

# Jochen Guck

## List of Publications by Year in descending order

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198  
papers

15,974  
citations

24978

57  
h-index

19690

117  
g-index

239  
all docs

239  
docs citations

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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.	0.2	1,268
2	The Optical Stretcher: A Novel Laser Tool to Micromanipulate Cells. <i>Biophysical Journal</i> , 2001, 81, 767-784.	0.2	921
3	Nuclear Architecture of Rod Photoreceptor Cells Adapts to Vision in Mammalian Evolution. <i>Cell</i> , 2009, 137, 356-368.	13.5	683
4	Real-time deformability cytometry: on-the-fly cell mechanical phenotyping. <i>Nature Methods</i> , 2015, 12, 199-202.	9.0	580
5	RNA-Induced Conformational Switching and Clustering of G3BP Drive Stress Granule Assembly by Condensation. <i>Cell</i> , 2020, 181, 346-361.e17.	13.5	557
6	Materials and technologies for soft implantable neuroprostheses. <i>Nature Reviews Materials</i> , 2016, 1, .	23.3	485
7	Mechanosensing is critical for axon growth in the developing brain. <i>Nature Neuroscience</i> , 2016, 19, 1592-1598.	7.1	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.	3.3	473
9	A comparison of methods to assess cell mechanical properties. <i>Nature Methods</i> , 2018, 15, 491-498.	9.0	448
10	Muller 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.	3.3	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, .	2.8	355
12	The relationship between glial cell mechanosensitivity and foreign body reactions in the central nervous system. <i>Biomaterials</i> , 2014, 35, 3919-3925.	5.7	331
13	Optical Deformability of Soft Biological Dielectrics. <i>Physical Review Letters</i> , 2000, 84, 5451-5454.	2.9	307
14	Mechanics in Neuronal Development and Repair. <i>Annual Review of Biomedical Engineering</i> , 2013, 15, 227-251.	5.7	293
15	Oral Cancer Diagnosis by Mechanical Phenotyping. <i>Cancer Research</i> , 2009, 69, 1728-1732.	0.4	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.	0.9	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.	3.3	211
18	Optical Rheology of Biological Cells. <i>Physical Review Letters</i> , 2005, 94, 098103.	2.9	193

