Guoyou G Huang

List of Publications by Year
in descending order

62 papers	4,046 citations	185998 28 h-index	133063 59 g-index
64 all docs	64 docs citations	64 times ranked	6509 citing authors

#	Article	IF	Citations
1	Functional and Biomimetic Materials for Engineering of the Three-Dimensional Cell Microenvironment. Chemical Reviews, 2017, 117, 12764-12850.	23.0	582
2	Magnetic Hydrogels and Their Potential Biomedical Applications. Advanced Functional Materials, 2013, 23, 660-672.	7.8	560
3	Bioinspired engineering of honeycomb structure â€“ Using nature to inspire human innovation. Progress in Materials Science, 2015, 74, 332-400.	16.0	501
4	Engineering cell alignment in vitro. Biotechnology Advances, 2014, 32, 347-365.	6.0	220
5	Microfluidic hydrogels for tissue engineering. Biofabrication, 2011, 3, 012001.	3.7	164
6	3D Spatiotemporal Mechanical Microenvironment: A Hydrogelâ€Based Platform for Guiding Stem Cell Fate. Advanced Materials, 2018, 30, e1705911.	11.1	162
7	Engineering three-dimensional cell mechanical microenvironment with hydrogels. Biofabrication, 2012, 4, 042001.	3.7	146
8	Magnetically Actuated Droplet Manipulation and Its Potential Biomedical Applications. ACS Applied Materials & Interfaces, 2017, 9, 1155-1166.	4.0	119
9	Advances in fabricating double-emulsion droplets and their biomedical applications. Microfluidics and Nanofluidics, 2015, 19, 1071-1090.	1.0	110
10	Bioprinting 3D cell-laden hydrogel microarray for screening human periodontal ligament stem cell response to extracellular matrix. Biofabrication, 2015, 7, 044105.	3.7	99
11	Bioprinting-Based High-Throughput Fabrication of Three-Dimensional MCF-7 Human Breast Cancer Cellular Spheroids. Engineering, 2015, 1, 269-274.	3.2	92
12	Reduced graphene oxide functionalized nanofibrous silk fibroin matrices for engineering excitable tissues. NPG Asia Materials, 2018, 10, 982-994.	3.8	88
13	Dextran-based hydrogel formed by thiol-Michael addition reaction for 3D cell encapsulation. Colloids and Surfaces B: Biointerfaces, 2015, 128, 140-148.	2.5	75
14	Nanoscale integrin cluster dynamics controls cellular mechanosensing via FAKY397 phosphorylation. Science Advances, 2020, 6, eaax1909.	4.7	69
15	Cellular mechanosensing of the biophysical microenvironment: A review of mathematical models of biophysical regulation of cell responses. Physics of Life Reviews, 2017, 22-23, 88-119.	1.5	67
16	Heterostructured Silk-Nanofiber-Reduced Graphene Oxide Composite Scaffold for SH-SY5Y Cell Alignment and Differentiation. ACS Applied Materials & Interfaces, 2018, 10, 39228-39237.	4.0	64
17	Microchannel Stiffness and Confinement Jointly Induce the Mesenchymal-Amoeboid Transition of Cancer Cell Migration. Nano Letters, 2019, 19, 5949-5958.	4.5	60
18	Mechanoregulation of cardiac myofibroblast differentiation: implications for cardiac fibrosis and therapy. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H532-H542.	1.5	58

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19	Solvent-Free Fabrication of Carbon Nanotube/Silk Fibroin Electrospun Matrices for Enhancing Cardiomyocyte Functionalities. ACS Biomaterials Science and Engineering, 2020, 6, 1630-1640.	2.6	56
20	Engineering physical microenvironment for stem cell based regenerative medicine. Drug Discovery Today, 2014, 19, 763-773.	3.2	53
21	Magnetically actuated cell-laden microscale hydrogels for probing strain-induced cell responses in three dimensions. NPG Asia Materials, 2016, 8, e238-e238.	3.8	49
22	Paracrine Effects of Adipose-Derived Stem Cells on Matrix Stiffness-Induced Cardiac Myofibroblast Differentiation via Angiotensin II Type 1 Receptor and Smad7. Scientific Reports, 2016, 6, 33067.	1.6	46
23	Hydrogel-based methods for engineering cellular microenvironment with spatiotemporal gradients. Critical Reviews in Biotechnology, 2016, 36, 1-13.	5.1	39
24	Benchtop fabrication of three-dimensional reconfigurable microfluidic devices from paperâ€“polymer composite. Lab on A Chip, 2013, 13, 4745.	3.1	37
25	Cell-encapsulating microfluidic hydrogels with enhanced mechanical stability. Soft Matter, 2012, 8, 10687.	1.2	34
26	Single neuron capture and axonal development in three-dimensional microscale hydrogels. Lab on A Chip, 2012, 12, 4724.	3.1	32
27	Matrix stiffness changes affect astrocyte phenotype in an in vitro injury model. NPG Asia Materials, 2021, 13, .	3.8	32
28	An approach to quantifying 3D responses of cells to extreme strain. Scientific Reports, 2016, 6, 19550.	1.6	30
29	An Integrated Stochastic Model of Matrix-Stiffness-Dependent Filopodial Dynamics. Biophysical Journal, 2016, 111, 2051-2061.	0.2	30
30	Improved Resolution and Fidelity of Droplet-Based Bioprinting by Upward Ejection. ACS Biomaterials Science and Engineering, 2019, 5, 4112-4121.	2.6	30
31	Matrix stiffness controls cardiac fibroblast activation through regulating YAP via AT₁R. Journal of Cellular Physiology, 2020, 235, 8345-8357.	2.0	28
32	Fabrication of Microscale Hydrogels with Tailored Microstructures based on Liquid Bridge Phenomenon. ACS Applied Materials & Interfaces, 2015, 7, 11134-11140.	4.0	26
33	Helical spring template fabrication of cellâ€laden microfluidic hydrogels for tissue engineering. Biotechnology and Bioengineering, 2013, 110, 980-989.	1.7	25
34	In vitrospatially organizing the differentiation in individual multicellular stem cell aggregates. Critical Reviews in Biotechnology, 2016, 36, 20-31.	5.1	24
35	Engineering Biomaterials and Approaches for Mechanical Stretching of Cells in Three Dimensions. Frontiers in Bioengineering and Biotechnology, 2020, 8, 589590.	2.0	21
36	Control of fibroblast shape in sequentially formed 3D hybrid hydrogels regulates cellular responses to microenvironmental cues. NPG Asia Materials, 2020, 12, .	3.8	20

