

Ruiguo Yang

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

1,387
citations

361296

20
h-index

414303

32
g-index

101
all docs

101
docs citations

101
times ranked

1705
citing authors

#	ARTICLE	IF	CITATIONS
1	A Wirelessly Controlled Smart Bandage with 3D-Printed Miniaturized Needle Arrays. <i>Advanced Functional Materials</i> , 2020, 30, 1905544.	7.8	109
2	The LINC complex, mechanotransduction, and mesenchymal stem cell function and fate. <i>Journal of Biological Engineering</i> , 2019, 13, 68.	2.0	91
3	The desmoplakin intermediate filament linkage regulates cell mechanics. <i>Molecular Biology of the Cell</i> , 2017, 28, 3156-3164.	0.9	70
4	Development of Infrared Detectors Using Single Carbon-Nanotube-Based Field-Effect Transistors. <i>IEEE Nanotechnology Magazine</i> , 2010, 9, 582-589.	1.1	59
5	Investigation of human keratinocyte cell adhesion using atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2010, 6, 191-200.	1.7	55
6	Asymmetric Hysteresis Modeling and Compensation Approach for Nanomanipulation System Motion Control Considering Working-Range Effect. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 5513-5523.	5.2	51
7	AFM Identification of Beetle Exocuticle: Bouligand Structure and Nanofiber Anisotropic Elastic Properties. <i>Advanced Functional Materials</i> , 2017, 27, 1603993.	7.8	50
8	Patchable micro/nanodevices interacting with skin. <i>Biosensors and Bioelectronics</i> , 2018, 122, 189-204.	5.3	47
9	Monoclonal Cell Line Generation and CRISPR/Cas9 Manipulation via Single-Cell Electroporation. <i>Small</i> , 2018, 14, e1702495.	5.2	37
10	Inactivation of SAG E3 Ubiquitin Ligase Blocks Embryonic Stem Cell Differentiation and Sensitizes Leukemia Cells to Retinoid Acid. <i>PLoS ONE</i> , 2011, 6, e27726.	1.1	33
11	Infrared Camera Using a Single Nano-Photodetector. <i>IEEE Sensors Journal</i> , 2013, 13, 949-958.	2.4	33
12	High Throughput and Highly Controllable Methods for In Vitro Intracellular Delivery. <i>Small</i> , 2020, 16, e2004917.	5.2	32
13	Cellular level robotic surgery: Nanodissection of intermediate filaments in live keratinocytes. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2015, 11, 137-145.	1.7	31
14	Quantitative Analysis of Human Keratinocyte Cell Elasticity Using Atomic Force Microscopy (AFM). <i>IEEE Transactions on Nanobioscience</i> , 2011, 10, 9-15.	2.2	29
15	Cellular-Level Surgery Using Nano Robots. <i>Journal of the Association for Laboratory Automation</i> , 2012, 17, 425-434.	2.8	27
16	Characterization of mechanical behavior of an epithelial monolayer in response to epidermal growth factor stimulation. <i>Experimental Cell Research</i> , 2012, 318, 521-526.	1.2	27
17	Development of a miniature self-stabilization jumping robot. , 2009, , .		26
18	Characterization of the strain-rate-dependent mechanical response of single cell-cell junctions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	25

#	ARTICLE	IF	CITATIONS
19	Video rate Atomic Force Microscopy (AFM) imaging using compressive sensing. , 2011, , .		24
20	Wearable Devices for Single-Cell Sensing and Transfection. Trends in Biotechnology, 2019, 37, 1175-1188.	4.9	23
21	Form-finding of deployable mesh reflectors using dynamic relaxation method. Acta Astronautica, 2018, 151, 380-388.	1.7	22
22	Cellular biophysical dynamics and ion channel activities detected by AFM-based nanorobotic manipulator in insulinoma β -cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2013, 9, 636-645.	1.7	21
23	Compressive Feedback-Based Motion Control for Nanomanipulation Theory and Applications. IEEE Transactions on Robotics, 2014, 30, 103-114.	7.3	21
24	Periodic reference tracking control approach for smart material actuators with complex hysteretic characteristics. Smart Materials and Structures, 2016, 25, 105029.	1.8	20
25	Tissue Regeneration from Mechanical Stretching of Cell Cell Adhesion. Tissue Engineering - Part C: Methods, 2019, 25, 631-640.	1.1	20
26	Nanosensors for single cell mechanical interrogation. Biosensors and Bioelectronics, 2021, 179, 113086.	5.3	20
27	Bionanomanipulation Using Atomic Force Microscopy. IEEE Nanotechnology Magazine, 2010, 4, 9-12.	0.9	19
28	Nanomechanical analysis of insulinoma cells after glucose and capsaicin stimulation using atomic force microscopy. Acta Pharmacologica Sinica, 2011, 32, 853-860.	2.8	19
29	Video Rate Atomic Force Microscopy: Use of compressive scanning for nanoscale video imaging. IEEE Nanotechnology Magazine, 2013, 7, 4-8.	0.9	19
30	Effect of initial imperfections of struts on the mechanical behavior of tensegrity structures. Composite Structures, 2019, 207, 871-876.	3.1	19
31	Compensating asymmetric hysteresis for nanorobot motion control. , 2015, , .		18
32	Nanorobotic Investigation Identifies Novel Visual, Structural and Functional Correlates of Autoimmune Pathology in a Blistering Skin Disease Model. PLoS ONE, 2014, 9, e106895.	1.1	17
33	Gate dependent photo-responses of carbon nanotube field effect phototransistors. Nanotechnology, 2012, 23, 385203.	1.3	16
34	Techniques to stimulate and interrogate cell cell adhesion mechanics. Extreme Mechanics Letters, 2018, 20, 125-139.	2.0	16
35	Enhanced Nonvector Space Approach for Nanoscale Motion Control. IEEE Nanotechnology Magazine, 2018, 17, 994-1005.	1.1	15
36	High Throughput DNA Tensioner Platform for Interrogating Mechanical Heterogeneity of Single Living Cells. Small, 2022, 18, e2106196.	5.2	15