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19	Extracting Cell Stiffness from Real-Time Deformability Cytometry: Theory and Experiment. <i>Biophysical Journal</i> , 2015, 109, 2023-2036.	0.2	193
20	Changes in Ect2 Localization Couple Actomyosin-Dependent Cell Shape Changes to Mitotic Progression. <i>Developmental Cell</i> , 2012, 23, 371-383.	3.1	168
21	Viscoelastic Properties of Differentiating Blood Cells Are Fate- and Function-Dependent. <i>PLoS ONE</i> , 2012, 7, e45237.	1.1	162
22	Chromatin Decondensation and Nuclear Softening Accompany Nanog Downregulation in Embryonic Stem Cells. <i>Biophysical Journal</i> , 2012, 103, 2060-2070.	0.2	153
23	A comparison of microfluidic methods for high-throughput cell deformability measurements. <i>Nature Methods</i> , 2020, 17, 587-593.	9.0	148
24	Mesenchymal Stem Cell Mechanics from the Attached to the Suspended State. <i>Biophysical Journal</i> , 2010, 99, 2479-2487.	0.2	146
25	Cell nuclei have lower refractive index and mass density than cytoplasm. <i>Journal of Biophotonics</i> , 2016, 9, 1068-1076.	1.1	139
26	SAMHD1 prevents autoimmunity by maintaining genome stability. <i>Annals of the Rheumatic Diseases</i> , 2015, 74, e17-e17.	0.5	133
27	Mechanical Mapping of Spinal Cord Growth and Repair in Living Zebrafish Larvae by Brillouin Imaging. <i>Biophysical Journal</i> , 2018, 115, 911-923.	0.2	133
28	Deformability-based flow cytometry. <i>Cytometry</i> , 2004, 59A, 203-209.	1.8	132
29	Actin stress fiber organization promotes cell stiffening and proliferation of pre-invasive breast cancer cells. <i>Nature Communications</i> , 2017, 8, 15237.	5.8	132
30	The biophysics of neuronal growth. <i>Reports on Progress in Physics</i> , 2010, 73, 094601.	8.1	131
31	Reconfigurable microfluidic integration of a dual-beam laser trap with biomedical applications. <i>Biomedical Microdevices</i> , 2007, 9, 703-710.	1.4	129
32	Real-time fluorescence and deformability cytometry. <i>Nature Methods</i> , 2018, 15, 355-358.	9.0	127
33	Detection of human disease conditions by single-cell morpho-rheological phenotyping of blood. <i>ELife</i> , 2018, 7, .	2.8	125
34	Mechanosensitivity of astrocytes on optimized polyacrylamide gels analyzed by quantitative morphometry. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 194114.	0.7	122
35	The optical cell rotator. <i>Optics Express</i> , 2008, 16, 16984.	1.7	119
36	Physical phenotype of blood cells is altered in COVID-19. <i>Biophysical Journal</i> , 2021, 120, 2838-2847.	0.2	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.	2.6	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.	4.1	112
39	Fluorescence ratio thermometry in a microfluidic dual-beam laser trap. <i>Optics Express</i> , 2007, 15, 15493.	1.7	111
40	Intelligent image-based deformation-assisted cell sorting with molecular specificity. <i>Nature Methods</i> , 2020, 17, 595-599.	9.0	109
41	Mechanical Environment Modulates Biological Properties of Oligodendrocyte Progenitor Cells. <i>Stem Cells and Development</i> , 2012, 21, 2905-2914.	1.1	105
42	Separation of blood cells with differing deformability using deterministic lateral displacement. <i>Interface Focus</i> , 2014, 4, 20140011.	1.5	99
43	Myosin II Activity Softens Cells in Suspension. <i>Biophysical Journal</i> , 2015, 108, 1856-1869.	0.2	96
44	Mechanical Adaptability of Tumor Cells in Metastasis. <i>Developmental Cell</i> , 2021, 56, 164-179.	3.1	94
45	Spatial mapping of the mechanical properties of the living retina using scanning force microscopy. <i>Soft Matter</i> , 2011, 7, 3147.	1.2	90
46	Quantifying the contribution of actin networks to the elastic strength of fibroblasts. <i>Journal of Theoretical Biology</i> , 2006, 242, 502-516.	0.8	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.	1.5	84
49	High-Throughput Rheological Measurements with an Optical Stretcher. <i>Methods in Cell Biology</i> , 2007, 83, 397-423.	0.5	79
50	Roadmap for optofluidics. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 093003.	1.0	78
51	Standardized microgel beads as elastic cell mechanical probes. <i>Journal of Materials Chemistry B</i> , 2018, 6, 6245-6261.	2.9	78
52	Three-dimensional correlative single-cell imaging utilizing fluorescence and refractive index tomography. <i>Journal of Biophotonics</i> , 2018, 11, e201700145.	1.1	75
53	Buckling of an Epithelium Growing under Spherical Confinement. <i>Developmental Cell</i> , 2020, 54, 655-668.e6.	3.1	75
54	Quantifying cellular differentiation by physical phenotype using digital holographic microscopy. <i>Integrative Biology (United Kingdom)</i> , 2012, 4, 280.	0.6	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.	6.0	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.	3.3	71
57	Critical review: cellular mechanobiology and amoeboid migration. <i>Integrative Biology (United Kingdom)</i> 10.1039/c6ib00011a	0.8	69
58	Mechanical deformation induces depolarization of neutrophils. <i>Science Advances</i> , 2017, 3, e1602536.	4.7	68
59	Oncogenic Signaling Alters Cell Shape and Mechanics to Facilitate Cell Division under Confinement. <i>Developmental Cell</i> , 2020, 52, 563-573.e3.	3.1	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, .	3.3	65
61	Stretching biological cells with light. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 4843-4856.	0.7	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.	5.8	60
63	Mechanical Strain Promotes Oligodendrocyte Differentiation by Global Changes of Gene Expression. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 93.	1.8	59
64	Initiation of acute graft-versus-host disease by angiogenesis. <i>Blood</i> , 2017, 129, 2021-2032.	0.6	56
65	The Relative Densities of Cytoplasm and Nuclear Compartments Are Robust against Strong Perturbation. <i>Biophysical Journal</i> , 2020, 119, 1946-1957.	0.2	53
66	Characterizing single suspended cells by optorheology. <i>Acta Biomaterialia</i> , 2005, 1, 263-271.	4.1	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.	1.0	50
68	Mechanics Meets Medicine. <i>Science Translational Medicine</i> , 2013, 5, 212fs41.	5.8	50
69	Bacterial infection of macrophages induces decrease in refractive index. <i>Journal of Biophotonics</i> , 2013, 6, 393-397.	1.1	50
70	Validation and perspectives of a femtosecond laser fabricated monolithic optical stretcher. <i>Biomedical Optics Express</i> , 2012, 3, 2658.	1.5	49
71	High-throughput cell mechanical phenotyping for label-free titration assays of cytoskeletal modifications. <i>Cytoskeleton</i> , 2017, 74, 283-296.	1.0	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.	5.7	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.	1.6	47
74	High-Throughput Microfluidic Characterization of Erythrocyte Shapes and Mechanical Variability. <i>Biophysical Journal</i> , 2019, 117, 14-24.	0.2	46
75	Enlightening discriminative network functional modules behind Principal Component Analysis separation in differential-omic science studies. <i>Scientific Reports</i> , 2017, 7, 43946.	1.6	45
76	Mechanotransduction in neutrophil activation and deactivation. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2015, 1853, 3105-3116.	1.9	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.	0.4	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.	0.5	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.	0.6	42
80	Niche WNT5A regulates the actin cytoskeleton during regeneration of hematopoietic stem cells. <i>Journal of Experimental Medicine</i> , 2017, 214, 165-181.	4.2	41
81	Some thoughts on the future of cell mechanics. <i>Biophysical Reviews</i> , 2019, 11, 667-670.	1.5	41
82	Real-Time Deformability Cytometry: Label-Free Functional Characterization of Cells. <i>Methods in Molecular Biology</i> , 2018, 1678, 347-369.	0.4	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.	3.1	40
84	Impact of heating on passive and active biomechanics of suspended cells. <i>Interface Focus</i> , 2014, 4, 20130069.	1.5	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.	0.9	39
86	Toward Deep Biophysical Cytometry: Prospects and Challenges. <i>Trends in Biotechnology</i> , 2021, 39, 1249-1262.	4.9	39
87	Physical insight into light scattering by photoreceptor cell nuclei. <i>Optics Letters</i> , 2010, 35, 2639.	1.7	38
88	Deformation of phospholipid vesicles in an optical stretcher. <i>Soft Matter</i> , 2015, 11, 6075-6088.	1.2	38
89	Mechanical changes of peripheral nerve tissue microenvironment and their structural basis during development. <i>APL Bioengineering</i> , 2019, 3, 036107.	3.3	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.	0.8	37

