Physical principles underlying the transduction of bilay mechanosensitive channel gating

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Citation Report

#	Article	IF	CITATIONS
1	Lipids tell channel to open wide. Journal of Cell Biology, 2002, 158, 831-831.	2.3	0
3	Crystal Structure of Escherichia coli MscS, a Voltage-Modulated and Mechanosensitive Channel. Science, 2002, 298, 1582-1587.	6.0	574
4	Open channel structure of MscL and the gating mechanism of mechanosensitive channels. Nature, 2002, 418, 942-948.	13.7	572
5	Retaining your identity under stress. , 2002, 9, 636-637.		11
6	Structure and mechanism in prokaryotic mechanosensitive channels. Current Opinion in Structural Biology, 2003, 13, 432-442.	2.6	151
7	The BON domain: a putative membrane-binding domain. Trends in Biochemical Sciences, 2003, 28, 352-355.	3.7	89
8	Evolutionary origins of mechanosensitive ion channels. Progress in Biophysics and Molecular Biology, 2003, 82, 11-24.	1.4	96
9	Effects of acute ventricular volume manipulation on in situ cardiomyocyte cell membrane configuration. Progress in Biophysics and Molecular Biology, 2003, 82, 221-227.	1.4	56
10	Interaction of the P-type cardiotoxin with phospholipid membranes. FEBS Journal, 2003, 270, 2038-2046.	0.2	36
11	Dynamical Properties of the MscL of Escherichia coli: A Normal Mode Analysis. Journal of Molecular Biology, 2003, 332, 657-674.	2.0	101
12	Biomolecular Stress-Sensitive Gauges:Â Surface-Mediated Immobilization of Mechanosensitive Membrane Protein. Journal of the American Chemical Society, 2003, 125, 12722-12723.	6.6	20
13	Gating of MscL Studied by Steered Molecular Dynamics. Biophysical Journal, 2003, 85, 2087-2099.	0.2	158
14	The Motility of Mollicutes. Biophysical Journal, 2003, 85, 828-842.	0.2	34
15	Investigating Lipid Composition Effects on the Mechanosensitive Channel of Large Conductance (MscL) Using Molecular Dynamics Simulations. Biophysical Journal, 2003, 85, 1512-1524.	0.2	89
16	Simulation of MscL Gating in a Bilayer under Stress. Biophysical Journal, 2003, 84, 2331-2337.	0.2	72
17	Molecular Mechanisms of Mechanosensation. Neuron, 2003, 37, 731-734.	3.8	35
18	Ultrashort pulsed electric fields induce membrane phospholipid translocation and caspase activation: differential sensitivities of Jurkat T lymphoblasts and rat Glioma C6 cells. IEEE Transactions on Dielectrics and Electrical Insulation, 2003, 10, 795-809.	1.8	98
19	Generation and Evaluation of a Large Mutational Library from the Escherichia coli Mechanosensitive Channel of Large Conductance, MscL. Journal of Biological Chemistry, 2003, 278, 21076-21082.	1.6	65

#	Article	IF	CITATIONS
20	A Short Regulatory Domain Restricts Glycerol Transport through Yeast Fps1p. Journal of Biological Chemistry, 2003, 278, 6337-6345.	1.6	87
21	The transient receptor potential channel on the yeast vacuole is mechanosensitive. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7105-7110.	3.3	148
22	Low Frequency Dynamics of Confined Proteins. Materials Research Society Symposia Proceedings, 2003, 790, 1.	0.1	0
23	The Closed Structure of the MscS Mechanosensitive Channel. Journal of Biological Chemistry, 2003, 278, 32246-32250.	1.6	64
24	Prokaryotic mechanosensitive channels. Advances in Protein Chemistry, 2003, 63, 177-209.	4.4	26
25	Membrane proteins: A new method enters the fold. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 3995-3996.	3.3	31
26	Gating-by-Tilt of Mechanically Sensitive Membrane Channels. Physical Review Letters, 2004, 93, 118103.	2.9	44
27	A Mechanosensitive Anion Channel in Arabidopsis thaliana Mesophyll Cells. Plant and Cell Physiology, 2004, 45, 1704-1708.	1.5	45
28	Sensitivity of Volume-regulated Anion Current to Cholesterol Structural Analogues. Journal of General Physiology, 2004, 123, 77-88.	0.9	73
29	Lipid- and mechanosensitivities of sodium/hydrogen exchangers analyzed by electrical methods. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10482-10487.	3.3	72
30	Gating Transitions in Bacterial Ion Channels Measured at 3 $\hat{l}$ 4s Resolution. Journal of General Physiology, 2004, 124, 151-161.	0.9	71
31	Thermodynamics of mechanosensitivity. Physical Biology, 2004, 1, 110-124.	0.8	99
32	Analytic models for mechanotransduction: Gating a mechanosensitive channel. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4071-4076.	3.3	133
33	Genetic Models of Mechanotransduction: The NematodeCaenorhabditis elegans. Physiological Reviews, 2004, 84, 1097-1153.	13.1	114
34	Intragenic suppression of gain-of-function mutations in the Escherichia coli mechanosensitive channel, MscL. Molecular Microbiology, 2004, 53, 485-495.	1.2	32
35	Channels in microbes: so many holes to fill. Molecular Microbiology, 2004, 53, 373-380.	1.2	44
36	Bilayer-dependent inhibition of mechanosensitive channels by neuroactive peptide enantiomers. Nature, 2004, 430, 235-240.	13.7	271
37	Physiological mechanisms of lysophosphatidylcholine-induced de-ramification of murine microglia. Journal of Physiology, 2004, 557, 105-120.	1.3	56

