

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	Optical Deformability as an Inherent Cell Marker for Testing Malignant Transformation and Metastatic Competence. <i>Biophysical Journal</i> , 2005, 88, 3689-3698.	0.5	1,268
2	The Optical Stretcher: A Novel Laser Tool to Micromanipulate Cells. <i>Biophysical Journal</i> , 2001, 81, 767-784.	0.5	921
3	Nuclear Architecture of Rod Photoreceptor Cells Adapts to Vision in Mammalian Evolution. <i>Cell</i> , 2009, 137, 356-368.	28.9	683
4	Real-time deformability cytometry: on-the-fly cell mechanical phenotyping. <i>Nature Methods</i> , 2015, 12, 199-202.	19.0	580
5	RNA-Induced Conformational Switching and Clustering of G3BP Drive Stress Granule Assembly by Condensation. <i>Cell</i> , 2020, 181, 346-361.e17.	28.9	557
6	Materials and technologies for soft implantable neuroprostheses. <i>Nature Reviews Materials</i> , 2016, 1, .	48.7	485
7	Mechanosensing is critical for axon growth in the developing brain. <i>Nature Neuroscience</i> , 2016, 19, 1592-1598.	14.8	478
8	Viscoelastic properties of individual glial cells and neurons in the CNS. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 17759-17764.	7.1	473
9	A comparison of methods to assess cell mechanical properties. <i>Nature Methods</i> , 2018, 15, 491-498.	19.0	448
10	Müller cells are living optical fibers in the vertebrate retina. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 8287-8292.	7.1	356
11	A pH-driven transition of the cytoplasm from a fluid- to a solid-like state promotes entry into dormancy. <i>ELife</i> , 2016, 5, .	6.0	355
12	The relationship between glial cell mechanosensitivity and foreign body reactions in the central nervous system. <i>Biomaterials</i> , 2014, 35, 3919-3925.	11.4	331
13	Optical Deformability of Soft Biological Dielectrics. <i>Physical Review Letters</i> , 2000, 84, 5451-5454.	7.8	307
14	Mechanics in Neuronal Development and Repair. <i>Annual Review of Biomedical Engineering</i> , 2013, 15, 227-251.	12.3	293
15	Oral Cancer Diagnosis by Mechanical Phenotyping. <i>Cancer Research</i> , 2009, 69, 1728-1732.	0.9	278
16	Mechanical difference between white and gray matter in the rat cerebellum measured by scanning force microscopy. <i>Journal of Biomechanics</i> , 2010, 43, 2986-2992.	2.1	221
17	The regulatory role of cell mechanics for migration of differentiating myeloid cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 15696-15701.	7.1	211
18	Optical Rheology of Biological Cells. <i>Physical Review Letters</i> , 2005, 94, 098103.	7.8	193

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19	Extracting Cell Stiffness from Real-Time Deformability Cytometry: Theory and Experiment. Biophysical Journal, 2015, 109, 2023-2036.	0.5	193
20	Changes in Ect2 Localization Couple Actomyosin-Dependent Cell Shape Changes to Mitotic Progression. Developmental Cell, 2012, 23, 371-383.	7.0	168
21	Viscoelastic Properties of Differentiating Blood Cells Are Fate- and Function-Dependent. PLoS ONE, 2012, 7, e45237.	2.5	162
22	Chromatin Decondensation and Nuclear Softening Accompany Nanog Downregulation in Embryonic Stem Cells. Biophysical Journal, 2012, 103, 2060-2070.	0.5	153
23	A comparison of microfluidic methods for high-throughput cell deformability measurements. Nature Methods, 2020, 17, 587-593.	19.0	148
24	Mesenchymal Stem Cell Mechanics from the Attached to the Suspended State. Biophysical Journal, 2010, 99, 2479-2487.	0.5	146
25	Cell nuclei have lower refractive index and mass density than cytoplasm. Journal of Biophotonics, 2016, 9, 1068-1076.	2.3	139
26	SAMHD1 prevents autoimmunity by maintaining genome stability. Annals of the Rheumatic Diseases, 2015, 74, e17-e17.	0.9	133
