbrain: a Python library for full-view, dense diffraction tomography. BMC Bioinformatics, 2015, 16, 367.	2.6	23
120	Real-time deformability cytometry as a label-free indicator of cell function. , 2015, 2015, 1861-4.		8
121	Refractive index measurements of single, spherical cells using digital holographic microscopy. Methods in Cell Biology, 2015, 125, 143-159.	1.1	30
122	Real-time deformability cytometry: on-the-fly cell mechanical phenotyping. Nature Methods, 2015, 12, 199-202.	19.0	580
123	Mechanotransduction in neutrophil activation and deactivation. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 3105-3116.	4.1	44
124	Deformation of phospholipid vesicles in an optical stretcher. Soft Matter, 2015, 11, 6075-6088.	2.7	38
125	Myosin II Activity Softens Cells in Suspension. Biophysical Journal, 2015, 108, 1856-1869.	0.5	96
126	Single-cell diffraction tomography with optofluidic rotation about a tilted axis. Proceedings of SPIE, 2015, , .	0.8	5

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127	SAMHD1 prevents autoimmunity by maintaining genome stability. Annals of the Rheumatic Diseases, 2015, 74, e17-e17.	0.9	133
128	A monolithic glass chip for active single-cell sorting based on mechanical phenotyping. Lab on A Chip, 2015, 15, 1267-1275.	6.0	32
129	Association of the EGF-TM7 receptor CD97 expression with FLT3-ITD in acute myeloid leukemia. Oncotarget, 2015, 6, 38804-38815.	1.8	14
130	Separation of blood cells with differing deformability using deterministic lateral displacement<sup />. Interface Focus, 2014, 4, 20140011.	3.0	99
131	Dynamic operation of optical fibres beyond the single-mode regime facilitates the orientation of biological cells. Nature Communications, 2014, 5, 5481.	12.8	60
132	Direct observation of light focusing by single photoreceptor cell nuclei. Optics Express, 2014, 22, 11043.	3.4	14
133	Impact of heating on passive and active biomechanics of suspended cells. Interface Focus, 2014, 4, 20130069.	3.0	39
134	The relationship between glial cell mechanosensitivity and foreign body reactions in the central nervous system. Biomaterials, 2014, 35, 3919-3925.	11.4	331
135	Grouped retinae and tapetal cups in some Teleostian fish: Occurrence, structure, and function. Progress in Retinal and Eye Research, 2014, 38, 43-69.	15.5	31
136	The Evolution of Mechanical Properties of Differentiating Stem Cells is Fate- and Function-Dependent. Biophysical Journal, 2014, 106, 42a.	0.5	0
137	Mechanics in Neuronal Development and Repair. Annual Review of Biomedical Engineering, 2013, 15, 227-251.	12.3	293
138	Mechanics Meets Medicine. Science Translational Medicine, 2013, 5, 212fs41.	12.4	50
139	Elastic theory for the deformation of a solid or layered spheroid under axisymmetric loading. Acta Mechanica, 2013, 224, 819-839.	2.1	6
140	Bacterial infection of macrophages induces decrease in refractive index. Journal of Biophotonics, 2013, 6, 393-397.	2.3	50
141	Comparison of stresses on homogeneous spheroids in the optical stretcher computed with geometrical optics and generalized Lorenzâ€“Mie theory. Applied Optics, 2012, 51, 7934.	1.8	21
142	Validation and perspectives of a femtosecond laser fabricated monolithic optical stretcher. Biomedical Optics Express, 2012, 3, 2658.	2.9	49
143	Coupling of Active Motion and Advection Shapes Intracellular Cargo Transport. Physical Review Letters, 2012, 109, 028104.	7.8	26
144	Viscoelastic Properties of Differentiating Blood Cells Are Fate- and Function-Dependent. PLoS ONE, 2012, 7, e45237.	2.5	162

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145	Chromatin Decondensation and Nuclear Softening Accompany Nanog Downregulation in Embryonic Stem Cells. Biophysical Journal, 2012, 103, 2060-2070.	0.5	153
