Ruiguo Yang

List of Publications by Year in descending order

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	An equivalent circuit model for localized electroporation on porous substrates. Biosensors and Bioelectronics, 2022, 199, 113862.	5.3	4
2	Microfabricated platforms to investigate cell mechanical properties. Medicine in Novel Technology and Devices, 2022, 13, 100107.	0.9	3
3	Highâ€Throughput DNA Tensioner Platform for Interrogating Mechanical Heterogeneity of Single Living Cells. Small, 2022, 18, e2106196.	5.2	15
4	Rho/ROCK mechanosensor in adipocyte stiffness and traction force generation. Biochemical and Biophysical Research Communications, 2022, 606, 42-48.	1.0	2
5	Characterization of the strain-rateâ€“dependent mechanical response of single cellâ€“cell junctions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	25
6	Nanosensors for single cell mechanical interrogation. Biosensors and Bioelectronics, 2021, 179, 113086.	5.3	20
7	Modulation of Mechanical Stress Mitigates Antiâ€Dsg3 Antibodyâ€Induced Dissociation of Cellâ€“Cell Adhesion. Advanced Biology, 2021, 5, 2000159.	1.4	4
8	Characterizing AFM Tip Lateral Positioning Variability Through Non-Vector Space Control-Based Nanometrology. IEEE Nanotechnology Magazine, 2020, 19, 56-60.	1.1	3
9	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
10	Development and experimental verification of an adaptive structure for phased antenna array using SMA bunch. Engineering Structures, 2020, 225, 111293.	2.6	5
11	High Throughput and Highly Controllable Methods for In Vitro Intracellular Delivery. Small, 2020, 16, e2004917.	5.2	32
12	Microfluidic Systems with Embedded Cell Culture Chambers for High-Throughput Biological Assays. ACS Applied Bio Materials, 2020, 3, 6661-6671.	2.3	13
13	An Active Biomechanical Model of Cell Adhesion Actuated by Intracellular Tensioning-Taxis. Biophysical Journal, 2020, 118, 2656-2669.	0.2	5
14	A Wirelessly Controlled Smart Bandage with 3Dâ€Printed Miniaturized Needle Arrays. Advanced Functional Materials, 2020, 30, 1905544.	7.8	109
15	Microfluidic Device for Localized Electroporation. Methods in Molecular Biology, 2020, 2050, 91-97.	0.4	4
16	The Role of Fluid Shear and Metastatic Potential in Breast Cancer Cell Migration. Journal of Biomechanical Engineering, 2020, 142, .	0.6	11
17	The LINC complex, mechanotransduction, and mesenchymal stem cell function and fate. Journal of Biological Engineering, 2019, 13, 68.	2.0	91
18	Tissue Regeneration from Mechanical Stretching of Cellâ€“Cell Adhesion. Tissue Engineering - Part C: Methods, 2019, 25, 631-640.	1.1	20

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19	Optimization of Proteinâ€“Protein Interaction Measurements for Drug Discovery Using AFM Force Spectroscopy. IEEE Nanotechnology Magazine, 2019, 18, 509-517.	1.1	4
20	Wearable Devices for Single-Cell Sensing andÂTransfection. Trends in Biotechnology, 2019, 37, 1175-1188.	4.9	23
21	Quantification of Cell Adhesion Strength using Energy Dissipation from Quartz Microbalance with Dissipation Monitoring. , 2019, , .		1
22	Spatiotemporal Characterizations of Spontaneously Beating Cardiomyocytes with Adaptive Reference Digital Image Correlation. Scientific Reports, 2019, 9, 18382.	1.6	5
23	Effect of initial imperfections of struts on the mechanical behavior of tensegrity structures. Composite Structures, 2019, 207, 871-876.	3.1	19
24	Monoclonal Cell Line Generation and CRISPR/Cas9 Manipulation via Singleâ€€Cell Electroporation. Small, 2018, 14, e1702495.	5.2	37
25	Techniques to stimulate and interrogate cellâ€“cell adhesion mechanics. Extreme Mechanics Letters, 2018, 20, 125-139.	2.0	16
26	Mechanical behavior of tensegrity structures with High-mode imperfections. Mechanics Research Communications, 2018, 94, 58-63.	1.0	6
27	Patchable micro/nanodevices interacting with skin. Biosensors and Bioelectronics, 2018, 122, 189-204.	5.3	47
28	Enhanced Nonvector Space Approach for Nanoscale Motion Control. IEEE Nanotechnology Magazine, 2018, 17, 994-1005.	1.1	15
29	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
30	Single-cell membrane drug delivery using porous pen nanodeposition. Nanoscale, 2018, 10, 12704-12712.	2.8	8
31	Form-finding of deployable mesh reflectors using dynamic relaxation method. Acta Astronautica, 2018, 151, 380-388.	1.7	22
32	Asymmetric Hysteresis Modeling and Compensation Approach for Nanomanipulation System Motion Control Considering Working-Range Effect. IEEE Transactions on Industrial Electronics, 2017, 64, 5513-5523.	5.2	51
33	The desmoplakinâ€“intermediate filament linkage regulates cell mechanics. Molecular Biology of the Cell, 2017, 28, 3156-3164.	0.9	70
34	AFM Identification of Beetle Exocuticle: Bouligand Structure and Nanofiber Anisotropic Elastic Properties. Advanced Functional Materials, 2017, 27, 1603993.	7.8	50
35	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
36	Multi-layer coated nanorobot end-effector for efficient drug delivery. , 2016, , .		0