27	Mechanical Mapping of Spinal Cord Growth and Repair in Living Zebrafish Larvae by Brillouin Imaging. Biophysical Journal, 2018, 115, 911-923.	0.5	133
28	Deformability-based flow cytometry. Cytometry, 2004, 59A, 203-209.	1.8	132
29	Actin stress fiber organization promotes cell stiffening and proliferation of pre-invasive breast cancer cells. Nature Communications, 2017, 8, 15237.	12.8	132
30	The biophysics of neuronal growth. Reports on Progress in Physics, 2010, 73, 094601.	20.1	131
31	Reconfigurable microfluidic integration of a dual-beam laser trap with biomedical applications. Biomedical Microdevices, 2007, 9, 703-710.	2.8	129
32	Real-time fluorescence and deformability cytometry. Nature Methods, 2018, 15, 355-358.	19.0	127
33	Detection of human disease conditions by single-cell morpho-rheological phenotyping of blood. ELife, 2018, 7, .	6.0	125
34	Mechanosensitivity of astrocytes on optimized polyacrylamide gels analyzed by quantitative morphometry. Journal of Physics Condensed Matter, 2010, 22, 194114.	1.8	122
35	The optical cell rotator. Optics Express, 2008, 16, 16984.	3.4	119
36	Physical phenotype of blood cells is altered in COVID-19. Biophysical Journal, 2021, 120, 2838-2847.	0.5	118

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37	Numerical Simulation of Real-Time Deformability Cytometry To Extract Cell Mechanical Properties. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2962-2973.	5.2	115
38	3D extracellular matrix interactions modulate tumour cell growth, invasion and angiogenesis in engineered tumour microenvironments. <i>Acta Biomaterialia</i> , 2016, 36, 73-85.	8.3	112
39	Fluorescence ratio thermometry in a microfluidic dual-beam laser trap. <i>Optics Express</i> , 2007, 15, 15493.	3.4	111
40	Intelligent image-based deformation-assisted cell sorting with molecular specificity. <i>Nature Methods</i> , 2020, 17, 595-599.	19.0	109
41	Mechanical Environment Modulates Biological Properties of Oligodendrocyte Progenitor Cells. <i>Stem Cells and Development</i> , 2012, 21, 2905-2914.	2.1	105
42	Separation of blood cells with differing deformability using deterministic lateral displacement. <i>Interface Focus</i> , 2014, 4, 20140011.	3.0	99
43	Myosin II Activity Softens Cells in Suspension. <i>Biophysical Journal</i> , 2015, 108, 1856-1869.	0.5	96
44	Mechanical Adaptability of Tumor Cells in Metastasis. <i>Developmental Cell</i> , 2021, 56, 164-179.	7.0	94
45	Spatial mapping of the mechanical properties of the living retina using scanning force microscopy. <i>Soft Matter</i> , 2011, 7, 3147.	2.7	90
46	Quantifying the contribution of actin networks to the elastic strength of fibroblasts. <i>Journal of Theoretical Biology</i> , 2006, 242, 502-516.	1.7	87
47	3D Microenvironment Stiffness Regulates Tumor Spheroid Growth and Mechanics via p21 and ROCK. <i>Advanced Biology</i> , 2019, 3, e1900128.	3.0	84
48	Recent progress and current opinions in Brillouin microscopy for life science applications. <i>Biophysical Reviews</i> , 2020, 12, 615-624.	3.2	84
49	High-Throughput Rheological Measurements with an Optical Stretcher. <i>Methods in Cell Biology</i> , 2007, 83, 397-423.	1.1	79
50	Roadmap for optofluidics. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 093003.	2.2	78
51	Standardized microgel beads as elastic cell mechanical probes. <i>Journal of Materials Chemistry B</i> , 2018, 6, 6245-6261.	5.8	78
52	Three-dimensional correlative single-cell imaging utilizing fluorescence and refractive index tomography. <i>Journal of Biophotonics</i> , 2018, 11, e201700145.	2.3	75
