Juan Ren

List of Publications by Year
in descending order

41 papers	448 citations	687220 13 h-index	752573 20 g-index
41 all docs	41 docs citations	41 times ranked	473 citing authors

#	Article	IF	Citations
1	An Atomic Force Microscope Study Revealed Two Mechanisms in the Effect of Anticancer Drugs on Rate-Dependent Youngâ€™s Modulus of Human Prostate Cancer Cells. PLoS ONE, 2015, 10, e0126107.	1.1	42
2	High-speed adaptive contact-mode atomic force microscopy imaging with near-minimum-force. Review of Scientific Instruments, 2014, 85, 073706.	0.6	33
3	Finite element modeling of living cells for AFM indentation-based biomechanical characterization. Micron, 2019, 116, 108-115.	1.1	33
4	Atomic force microscopy study revealed velocity-dependence and nonlinearity of nanoscale poroelasticity of eukaryotic cells. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 78, 65-73.	1.5	29
5	High-speed AFM imaging via iterative learning-based model predictive control. Mechatronics, 2019, 57, 86-94.	2.0	28
6	Indentation quantification for in-liquid nanomechanical measurement of soft material using an atomic force microscope: Rate-dependent elastic modulus of live cells. Physical Review E, 2013, 88, 052711.	0.8	27
7	Recurrent-Neural-Network-Based Predictive Control of Piezo Actuators for Trajectory Tracking. IEEE/ASME Transactions on Mechatronics, 2019, 24, 2885-2896.	3.7	25
8	A Control-Based Approach to Accurate Nanoindentation Quantification in Broadband Nanomechanical Measurement Using Scanning Probe Microscope. IEEE Nanotechnology Magazine, 2014, 13, 46-54.	1.1	24
9	High-speed atomic force microscope imaging: Adaptive multiloop mode. Physical Review E, 2014, 90, 012405.	0.8	19
10	Effect of F-actin and Microtubules on Cellular Mechanical Behavior Studied Using Atomic Force Microscope and an Image Recognition-Based Cytoskeleton Quantification Approach. International Journal of Molecular Sciences, 2020, 21, 392.	1.8	19
11	Nonlinear Cellular Mechanical Behavior Adaptation to Substrate Mechanics Identified by Atomic Force Microscope. International Journal of Molecular Sciences, 2018, 19, 3461.	1.8	18
12	Adaptive-scanning, near-minimum-deformation atomic force microscope imaging of soft sample in liquid: Live mammalian cell example. Ultramicroscopy, 2018, 186, 150-157.	0.8	16
13	An Image Recognition-Based Approach to Actin Cytoskeleton Quantification. Electronics (Switzerland), 2018, 7, 443.	1.8	16
14	An experimental study of rain erosion effects on a hydro-/ice-phobic coating pertinent to Unmanned-Arial-System (UAS) inflight icing mitigation. Cold Regions Science and Technology, 2021, 181, 103196.	1.6	15
15	Enhanced measurement of broadband nanomechanical property of polymers using atomic force microscope. Applied Physics Letters, 2013, 102, .	1.5	14
16	Study of Cholesterol Repletion Effect on Nanomechanical Properties of Human Umbilical Vein Endothelial Cell Via Rapid Broadband Atomic Force Microscopy. Journal of Biomechanical Engineering, 2017, 139, .	0.6	10
17	Receptorâ€mediated endocytosis generates nanomechanical force reflective of ligand identity and cellular property. Journal of Cellular Physiology, 2018, 233, 5908-5919.	2.0	10
18	Note: Precision control of nano-positioning stage: An iterative learning-based model predictive control approach. Review of Scientific Instruments, 2018, 89, 076103.	0.6	10

#	Article	IF	Citations
19	Recurrent-neural-network-based Predictive Control of Piezo Actuators for Precision Trajectory Tracking. , 2019, , .		8
20	Linearization of Recurrent-Neural-Network- Based Models for Predictive Control of Nano-Positioning Systems Using Data-Driven Koopman Operators. IEEE Access, 2020, 8, 147077-147088.	2.6	8
21	Iterative Learning-based Model Predictive Control for Precise Trajectory Tracking of Piezo Nanopositioning Stage. , 2018, , .		6
22	Investigation of the effect of substrate morphology on MDCK cell mechanical behavior using atomic force microscopy. Applied Physics Letters, 2019, 115, 063701.	1.5	6
23	Unique Orientation of the Solidâ€“Solid Interface at the Janus Particle Boundary Induced by Ionic Liquids. Journal of Physical Chemistry Letters, 2020, 11, 9834-9841.	2.1	5
24	High-speed dynamic-mode atomic force microscopy imaging of polymers: an adaptive multiloop-mode approach. Beilstein Journal of Nanotechnology, 2017, 8, 1563-1570.	1.5	4
25	AI Guided Measurement of Live Cells Using AFM. IFAC-PapersOnLine, 2021, 54, 316-321.	0.5	4
26	High-speed broadband monitoring of cell viscoelasticity in real time shows myosin-dependent oscillations. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1857-1868.	1.4	3
27	Tracking Control Using Recurrent-Neural-Network-Based Inversion Model: A Case Study on a Piezo Actuator. IEEE Transactions on Industrial Electronics, 2021, 68, 11409-11419.	5.2	3
28	Actin Cytoskeleton Morphology Modeling Using Graph Embedding and Classification in Machine Learning. IFAC-PapersOnLine, 2021, 54, 328-333.	0.5	3
29	Predictive Control of Nano-positioning Stage Using Recurrent-neural-network-based Inversion Model. , 2019, , .		2
30	Towards Improving the Performance of the RNN-based Inversion Model in Output Tracking Control. , 2020, , .		2
31	Biobased superhydrophobic coating enabled by nanoparticle assembly. Nanoscale Advances, 2021, 3, 4037-4047.	2.2	2
32	Soft Ferrofluid Actuator Based on 3D-Printed Scaffold Removal. 3D Printing and Additive Manufacturing, 2021, 8, 126-135.	1.4	2
33	A control-based approach to quantification of rate-dependent elastic modulus of living cell using atomic force microscope. , 2013, , .		1
34	Long Short-term Memory Neural Network-based System Identification and Augmented Predictive Control of Piezoelectric Actuators for Precise Trajectory Tracking. IFAC-PapersOnLine, 2021, 54, 38-45.	0.5	1
35	Rapid online quantification of tip-sample interaction for high-speed dynamic-mode atomic force microscope imaging. , 2011, , .		0
36	A control-based approach to indentation quantification in broadband and in-liquid nanomechanical measurement using atomic force microscope. , 2012, , .		0

#	Article	IF	Citations
37	Modeling and Control of Dynamic Cellular Mechanotransduction: Part I â€" Actin Cytoskeleton Quantification. , 2018, , .		0
38	Modeling of Soft Sample Deformation in Atomic Force Microscope Imaging: Live Mammalian Cell Example. Advanced Theory and Simulations, 2019, 2, 1800036.	1.3	0
39	Discrete System Linearization using Koopman Operators for Predictive Control and Its Application in Nano-positioning. , 2020, , .		0
40	Scanning Probe Microscope Imaging Control. , 2021, , 2028-2034.		0
41	Scanning Probe Microscope Imaging Control. , 2020, , 1-6.		0