#	ARTICLE	IF	CITATIONS
38	Dealing with mechanics: mechanisms of force transduction in cells. Trends in Biochemical Sciences, 2004, 29, 364-370.	3.7	248
39	Magnetic field dependence of proton spin-lattice relaxation of confined proteins. Comptes Rendus Physique, 2004, 5, 349-357.	0.3	23
40	Bilayer Thickness Modulates the Conductance of the BK Channel in Model Membranes. Biophysical Journal, 2004, 86, 3620-3633.	0.2	52
41	Lipid Bilayer Pressure Profiles and Mechanosensitive Channel Gating. Biophysical Journal, 2004, 86, 3496-3509.	0.2	319
42	Molecular Dynamics Study of Gating in the Mechanosensitive Channel of Small Conductance MscS. Biophysical Journal, 2004, 87, 3050-3065.	0.2	152
43	Mechanosensitive ion channels: molecules of mechanotransduction. Journal of Cell Science, 2004, 117, 2449-2460.	1.2	470
44	Mechanosensitive Channels: Multiplicity of Families and Gating Paradigms. Science Signaling, 2004, 2004, re4-re4.	1.6	181
45	The conserved carboxy-terminus of the MscS mechanosensitive channel is not essential but increases stability and activity. FEBS Letters, 2004, 572, 233-237.	1.3	51
46	Effect of lipids with different spontaneous curvature on the channel activity of colicin E1: evidence in favor of a toroidal pore. FEBS Letters, 2004, 576, 205-210.	1.3	96
47	How lipids affect the activities of integral membrane proteins. Biochimica Et Biophysica Acta - Biomembranes, 2004, 1666, 62-87.	1.4	1,030
48	Lipids do influence protein functionâ€"the hydrophobic matching hypothesis revisited. Biochimica Et Biophysica Acta - Biomembranes, 2004, 1666, 205-226.	1.4	363
49	Nonbilayer lipids affect peripheral and integral membrane proteins via changes in the lateral pressure profile. Biochimica Et Biophysica Acta - Biomembranes, 2004, 1666, 275-288.	1.4	372
50	Evidence for a mechanosensitive calcium influx into red cells. Blood Cells, Molecules, and Diseases, 2004, 32, 349-352.	0.6	23
51	Mechanosensitive channels: what can we learn from ?simple? model systems?. Trends in Neurosciences, 2004, 27, 345-351.	4.2	88
52	Gating the bacterial mechanosensitive channels: MscS a new paradigm?. Current Opinion in Microbiology, 2004, 7, 163-167.	2.3	51
53	Controlling the Folding Efficiency of an Integral Membrane Protein. Journal of Molecular Biology, 2004, 342, 1293-1304.	2.0	69
54	X-ray Scattering Study of Pike Olfactory Nerve: Elastic, Thermodynamic and Physiological Properties of the Axonal Membrane. Journal of Molecular Biology, 2004, 343, 199-212.	2.0	14
55	Membrane Model for the G-Protein-Coupled Receptor Rhodopsin: Hydrophobic Interface and Dynamical Structure. Biophysical Journal, 2004, 86, 2078-2100.	0.2	141

#	ARTICLE	IF	CITATIONS
56	Loss-of-Function Mutations at the Rim of the Funnel of Mechanosensitive Channel MscL. Biophysical Journal, 2004, 86, 2113-2120.	0.2	77
57	Purification and Functional Reconstitution of N- and C-Halves of the MscL Channel. Biophysical Journal, 2004, 86, 2129-2136.	0.2	36
58	Lipid-Mediated Light Activation of a Mechanosensitive Channel of Large Conductance. Langmuir, 2004, 20, 6985-6987.	1.6	51
59	Lipid interactions with bacterial channels: fluorescence studies. Biochemical Society Transactions, 2005, 33, 905-909.	1.6	8
60	Lipid interactions with bacterial channels: fluorescence studies. Biochemical Society Transactions, 2005, 33, 905.	1.6	20
61	A possible unifying principle for mechanosensation. Nature, 2005, 436, 647-654.	13.7	621
62	Membranes are more mosaic than fluid. Nature, 2005, 438, 578-580.	13.7	776
63	Microbial mechanosensation. Current Opinion in Neurobiology, 2005, 15, 397-405.	2.0	39
64	Sane in the membrane: designing systems to modulate membrane proteins. Current Opinion in Structural Biology, 2005, 15, 435-440.	2.6	57
65	Heterologously expressed fungal transient receptor potential channels retain mechanosensitivity in vitro and osmotic response in vivo. European Biophysics Journal, 2005, 34, 413-422.	1.2	42
66	The role of the periplasmic loop residue glutamine 65 for MscL mechanosensitivity. European Biophysics Journal, 2005, 34, 403-412.	1.2	26
67	Effect of high hydrostatic pressure on the bacterial mechanosensitive channel MscS. European Biophysics Journal, 2005, 34, 434-441.	1.2	22
68	The influence of static magnetic fields on mechanosensitive ion channel activity in artificial liposomes. European Biophysics Journal, 2005, 34, 461-468.	1.2	33
69	Analytical derivation of thermodynamic characteristics of lipid bilayer from a flexible string model. Physical Review E, 2005, 71, 061918.	0.8	29
70	Effects of hydrophobic mismatch and spontaneous curvature on ion channel gating with a hinge. Physical Review E, 2005, 72, 031917.	0.8	7
71	2D-Protein Crystals (S-Layers) as Support for Lipid Membranes. Behavior Research Methods, 2005, 1, 247-293.	2.3	14
72	Assessment of Potential Stimuli for Mechano-Dependent Gating of MscL:  Effects of Pressure, Tension, and Lipid Headgroups. Biochemistry, 2005, 44, 12239-12244.	1.2	183
73	Effect of salt concentration on membrane lysis pressure. Biochimica Et Biophysica Acta - Biomembranes, 2005, 1717, 104-108.	1.4	17