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91	Zebrafish Spinal Cord Repair Is Accompanied by Transient Tissue Stiffening. <i>Biophysical Journal</i> , 2020, 118, 448-463.	0.2	37
92	Correlative all-optical quantification of mass density and mechanics of subcellular compartments with fluorescence specificity. <i>ELife</i> , 2022, 11, .	2.8	37
93	Brain tissue stiffness is a sensitive marker for acidosis. <i>Journal of Neuroscience Methods</i> , 2016, 271, 50-54.	1.3	36
94	Detection of Plasmodium falciparum-infected red blood cells by optical stretching. <i>Journal of Biomedical Optics</i> , 2010, 15, 030517.	1.4	35
95	Micro and nanotechnology for biological and biomedical applications. <i>Medical and Biological Engineering and Computing</i> , 2010, 48, 941-943.	1.6	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.	7.3	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.	1.2	34
98	Real-time deformability cytometry reveals sequential contraction and expansion during neutrophil priming. <i>Journal of Leukocyte Biology</i> , 2019, 105, 1143-1153.	1.5	34
99	Metabolic Profiling of Human Eosinophils. <i>Frontiers in Immunology</i> , 2018, 9, 1404.	2.2	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.	3.1	32
101	Volume Transitions of Isolated Cell Nuclei Induced by Rapid Temperature Increase. <i>Biophysical Journal</i> , 2017, 112, 1063-1076.	0.2	32
102	Droplet-Assisted Microfluidic Fabrication and Characterization of Multifunctional Polysaccharide Microgels Formed by Multicomponent Reactions. <i>Polymers</i> , 2018, 10, 1055.	2.0	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.	7.3	31
104	Spheroid Culture of Mesenchymal Stromal Cells Results in Morphorheological Properties Appropriate for Improved Microcirculation. <i>Advanced Science</i> , 2019, 6, 1802104.	5.6	31
105	AIDeveloper: Deep Learning Image Classification in Life Science and Beyond. <i>Advanced Science</i> , 2021, 8, e2003743.	5.6	31
106	Refractive index measurements of single, spherical cells using digital holographic microscopy. <i>Methods in Cell Biology</i> , 2015, 125, 143-159.	0.5	30
107	Bone marrow niche-mimetics modulate HSPC function via integrin signaling. <i>Scientific Reports</i> , 2017, 7, 2549.	1.6	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.	1.2	29