146	Photonic Crystal Light Collectors in Fish Retina Improve Vision in Turbid Water. Science, 2012, 336, 1700-1703.	12.6	71
147	Mechanical Environment Modulates Biological Properties of Oligodendrocyte Progenitor Cells. Stem Cells and Development, 2012, 21, 2905-2914.	2.1	105
148	Changes in Ect2 Localization Couple Actomyosin-Dependent Cell Shape Changes to Mitotic Progression. Developmental Cell, 2012, 23, 371-383.	7.0	168
149	Quantifying cellular differentiation by physical phenotype using digital holographic microscopy. Integrative Biology (United Kingdom), 2012, 4, 280.	1.3	74
150	Differentiation, Migration, Proliferation, and Survival of Oligodendrocyte Precursor Cells is Modulated by Mechanical Properties of their Environment. Biophysical Journal, 2012, 102, 704a.	0.5	0
151	Live Cells as Optical Fibers in the Vertebrate Retina. , 2012, , .		4
152	Femtosecond laser fabricated monolithic devices for single cell manipulation. , 2012, , .		0
153	Spatial mapping of the mechanical properties of the living retina using scanning force microscopy. Soft Matter, 2011, 7, 3147.	2.7	90
154	3D inverted colloidal crystals in realistic cell migration assays for drug screening applications. Integrative Biology (United Kingdom), 2011, 3, 1202-1206.	1.3	12
155	Changes in Mechanical Properties Occur During Differentiation Within the Oligodendrocyte Lineage. Biophysical Journal, 2011, 100, 483a.	0.5	0
156	Exact analytical expansion of an off-axis Gaussian laser beam using the translation theorems for the vector spherical harmonics. Applied Optics, 2011, 50, 1023.	2.1	8
157	O33. Oral cancer diagnosis by mechanical phenotyping. Oral Oncology, 2011, 47, S39.	1.5	0
158	Near- and far-field scattering from arbitrary three-dimensional aggregates of coated spheres using parallel computing. Physical Review E, 2011, 83, 026701.	2.1	20
159	The biophysics of neuronal growth. Reports on Progress in Physics, 2010, 73, 094601.	20.1	131
160	Biophotonic techniques for the study of malaria-infected red blood cells. Medical and Biological Engineering and Computing, 2010, 48, 1055-1063.	2.8	27
161	Micro and nanotechnology for biological and biomedical applications. Medical and Biological Engineering and Computing, 2010, 48, 941-943.	2.8	34
162	Monitoring of laser micromanipulated optically trapped cells by digital holographic microscopy. Journal of Biophotonics, 2010, 3, 425-431.	2.3	25

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163	Mechanical difference between white and gray matter in the rat cerebellum measured by scanning force microscopy. Journal of Biomechanics, 2010, 43, 2986-2992.	2.1	221
164	The cavity-to-cavity migration of leukaemic cells through 3D honey-combed hydrogels with adjustable internal dimension and stiffness. Biomaterials, 2010, 31, 2201-2208.	11.4	47
165	Dual-beam laser traps in biology and medicine: when one beam is not enough. , 2010, , .		2
166	Mechanosensitivity of astrocytes on optimized polyacrylamide gels analyzed by quantitative morphometry. Journal of Physics Condensed Matter, 2010, 22, 194114.	1.8	122
167	Detection of Plasmodium falciparum-infected red blood cells by optical stretching. Journal of Biomedical Optics, 2010, 15, 030517.	2.6	35
168	Mesenchymal Stem Cell Mechanics from the Attached to the Suspended State. Biophysical Journal, 2010, 99, 2479-2487.	0.5	146
169	Physical insight into light scattering by photoreceptor cell nuclei. Optics Letters, 2010, 35, 2639.	3.3	38
170	Critical review: cellular mechanobiology and amoeboid migration. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462	1.3	69