#	Article	IF	Citations
74	Membrane-Protein Interactions in Mechanosensitive Channels. Biophysical Journal, 2005, 88, 880-902.	0.2	165
75	The conformation of the pore region of the M2 proton channel depends on lipid bilayer environment. Protein Science, 2005, 14, 856-861.	3.1	91
76	Effect of Structural Transition of the Host Assembly on Dynamics of an Ion Channel Peptide: A Fluorescence Approach. Biophysical Journal, 2005, 89, 3049-3058.	0.2	26
77	Conformational Changes Involved in MscL Channel Gating Measured using FRET Spectroscopy. Biophysical Journal, 2005, 89, L49-L51.	0.2	64
78	Activation of a mechanosensitive BK channel by membrane stress created with amphipaths. Molecular Membrane Biology, 2005, 22, 519-527.	2.0	41
79	Molecular Dynamics Simulations of Model Trans-Membrane Peptides in Lipid Bilayers: A Systematic Investigation of Hydrophobic Mismatch. Biophysical Journal, 2006, 90, 2326-2343.	0.2	162
80	C-Terminal Charged Cluster of MscL, RKKEE, Functions as a pH Sensor. Biophysical Journal, 2006, 90, 1992-1998.	0.2	38
81	Electrostatic Properties of the Mechanosensitive Channel of Small Conductance MscS. Biophysical Journal, 2006, 90, 3496-3510.	0.2	49
82	Molecular Dynamics Study of MscL Interactions with a Curved Lipid Bilayer. Biophysical Journal, 2006, 91, 1630-1637.	0.2	63
83	Curvature and Hydrophobic Forces Drive Oligomerization and Modulate Activity of Rhodopsin in Membranes. Biophysical Journal, 2006, 91, 4464-4477.	0.2	261
84	Lipid-Protein Interaction of the MscS Mechanosensitive Channel Examined by Scanning Mutagenesis. Biophysical Journal, 2006, 91, 2874-2881.	0.2	70
85	A Finite Element Framework for Studying the Mechanical Response of Macromolecules: Application to the Gating of the Mechanosensitive Channel MscL. Biophysical Journal, 2006, 91, 1248-1263.	0.2	73
86	ROLES OF BILAYER MATERIAL PROPERTIES IN FUNCTION AND DISTRIBUTION OF MEMBRANE PROTEINS. Annual Review of Biophysics and Biomolecular Structure, 2006, 35, 177-198.	18.3	213
87	Role of membrane curvature in mechanoelectrical transduction: Ion carriers nonactin and valinomycin sense changes in integral bending energy. Biochimica Et Biophysica Acta - Biomembranes, 2006, 1758, 1723-1731.	1.4	2
88	Lipid membrane interaction and antimicrobial activity of GsMTx-4, an inhibitor of mechanosensitive channel. Biochemical and Biophysical Research Communications, 2006, 340, 633-638.	1.0	36
89	Laurdan fluorescence senses mechanical strain in the lipid bilayer membrane. Biochemical and Biophysical Research Communications, 2006, 347, 838-841.	1.0	83
90	Kinetics of an Individual Transmembrane Helix during Bacteriorhodopsin Folding. Journal of Molecular Biology, 2006, 357, 325-338.	2.0	25
91	Physical coupling between lipids and proteins: a paradigm for cellular control. Signal Transduction, 2006, 6, 112-132.	0.7	31

#	Article	IF	Citations
92	Gating prokaryotic mechanosensitive channels. Nature Reviews Molecular Cell Biology, 2006, 7, 109-119.	16.1	112
93	Modelling of proteins in membranes. Chemistry and Physics of Lipids, 2006, 141, 2-29.	1.5	66
94	Twenty odd years of stretch-sensitive channels. Pflugers Archiv European Journal of Physiology, 2006, 453, 333-351.	1.3	107
95	Cell membrane-derived lysophosphatidylcholine activates cardiac ryanodine receptor channels. Pflugers Archiv European Journal of Physiology, 2006, 453, 455-462.	1.3	9
96	Elastic curvature constants of lipid monolayers and bilayers. Chemistry and Physics of Lipids, 2006, 144, 146-159.	1.5	287
97	Rationally Designed Chemical Modulators Convert a Bacterial Channel Protein into a pH-Sensory Valve. Angewandte Chemie - International Edition, 2006, 45, 3126-3130.	7.2	66
98	Expression of the mechanosensitive 2PK+ channel TREK-1 in human osteoblasts. Journal of Cellular Physiology, 2006, 206, 738-748.	2.0	47
100	The biological significance of lipid–protein interactions. Journal of Physics Condensed Matter, 2006, 18, S1281-S1291.	0.7	29
101	Mechanosensitive Channels: Therapeutic Targets in the Myocardium?. Current Pharmaceutical Design, 2006, 12, 3645-3663.	0.9	34
102	Energetics of rotational gating mechanisms of an ion channel induced by membrane deformation. Physical Review E, 2006, 73, 021909.	0.8	9
103	Desensitization of mechano-gated K2P channels. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 6859-6864.	3.3	124
104	Lipid Dependence of the Channel Properties of a Colicin E1-Lipid Toroidal Pore. Journal of Biological Chemistry, 2006, 281, 14408-14416.	1.6	67
105	Structures of the Prokaryotic Mechanosensitive Channels MscL and MscS. Current Topics in Membranes, 2007, 58, 1-24.	0.5	176
106	Liposome reconstitution and modulation of recombinant N-methyl-D-aspartate receptor channels by membrane stretch. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1540-1545.	3.3	79
107	An integrative approach to understanding mechanosensation. Briefings in Bioinformatics, 2007, 8, 258-265.	3.2	4
108	Regulation of the Gating of BKCa Channel by Lipid Bilayer Thickness. Journal of Biological Chemistry, 2007, 282, 7276-7286.	1.6	60
109	Membrane Curvature Alters the Activation Kinetics of the Epithelial Na+/H+ Exchanger, NHE3. Journal of Biological Chemistry, 2007, 282, 7376-7384.	1.6	31
110	Lack of a role of membrane-protein interactions in flow-dependent activation of ENaC. American Journal of Physiology - Renal Physiology, 2007, 293, F316-F324.	1.3	21

