Roland R Kaunas

List of Publications by Year
in descending order

44 papers	3,831 citations	257450 24 h-index	289244 40 g-index
46 all docs	46 docs citations	46 times ranked	5148 citing authors

#	Article	IF	Citations
1	Bioactive Nanoengineered Hydrogels for Bone Tissue Engineering: A Growth-Factor-Free Approach. ACS Nano, 2015, 9, 3109-3118.	14.6	547
2	Advanced Bioinks for 3D Printing: A Materials Science Perspective. Annals of Biomedical Engineering, 2016, 44, 2090-2102.	2.5	518
3	Hydrogel Bioink Reinforcement for Additive Manufacturing: A Focused Review of Emerging Strategies. Advanced Materials, 2020, 32, e1902026.	21.0	377
4	From The Cover: Cooperative effects of Rho and mechanical stretch on stress fiber organization. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15895-15900.	7.1	376
5	Effects of cell tension on the small GTPase Rac. Journal of Cell Biology, 2002, 158, 153-164.	5.2	220
6	Nanoengineered Ionicâ€"Covalent Entanglement (NICE) Bioinks for 3D Bioprinting. ACS Applied Materials & Interfaces, 2018, 10, 9957-9968.	8.0	192
7	Effects of Flow Patterns on the Localization and Expression of VE-Cadherin at Vascular Endothelial Cell Junctions: In vivo and in vitro Investigations. Journal of Vascular Research, 2005, 42, 77-89.	1.4	133
8	Stretch-Induced Stress Fiber Remodeling and the Activations of JNK and ERK Depend on Mechanical Strain Rate, but Not FAK. PLoS ONE, 2010, 5, e12470.	2.5	133
9	Widespread changes in transcriptome profile of human mesenchymal stem cells induced by two-dimensional nanosilicates. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3905-E3913.	7.1	119
10	Regulation of stretch-induced JNK activation by stress fiber orientation. Cellular Signalling, 2006, 18, 1924-1931.	3.6	115
11	A Dynamic Stochastic Model of Frequency-Dependent Stress Fiber Alignment Induced by Cyclic Stretch. PLoS ONE, 2009, 4, e4853.	2.5	108
12	Directional shear flow and Rho activation prevent the endothelial cell apoptosis induced by micropatterned anisotropic geometry. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1254-1259.	7.1	85
13	Cyclic stretch-induced stress fiber dynamics â€" Dependence on strain rate, Rho-kinase and MLCK. Biochemical and Biophysical Research Communications, 2010, 401, 344-349.	2.1	85
14	Fluid shear stress modulates endothelial cell invasion into three-dimensional collagen matrices. American Journal of Physiology - Heart and Circulatory Physiology, 2008, 295, H2087-H2097.	3.2	78
15	A kinematic model of stretch-induced stress fiber turnover and reorientation. Journal of Theoretical Biology, 2009, 257, 320-330.	1.7	75
16	Photocrosslinkable and elastomeric hydrogels for bone regeneration. Journal of Biomedical Materials Research - Part A, 2016, 104, 879-888.	4.0	73
17	Collagen microsphere production on a chip. Lab on A Chip, 2012, 12, 3277.	6.0	71
18	The Direction of Stretch-Induced Cell and Stress Fiber Orientation Depends on Collagen Matrix Stress. PLoS ONE, 2014, 9, e89592.	2.5	71