171	Oral Cancer Diagnosis by Mechanical Phenotyping. Cancer Research, 2009, 69, 1728-1732.	0.9	278
172	The regulatory role of cell mechanics for migration of differentiating myeloid cells. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15696-15701.	7.1	211
173	Nuclear Architecture of Rod Photoreceptor Cells Adapts to Vision in Mammalian Evolution. Cell, 2009, 137, 356-368.	28.9	683
174	Interaction of Gaussian beam with near-spherical particle: an analytic-numerical approach for assessing scattering and stresses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 1814.	1.5	28
175	Living Optical Elements in the Vertebrate Retina. Biophysical Journal, 2009, 96, 527a.	0.5	0
176	Microfluidic integration of high power dual-beam laser traps for cell mechanical measurements. , 2009, , .		1
177	Mechanics in neuronal development. Biophysical Journal, 2009, 96, 196a.	0.5	0
178	Do cells care about physics?. Physics World, 2009, 22, 31-34.	0.0	0
179	The optical cell rotator. Optics Express, 2008, 16, 16984.	3.4	119
180	E-CADHERIN DEPENDENT ELASTICITY OF PANCREATIC TUMOR CELLS DETECTED BY COMBINED OPTICAL STRETCHER AND DIGITAL HOLOGRAPHY. Pancreas, 2008, 37, 494.	1.1	0

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181	Highâ€Throughput Rheological Measurements with an Optical Stretcher. Methods in Cell Biology, 2007, 83, 397-423.	1.1	79
182	Fluorescence ratio thermometry in a microfluidic dual-beam laser trap. Optics Express, 2007, 15, 15493.	3.4	111
183	MÃ¼ller cells are living optical fibers in the vertebrate retina. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8287-8292.	7.1	356
184	Reconfigurable microfluidic integration of a dual-beam laser trap with biomedical applications. Biomedical Microdevices, 2007, 9, 703-710.	2.8	129
185	Viscoelastic properties of individual glial cells and neurons in the CNS. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17759-17764.	7.1	473
186	Quantifying the contribution of actin networks to the elastic strength of fibroblasts. Journal of Theoretical Biology, 2006, 242, 502-516.	1.7	87
187	The microscopy cell (MicCell), a versatile modular flowthrough system for cell biology, biomaterial research, and nanotechnology. Microfluidics and Nanofluidics, 2006, 2, 21-36.	2.2	50
188	SCATTERING FROM SINGLE NANOPARTICLES: MIE THEORY REVISITED. Biophysical Reviews and Letters, 2006, 01, 179-207.	0.8	4
189	Characterizing single suspended cells by optorheology. Acta Biomaterialia, 2005, 1, 263-271.	8.3	51
190	Optical Rheology of Biological Cells. Physical Review Letters, 2005, 94, 098103.	7.8	193
191	Excitation beyond the monochromatic laser limit: simultaneous 3-D confocal and multiphoton microscopy with a tapered fiber as white-light laser source. Journal of Biomedical Optics, 2005, 10, 054009.	2.6	21
192	Optical Deformability as an Inherent Cell Marker for Testing Malignant Transformation and Metastatic Competence. Biophysical Journal, 2005, 88, 3689-3698.	0.5	1,268
193	Deformability-based flow cytometry. Cytometry, 2004, 59A, 203-209.	1.8	132
194	Feeling for cells with light. , 2004, , .		2
195	Stretching biological cells with light. Journal of Physics Condensed Matter, 2002, 14, 4843-4856.	1.8	61
196	The Optical Stretcher: A Novel Laser Tool to Micromanipulate Cells. Biophysical Journal, 2001, 81, 767-784.	0.5	921
197	Optical Deformability of Soft Biological Dielectrics. Physical Review Letters, 2000, 84, 5451-5454.	7.8	307
198	Amoeboid-like migration ensures correct horizontal cell layer formation in the developing vertebrate retina. ELife, 0, 11, .	6.0	9