#	Article	IF	Citations
111	Assessing the Nature of Lipid Raft Membranes. PLoS Computational Biology, 2007, 3, e34.	1.5	257
112	Cooperative Gating and Spatial Organization of Membrane Proteins through Elastic Interactions. PLoS Computational Biology, 2007, 3, e81.	1.5	105
113	Polymodal Regulation of NMDA Receptor-Channels. Channels, 2007, 1, 334-343.	1.5	38
114	MscL: The Bacterial Mechanosensitive Channel of Large Conductance. Current Topics in Membranes, 2007, 58, 201-233.	0.5	7
115	Regulation of Eosinophil Adhesion by Lysophosphatidylcholine via a Non–Store-Operated Ca2+Channel. American Journal of Respiratory Cell and Molecular Biology, 2007, 36, 585-593.	1.4	29
116	Properties and Mechanism of the Mechanosensitive Ion Channel Inhibitor GsMTx4, a Therapeutic Peptide Derived from Tarantula Venom. Current Topics in Membranes, 2007, 59, 81-109.	0.5	22
117	Molecular and electrophysiological characterization of a mechanosensitive channel expressed in the chloroplasts of Chlamydomonas. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5883-5888.	3.3	87
118	A Remote Controlled Valve in Liposomes for Triggered Liposomal Release. Journal of Liposome Research, 2007, 17, 219-225.	1.5	27
119	The Significance of Biomimetic Membrane Nanobiotechnology to Biomedical Applications., 2007,, 1-21.		0
120	Lysophosphatidylcholine potentiates Ca2+ influx, pore formation and p44/42 MAP kinase phosphorylation mediated by P2X7 receptor activation in mouse microglial cells. Journal of Neurochemistry, 2007, 102, 1518-1532.	2.1	48
121	The Bacterial Mechanosensitive Channel MscS: Emerging Principles of Gating and Modulation. Current Topics in Membranes, 2007, 58, 235-267.	0.5	7
122	Lipid Effects on Mechanosensitive Channels. Current Topics in Membranes, 2007, 58, 151-178.	0.5	8
123	Structure–Function Relations of MscS. Current Topics in Membranes, 2007, , 269-294.	0.5	4
124	3.5 Billion Years of Mechanosensory Transduction: Structure and Function of Mechanosensitive Channels in Prokaryotes. Current Topics in Membranes, 2007, , 25-57.	0.5	12
125	Mechanosensitive ion channels and the peptide inhibitor GsMTx-4: History, properties, mechanisms and pharmacology. Toxicon, 2007, 49, 249-270.	0.8	161
126	Lipid Chain Selectivity by Outer Membrane Phospholipase A. Journal of Molecular Biology, 2007, 366, 461-468.	2.0	15
127	Bilayer Mechanical Properties Regulate the Transmembrane Helix Mobility and Enzymatic State of CD39â€. Biochemistry, 2007, 46, 279-290.	1.2	14
128	Calculation of local and average pressure tensors in molecular simulations. Molecular Simulation, 2007, 33, 747-758.	0.9	23