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109	Quantitative phase imaging through an ultra-thin lensless fiber endoscope. <i>Light: Science and Applications</i> , 2022, 11, .	7.7	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.	0.8	28
111	Toll-Like Receptor-Mediated Upregulation of CXCL16 in Psoriasis Orchestrates Neutrophil Activation. <i>Journal of Investigative Dermatology</i> , 2018, 138, 344-354.	0.3	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.	1.6	27
113	Coupling of Active Motion and Advection Shapes Intracellular Cargo Transport. <i>Physical Review Letters</i> , 2012, 109, 028104.	2.9	26
114	High-throughput single-cell mechanical phenotyping with real-time deformability cytometry. <i>Methods in Cell Biology</i> , 2018, 147, 175-198.	0.5	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.	1.8	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.	1.8	26
117	Monitoring of laser micromanipulated optically trapped cells by digital holographic microscopy. <i>Journal of Biophotonics</i> , 2010, 3, 425-431.	1.1	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.	2.2	24
119	ODTbrain: a Python library for full-view, dense diffraction tomography. <i>BMC Bioinformatics</i> , 2015, 16, 367.	1.2	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, .	1.0	23
121	Mapping Tumor Spheroid Mechanics in Dependence of 3D Microenvironment Stiffness and Degradability by Brillouin Microscopy. <i>Cancers</i> , 2021, 13, 5549.	1.7	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.	1.4	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.	0.9	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.	0.8	20
125	Mechanical properties of cell- and microgel bead-laden oxidized alginate-gelatin hydrogels. <i>Biomaterials Science</i> , 2021, 9, 3051-3068.	2.6	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.	3.0	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.	1.7	19
128	Optical quantification of intracellular mass density and cell mechanics in 3D mechanical confinement. <i>Soft Matter</i> , 2021, 17, 853-862.	1.2	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.	3.9	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.	6.1	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.	1.0	16
132	Rapid computational cell-rotation around arbitrary axes in 3D with multi-core fiber. <i>Biomedical Optics Express</i> , 2021, 12, 3423.	1.5	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.	3.1	16
134	Mechanical mismatch between Ras transformed and untransformed epithelial cells. <i>Soft Matter</i> , 2017, 13, 8483-8491.	1.2	15
135	Direct observation of light focusing by single photoreceptor cell nuclei. <i>Optics Express</i> , 2014, 22, 11043.	1.7	14
136	Estrogens Determine Adherens Junction Organization and E-Cadherin Clustering in Breast Cancer Cells via Amphiregulin. <i>IScience</i> , 2020, 23, 101683.	1.9	14
137	The <i>Xenopus</i> spindle is as dense as the surrounding cytoplasm. <i>Developmental Cell</i> , 2021, 56, 967-975.e5.	3.1	14
138	Association of the EGF-TM7 receptor CD97 expression with FLT3-ITD in acute myeloid leukemia. <i>Oncotarget</i> , 2015, 6, 38804-38815.	0.8	14
139	HIF2 $\beta$ is a direct regulator of neutrophil motility. <i>Blood</i> , 2021, 137, 3416-3427.	0.6	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.	2.4	13
141	An explicit model to extract viscoelastic properties of cells from AFM force-indentation curves. <i>IScience</i> , 2022, 25, 104016.	1.9	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.	0.6	12
143	The mechanics of myeloid cells. <i>Biology of the Cell</i> , 2020, 112, 103-112.	0.7	12
144	Label-free imaging flow cytometry for analysis and sorting of enzymatically dissociated tissues. <i>Scientific Reports</i> , 2022, 12, 963.	1.6	12