53	Buckling of an Epithelium Growing under Spherical Confinement. <i>Developmental Cell</i> , 2020, 54, 655-668.e6.	7.0	75
54	Quantifying cellular differentiation by physical phenotype using digital holographic microscopy. <i>Integrative Biology (United Kingdom)</i> , 2012, 4, 280.	1.3	74

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55	Photonic Crystal Light Collectors in Fish Retina Improve Vision in Turbid Water. <i>Science</i> , 2012, 336, 1700-1703.	12.6	71
56	<i>Plasmodium falciparum</i> erythrocyte-binding antigen 175 triggers a biophysical change in the red blood cell that facilitates invasion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4225-4230.	7.1	71
57	Critical review: cellular mechanobiology and amoeboid migration. <i>Integrative Biology (United Kingdom)</i> 10.1039/c6ib00111g	1.5	69
58	Mechanical deformation induces depolarization of neutrophils. <i>Science Advances</i> , 2017, 3, e1602536.	10.3	68
59	Oncogenic Signaling Alters Cell Shape and Mechanics to Facilitate Cell Division under Confinement. <i>Developmental Cell</i> , 2020, 52, 563-573.e3.	7.0	65
60	Passive coupling of membrane tension and cell volume during active response of cells to osmosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	65
61	Stretching biological cells with light. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 4843-4856.	1.8	61
62	Dynamic operation of optical fibres beyond the single-mode regime facilitates the orientation of biological cells. <i>Nature Communications</i> , 2014, 5, 5481.	12.8	60
63	Mechanical Strain Promotes Oligodendrocyte Differentiation by Global Changes of Gene Expression. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 93.	3.7	59
64	Initiation of acute graft-versus-host disease by angiogenesis. <i>Blood</i> , 2017, 129, 2021-2032.	1.4	56
65	The Relative Densities of Cytoplasm and Nuclear Compartments Are Robust against Strong Perturbation. <i>Biophysical Journal</i> , 2020, 119, 1946-1957.	0.5	53
66	Characterizing single suspended cells by optorheology. <i>Acta Biomaterialia</i> , 2005, 1, 263-271.	8.3	51
67	The microscopy cell (MicCell), a versatile modular flowthrough system for cell biology, biomaterial research, and nanotechnology. <i>Microfluidics and Nanofluidics</i> , 2006, 2, 21-36.	2.2	50
68	Mechanics Meets Medicine. <i>Science Translational Medicine</i> , 2013, 5, 212fs41.	12.4	50
69	Bacterial infection of macrophages induces decrease in refractive index. <i>Journal of Biophotonics</i> , 2013, 6, 393-397.	2.3	50
70	Validation and perspectives of a femtosecond laser fabricated monolithic optical stretcher. <i>Biomedical Optics Express</i> , 2012, 3, 2658.	2.9	49
71	High-throughput cell mechanical phenotyping for label-free titration assays of cytoskeletal modifications. <i>Cytoskeleton</i> , 2017, 74, 283-296.	2.0	49
72	The cavity-to-cavity migration of leukaemic cells through 3D honey-combed hydrogels with adjustable internal dimension and stiffness. <i>Biomaterials</i> , 2010, 31, 2201-2208.	11.4	47

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73	Polyacrylamide Bead Sensors for in vivo Quantification of Cell-Scale Stress in Zebrafish Development. <i>Scientific Reports</i> , 2019, 9, 17031.	3.3	47
74	High-Throughput Microfluidic Characterization of Erythrocyte Shapes and Mechanical Variability. <i>Biophysical Journal</i> , 2019, 117, 14-24.	0.5	46
75	Enlightening discriminative network functional modules behind Principal Component Analysis separation in differential-omic science studies. <i>Scientific Reports</i> , 2017, 7, 43946.	3.3	45
76	Mechanotransduction in neutrophil activation and deactivation. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2015, 1853, 3105-3116.	4.1	44
