Florian Rehfeldt

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1957843/publications.pdf

Version: 2024-02-01

66 papers	4,616 citations	201385 27 h-index	143772 57 g-index
76 all docs	76 docs citations	76 times ranked	7622 citing authors

#	Article	IF	Citations
1	Nuclear Lamin-A Scales with Tissue Stiffness and Enhances Matrix-Directed Differentiation. Science, 2013, 341, 1240104.	6.0	1,595
2	Cell responses to the mechanochemical microenvironmentâ€"Implications for regenerative medicine and drug deliveryâ˜†. Advanced Drug Delivery Reviews, 2007, 59, 1329-1339.	6.6	351
3	Optimal matrix rigidity for stress-fibre polarization in stem cells. Nature Physics, 2010, 6, 468-473.	6.5	335
4	The 2019 surface acoustic waves roadmap. Journal Physics D: Applied Physics, 2019, 52, 353001.	1.3	236
5	Mechanotransduction: use the force(s). BMC Biology, 2015, 13, 47.	1.7	183
6	Swelling Behavior of Polyelectrolyte Multilayers in Saturated Water Vapor. Macromolecules, 2004, 37, 7285-7289.	2.2	180
7	Microtissue Elasticity: Measurements by Atomic Force Microscopy and Its Influence on Cell Differentiation. Methods in Cell Biology, 2007, 83, 521-545.	0.5	158
8	Contractile Forces Sustain and Polarize Hematopoiesis from Stem and Progenitor Cells. Cell Stem Cell, 2014, 14, 81-93.	5.2	114
9	Hyaluronic acid matrices show matrix stiffness in 2D and 3D dictates cytoskeletal order and myosin-II phosphorylation within stem cells. Integrative Biology (United Kingdom), 2012, 4, 422.	0.6	107
10	The 2018 correlative microscopy techniques roadmap. Journal Physics D: Applied Physics, 2018, 51, 443001.	1.3	99
11	Coordinated increase of nuclear tension and lamin-A with matrix stiffness outcompetes lamin-B receptor that favors soft tissue phenotypes. Molecular Biology of the Cell, 2017, 28, 3333-3348.	0.9	94
12	Cell shape, spreading symmetry, and the polarization of stress-fibers in cells. Journal of Physics Condensed Matter, 2010, 22, 194110.	0.7	75
13	Selective Deposition of Native Cell Membranes on Biocompatible Micropatterns. Journal of the American Chemical Society, 2004, 126, 3257-3260.	6.6	68
14	The Filament Sensor for Near Real-Time Detection of Cytoskeletal Fiber Structures. PLoS ONE, 2015, 10, e0126346.	1.1	64
15	Static and Dynamic Swelling of Grafted Poly(2-alkyl-2-oxazoline)s. Langmuir, 2002, 18, 4908-4914.	1.6	57
16	Hydration Forces in Ultrathin Films of Celluloseâ€. Langmuir, 2003, 19, 1467-1473.	1.6	56
17	Liquid-Behaviors-Assisted Fabrication of Multidimensional Birefringent Materials from Dynamic Hybrid Hydrogels. ACS Nano, 2019, 13, 3867-3874.	7.3	54
18	Limits of Applicability of the Voronoi Tessellation Determined by Centers of Cell Nuclei to Epithelium Morphology. Frontiers in Physiology, 2016, 7, 551.	1.3	46

#	Article	IF	Citations
19	Reversible Activation of Diblock Copolymer Monolayers at the Interface by pH Modulation, 1:Â Lateral Chain Density and Conformation. Journal of Physical Chemistry B, 2006, 110, 9171-9176.	1.2	40
20	DNA damage alters nuclear mechanics through chromatin reorganization. Nucleic Acids Research, 2021, 49, 340-353.	6.5	38
21	Multiâ€Responsive Bilayer Hydrogel Actuators with Programmable and Precisely Tunable Motions. Macromolecular Chemistry and Physics, 2019, 220, 1800562.	1.1	37
22	Myotubularin related protein-2 and its phospholipid substrate PIP2 control Piezo2-mediated mechanotransduction in peripheral sensory neurons. ELife, 2018, 7, .	2.8	37
23	Effect of Adhesion and Substrate Elasticity on Neutrophil Extracellular Trap Formation. Frontiers in Immunology, 2019, 10, 2320.	2.2	35
24	Mechanical properties of interacting lipopolysaccharide membranes from bacteria mutants studied by specular and off-specular neutron scattering. Physical Review E, 2009, 80, 041929.	0.8	32
25	Reversible Activation of Diblock Copolymer Monolayers at the Interface by pH Modulation, 2:Â Membrane Interactions at the Solid/Liquid Interface. Journal of Physical Chemistry B, 2006, 110, 9177-9182.	1.2	30
26	Novel Growth Regime of MDCK II Model Tissues on Soft Substrates. Biophysical Journal, 2014, 106, L25-L28.	0.2	30
27	Preparation of Collagen-Coated Gels that Maximize In Vitro Myogenesis of Stem Cells by Matching the Lateral Elasticity of In Vivo Muscle. Methods in Molecular Biology, 2010, 621, 185-202.	0.4	29
28	Structures of regenerated cellulose films revealed by grazing incidence small-angle x-ray scattering. Biointerphases, 2008, 3, 117-127.	0.6	28
29	Elasticity of 3D networks with rigid filaments and compliant crosslinks. Soft Matter, 2015, 11, 343-354.	1.2	27
30	Wetting and dewetting of extracellular matrix and glycocalix models. Journal of Physics Condensed Matter, 2005, 17, S649-S663.	0.7	26
31	Modulation of intermembrane interaction and bending rigidity of biomembrane models via carbohydrates investigated by specular and off-specular neutron scattering. Physical Review E, 2008, 78, 061924.	0.8	26
32	Force fluctuations in three-dimensional suspended fibroblasts. Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20140028.	1.8	26
33	Dual-color metal-induced and FÃ¶rster resonance energy transfer for cell nanoscopy. Molecular Biology of the Cell, 2018, 29, 846-851.	0.9	26
34	Adhesion of Cells, Viruses and Nanoparticles. , 2011, , .		26
35	Anisotropic x-ray scattering and orientation fields in cardiac tissue cells. New Journal of Physics, 2017, 19, 013012.	1.2	25
36	High-Internal-Phase Pickering Emulsions Stabilized by Polymeric Dialdehyde Cellulose-Based Nanoparticles. ACS Sustainable Chemistry and Engineering, 2020, 8, 7371-7379.	3.2	25