#	Article	IF	CITATIONS
129	2,2,2-Trifluoroethanol Changes the Transition Kinetics and Subunit Interactions in the Small Bacterial Mechanosensitive Channel MscS. Biophysical Journal, 2007, 92, 2771-2784.	0.2	27
130	Effects of Chlorpromazine and Trinitrophenol on the Membrane Motor of Outer Hair Cells. Biophysical Journal, 2007, 93, 1809-1817.	0.2	15
131	Nav Channel Mechanosensitivity: Activation and Inactivation Accelerate Reversibly with Stretch. Biophysical Journal, 2007, 93, 822-833.	0.2	150
132	Lateral Pressure Profile, Spontaneous Curvature Frustration, and the Incorporation and Conformation of Proteins in Membranes. Biophysical Journal, 2007, 93, 3884-3899.	0.2	285
133	Bilayer Thickness and Membrane Protein Function: An Energetic Perspective. Annual Review of Biophysics and Biomolecular Structure, 2007, 36, 107-130.	18.3	738
134	β-Subunit–Dependent Modulation of hSlo BK Current by Arachidonic Acid. Journal of Neurophysiology, 2007, 97, 62-69.	0.9	35
135	Effect of structural transition of the host assembly on dynamics of a membrane-bound tryptophan analogue. Biophysical Chemistry, 2007, 129, 172-180.	1.5	8
136	Mechanosensitive channels in bacteria: signs of closure?. Nature Reviews Microbiology, 2007, 5, 431-440.	13.6	135
137	Identification of mutations that alter the gating of the Escherichia coli mechanosensitive channel protein, MscK. Molecular Microbiology, 2007, 64, 560-574.	1.2	27
138	TRPCs as MS Channels. Current Topics in Membranes, 2007, 59, 191-231.	0.5	10
139	Modulation of channel activity and gadolinium block of MscL by static magnetic fields. European Biophysics Journal, 2007, 36, 95-105.	1.2	26
140	Mechanosensitive Channels: Insights from Continuum-Based Simulations. Cell Biochemistry and Biophysics, 2008, 52, 1-18.	0.9	14
141	Polyunsaturated Fatty Acid Modulation of Voltage-Gated Ion Channels. Cell Biochemistry and Biophysics, 2008, 52, 59-84.	0.9	103
142	New insights of membrane environment effects on MscL channel mechanics from theoretical approaches. Proteins: Structure, Function and Bioinformatics, 2008, 71, 1183-1196.	1.5	18
143	The sodium alcium exchanger is a mechanosensitive transporter. Journal of Physiology, 2008, 586, 1549-1563.	1.3	12
144	Molecular mechanisms of mechanosensing and their roles in fungal contact sensing. Nature Reviews Microbiology, 2008, 6, 667-673.	13.6	121
145	Membranes: a meeting point for lipids, proteins and therapies. Journal of Cellular and Molecular Medicine, 2008, 12, 829-875.	1.6	348
146	Mechanosensitive Channels: Their Mechanisms and Roles in Preserving Bacterial Ultrastructure During Adaptation to Environmental Changes. , 2008, , 73-95.		2

#	Article	IF	CITATIONS
147	Gating of the Mechanosensitive Channel Protein MscL: The Interplay of Membrane and Protein. Biophysical Journal, 2008, 94, 3497-3511.	0.2	62
148	Hydrogen-Bonding and Packing Features of Membrane Proteins: Functional Implications. Biophysical Journal, 2008, 94, 1945-1953.	0.2	52
149	Mechanosensitive Membrane Channels in Action. Biophysical Journal, 2008, 94, 2994-3002.	0.2	104
150	Energetics of Hydrophobic Matching in Lipid-Protein Interactions. Biophysical Journal, 2008, 94, 3996-4013.	0.2	98
151	Gating Mechanisms of Mechanosensitive Channels of Large Conductance, I: A Continuum Mechanics-Based Hierarchical Framework. Biophysical Journal, 2008, 95, 563-580.	0.2	44
152	Gating Mechanisms of Mechanosensitive Channels of Large Conductance, II: Systematic Study of Conformational Transitions. Biophysical Journal, 2008, 95, 581-596.	0.2	26
153	Selective activation of mechanosensitive ion channels using magnetic particles. Journal of the Royal Society Interface, 2008, 5, 855-863.	1.5	163
154	A Structural Mechanism for MscS Gating in Lipid Bilayers. Science, 2008, 321, 1210-1214.	6.0	179
155	Biofunctionalized Lipidâ^'Polymer Hybrid Nanocontainers with Controlled Permeability. Nano Letters, 2008, 8, 1105-1110.	4.5	20
157	Three-Dimensional Architecture of Membrane-Embedded MscS in the Closed Conformation. Journal of Molecular Biology, 2008, 378, 55-70.	2.0	82
158	Phosphatidylglycerol Lipids Enhance Folding of an $\hat{l}_{\pm}$ Helical Membrane Protein. Journal of Molecular Biology, 2008, 380, 548-556.	2.0	45
159	Mechanosensitive channel of large conductance. International Journal of Biochemistry and Cell Biology, 2008, 40, 164-169.	1.2	27
160	Bacterial mechanosensitive channels: Experiment and theory. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 1859-1870.	1.4	36
161	Protein modulation of lipids, and vice-versa, in membranes. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 1545-1575.	1.4	288
162	Mechano-sensitive channels regulate the stomatal aperture in Vicia faba. Biochemical and Biophysical Research Communications, 2008, 366, 758-762.	1.0	21
163	Surface Behavior and Peptideâ^'Lipid Interactions of the Cyclic Neuropeptide Melanin Concentrating Hormone. Journal of Physical Chemistry B, 2008, 112, 7330-7337.	1.2	8
164	Anionic Phospholipids Affect the Rate and Extent of Flux through the Mechanosensitive Channel of Large Conductance MscL. Biochemistry, 2008, 47, 4317-4328.	1.2	57
165	A Surface Active Benzodiazepine Receptor Ligand for Potential Probing Membrane Order of GABA <sub>A</sub> -Receptor Surroundings. Bioconjugate Chemistry, 2008, 19, 1888-1895.	1.8	2