77	Targeting Mechanoresponsive Proteins in Pancreatic Cancer: 4-Hydroxyacetophenone Blocks Dissemination and Invasion by Activating MYH14. <i>Cancer Research</i> , 2019, 79, 4665-4678.	0.9	44
78	Proteomic, biomechanical and functional analyses define neutrophil heterogeneity in systemic lupus erythematosus. <i>Annals of the Rheumatic Diseases</i> , 2021, 80, 209-218.	0.9	43
79	Mechanical phenotyping of primary human skeletal stem cells in heterogeneous populations by real-time deformability cytometry. <i>Integrative Biology (United Kingdom)</i> , 2016, 8, 616-623.	1.3	42
80	Niche WNT5A regulates the actin cytoskeleton during regeneration of hematopoietic stem cells. <i>Journal of Experimental Medicine</i> , 2017, 214, 165-181.	8.5	41
81	Some thoughts on the future of cell mechanics. <i>Biophysical Reviews</i> , 2019, 11, 667-670.	3.2	41
82	Real-Time Deformability Cytometry: Label-Free Functional Characterization of Cells. <i>Methods in Molecular Biology</i> , 2018, 1678, 347-369.	0.9	40
83	A switch in pdgfrb cell-derived ECM composition prevents inhibitory scarring and promotes axon regeneration in the zebrafish spinal cord. <i>Developmental Cell</i> , 2021, 56, 509-524.e9.	7.0	40
84	Impact of heating on passive and active biomechanics of suspended cells. <i>Interface Focus</i> , 2014, 4, 20130069.	3.0	39
85	The relationship between metastatic potential and in vitro mechanical properties of osteosarcoma cells. <i>Molecular Biology of the Cell</i> , 2019, 30, 887-898.	2.1	39
86	Toward Deep Biophysical Cytometry: Prospects and Challenges. <i>Trends in Biotechnology</i> , 2021, 39, 1249-1262.	9.3	39
87	Physical insight into light scattering by photoreceptor cell nuclei. <i>Optics Letters</i> , 2010, 35, 2639.	3.3	38
88	Deformation of phospholipid vesicles in an optical stretcher. <i>Soft Matter</i> , 2015, 11, 6075-6088.	2.7	38
89	Mechanical changes of peripheral nerve tissue microenvironment and their structural basis during development. <i>APL Bioengineering</i> , 2019, 3, 036107.	6.2	38
90	V-ATPase inhibition increases cancer cell stiffness and blocks membrane related Ras signaling - a new option for HCC therapy. <i>Oncotarget</i> , 2017, 8, 9476-9487.	1.8	37

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91	Zebrafish Spinal Cord Repair Is Accompanied by Transient Tissue Stiffening. <i>Biophysical Journal</i> , 2020, 118, 448-463.	0.5	37
92	Correlative all-optical quantification of mass density and mechanics of subcellular compartments with fluorescence specificity. <i>ELife</i> , 2022, 11, .	6.0	37
93	Brain tissue stiffness is a sensitive marker for acidosis. <i>Journal of Neuroscience Methods</i> , 2016, 271, 50-54.	2.5	36
94	Detection of Plasmodium falciparum-infected red blood cells by optical stretching. <i>Journal of Biomedical Optics</i> , 2010, 15, 030517.	2.6	35
95	Micro and nanotechnology for biological and biomedical applications. <i>Medical and Biological Engineering and Computing</i> , 2010, 48, 941-943.	2.8	34
96	A Nanoprinted Model of Interstitial Cancer Migration Reveals a Link between Cell Deformability and Proliferation. <i>ACS Nano</i> , 2016, 10, 6437-6448.	14.6	34
97	Single-cell mechanical phenotype is an intrinsic marker of reprogramming and differentiation along the mouse neural lineage. <i>Development (Cambridge)</i> , 2017, 144, 4313-4321.	2.5	34
98	Real-time deformability cytometry reveals sequential contraction and expansion during neutrophil priming. <i>Journal of Leukocyte Biology</i> , 2019, 105, 1143-1153.	3.3	34
99	Metabolic Profiling of Human Eosinophils. <i>Frontiers in Immunology</i> , 2018, 9, 1404.	4.8	33