#	Article	IF	Citations
37	X-Ray Micro- and Nanodiffraction Imaging on Human Mesenchymal Stem Cells and Differentiated Cells. Biophysical Journal, 2016, 110, 680-690.	0.2	22
38	Agonistic and antagonistic roles of fibroblasts and cardiomyocytes on viscoelastic stiffening of engineered human myocardium. Progress in Biophysics and Molecular Biology, 2019, 144, 51-60.	1.4	16
39	High internal phase Pickering emulsions stabilized by dialdehyde amylopectin/chitosan complex nanoparticles. Carbohydrate Polymers, 2021, 258, 117655.	5.1	16
40	Large expert-curated database for benchmarking document similarity detection in biomedical literature search. Database: the Journal of Biological Databases and Curation, 2019, 2019, .	1.4	15
41	The circular SiZer, inferred persistence of shape parameters and application to early stem cell differentiation. Bernoulli, 2016, 22, .	0.7	14
42	Molecular force sensors to measure stress in cells. Journal Physics D: Applied Physics, 2017, 50, 233001.	1.3	14
43	Micro-topography influences blood platelet spreading. Soft Matter, 2014, 10, 2365-2371.	1.2	11
44	Description of Vapour Pressures of Polycyclic Aromatic Compounds by Graph Theoretical Indices. QSAR and Combinatorial Science, 1997, 16, 38-48.	1.4	9
45	Physical probing of cells. Journal Physics D: Applied Physics, 2017, 50, 463001.	1.3	9
46	A Focal Adhesion Filament Cross-correlation Kit for fast, automated segmentation and correlation of focal adhesions and actin stress fibers in cells. PLoS ONE, 2021, 16, e0250749.	1.1	9
47	Robust Heterogeneous Hydrogels with Dynamic Nanocrystalâ€“Polymer Interface. Macromolecular Rapid Communications, 2017, 38, 1600810.	2.0	8
48	Metasurface-based total internal reflection microscopy. Biomedical Optics Express, 2020, 11, 1967.	1.5	7
49	Cell dipoles feel their way. Nature Physics, 2007, 3, 592-593.	6.5	6
50	Dually Heterogeneous Hydrogels via Dynamic and Supramolecular Cross-Links Tuning Discontinuous Spatial Ruptures. ACS Sustainable Chemistry and Engineering, 2018, 6, 4294-4301.	3.2	6
51	Lipid Emulsionâ€“Based OCT Angiography for Ex Vivo Imaging of the Aqueous Outflow Tract. , 2019, 60, 397.		6
52	Mechanical Regulation of Epithelial Tissue Homeostasis. Physical Review X, 2021, 11, .	2.8	6
53	Thermoresponsive Water Transportation in Dually Electrostatically Crosslinked Nanocomposite Hydrogels. Macromolecular Rapid Communications, 2019, 40, e1900317.	2.0	4
54	Sulfo-SMCC Prevents Annealing of Taxol-Stabilized Microtubules In Vitro. PLoS ONE, 2016, 11, e0161623.	1.1	3

#	Article	IF	Citations
55	Topology Counts: Force Distributions in Circular Spring Networks. Physical Review Letters, 2018, 120, 068001.	2.9	3
56	Rhombic organization of microvilli domains found in a cell model of the human intestine. PLoS ONE, 2018, 13, e0189970.	1.1	3
57	Oligomer-to-Polymer Transition in Short Ethylene Glycol Chains Connected to Mobile Hydrophobic Anchors. ChemPhysChem, 2005, 6, 101-109.	1.0	1
58	Adhesion of Viruses. , 2010, , 195-220.		1
59	Adhesion of Cells. , 2010, , 221-240.		1
60	ESTIMATION OF PARAMETERS IN A PLANAR SEGMENT PROCESS WITH A BIOLOGICAL APPLICATION. Image Analysis and Stereology, 2017, 36, 25.	0.4	1
61	A Statistical and Biophysical Toolbox to Elucidate Structure and Formation of Stress Fibers. Topics in Applied Physics, 2020, , 263-282.	0.4	1
62	Modelling Nanoparticle, Virus and Cell Adhesion. , 2010, , 45-71.		0
63	Stem Cell Nucleus Morphology is Modulated by Matrix Mechanics via the Cytoskeleton. Biophysical Journal, 2013, 104, 151a.	0.2	0
64	Topology determines force distributions in one-dimensional random spring networks. Physical Review E, 2018, 97, 022306.	0.8	0
65	Measurement Methods. , 2010, , 145-165.		0
66	Phenomenology of Adhesion: From Macro- to Nano-Systems. , 2010, , 21-43.		0