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37	Periodic reference tracking control approach for smart material actuators with complex hysteretic characteristics. Smart Materials and Structures, 2016, 25, 105029.	1.8	20
38	Compensating asymmetric hysteresis for nanorobot motion control. , 2015, , .		18
39	Kinetics of enzymatic hydrolysis revealed by video rate AFM single molecule analysis. , 2015, , .		0
40	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
41	Cellular level robotic surgery: Nanodissection of intermediate filaments in live keratinocytes. Nanomedicine: Nanotechnology, Biology, and Medicine, 2015, 11, 137-145.	1.7	31
42	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
43	Scan range adaptive hysteresis/creep hybrid compensator for AFM based nanomanipulations. , 2014, , .		3
44	Controllable electrical breakdown of multiwall carbon nanotubes. , 2014, , .		3
45	In situ visualization of dynamic interactions of cellulase and cellulose molecules. , 2014, , .		0
46	High precision positioning control for SPM based nanomanipulation: A robust adaptive model reference control approach. , 2014, , .		6
47	Infrared light field imaging using single carbon nanotube detector. , 2014, , .		3
48	In Vivo tumor interstitial fluid pressure measurement using static micro force sensor and mechanical tumor model. , 2014, , .		0
49	Compressive Feedback-Based Motion Control for Nanomanipulationâ€"Theory and Applications. IEEE Transactions on Robotics, 2014, 30, 103-114.	7.3	21
50	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
51	Super resolution infrared camera using single carbon nanotube photodetector. , 2014, , .		1
52	Substrate effect on single carbon nanotube based infrared sensors. , 2013, , .		3
53	Real-Time, Label-Free Sensing of Epidermal Growth Factor-Induced Changes of Cell Adhesion. Biophysical Journal, 2013, 104, 503a.	0.2	0
54	Measurement of Cationic and Intracellular Modulation of Integrin Binding Affinity by AFM-Based Nanorobot. Biophysical Journal, 2013, 105, 40-47.	0.2	7