100	A monolithic glass chip for active single-cell sorting based on mechanical phenotyping. <i>Lab on A Chip</i> , 2015, 15, 1267-1275.	6.0	32
101	Volume Transitions of Isolated Cell Nuclei Induced by Rapid Temperature Increase. <i>Biophysical Journal</i> , 2017, 112, 1063-1076.	0.5	32
102	Droplet-Assisted Microfluidic Fabrication and Characterization of Multifunctional Polysaccharide Microgels Formed by Multicomponent Reactions. <i>Polymers</i> , 2018, 10, 1055.	4.5	32
103	Grouped retinae and tapetal cups in some Teleostian fish: Occurrence, structure, and function. <i>Progress in Retinal and Eye Research</i> , 2014, 38, 43-69.	15.5	31
104	Spheroid Culture of Mesenchymal Stromal Cells Results in Morphorheological Properties Appropriate for Improved Microcirculation. <i>Advanced Science</i> , 2019, 6, 1802104.	11.2	31
105	AIDeveloper: Deep Learning Image Classification in Life Science and Beyond. <i>Advanced Science</i> , 2021, 8, e2003743.	11.2	31
106	Refractive index measurements of single, spherical cells using digital holographic microscopy. <i>Methods in Cell Biology</i> , 2015, 125, 143-159.	1.1	30
107	Bone marrow niche-mimetics modulate HSPC function via integrin signaling. <i>Scientific Reports</i> , 2017, 7, 2549.	3.3	30
108	nanite: using machine learning to assess the quality of atomic force microscopy-enabled nano-indentation data. <i>BMC Bioinformatics</i> , 2019, 20, 465.	2.6	29

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109	Quantitative phase imaging through an ultra-thin lensless fiber endoscope. <i>Light: Science and Applications</i> , 2022, 11, .	16.6	29
110	Interaction of Gaussian beam with near-spherical particle: an analytic-numerical approach for assessing scattering and stresses. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2009, 26, 1814.	1.5	28
111	Toll-Like Receptor-Mediated Upregulation of CXCL16 in Psoriasis Orchestrates Neutrophil Activation. <i>Journal of Investigative Dermatology</i> , 2018, 138, 344-354.	0.7	28
112	Biophotonic techniques for the study of malaria-infected red blood cells. <i>Medical and Biological Engineering and Computing</i> , 2010, 48, 1055-1063.	2.8	27
113	Coupling of Active Motion and Advection Shapes Intracellular Cargo Transport. <i>Physical Review Letters</i> , 2012, 109, 028104.	7.8	26
114	High-throughput single-cell mechanical phenotyping with real-time deformability cytometry. <i>Methods in Cell Biology</i> , 2018, 147, 175-198.	1.1	26
115	Alterations in Cell Mechanics by Actin Cytoskeletal Changes Correlate with Strain-Specific Rubella Virus Phenotypes for Cell Migration and Induction of Apoptosis. <i>Cells</i> , 2018, 7, 136.	4.1	26
116	Compliant Substrates Enhance Macrophage Cytokine Release and NLRP3 Inflammasome Formation During Their Pro-Inflammatory Response. <i>Frontiers in Cell and Developmental Biology</i> , 2021, 9, 639815.	3.7	26
117	Monitoring of laser micromanipulated optically trapped cells by digital holographic microscopy. <i>Journal of Biophotonics</i> , 2010, 3, 425-431.	2.3	25
118	Maturation of Monocyte-Derived DCs Leads to Increased Cellular Stiffness, Higher Membrane Fluidity, and Changed Lipid Composition. <i>Frontiers in Immunology</i> , 2020, 11, 590121.	4.8	24
119	ODTbrain: a Python library for full-view, dense diffraction tomography. <i>BMC Bioinformatics</i> , 2015, 16, 367.	2.6	23
120	Intracellular Mass Density Increase Is Accompanying but Not Sufficient for Stiffening and Growth Arrest of Yeast Cells. <i>Frontiers in Physics</i> , 2018, 6, .	2.1	23
121	Mapping Tumor Spheroid Mechanics in Dependence of 3D Microenvironment Stiffness and Degradability by Brillouin Microscopy. <i>Cancers</i> , 2021, 13, 5549.	3.7	23