#	Article	IF	CITATIONS
166	Importance of Direct Interactions with Lipids for the Function of the Mechanosensitive Channel MscL. Biochemistry, 2008, 47, 12175-12184.	1.2	59
167	The Membrane Lateral Pressure-Perturbing Capacity of Parabens and Their Effects on the Mechanosensitive Channel Directly Correlate with Hydrophobicity. Biochemistry, 2008, 47, 10540-10550.	1.2	30
168	Membrane mechanics as a probe of ion-channel gating mechanisms. Physical Review E, 2008, 78, 041901.	0.8	46
169	Gating-associated conformational changes in the mechanosensitive channel MscL. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 4033-4038.	3.3	54
170	Ion Channels in Microbes. Physiological Reviews, 2008, 88, 1449-1490.	13.1	183
171	Influence ofcisdouble-bond parametrization on lipid membrane properties: How seemingly insignificant details in force-field change even qualitative trends. Journal of Chemical Physics, 2008, 129, 105103.	1.2	49
172	Voltage-dependent K $<$ sup $>+sup> channel gating and voltage sensor toxin sensitivity depend on the mechanical state of the lipid membrane. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19276-19281.$	3.3	147
173	Cardiolipin Controls the Osmotic Stress Response and the Subcellular Location of Transporter ProP in Escherichia coli. Journal of Biological Chemistry, 2008, 283, 12314-12323.	1.6	81
174	Functional Motions in Biomolecules: Insights from Computational Studies at Multiple Scales. , 2008, , 253-297.		3
176	Mechanotransduction by Membrane-Mediated Activation of G-Protein Coupled Receptors and G-Proteins. , 0, , 89-119.		0
177	State-stabilizing Interactions in Bacterial Mechanosensitive Channel Gating and Adaptation. Journal of Biological Chemistry, 2009, 284, 19153-19157.	1.6	22
178	Statolith Sedimentation Kinetics and Force Transduction to the Cortical Endoplasmic Reticulum in Gravity-Sensing <i>Arabidopsis </i> Columella Cells Â. Plant Cell, 2009, 21, 843-860.	3.1	147
179	Synergistic Activation of Vascular TRPC6 Channel by Receptor and Mechanical Stimulation via Phospholipase C/Diacylglycerol and Phospholipase A <sub>2</sub> /ï‰-Hydroxylase/20-HETE Pathways. Circulation Research, 2009, 104, 1399-1409.	2.0	140
180	Mechanosensitive TRP channels in cardiovascular pathophysiology. , 2009, 123, 371-385.		158
181	Bioinspired Material Approaches to Sensing. Advanced Functional Materials, 2009, 19, 2527-2544.	7.8	93
182	The use of yeast to understand TRP-channel mechanosensitivity. Pflugers Archiv European Journal of Physiology, 2009, 458, 861-867.	1.3	24
183	Lysophosphatidylcholine- and MCP-1-induced chemotaxis of monocytes requires potassium channel activity. Pflugers Archiv European Journal of Physiology, 2009, 459, 71-77.	1.3	19
184	Open Channel Structure of MscL: A Patch-Clamp and Spectroscopic Study. Applied Magnetic Resonance, 2009, 36, 171-179.	0.6	3

#	Article	IF	CITATIONS
185	Numerical Simulation of Nanoindentation and Patch Clamp Experiments on Mechanosensitive Channels of Large Conductance in Escherichia coli. Experimental Mechanics, 2009, 49, 35-46.	1.1	11
186	Concentration dependent effect of GsMTx4 on mechanosensitive channels of small conductance in E. coli spheroplasts. European Biophysics Journal, 2009, 38, 415-425.	1.2	26
187	Emerging roles for lipids in shaping membrane-protein function. Nature, 2009, 459, 379-385.	13.7	865
188	Nearâ€infrared Photoinactivation of Bacteria and Fungi at Physiologic Temperatures. Photochemistry and Photobiology, 2009, 85, 1364-1374.	1.3	71
189	Coarse-Grained Model for Mechanosensitive Ion Channels. Journal of Physical Chemistry B, 2009, 113, 14431-14438.	1.2	24
190	Stability of Asymmetric Lipid Bilayers Assessed by Molecular Dynamics Simulations. Journal of the American Chemical Society, 2009, 131, 15194-15202.	6.6	68
191	Phase-Transition-Induced Protein Redistribution in Lipid Bilayers. Journal of Physical Chemistry B, 2009, 113, 16654-16659.	1.2	36
192	Stress-Axis Regulated Exon (STREX) in the C terminus of BKCa channels is responsible for the stretch sensitivity. Biochemical and Biophysical Research Communications, 2009, 385, 634-639.	1.0	33
193	Organization and dynamics in micellar structural transition monitored by pyrene fluorescence. Biochemical and Biophysical Research Communications, 2009, 390, 728-732.	1.0	56
194	In vitro Unfolding and Refolding of the Small Multidrug Transporter EmrE. Journal of Molecular Biology, 2009, 393, 815-832.	2.0	59
195	Structural Changes in the Cytoplasmic Domain of the Mechanosensitive Channel MscS During Opening. Biophysical Journal, 2009, 97, 1048-1057.	0.2	45
196	Curvature Generation and Pressure Profile Modulation in Membrane by Lysolipids: Insights from Coarse-Grained Simulations. Biophysical Journal, 2009, 97, 2267-2276.	0.2	67
197	Mechanosensitive Closed-Closed Transitions in Large Membrane Proteins: Osmoprotection and Tension Damping. Biophysical Journal, 2009, 97, 2761-2770.	0.2	19
199	Osmotic Stress. EcoSal Plus, 2009, 3, .	2.1	48
200	Bacterial Ion Channels. EcoSal Plus, 2010, 4, .	2.1	4
201	Stretch-Activated Ion Channels: What Are They?. Physiology, 2010, 25, 50-56.	1.6	267
202	Structures of membrane proteins. Quarterly Reviews of Biophysics, 2010, 43, 65-158.	2.4	157
203	Cloning and Functional Expression of an MscL Ortholog from Rhizobium etli: Characterization of a Mechanosensitive Channel. Journal of Membrane Biology, 2010, 234, 13-27.	1.0	7