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37	A Humanoid Neck System Featuring Low Motion-Noise. Journal of Intelligent and Robotic Systems: Theory and Applications, 2012, 67, 101-116.	2.0	14
38	Microfluidic Systems with Embedded Cell Culture Chambers for High-Throughput Biological Assays. ACS Applied Bio Materials, 2020, 3, 6661-6671.	2.3	13
39	On the Measurement of Energy Dissipation of Adhered Cells with the Quartz Microbalance with Dissipation Monitoring. Analytical Chemistry, 2018, 90, 10340-10349.	3.2	12
40	Task Space Motion Control for AFM-Based Nanorobot Using Optimal and Ultralimit Archimedean Spiral Local Scan. IEEE Robotics and Automation Letters, 2020, 5, 282-289.	3.3	11
41	The Role of Fluid Shear and Metastatic Potential in Breast Cancer Cell Migration. Journal of Biomechanical Engineering, 2020, 142, .	0.6	11
42	Non-vector space control for nanomanipulations based on compressive feedbacks. , 2012, , .		10
43	Single-cell membrane drug delivery using porous pen nanodeposition. Nanoscale, 2018, 10, 12704-12712.	2.8	8
44	Measurement of Cationic and Intracellular Modulation of Integrin Binding Affinity by AFM-Based Nanorobot. Biophysical Journal, 2013, 105, 40-47.	0.2	7
45	CNT infrared detectors using Schottky barriers and p-n junctions based FETs. , 2009, , .		6
46	High precision positioning control for SPM based nanomanipulation: A robust adaptive model reference control approach. , 2014, , .		6
47	Systematic Hysteresis Compensator Design based on Extended Unparallel Prandtl-Ishlinskii Model for SPM Imaging Rectification * *This work was supported in part by the U.S. Army Research Laboratory and the U.S. Army Research Office under the Grant W911NF-16-1-0572. IFAC-PapersOnLine, 2017, 50, 10901-10906.	0.5	6
48	Mechanical behavior of tensegrity structures with High-mode imperfections. Mechanics Research Communications, 2018, 94, 58-63.	1.0	6
49	Atomic Force Microscopy as Nanorobot. Methods in Molecular Biology, 2011, 736, 485-503.	0.4	6
50	The Emergence of AFM Applications to Cell Biology: How new technologies are facilitating investigation of human cells in health and disease at the nanoscale. Journal of Nanoscience Letters, 2011, 1, 87-101.	1.0	6
51	Spatiotemporal Characterizations of Spontaneously Beating Cardiomyocytes with Adaptive Reference Digital Image Correlation. Scientific Reports, 2019, 9, 18382.	1.6	5
52	Development and experimental verification of an adaptive structure for phased antenna array using SMA bunch. Engineering Structures, 2020, 225, 111293.	2.6	5
53	An Active Biomechanical Model of Cell Adhesion Actuated by Intracellular Tensioning-Taxis. Biophysical Journal, 2020, 118, 2656-2669.	0.2	5
54	Motion controller for the Atomic Force Microscopy based nanomanipulation system. , 2009, , .		4

