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	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
2	Characterization of the Nuclear Deformation Caused by Changes in Endothelial Cell Shape. Journal of Biomechanical Engineering, 2004, 126, 552-558.	0.6	64
3	Effects of Plasma Membrane Cholesterol Level and Cytoskeleton F-Actin on Cell Protrusion Mechanics. PLoS ONE, 2013, 8, e57147.	1.1	57
4	Stereocilia Membrane Deformation: Implications for the Gating Spring and Mechanotransduction Channel. Biophysical Journal, 2012, 102, 201-210.	0.2	55
5	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
6	Kinetic and mechanical analysis of live tube morphogenesis. Developmental Dynamics, 2008, 237, 2874-2888.	0.8	37
7	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
8	Effects of Chlorpromazine on Mechanical Properties of the Outer Hair Cell Plasma Membrane. Biophysical Journal, 2005, 89, 4090-4095.	0.2	31
9	Biophysical Stimulation for Engineering Functional Skeletal Muscle. Tissue Engineering - Part B: Reviews, 2017, 23, 362-372.	2.5	25
10	The Local Forces Acting on the Mechanotransduction Channel in Hair Cell Stereocilia. Biophysical Journal, 2014, 106, 2519-2528.	0.2	24
11	Nonlinear active force generation by cochlear outer hair cell. Journal of the Acoustical Society of America, 1999, 105, 2414-2420.	0.5	23
12	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
13	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
14	Outer hair cell active force generation in the cochlear environment. Journal of the Acoustical Society of America, 2007, 122, 2215-2225.	0.5	18
15	Simulation of Motor-Driven Cochlear Outer Hair Cell Electromotility. Biophysical Journal, 2001, 81, 11-24.	0.2	17
16	Voltage-induced bending and electromechanical coupling in lipid bilayers. Physical Review E, 2010, 81, 031907.	0.8	17
17	Elastic Properties of the Composite Outer Hair Cell Wall. Annals of Biomedical Engineering, 1998, 26, 157-165.	1.3	16
18	Modeling Stem Cell Myogenic Differentiation. Scientific Reports, 2017, 7, 40639.	1.6	16

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19	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
20	Voltage and frequency dependence of prestin-associated charge transfer. Journal of Theoretical Biology, 2009, 260, 137-144.	0.8	15
21	Multistage Adipose-Derived Stem Cell Myogenesis: An Experimental and Modeling Study. Cellular and Molecular Bioengineering, 2014, 7, 497-509.	1.0	15
22	Nanostructure, Effective Properties, and Deformation Pattern of the Cochlear Outer Hair Cell Cytoskeleton. Journal of Biomechanical Engineering, 2002, 124, 180-187.	0.6	14
23	Computational analysis of the tether-pulling experiment to probe plasma membrane-cytoskeleton interaction in cells. Physical Review E, 2009, 80, 041905.	0.8	13
24	Modes and Balance of Energy in the Piezoelectric Cochlear Outer Hair Cell Wall. Journal of Biomechanical Engineering, 2004, 126, 17-25.	0.6	12
25	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
26	A Modeling Insight into Adipose-Derived Stem Cell Myogenesis. PLoS ONE, 2015, 10, e0137918.	1.1	11
27	Stem Cell Fate Decision Making: Modeling Approaches. ACS Biomaterials Science and Engineering, 2017, 3, 2702-2711.	2.6	11
28	Modeling the Mechanics of Tethers Pulled From the Cochlear Outer Hair Cell Membrane. Journal of Biomechanical Engineering, 2008, 130, 031007.	0.6	9
29	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
30	Modeling Electrically Active Viscoelastic Membranes. PLoS ONE, 2012, 7, e37667.	1.1	9
31	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
32	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
33	Nonlinear Electroelastic Model for the Composite Outer Hair Cell Wall. Orl, 1999, 61, 287-293.	0.6	6
34	On the mechanoelectrical coupling in the cochlear outer hair cell. Journal of the Acoustical Society of America, 2000, 107, 1435-1441.	0.5	6
35	Internal forces, tension and energy density in tethered cellular membranes. Journal of Biomechanics, 2012, 45, 1328-1331.	0.9	6
36	A Poroelastic Model of a Fibrous-Porous Tissue Engineering Scaffold. Scientific Reports, 2018, 8, 5043.	1.6	6

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37	Effect of membrane mechanics on charge transfer by the membrane protein prestin. Biomechanics and Modeling in Mechanobiology, 2012, 11, 107-118.	1.4	5
38	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
39	Modeling the mechanics of fibrous-porous scaffolds for skeletal muscle regeneration. Medical and Biological Engineering and Computing, 2021, 59, 131-142.	1.6	3
40	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
41	A Model of Cochlear Macro-, Micro-, and Nano-Mechanics. Otolaryngology - Head and Neck Surgery, 2004, 131, P150-P150.	1.1	0
42	Rate-dependent dynamics of cellular membranes probed by laser tweezers and optical displacement sensing. , 2014, , .		0