#	Article	IF	CITATIONS
204	Lysophospholipids modulate voltage-gated calcium channel currents in pituitary cells; effects of lipid stress. Cell Calcium, 2010, 47, 514-524.	1.1	20
205	Determinants of specificity at the protein–lipid interface in membranes. FEBS Letters, 2010, 584, 1713-1720.	1.3	38
206	KCNE1-KCNQ1 osmoregulation by interaction of phosphatidylinositol-4,5-bisphosphate with Mg <sup>2+</sup> and polyamines. Journal of Physiology, 2010, 588, 3471-3483.	1.3	18
207	Adaptive behavior of bacterial mechanosensitive channels is coupled to membrane mechanics. Journal of General Physiology, 2010, 135, 641-652.	0.9	70
208	Mechanosensitivity of ion channels based on protein–lipid interactions. Journal of the Royal Society Interface, 2010, 7, S307-20.	1.5	40
209	Voltage-induced bending and electromechanical coupling in lipid bilayers. Physical Review E, 2010, 81, 031907.	0.8	17
210	Tryptophan in the Pore of the Mechanosensitive Channel MscS. Journal of Biological Chemistry, 2010, 285, 5377-5384.	1.6	20
211	An improved open-channel structure of MscL determined from FRET confocal microscopy and simulation. Journal of General Physiology, 2010, 136, 483-494.	0.9	82
213	Pore-opening mechanism in trimeric P2X receptor channels. Nature Communications, 2010, 1, 44.	5.8	89
214	Combined Voltage-Clamp and Atomic Force Microscope for the Study of Membrane Electromechanics. , 2010, , 461-489.		0
215	Gadolinium Ions Block Mechanosensitive Channels by Altering the Packing and Lateral Pressure of Anionic Lipids. Biophysical Journal, 2010, 98, 1018-1027.	0.2	105
216	Gramicidin Channels Are Internally Gated. Biophysical Journal, 2010, 98, 1486-1493.	0.2	13
217	Lysophospholipids Modulate Voltage-Gated Calcium Channel Currents in Pituitary Cells; Effects of Lipid-Stress. Biophysical Journal, 2010, 98, 15a.	0.2	3
218	Sensitivity of Prestin-Based Membrane Motor to Membrane Thickness. Biophysical Journal, 2010, 98, 2831-2838.	0.2	23
219	Lateral Diffusion of Membrane Proteins: Consequences of Hydrophobic Mismatch and Lipid Composition. Biophysical Journal, 2010, 99, 1482-1489.	0.2	54
220	Effects of GsMTx4 on Bacterial Mechanosensitive Channels in Inside-Out Patches from Giant Spheroplasts. Biophysical Journal, 2010, 99, 2870-2878.	0.2	39
221	Electrostatic Bending of Lipid Membranes: How Are Lipid and Electrostatic Properties Interrelated?. Langmuir, 2010, 26, 14737-14746.	1.6	8
222	<i>Mycobacterium tuberculosis</i> Rv0899 Adopts a Mixed $\hat{l}\pm/\hat{l}^2$ -Structure and Does Not Form a Transmembrane $\hat{l}^2$ -Barrel. Biochemistry, 2010, 49, 2768-2777.	1.2	26

#	ARTICLE	IF	CITATIONS
223	Studying Mechanosensitive Ion Channels Using Liposomes. Methods in Molecular Biology, 2010, 606, 31-53.	0.4	34
224	Nanomechanics of lipid bilayers by force spectroscopy with AFM: A perspective. Biochimica Et Biophysica Acta - Biomembranes, 2010, 1798, 741-749.	1.4	148
225	Potential role of the membrane in hERG channel functioning and drug-induced long QT syndrome. Biochimica Et Biophysica Acta - Biomembranes, 2010, 1798, 1651-1662.	1.4	16
226	The membrane environment modulates self-association of the human GpA TM domainâ€"Implications for membrane protein folding and transmembrane signaling. Biochimica Et Biophysica Acta - Biomembranes, 2010, 1798, 1899-1907.	1.4	93
227	Eukaryotic Mechanosensitive Channels. Annual Review of Biophysics, 2010, 39, 111-137.	4.5	360
228	Mechanosensitive Channels in Microbes. Annual Review of Microbiology, 2010, 64, 313-329.	2.9	287
230	Simulating electron spin resonance spectra of macromolecules labeled with two dipolar-coupled nitroxide spin labels from trajectories. Physical Chemistry Chemical Physics, 2011, 13, 12785.	1.3	4
231	Effects on Membrane Lateral Pressure Suggest Permeation Mechanisms for Bacterial Quorum Signaling Molecules. Biochemistry, 2011, 50, 6983-6993.	1.2	41
232	Thermodynamics of Biological Processes. Methods in Enzymology, 2011, 492, 27-59.	0.4	45
233	Solid-State 2H NMR Shows Equivalence of Dehydration and Osmotic Pressures in Lipid Membrane Deformation. Biophysical Journal, 2011, 100, 98-107.	0.2	40
234	Bilayer-Mediated Clustering and Functional Interaction of MscL Channels. Biophysical Journal, 2011, 100, 1252-1260.	0.2	87
235	Flying-Patch Patch-Clamp Study of G22E-MscL Mutant under High Hydrostatic Pressure. Biophysical Journal, 2011, 100, 1635-1641.	0.2	21
236	Protein Shape Change Has a Major Effect on the Gating Energy of a Mechanosensitive Channel. Biophysical Journal, 2011, 100, 1651-1659.	0.2	48
237	Membrane Tension, Lipid Adaptation, Conformational Changes, and Energetics in MscL Gating. Biophysical Journal, 2011, 101, 671-679.	0.2	16
238	Lipid Bilayer Mechanics in a Pipette with Glass-Bilayer Adhesion. Biophysical Journal, 2011, 101, 1913-1920.	0.2	27
239	An NMR database for simulations of membrane dynamics. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 818-839.	1.4	98
240	Regulation of Protein Function by Membrane Elastic Properties. Biological and Medical Physics Series, 2011, , 187-203.	0.3	0
241	Specificity of Intramembrane Protein-Lipid Interactions. Cold Spring Harbor Perspectives in Biology, 2011, 3, a004705-a004705.	2.3	145