122	Excitation beyond the monochromatic laser limit: simultaneous 3-D confocal and multiphoton microscopy with a tapered fiber as white-light laser source. <i>Journal of Biomedical Optics</i> , 2005, 10, 054009.	2.6	21
123	Comparison of stresses on homogeneous spheroids in the optical stretcher computed with geometrical optics and generalized Lorenzâ€™Mie theory. <i>Applied Optics</i> , 2012, 51, 7934.	1.8	21
124	Near- and far-field scattering from arbitrary three-dimensional aggregates of coated spheres using parallel computing. <i>Physical Review E</i> , 2011, 83, 026701.	2.1	20
125	Mechanical properties of cell- and microgel bead-laden oxidized alginate-gelatin hydrogels. <i>Biomaterials Science</i> , 2021, 9, 3051-3068.	5.4	20
126	The F-actin modifier villin regulates insulin granule dynamics and exocytosis downstream of islet cell autoantigen 512. <i>Molecular Metabolism</i> , 2016, 5, 656-668.	6.5	19

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127	Accurate evaluation of size and refractive index for spherical objects in quantitative phase imaging. <i>Optics Express</i> , 2018, 26, 10729.	3.4	19
128	Optical quantification of intracellular mass density and cell mechanics in 3D mechanical confinement. <i>Soft Matter</i> , 2021, 17, 853-862.	2.7	18
129	Matrix stiffness mechanosensing modulates the expression and distribution of transcription factors in Schwann cells. <i>Bioengineering and Translational Medicine</i> , 2022, 7, e10257.	7.1	18
130	Epithelial RAC1-dependent cytoskeleton dynamics controls cell mechanics, cell shedding and barrier integrity in intestinal inflammation. <i>Gut</i> , 2023, 72, 275-294.	12.1	18
131	Chemotherapy impedes in vitro microcirculation and promotes migration of leukemic cells with impact on metastasis. <i>Biochemical and Biophysical Research Communications</i> , 2016, 479, 841-846.	2.1	16
132	Rapid computational cell-rotation around arbitrary axes in 3D with multi-core fiber. <i>Biomedical Optics Express</i> , 2021, 12, 3423.	2.9	16
133	Efficient and gentle delivery of molecules into cells with different elasticity via Progressive Mechanoporation. <i>Lab on A Chip</i> , 2021, 21, 2437-2452.	6.0	16
134	Mechanical mismatch between Ras transformed and untransformed epithelial cells. <i>Soft Matter</i> , 2017, 13, 8483-8491.	2.7	15
135	Direct observation of light focusing by single photoreceptor cell nuclei. <i>Optics Express</i> , 2014, 22, 11043.	3.4	14
136	Estrogens Determine Adherens Junction Organization and E-Cadherin Clustering in Breast Cancer Cells via Amphiregulin. <i>IScience</i> , 2020, 23, 101683.	4.1	14
137	The <i>Xenopus</i> spindle is as dense as the surrounding cytoplasm. <i>Developmental Cell</i> , 2021, 56, 967-975.e5.	7.0	14
138	Association of the EGF-TM7 receptor CD97 expression with FLT3-ITD in acute myeloid leukemia. <i>Oncotarget</i> , 2015, 6, 38804-38815.	1.8	14
139	HIF2 β is a direct regulator of neutrophil motility. <i>Blood</i> , 2021, 137, 3416-3427.	1.4	13
140	Depressive disorders are associated with increased peripheral blood cell deformability: a cross-sectional case-control study (Mood-Morph). <i>Translational Psychiatry</i> , 2022, 12, 150.	4.8	13
141	An explicit model to extract viscoelastic properties of cells from AFM force-indentation curves. <i>IScience</i> , 2022, 25, 104016.	4.1	13
142	3D inverted colloidal crystals in realistic cell migration assays for drug screening applications. <i>Integrative Biology (United Kingdom)</i> , 2011, 3, 1202-1206.	1.3	12
143	The mechanics of myeloid cells. <i>Biology of the Cell</i> , 2020, 112, 103-112.	2.0	12