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37	Collective Wetting of a Natural Fibrous System and Its Application in Pumpâ€Free Droplet Transfer. Advanced Functional Materials, 2017, 27, 1606607.	7.8	18
38	Differential Effects of Directional Cyclic Stretching on the Functionalities of Engineered Cardiac Tissues. ACS Applied Bio Materials, 2019, 2, 3508-3519.	2.3	17
39	Mechanical microenvironments of living cells: a critical frontier in mechanobiology. Acta Mechanica Sinica/Lixue Xuebao, 2019, 35, 265-269.	1.5	16
40	Advances in cellâ€based biosensors using threeâ€dimensional cellâ€encapsulating hydrogels. Biotechnology Journal, 2011, 6, 1466-1476.	1.8	14
41	The protective effects of acupoint gel embedding on rats with myocardial ischemia-reperfusion injury. Life Sciences, 2018, 211, 51-62.	2.0	14
42	Engineering Three-Dimensional Cardiac Microtissues for Potential Drug Screening Applications. Current Medicinal Chemistry, 2014, 21, 2497-2509.	1.2	14
43	A mechanoelectrical coupling model of neurons under stretching. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 93, 213-221.	1.5	12
44	Fluorescent conjugated polymer nanovector for in vivo tracking and regulating the fate of stem cells for restoring infarcted myocardium. Acta Biomaterialia, 2020, 109, 195-207.	4.1	12
45	The Plasticity of Nanofibrous Matrix Regulates Fibroblast Activation in Fibrosis. Advanced Healthcare Materials, 2021, 10, e2001856.	3.9	12
46	Investigating the Effect of Substrate Stiffness on the Redox State of Cardiac Fibroblasts Using Scanning Electrochemical Microscopy. Analytical Chemistry, 2021, 93, 5797-5804.	3.2	11
47	Effect of viscoelasticity on skin pain sensation. Theoretical and Applied Mechanics Letters, 2015, 5, 222-226.	1.3	9
48	Engineering ellipsoidal cap-like hydrogel particles as building blocks or sacrificial templates for three-dimensional cell culture. Biomaterials Science, 2018, 6, 885-892.	2.6	9
49	Reaction-induced swelling of ionic gels. Soft Matter, 2015, 11, 449-455.	1.2	7
50	Stress evolution in a phase-separating polymeric gel. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 025002.	0.8	6
51	Engineering Artificial Machines from Designable DNA Materials for Biomedical Applications. Tissue Engineering - Part B: Reviews, 2015, 21, 288-297.	2.5	5
52	Elastoplastic Deformation of Silk Micro- and Nanostructures. ACS Biomaterials Science and Engineering, 2016, 2, 893-899.	2.6	5
53	Development of a micro-indentation device for measuring the mechanical properties of soft materials. Theoretical and Applied Mechanics Letters, 2013, 3, 054004.	1.3	4
54	Advances in Hydrogel-based Bottom-Up Tissue Engineering. Scientia Sinica Vitae, 2015, 45, 256-270.	0.1	3

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55	Energetics: An emerging frontier in cellular mechanosensing. Physics of Life Reviews, 2017, 22-23, 130-135.	1.5	2
56	Bioinspired Microstructure Platform for Modular Cellâ€Laden Microgel Fabrication. Macromolecular Bioscience, 2021, 21, 2100110.	2.1	2
57	A new model of myofibroblast-cardiomyocyte interactions and their differences across species. Biophysical Journal, 2021, 120, 3764-3775.	0.2	1
58	Mechanobiology in wound healing. Biophysical Journal, 2022, 121, 173-174.	0.2	1
59	Bioinspired Structures: Collective Wetting of a Natural Fibrous System and Its Application in Pumpâ€Free Droplet Transfer (Adv. Funct. Mater. 22/2017). Advanced Functional Materials, 2017, 27, .	7.8	0
60	Effect of gene mutation of plants on their mechano-sensibility: the mutant of EXO70H4 influences the buckling of Arabidopsis trichomes. Analyst, The, 2021, 146, 5169-5176.	1.7	0
61	Fiber Networks: The Plasticity of Nanofibrous Matrix Regulates Fibroblast Activation in Fibrosis (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlo	3.9	0
62	Differential Responses of Primary Astrocytes Under Hyperthermic Temperatures. IEEE Transactions on Biomedical Engineering, 2023, 70, 125-134.	2.5	0