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55	On-line sensing and visual feedback for atomic force microscopy (AFM) based nano-manipulations. , 2010, , .		4
56	Optimization of Protein-Protein Interaction Measurements for Drug Discovery Using AFM Force Spectroscopy. IEEE Nanotechnology Magazine, 2019, 18, 509-517.	1.1	4
57	Modulation of Mechanical Stress Mitigates Anti- α 3 Antibody-Induced Dissociation of Cell-Cell Adhesion. Advanced Biology, 2021, 5, 2000159.	1.4	4
58	Microfluidic Device for Localized Electroporation. Methods in Molecular Biology, 2020, 2050, 91-97.	0.4	4
59	An equivalent circuit model for localized electroporation on porous substrates. Biosensors and Bioelectronics, 2022, 199, 113862.	5.3	4
60	Ultra-compliant thermal AFM probes for studying of cellular properties. , 2010, , .		3
61	Fabrication of graphene devices for infrared detection. , 2010, , .		3
62	Substrate effect on single carbon nanotube based infrared sensors. , 2013, , .		3
63	Scan range adaptive hysteresis/creep hybrid compensator for AFM based nanomanipulations. , 2014, , .		3
64	Controllable electrical breakdown of multiwall carbon nanotubes. , 2014, , .		3
65	Infrared light field imaging using single carbon nanotube detector. , 2014, , .		3
66	Characterizing AFM Tip Lateral Positioning Variability Through Non-Vector Space Control-Based Nanometrology. IEEE Nanotechnology Magazine, 2020, 19, 56-60.	1.1	3
67	Microfabricated platforms to investigate cell mechanical properties. Medicine in Novel Technology and Devices, 2022, 13, 100107.	0.9	3
68	Rapid robot/workcell calibration using line-based approach. , 2008, , .		2
69	Development of a low motion-noise humanoid neck: Statics analysis and experimental validation. , 2010, , .		2
70	Real time identification of apoptosis signaling pathways using AFM-based nano robot. , 2010, , .		2
71	Comparative studies of Atomic Force Microscopy (AFM) and Quartz Crystal Microbalance with Dissipation (QCM-D) for real-time identification of signaling pathway. , 2010, , .		2
72	Dynamic Mechanical Response of Epithelial Cells to Epidermal Growth Factor. , 2012, , .		2

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73	Tu1994 Inhibition of Pressure-Stimulated FAK and AKT1 Interaction via a 33 Amino Acid FAK-Derived Peptide. Gastroenterology, 2015, 148, S-954-S-955.	0.6	2
74	Rho/ROCK mechanosensor in adipocyte stiffness and traction force generation. Biochemical and Biophysical Research Communications, 2022, 606, 42-48.	1.0	2
75	Development of infrared sensors using carbon nanotube (CNT) based field effect transistor (FET). , 2009, , .		1
76	Manipulation and assembly methods for graphene based nano devices. , 2010, , .		1
77	Investigations of bio markers for human lymphoblastoid cells using Atomic Force Microscopy. , 2010, , .		1
78	Improving the detectability of CNT based infrared sensors using multi-gate field effect transistor. , 2010, , .		1
79	Uncooled infrared sensing using graphene. , 2011, , .		1
80	Development and testing of nano robot end effector for cell electrophysiology and elastography studies. , 2011, , .		1
81	Bio-inspired scanning for video-imaging using an atomic force microscope. , 2012, , .		1
82	Super resolution infrared camera using single carbon nanotube photodetector. , 2014, , .		1
83	Quantification of Cell Adhesion Strength using Energy Dissipation from Quartz Microbalance with Dissipation Monitoring. , 2019, , .		1
84	Design and Implementation of Motion Controllers for Atomic Force Microscopy Based Nanomanipulation Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 429-434.	0.4	0
85	Micro fixture enabled in-situ imaging and manipulation of cell membrane protein. , 2010, , .		0
86	Atomic Force Microscopy based nanorobotic operations for biomedical investigations. , 2010, , .		0
87	Gate structure optimization of carbon nanotube transistor based infrared detector. , 2010, , .		0
88	Investigations of Bio Markers for ion channel activities on insulinoma cells. , 2010, , .		0
89	Cellular tensegrity modeling with Atomic Force Microscopy (AFM) experimentation. , 2010, , .		0
90	Investigation and characterization of graphene for optical sensing. , 2011, , .		0

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91	Investigations of bio marker for stem cell differentiations using an Atomic Force Microscopy based nanorobot. , 2011, , .		0
92	Nano-robot enabled characterizations of local electrical properties for nano-structures. , 2012, , .		0
93	Real-Time, Label-Free Sensing of Epidermal Growth Factor-Induced Changes of Cell Adhesion. Biophysical Journal, 2013, 104, 503a.	0.2	0
94	In situ visualization of dynamic interactions of cellulase and cellulose molecules. , 2014, , .		0
95	In Vivo tumor interstitial fluid pressure measurement using static micro force sensor and mechanical tumor model. , 2014, , .		0
96	Dynamics Modeling Signaling Pathway Regulating EGF-Induced Cell Adhesion. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7486-7491.	0.4	0
97	Kinetics of enzymatic hydrolysis revealed by video rate AFM single molecule analysis. , 2015, , .		0
98	Multi-layer coated nanorobot end-effector for efficient drug delivery. , 2016, , .		0
99	Augmented Reality for Nano Manipulation. , 2011, , 435-447.		0
100	Motion Controller for Atomic Force Microscopy Based Nanobiomanipulation. Lecture Notes in Control and Information Sciences, 2011, , 153-168.	0.6	0