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145	DryMass: handling and analyzing quantitative phase microscopy images of spherical, cell-sized objects. BMC Bioinformatics, 2020, 21, 226.	1.2	11
146	Machine learning assisted real-time deformability cytometry of CD34+ cells allows to identify patients with myelodysplastic syndromes. Scientific Reports, 2022, 12, 870.	1.6	11
147	Axonal Transport, Phase-Separated Compartments, and Neuron Mechanics - A New Approach to Investigate Neurodegenerative Diseases. Frontiers in Cellular Neuroscience, 2018, 12, 358.	1.8	10
148	Effects of rigosertib on the osteo-hematopoietic niche in myelodysplastic syndromes. Annals of Hematology, 2019, 98, 2063-2072.	0.8	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.	1.1	10
150	Nonlinear microscopy using impulsive stimulated Brillouin scattering for high-speed elastography. Optics Express, 2022, 30, 4748.	1.7	10
151	CASP1 variants influence subcellular caspase-1 localization, pyroptosome formation, pro-inflammatory cell death and macrophage deformability. Clinical Immunology, 2019, 208, 108232.	1.4	9
152	Best practices for reporting throughput in biomedical research. Nature Methods, 2022, 19, 633-634.	9.0	9
153	Amoeboid-like migration ensures correct horizontal cell layer formation in the developing vertebrate retina. ELife, 0, 11, .	2.8	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.	0.4	8
157	Colloidal crystals of compliant microgel beads to study cell migration and mechanosensitivity in 3D. Soft Matter, 2019, 15, 9776-9787.	1.2	8
158	Controlling distinct signaling states in cultured cancer cells provides a new platform for drug discovery. FASEB Journal, 2019, 33, 9235-9249.	0.2	7
159	Acquired demyelination but not genetic developmental defects in myelination leads to brain tissue stiffness changes. Brain Multiphysics, 2020, 1, 100019.	0.8	7
160	Changes in Blood Cell Deformability in Chorea-Acanthocytosis and Effects of Treatment With Dasatinib or Lithium. Frontiers in Physiology, 2022, 13, 852946.	1.3	7
161	Elastic theory for the deformation of a solid or layered spheroid under axisymmetric loading. Acta Mechanica, 2013, 224, 819-839.	1.1	6
162	Quantitative imaging of Caenorhabditis elegans dauer larvae during cryptobiotic transition. Biophysical Journal, 2022, 121, 1219-1229.	0.2	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, .	1.5	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.	2.6	5
166	SCATTERING FROM SINGLE NANOPARTICLES: MIE THEORY REVISITED. <i>Biophysical Reviews and Letters</i> , 2006, 01, 179-207.	0.9	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.	1.1	4
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