Alexander A Spector

List of Publications by Year
in descending order

42 papers	1,484 citations	516215 16 h-index	315357 38 g-index
43 all docs	43 docs citations	43 times ranked	1928 citing authors

#	Article	IF	Citations
1	Modeling the mechanics of fibrous-porous scaffolds for skeletal muscle regeneration. Medical and Biological Engineering and Computing, 2021, 59, 131-142.	1.6	3
2	A Poroelastic Model of a Fibrous-Porous Tissue Engineering Scaffold. Scientific Reports, 2018, 8, 5043.	1.6	6
3	Modeling Stem Cell Myogenic Differentiation. Scientific Reports, 2017, 7, 40639.	1.6	16
4	Stem Cell Fate Decision Making: Modeling Approaches. ACS Biomaterials Science and Engineering, 2017, 3, 2702-2711.	2.6	11
5	Biophysical Stimulation for Engineering Functional Skeletal Muscle. Tissue Engineering - Part B: Reviews, 2017, 23, 362-372.	2.5	25
6	A Modeling Insight into Adipose-Derived Stem Cell Myogenesis. PLoS ONE, 2015, 10, e0137918.	1.1	11
7	The potential and electric field in the cochlear outer hair cell membrane. Medical and Biological Engineering and Computing, 2015, 53, 405-413.	1.6	9
8	Rate-dependent dynamics of cellular membranes probed by laser tweezers and optical displacement sensing. , 2014, , .		0
9	Multistage Adipose-Derived Stem Cell Myogenesis: An Experimental and Modeling Study. Cellular and Molecular Bioengineering, 2014, 7, 497-509.	1.0	15
10	The Local Forces Acting on the Mechanotransduction Channel in Hair Cell Stereocilia. Biophysical Journal, 2014, 106, 2519-2528.	0.2	24
11	Effects of Plasma Membrane Cholesterol Level and Cytoskeleton F-Actin on Cell Protrusion Mechanics. PLoS ONE, 2013, 8, e57147.	1.1	57
12	Stereocilia Membrane Deformation: Implications for the Gating Spring and Mechanotransduction Channel. Biophysical Journal, 2012, 102, 201-210.	0.2	55
13	Internal forces, tension and energy density in tethered cellular membranes. Journal of Biomechanics, 2012, 45, 1328-1331.	0.9	6
14	Effect of membrane mechanics on charge transfer by the membrane protein prestin. Biomechanics and Modeling in Mechanobiology, 2012, 11, 107-118.	1.4	5
15	Modeling Electrically Active Viscoelastic Membranes. PLoS ONE, 2012, 7, e37667.	1.1	9
16	Voltage-induced bending and electromechanical coupling in lipid bilayers. Physical Review E, 2010, 81, 031907.	0.8	17
17	Computational analysis of the tether-pulling experiment to probe plasma membrane-cytoskeleton interaction in cells. Physical Review E, 2009, 80, 041905.	0.8	13
18	Voltage and frequency dependence of prestin-associated charge transfer. Journal of Theoretical Biology, 2009, 260, 137-144.	0.8	15

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19	Kinetic and mechanical analysis of live tube morphogenesis. Developmental Dynamics, 2008, 237, 2874-2888.	0.8	37
20	Modeling the Mechanics of Tethers Pulled From the Cochlear Outer Hair Cell Membrane. Journal of Biomechanical Engineering, 2008, 130, 031007.	0.6	9
21	Outer hair cell active force generation in the cochlear environment. Journal of the Acoustical Society of America, 2007, 122, 2215-2225.	0.5	18
22	High-Frequency Force Generation in the Constrained Cochlear Outer Hair Cell: A Model Study. JARO - Journal of the Association for Research in Otolaryngology, 2006, 6, 378-389.	0.9	3
23	Mechanosensitive Channels in the Lateral Wall Can Enhance the Cochlear Outer Hair Cell Frequency Response. Annals of Biomedical Engineering, 2005, 33, 991-1002.	1.3	11
24	Effect of voltage-dependent membrane properties on active force generation in cochlear outer hair cell. Journal of the Acoustical Society of America, 2005, 118, 3737-3746.	0.5	7
25	Modeling high-frequency electromotility of cochlear outer hair cell in microchamber experiment. Journal of the Acoustical Society of America, 2005, 117, 2147-2157.	0.5	15
26	Effectiveness, Active Energy Produced by Molecular Motors, and Nonlinear Capacitance of the Cochlear Outer Hair Cell. Journal of Biomechanical Engineering, 2005, 127, 391-399.	0.6	7
27	Effects of Chlorpromazine on Mechanical Properties of the Outer Hair Cell Plasma Membrane. Biophysical Journal, 2005, 89, 4090-4095.	0.2	31
28	Emergent patterns of growth controlled by multicellular form and mechanics. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11594-11599.	3.3	760
29	Modes and Balance of Energy in the Piezoelectric Cochlear Outer Hair Cell Wall. Journal of Biomechanical Engineering, 2004, 126, 17-25.	0.6	12
30	Characterization of the Nuclear Deformation Caused by Changes in Endothelial Cell Shape. Journal of Biomechanical Engineering, 2004, 126, 552-558.	0.6	64
31	A Model of Cochlear Macro-, Micro-, and Nano-Mechanics. Otolaryngology - Head and Neck Surgery, 2004, 131, P150-P150.	1.1	0
32	Effect of outer hair cell piezoelectricity on high-frequency receptor potentials. Journal of the Acoustical Society of America, 2003, 113, 453-461.	0.5	53
33	Nanostructure, Effective Properties, and Deformation Pattern of the Cochlear Outer Hair Cell Cytoskeleton. Journal of Biomechanical Engineering, 2002, 124, 180-187.	0.6	14
34	Simulation of Motor-Driven Cochlear Outer Hair Cell Electromotility. Biophysical Journal, 2001, 81, 11-24.	0.2	17
35	On the mechanoelectrical coupling in the cochlear outer hair cell. Journal of the Acoustical Society of America, 2000, 107, 1435-1441.	0.5	6
36	Nonlinear Electroelastic Model for the Composite Outer Hair Cell Wall. Orl, 1999, 61, 287-293.	0.6	6

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37	Nonlinear active force generation by cochlear outer hair cell. Journal of the Acoustical Society of America, 1999, 105, 2414-2420.	0.5	23
38	Elastic Properties of the Composite Outer Hair Cell Wall. Annals of Biomedical Engineering, 1998, 26, 157-165.	1.3	16
39	Estimation of elastic moduli and bending stiffness of the anisotropic outer hair cell wall. Journal of the Acoustical Society of America, 1998, 103, 1007-1011.	0.5	35
40	Analysis of the micropipet experiment with the anisotropic outer hair cell wall. Journal of the Acoustical Society of America, 1998, 103, 1001-1006.	0.5	21
41	A model for cochlear outer hair cell deformations in micropipette aspiration experiments: An analytical solution. Annals of Biomedical Engineering, 1996, 24, A241-A249.	1.3	2
42	A model for cochlear outer hair cell deformations in micropipette aspiration experiments: An analytical solution. Annals of Biomedical Engineering, 1996, 24, 241-249.	1.3	20