144	Label-free imaging flow cytometry for analysis and sorting of enzymatically dissociated tissues. <i>Scientific Reports</i> , 2022, 12, 963.	3.3	12

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145	DryMass: handling and analyzing quantitative phase microscopy images of spherical, cell-sized objects. BMC Bioinformatics, 2020, 21, 226.	2.6	11
146	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
147	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
148	Effects of rigosertib on the osteo-hematopoietic niche in myelodysplastic syndromes. Annals of Hematology, 2019, 98, 2063-2072.	1.8	10
149	Morpho-rheological Fingerprinting of Rod Photoreceptors Using Real-time Deformability Cytometry. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2019, 95, 1145-1157.	1.5	10
150	Nonlinear microscopy using impulsive stimulated Brillouin scattering for high-speed elastography. Optics Express, 2022, 30, 4748.	3.4	10
151	CASP1 variants influence subcellular caspase-1 localization, pyroptosome formation, pro-inflammatory cell death and macrophage deformability. Clinical Immunology, 2019, 208, 108232.	3.2	9
152	Best practices for reporting throughput in biomedical research. Nature Methods, 2022, 19, 633-634.	19.0	9
153	Amoeboid-like migration ensures correct horizontal cell layer formation in the developing vertebrate retina. ELife, 0, 11, .	6.0	9
154	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
155	Real-time deformability cytometry as a label-free indicator of cell function. , 2015, 2015, 1861-4.		8
156	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
157	Colloidal crystals of compliant microgel beads to study cell migration and mechanosensitivity in 3D. Soft Matter, 2019, 15, 9776-9787.	2.7	8
158	Controlling distinct signaling states in cultured cancer cells provides a new platform for drug discovery. FASEB Journal, 2019, 33, 9235-9249.	0.5	7
159	Acquired demyelination but not genetic developmental defects in myelination leads to brain tissue stiffness changes. Brain Multiphysics, 2020, 1, 100019.	2.3	7
160	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
161	Elastic theory for the deformation of a solid or layered spheroid under axisymmetric loading. Acta Mechanica, 2013, 224, 819-839.	2.1	6
162	Quantitative imaging of Caenorhabditis elegans dauer larvae during cryptobiotic transition. Biophysical Journal, 2022, 121, 1219-1229.	0.5	6

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163	<i>In vivo</i> assessment of mechanical properties during axolotl development and regeneration using confocal Brillouin microscopy. <i>Open Biology</i> , 2022, 12, .	3.6	6
164	Single-cell diffraction tomography with optofluidic rotation about a tilted axis. <i>Proceedings of SPIE</i> , 2015, , .	0.8	5
165	PNIPAAm microgels with defined network architecture as temperature sensors in optical stretchers. <i>Materials Advances</i> , 2022, 3, 6179-6190.	5.4	5
166	SCATTERING FROM SINGLE NANOPARTICLES: MIE THEORY REVISITED. <i>Biophysical Reviews and Letters</i> , 2006, 01, 179-207.	0.8	4
167	Live Cells as Optical Fibers in the Vertebrate Retina. , 2012, , .		4
168	Response to Comment on "Cell nuclei have lower refractive index and mass density than cytoplasm". <i>Journal of Biophotonics</i> , 2018, 11, e201800095.	2.3	4
169	Cell Mechanics Based Computational Classification of Red Blood Cells Via Machine Intelligence Applied to Morpho-Rheological Markers. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2021, 18, 1405-1415.	3.0	4
170	Stretching and heating cells with light" nonlinear photothermal cell rheology. <i>New Journal of Physics</i> , 2020, 22, 085003.	2.9	4
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