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19	Dependence of cyclic stretch-induced stress fiber reorientation on stretch waveform. Journal of Biomechanics, 2012, 45, 728-735.	2.1	64
20	Fluid Shear Stress and Sphingosine 1-Phosphate Activate Calpain to Promote Membrane Type 1 Matrix Metalloproteinase (MT1-MMP) Membrane Translocation and Endothelial Invasion into Three-dimensional Collagen Matrices*. Journal of Biological Chemistry, 2011, 286, 42017-42026.	3.4	41
21	Synergistic Regulation of Angiogenic Sprouting by Biochemical Factors and Wall Shear Stress. Cellular and Molecular Bioengineering, 2011, 4, 547-559.	2.1	40
22	Non-muscle myosin II induces disassembly of actin stress fibres independently of myosin light chain dephosphorylation. Interface Focus, 2011, 1, 754-766.	3.0	37
23	Characterization of a pluripotent stem cell-derived matrix with powerful osteoregenerative capabilities. Nature Communications, 2020, 11, 3025.	12.8	37
24	Multiple Roles for Myosin II in Tensional Homeostasis Under Mechanical Loading. Cellular and Molecular Bioengineering, 2011, 4, 182-191.	2.1	34
25	The many ways adherent cells respond to applied stretch. Journal of Biomechanics, 2016, 49, 1347-1354.	2.1	29
26	Conditioning of 3D Printed Nanoengineered Ionicâ€"Covalent Entanglement Scaffolds with iPâ€hMSCs Derived Matrix. Advanced Healthcare Materials, 2020, 9, 1901580.	7.6	22
27	Fluid shear stress promotes proprotein convertase-dependent activation of MT1-MMP. Biochemical and Biophysical Research Communications, 2015, 460, 596-602.	2.1	21
28	Actin stress fibers are at a tipping point between conventional shortening and rapid disassembly at physiological levels of MgATP. Biochemical and Biophysical Research Communications, 2010, 395, 301-306.	2.1	20
29	A Scalable System for Generation of Mesenchymal Stem Cells Derived from Induced Pluripotent Cells Employing Bioreactors and Degradable Microcarriers. Stem Cells Translational Medicine, 2021, 10, 1650-1665.	3.3	19
30	Automated mesenchymal stem cell segmentation and machine learning-based phenotype classification using morphometric and textural analysis. Journal of Medical Imaging, 2021, 8, 014503.	1.5	15
31	A kinematic model coupling stress fiber dynamics with JNK activation in response to matrix stretching. Journal of Theoretical Biology, 2010, 264, 593-603.	1.7	13
32	Oleic acid surfactant in polycaprolactone/hydroxyapatiteâ€composites for bone tissue engineering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 1076-1082.	3.4	13
33	Good advice for endothelial cells: Get in line, relax tension, and go with the flow. APL Bioengineering, 2020, 4, 010905.	6.2	11
34	Three-dimensional in vitro modeling of malignant bone disease recapitulates experimentally accessible mechanisms of osteoinhibition. Cell Death and Disease, 2018, 9, 1161.	6.3	10
35	Hybrid nonlinear photoacoustic and reflectance confocal microscopy for label-free subcellular imaging with a single light source. Optics Letters, 2017, 42, 4028.	3.3	6
36	Mimicking the Organic and Inorganic Composition of Anabolic Bone Enhances Human Mesenchymal Stem Cell Osteoinduction and Scaffold Mechanical Properties. Frontiers in Bioengineering and Biotechnology, 2020, 8, 753.	4.1	6

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37	In Silico Searching for Alternative Lead Compounds to Treat Type 2 Diabetes through a QSAR and Molecular Dynamics Study. Pharmaceutics, 2022, 14, 232.	4.5	6
38	S1P Synergizes with Wall Shear Stress and Other Angiogenic Factors to Induce Endothelial Cell Sprouting Responses. Methods in Molecular Biology, 2017, 1697, 99-115.	0.9	5
39	Pulsatile equibiaxial stretch inhibits thrombin-induced RhoA and NF-Î°B activation. Biochemical and Biophysical Research Communications, 2008, 372, 216-220.	2.1	3
40	Cellular and Molecular Bioengineering: A Tipping Point. Cellular and Molecular Bioengineering, 2012, 5, 239-253.	2.1	3
41	2SQ-01 Nonmuscle Myosin II-Based Regulation of Cellular Tensional Homeostasis(2SQ Developing) Tj ETQq1 1 0.784314 rgBT /Overlock	0.1	0
42	Cyclic Stretch-Induced Reorganization of Stress Fibers in Endothelial Cells. , 2016, , 99-110.		0
43	Calpain 2 is activated downstream of wall shear stress and sphingosineâ€1â€phosphate to induce endothelial cell sprout formation in three dimensional collagen matrices. FASEB Journal, 2009, 23, 311.4.	0.5	0
44	Multiscale Regulation of Mechanosensing in Soft Tissues. FASEB Journal, 2018, 32, 94.2.	0.5	0