Dimitrije StamenoviÄ‡

List of Publications by Year
in descending order

66 papers	4,043 citations	172457 29 h-index	138484 58 g-index
68 all docs	68 docs citations	68 times ranked	3925 citing authors

#	Article	IF	Citations
1	Cell prestress. I. Stiffness and prestress are closely associated in adherent contractile cells. American Journal of Physiology - Cell Physiology, 2002, 282, C606-C616.	4.6	591
2	Tensegrity, cellular biophysics, and the mechanics of living systems. Reports on Progress in Physics, 2014, 77, 046603.	20.1	339
3	Biomechanics of the lung parenchyma: critical roles of collagen and mechanical forces. Journal of Applied Physiology, 2005, 98, 1892-1899.	2.5	263
4	Contribution of intermediate filaments to cell stiffness, stiffening, and growth. American Journal of Physiology - Cell Physiology, 2000, 279, C188-C194.	4.6	261
5	A Microstructural Approach to Cytoskeletal Mechanics based on Tensegrity. Journal of Theoretical Biology, 1996, 181, 125-136.	1.7	212
6	Cell prestress. II. Contribution of microtubules. American Journal of Physiology - Cell Physiology, 2002, 282, C617-C624.	4.6	190
7	Fractional Derivatives Embody Essential Features of Cell Rheological Behavior. Annals of Biomedical Engineering, 2003, 31, 692-699.	2.5	157
8	Lung Parenchymal Mechanics. , 2011, 1, 1317-1351.		139
9	Rheology of airway smooth muscle cells is associated with cytoskeletal contractile stress. Journal of Applied Physiology, 2004, 96, 1600-1605.	2.5	128
10	The Role of Prestress and Architecture of the Cytoskeleton and Deformability of Cytoskeletal Filaments in Mechanics of Adherent Cells: a Quantitative Analysis. Journal of Theoretical Biology, 1999, 201, 63-74.	1.7	121
11	Confined and unconfined stress relaxation of cartilage: appropriateness of a transversely isotropic analysis. Journal of Biomechanics, 1999, 32, 1125-1130.	2.1	104
12	A Computational Tensegrity Model Predicts Dynamic Rheological Behaviors in Living Cells. Annals of Biomedical Engineering, 2004, 32, 520-530.	2.5	103
13	Rheological Behavior of Living Cells Is Timescale-Dependent. Biophysical Journal, 2007, 93, L39-L41.	0.5	100
14	A Prestressed Cable Network Model of the Adherent Cell Cytoskeleton. Biophysical Journal, 2003, 84, 1328-1336.	0.5	90
15	Invited Review: Engineering approaches to cytoskeletal mechanics. Journal of Applied Physiology, 2000, 89, 2085-2090.	2.5	89
16	Dynamic instabilities in the inflating lung. Nature, 2002, 417, 809-811.	27.8	84
17	Effects of cytoskeletal prestress on cell rheological behavior. Acta Biomaterialia, 2005, 1, 255-262.	8.3	80
18	A micropatterning and image processing approach to simplify measurement of cellular traction forces. Acta Biomaterialia, 2012, 8, 82-88.	8.3	79

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19	Tensegrity-guided self assembly: from molecules to living cells. Soft Matter, 2009, 5, 1137-1145.	2.7	62
20	Effect of the cytoskeletal prestress on the mechanical impedance of cultured airway smooth muscle cells. Journal of Applied Physiology, 2002, 92, 1443-1450.	2.5	54
21	Fluidization, resolidification, and reorientation of the endothelial cell in response to slow tidal stretches. American Journal of Physiology - Cell Physiology, 2012, 303, C368-C375.	4.6	54
22	A model of foam elasticity based upon the laws of plateau. Journal of Colloid and Interface Science, 1991, 145, 255-259.	9.4	48
23	Durotaxis as an elastic stability phenomenon. Journal of Biomechanics, 2008, 41, 1289-1294.	2.1	48
24	Viscoelastic and dynamic nonlinear properties of airway smooth muscle tissue: roles of mechanical force and the cytoskeleton. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2006, 290, L1227-L1237.	2.9	42
25	Microtubules may harden or soften cells, depending of the extent of cell distension. Journal of Biomechanics, 2005, 38, 1728-1732.	2.1	39
26	Rheological behavior of mammalian cells. Cellular and Molecular Life Sciences, 2008, 65, 3592-3605.	5.4	38
27	Distending stress of the cytoskeleton is a key determinant of cell rheological behavior. Biochemical and Biophysical Research Communications, 2004, 321, 617-622.	2.1	36
28	Dynamics of Prestressed Semiflexible Polymer Chains as a Model of Cell Rheology. Physical Review Letters, 2006, 97, 168101.	7.8	33
29	A zipper network model of the failure mechanics of extracellular matrices. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1081-1086.	7.1	33
30	Biomechanical imaging of cell stiffness and prestress with subcellular resolution. Biomechanics and Modeling in Mechanobiology, 2014, 13, 665-678.	2.8	33
31	Mechanical Stability Determines Stress Fiber and Focal Adhesion Orientation. Cellular and Molecular Bioengineering, 2009, 2, 475-485.	2.1	31
32	Mathematical Modeling of the First Inflation of Degassed Lungs. Annals of Biomedical Engineering, 1998, 26, 608-617.	2.5	30
33	A Preliminary Assessment of a Novel Pneumatic Unloading Knee Brace on the Gait Mechanics of Patients With Knee Osteoarthritis. PM and R, 2013, 5, 816-824.	1.6	24
34	Topographical control of multiple cell adhesion molecules for traction force microscopy. Integrative Biology (United Kingdom), 2014, 6, 357-365.	1.3	24
35	Stress Transmission within the Cell. , 2011, 1, 499-524.		21
36	Tensional homeostasis in endothelial cells is a multicellular phenomenon. American Journal of Physiology - Cell Physiology, 2016, 311, C528-C535.	4.6	21