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55	Infrared Camera Using a Single Nano-Photodetector. IEEE Sensors Journal, 2013, 13, 949-958.	2.4	33
56	Cellular biophysical dynamics and ion channel activities detected by AFM-based nanorobotic manipulator in insulinoma Î²-cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2013, 9, 636-645.	1.7	21
57	Video Rate Atomic Force Microscopy: Use of compressive scanning for nanoscale video imaging. IEEE Nanotechnology Magazine, 2013, 7, 4-8.	0.9	19
58	Non-vector space control for nanomanipulations based on compressive feedbacks. , 2012, , .		10
59	Cellular-Level Surgery Using Nano Robots. Journal of the Association for Laboratory Automation, 2012, 17, 425-434.	2.8	27
60	Nano-robot enabled characterizations of local electrical properties for nano-structures. , 2012, , .		0
61	Bio-inspired scanning for video-imaging using an atomic force microscope. , 2012, , .		1
62	Gate dependent photo-responses of carbon nanotube field effect phototransistors. Nanotechnology, 2012, 23, 385203.	1.3	16
63	Dynamic Mechanical Response of Epithelial Cells to Epidermal Growth Factor. , 2012, , .		2
64	A Humanoid Neck System Featuring Low Motion-Noise. Journal of Intelligent and Robotic Systems: Theory and Applications, 2012, 67, 101-116.	2.0	14
65	Characterization of mechanical behavior of an epithelial monolayer in response to epidermal growth factor stimulation. Experimental Cell Research, 2012, 318, 521-526.	1.2	27
66	Uncooled infrared sensing using graphene. , 2011, , .		1
67	Quantitative Analysis of Human Keratinocyte Cell Elasticity Using Atomic Force Microscopy (AFM). IEEE Transactions on Nanobioscience, 2011, 10, 9-15.	2.2	29
68	Inactivation of SAG E3 Ubiquitin Ligase Blocks Embryonic Stem Cell Differentiation and Sensitizes Leukemia Cells to Retinoid Acid. PLoS ONE, 2011, 6, e27726.	1.1	33
69	Nanomechanical analysis of insulinoma cells after glucose and capsaicin stimulation using atomic force microscopy. Acta Pharmacologica Sinica, 2011, 32, 853-860.	2.8	19
70	Video rate Atomic Force Microscopy (AFM) imaging using compressive sensing. , 2011, , .		24
71	Development and testing of nano robot end effector for cell electrophysiology and elastography studies. , 2011, , .		1
72	Investigation and characterization of graphene for optical sensing. , 2011, , .		0

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73	Investigations of bio marker for stem cell differentiations using an Atomic Force Microscopy based nanorobot. , 2011, , .		0
74	Atomic Force Microscopy as Nanorobot. Methods in Molecular Biology, 2011, 736, 485-503.	0.4	6
75	Augmented Reality for Nano Manipulation. , 2011, , 435-447.		0
76	Motion Controller for Atomic Force Microscopy Based Nanobiomanipulation. Lecture Notes in Control and Information Sciences, 2011, , 153-168.	0.6	0
77	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
78	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
79	Bionanomanipulation Using Atomic Force Microscopy. IEEE Nanotechnology Magazine, 2010, 4, 9-12.	0.9	19
80	Investigation of human keratinocyte cell adhesion using atomic force microscopy. Nanomedicine: Nanotechnology, Biology, and Medicine, 2010, 6, 191-200.	1.7	55
81	Manipulation and assembly methods for graphene based nano devices. , 2010, , .		1
82	Micro fixture enabled in-situ imaging and manipulation of cell membrane protein. , 2010, , .		0
83	Investigations of bio markers for human lymphoblastoid cells using Atomic Force Microscopy. , 2010, , .		1
84	Ultra-compliant thermal AFM probes for studying of cellular properties. , 2010, , .		3
85	Development of a low motion-noise humanoid neck: Statics analysis and experimental validation. , 2010, , .		2
86	On-line sensing and visual feedback for atomic force microscopy (AFM) based nano-manipulations. , 2010, , .		4
87	Atomic Force Microscopy based nanorobotic operations for biomedical investigations. , 2010, , .		0
88	Development of Infrared Detectors Using Single Carbon-Nanotube-Based Field-Effect Transistors. IEEE Nanotechnology Magazine, 2010, 9, 582-589.	1.1	59
89	Improving the detectability of CNT based infrared sensors using multi-gate field effect transistor. , 2010, , .		1
90	Real time identification of apoptosis signaling pathways using AFM-based nano robot. , 2010, , .		2

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91	Gate structure optimization of carbon nanotube transistor based infrared detector. , 2010, , .		0
92	Fabrication of graphene devices for infrared detection. , 2010, , .		3
93	Investigations of Bio Markers for ion channel activities on insulinoma cells. , 2010, , .		0
94	Comparative studies of Atomic Force Microscopy (AFM) and Quartz Crystal Microbalance with Dissipation (QCM-D) for real-time identification of signaling pathway. , 2010, , .		2
95	Cellular tensegrity modeling with Atomic Force Microscopy (AFM) experimentation. , 2010, , .		0
96	Development of a miniature self-stabilization jumping robot. , 2009, , .		26
97	Development of infrared sensors using carbon nanotube (CNT) based field effect transistor (FET). , 2009, , .		1
98	Motion controller for the Atomic Force Microscopy based nanomanipulation system. , 2009, , .		4
99	CNT infrared detectors using Schottky barriers and p-n junctions based FETs. , 2009, , .		6
100	Rapid robot/workcell calibration using line-based approach. , 2008, , .		2