Anna Grosberg

List of Publications by Year
in descending order

46 papers	2,492 citations	393982 19 h-index	288905 40 g-index
47 all docs	47 docs citations	47 times ranked	3692 citing authors

#	Article	IF	Citations
1	An Energetic Approach to Modeling Cytoskeletal Architecture in Maturing Cardiomyocytes. Journal of Biomechanical Engineering, 2022, 144, .	0.6	0
2	Statistical parametrization of cell cytoskeleton reveals lung cancer cytoskeletal phenotype with partial EMT signature. Communications Biology, 2022, 5, 407.	2.0	8
3	Actively Driven Fluctuations in a Fibrin Network. Frontiers in Physics, 2021, 8, .	1.0	4
4	A Study of Gene Expression, Structure, and Contractility of iPSC-Derived Cardiac Myocytes from a Family with Heart Disease due to LMNA Mutation. Annals of Biomedical Engineering, 2021, 49, 3524-3539.	1.3	5
5	Quantitative Evaluation of Cardiac Cell Interactions and Responses to Cyclic Strain. Cells, 2021, 10, 3199.	1.8	3
6	The Effect of Cyclic Strain on Human Fibroblasts With Lamin A/C Mutations and Its Relation to Heart Disease. Journal of Biomechanical Engineering, 2020, 142, .	0.6	2
7	Gene expression profiling of fibroblasts in a family with LMNA-related cardiomyopathy reveals molecular pathways implicated in disease pathogenesis. BMC Medical Genetics, 2020, 21, 152.	2.1	4
8	An adapted particle swarm optimization algorithm as a model for exploring premyofibril formation. AIP Advances, 2020, 10, 045126.	0.6	1
9	Striated myocyte structural integrity: Automated analysis of sarcomeric z-discs. PLoS Computational Biology, 2020, 16, e1007676.	1.5	32
10	Core Competencies for Undergraduates in Bioengineering and Biomedical Engineering: Findings, Consequences, and Recommendations. Annals of Biomedical Engineering, 2020, 48, 905-912.	1.3	37
11	Striated myocyte structural integrity: Automated analysis of sarcomeric z-discs. , 2020, 16, e1007676.		0
12	Striated myocyte structural integrity: Automated analysis of sarcomeric z-discs. , 2020, 16, e1007676.		0
13	Striated myocyte structural integrity: Automated analysis of sarcomeric z-discs. , 2020, 16, e1007676.		0
14	Striated myocyte structural integrity: Automated analysis of sarcomeric z-discs. , 2020, 16, e1007676.		0
15	Exploring cardiac form and function: A length-scale computational biology approach. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2019, 12, e1470.	6.6	5
16	Databases to Efficiently Manage Medium Sized, Low Velocity, Multidimensional Data in Tissue Engineering. Journal of Visualized Experiments, 2019, , .	0.2	4
17	A Low-Cost Mechanical Stretching Device for Uniaxial Strain of Cells: A Platform for Pedagogy in Mechanobiology. Journal of Biomechanical Engineering, 2018, 140, 081005-081005-9.	0.6	17
18	Toward improved myocardial maturity in an organ-on-chip platform with immature cardiac myocytes. Experimental Biology and Medicine, 2017, 242, 1643-1656.	1.1	38