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37	Tensional homeostasis at different length scales. Soft Matter, 2020, 16, 6946-6963.	2.7	21
38	Two regimes, maybe three?. Nature Materials, 2006, 5, 597-598.	27.5	20
39	Pneumatic Osteoarthritis Knee Brace. Journal of Biomechanical Engineering, 2009, 131, 045001.	1.3	18
40	A Model for Stress Fiber Realignment Caused by Cytoskeletal Fluidization During Cyclic Stretching. Cellular and Molecular Bioengineering, 2011, 4, 67-80.	2.1	17
41	Cytoskeletal mechanics in airway smooth muscle cells. Respiratory Physiology and Neurobiology, 2008, 163, 25-32.	1.6	16
42	Dependence of Tensional Homeostasis on Cell Type and on Cellâ€“Cell Interactions. Cellular and Molecular Bioengineering, 2018, 11, 175-184.	2.1	16
43	Contributions of the Active and Passive Components of the Cytoskeletal Prestress to Stiffening of Airway Smooth Muscle Cells. Annals of Biomedical Engineering, 2007, 35, 224-234.	2.5	15
44	Integrin Î²1 orchestrates the abnormal cell-matrix attachment and invasive behaviour of E-cadherin dysfunctional cells. Gastric Cancer, 2022, 25, 124-137.	5.3	13
45	Power-law creep behavior of a semiflexible chain. Physical Review E, 2008, 78, 041922.	2.1	12
46	Experimental tests of the cellular tensegrity hypothesis. Biorheology, 2003, 40, 221-5.	0.4	10
47	Static Shear Modulus of Gasâ€“Liquid Foam Determined by the Punch Indentation Test. Journal of Colloid and Interface Science, 1996, 181, 661-666.	9.4	9
48	Inflation instability in the lung: an analytical model of a thick-walled alveolus with wavy fibres under large deformations. Journal of the Royal Society Interface, 2021, 18, 20210594.	3.4	9
49	Measurements of Shear Wave Propagation Speed in Gas-Liquid Foam. Journal of Colloid and Interface Science, 1994, 163, 269-276.	9.4	7
50	Effect of surface tension on alveolar surface area. Journal of Applied Physiology, 2002, 93, 1015-1022.	2.5	7
51	Focal adhesion displacement magnitude is a unifying feature of tensional homeostasis. Acta Biomaterialia, 2020, 113, 372-379.	8.3	7
52	As the endothelial cell reorients, its tensile forces stabilize. Journal of Biomechanics, 2020, 105, 109770.	2.1	7
53	A mathematical model of cell reorientation in response to substrate stretching. MCB Molecular and Cellular Biomechanics, 2006, 3, 43-8.	0.7	7
54	The mixture of phases and elastic stability of lungs with constant surface forces. Mathematical Modelling, 1986, 7, 1071-1082.	0.2	5

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55	On Extended Polar Decomposition. Journal of Elasticity, 2006, 83, 277-289.	1.9	5
56	Modeling tensional homeostasis in multicellular clusters. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e02801.	2.1	5
57	Effect of correlation between traction forces on tensional homeostasis in clusters of endothelial cells and fibroblasts. Journal of Biomechanics, 2020, 100, 109588.	2.1	5
58	Cytoskeletal Prestress as a Determinant of Deformability and Rheology of Adherent Cells. , 2012, , 92-118.		4
59	Stiffness versus prestress relationship at subcellular length scale. Journal of Biomechanics, 2014, 47, 3222-3225.	2.1	4
60	Differential Impacts on Tensional Homeostasis of Gastric Cancer Cells Due to Distinct Domain Variants of E-Cadherin. Cancers, 2022, 14, 2690.	3.7	2
61	Contractile torque as a steering mechanism for orientation of adherent cells. Mcb Mechanics and Chemistry of Biosystems, 2005, 2, 69-76.	0.3	1
62	On Unsheared Tetrads. Journal of Elasticity, 2005, 81, 153-157.	1.9	0
63	Multicellular Regulation of Tensional Homeostasis. Biophysical Journal, 2015, 108, 307a.	0.5	0
64	Focal Adhesion Displacement Magnitude is a Unifying Feature of Tensional Homeostasis. SSRN Electronic Journal, 0, , .	0.4	0
65	Reply to the â€˜Comment on â€œTensional homeostasis at different length scalesâ€•by J. Humphrey and C. Cyron, Soft Matter, 2022, 18, DOI: 10.1039/D1SM01151Kâ€™. Soft Matter, 2022, 18, 680-682.	2.7	0
66	Pattern Generation for Micropattern Traction Microscopy. Journal of Visualized Experiments, 2022, , .	0.3	0