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19	Dupuytrenâ€™s and Ledderhose Diseases in a Family with LMNA-Related Cardiomyopathy and a Novel Variant in the ASTE1 Gene. Cells, 2017, 6, 40.	1.8	5
20	Age of heart disease presentation and dysmorphic nuclei in patients with LMNA mutations. PLoS ONE, 2017, 12, e0188256.	1.1	9
21	Exome Sequencing Identifies a Novel LMNA Splice-Site Mutation and Multigenic Heterozygosity of Potential Modifiers in a Family with Sick Sinus Syndrome, Dilated Cardiomyopathy, and Sudden Cardiac Death. PLoS ONE, 2016, 11, e0155421.	1.1	26
22	Multiscale Characterization of Engineered Cardiac Tissue Architecture. Journal of Biomechanical Engineering, 2016, 138, .	0.6	10
23	Emergent Global Contractile Force in Cardiac Tissues. Biophysical Journal, 2016, 110, 1615-1624.	0.2	18
24	Dose-dependent intracellular reactive oxygen and nitrogen species (ROS/RNS) production from particulate matter exposure: comparison to oxidative potential and chemical composition. Atmospheric Environment, 2016, 144, 335-344.	1.9	62
25	Simulating muscular thin films using thermal contraction capabilities in finite element analysis tools. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 63, 326-336.	1.5	7
26	Metrics for Assessing Cytoskeletal Orientational Correlations and Consistency. PLoS Computational Biology, 2015, 11, e1004190.	1.5	27
27	Methods of Myofibrillogenesis Modeling. Methods in Molecular Biology, 2015, 1299, 75-91.	0.4	4
28	In Vitro Tools for Quantifying Structureâ€“Function Relationships in Cardiac Myocyte Cells and Tissues. , 2015, , 15-39.		2
29	Quality Metrics for Stem Cell-Derived Cardiac Myocytes. Stem Cell Reports, 2014, 2, 282-294.	2.3	84
30	Integrated platform for functional monitoring of biomimetic heart sheets derived from human pluripotent stem cells. Biomaterials, 2014, 35, 675-683.	5.7	37
31	Recapitulating maladaptive, multiscale remodeling of failing myocardium on a chip. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9770-9775.	3.3	133
32	The contribution of cellular mechanotransduction to cardiomyocyte form and function. Biomechanics and Modeling in Mechanobiology, 2012, 11, 1227-1239.	1.4	73
33	Modeling of cardiac muscle thin films: Pre-stretch, passive and active behavior. Journal of Biomechanics, 2012, 45, 832-841.	0.9	52
34	A tissue-engineered jellyfish with biomimetic propulsion. Nature Biotechnology, 2012, 30, 792-797.	9.4	536
35	Controlling the contractile strength of engineered cardiac muscle by hierarchal tissue architecture. Biomaterials, 2012, 33, 5732-5741.	5.7	195
36	Muscle on a chip: In vitro contractility assays for smooth and striated muscle. Journal of Pharmacological and Toxicological Methods, 2012, 65, 126-135.	0.3	147

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37	Vascular smooth muscle contractility depends on cell shape. Integrative Biology (United Kingdom), 2011, 3, 1063-1070.	0.6	110
38	Ensembles of engineered cardiac tissues for physiological and pharmacological study: Heart on a chip. Lab on A Chip, 2011, 11, 4165.	3.1	452
39	Cyclic strain induces dual-mode endothelial-mesenchymal transformation of the cardiac valve. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19943-19948.	3.3	145
40	Self-Organization of Muscle Cell Structure and Function. PLoS Computational Biology, 2011, 7, e1001088.	1.5	102
41	Modeling the macro-structure of the heart: healthy and diseased. Medical and Biological Engineering and Computing, 2009, 47, 301-311.	1.6	13
42	Effect of Fiber Geometry on Pulsatile Pumping and Energy Expenditure. Bulletin of Mathematical Biology, 2009, 71, 1580-1598.	0.9	15
43	Computational models of heart pumping efficiencies based on contraction waves in spiral elastic bands. Journal of Theoretical Biology, 2009, 257, 359-370.	0.8	9
44	A dynamic double helical band as a model for cardiac pumping. Bioinspiration and Biomimetics, 2009, 4, 026003.	1.5	4
45	Physiology in Phylogeny: Modeling of Mechanical Driving Forces in Cardiac Development. Heart Failure Clinics, 2008, 4, 247-259.	1.0	9
46	Rational Design of Contact Guiding, Neurotrophic Matrices for Peripheral Nerve Regeneration. Annals of Biomedical Engineering, 2003, 31, 1383-1401.	1.3	44