#	Article	IF	CITATIONS
242	Mutual adaptation of a membrane protein and its lipid bilayer during conformational changes. Nature Communications, $2011, 2, 304$ .	5.8	108
243	Mechanosensitive Channels: What Can They Do and How Do They Do It?. Structure, 2011, 19, 1356-1369.	1.6	303
244	Toward Understanding Protocell Mechanosensation. Origins of Life and Evolution of Biospheres, 2011, 41, 281-304.	0.8	5
245	Collective response of self-organized clusters of mechanosensitive channels. Physical Review E, 2011, 83, 020901.	0.8	5
246	An ⟨i⟩in vivo⟨ i⟩ screen reveals proteinâ€lipid interactions crucial for gating a mechanosensitive channel. FASEB Journal, 2011, 25, 694-702.	0.2	23
247	Bacterial Mechanosensitive Channels as a Paradigm for Mechanosensory Transduction. Cellular Physiology and Biochemistry, 2011, 28, 1051-1060.	1.1	57
248	Entropic Tension in Crowded Membranes. PLoS Computational Biology, 2012, 8, e1002431.	1.5	68
249	Static mechanical stretching accelerates lipid production in 3T3-L1 adipocytes by activating the MEK signaling pathway. American Journal of Physiology - Cell Physiology, 2012, 302, C429-C441.	2.1	76
250	Structural Investigation of MscL Gating Using Experimental Data and Coarse Grained MD Simulations. PLoS Computational Biology, 2012, 8, e1002683.	1.5	50
251	The protective effect of osmoprotectant TMAO on bacterial mechanosensitive channels of small conductance MscS/MscK under high hydrostatic pressure. Channels, 2012, 6, 262-271.	1.5	16
252	The dynamics of protein-protein interactions between domains of MscL at the cytoplasmic-lipid interface. Channels, 2012, 6, 255-261.	1.5	13
253	The MscS and MscL Families of Mechanosensitive Channels Act as Microbial Emergency Release Valves. Journal of Bacteriology, 2012, 194, 4802-4809.	1.0	189
254	Hydrophobic gating of mechanosensitive channel of large conductance evidenced by single-subunit resolution. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12944-12949.	3.3	59
255	Membrane bending is critical for the stability of voltage sensor segments in the membrane. Journal of General Physiology, 2012, 140, 55-68.	0.9	29
256	Mechanical properties of lipid bilayers and regulation of mechanosensitive function. Channels, 2012, 6, 220-233.	1.5	22
257	On-Chip Stochastic Resonance of Ion Channel Systems With Variable Internal Noise. IEEE Transactions on Nanobioscience, 2012, 11, 169-175.	2.2	4
258	Water Permeability of Aquaporin-4 Channel Depends on Bilayer Composition, Thickness, and Elasticity. Biophysical Journal, 2012, 103, 1899-1908.	0.2	78
259	Mechanical actuation of ion channels using a piezoelectric planar patch clamp system. Lab on A Chip, 2012, 12, 80-87.	3.1	13

#	Article	IF	CITATIONS
260	Engineering <i>de Novo</i> Membrane-Mediated Protein–Protein Communication Networks. Journal of the American Chemical Society, 2012, 134, 5746-5749.	6.6	34
261	Sensing pressure with ion channels. Trends in Neurosciences, 2012, 35, 477-486.	4.2	134
262	Dopamine D <sub>1</sub> receptor and serotonin 5-HT <sub>1A</sub> receptor agonist effects of the natural product (–)-stepholidine: molecular modelling and dynamics simulations. Molecular Simulation, 2012, 38, 970-979.	0.9	2
263	Modeling and Simulation of Ion Channels. Chemical Reviews, 2012, 112, 6250-6284.	23.0	196
264	Insight into DEG/ENaC Channel Gating from Genetics and Structure. Physiology, 2012, 27, 282-290.	1.6	63
265	Strain, stress and energy in lipid bilayer induced by electrostatic/electrokinetic forces. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 829-838.	1.4	2
266	The role of membrane thickness in charged protein–lipid interactions. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 135-145.	1.4	66
267	Membrane models of E. coli containing cyclic moieties in the aliphatic lipid chain. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 1205-1210.	1.4	89
268	Effect of membrane tension on the physical properties of DOPC lipid bilayer membrane. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 2271-2281.	1.4	97
269	Curvature Forces in Membrane Lipid–Protein Interactions. Biochemistry, 2012, 51, 9782-9795.	1.2	149
270	Bacterial Mechanosensitive Channels—MscS: Evolution's Solution to Creating Sensitivity in Function. Annual Review of Biophysics, 2012, 41, 157-177.	4.5	93
271	6.5 Mechanosensory Transduction. , 2012, , 108-141.		6
272	5.12 Membrane Protein–Lipid Match and Mismatch. , 2012, , 245-260.		3
273	Role of Unsaturated Lipid and Ergosterol in Ethanol Tolerance of Model Yeast Biomembranes. Biophysical Journal, 2012, 102, 507-516.	0.2	115
274	Sensing and Responding to Membrane Tension: The Bacterial MscL Channel as a Model System. Biophysical Journal, 2012, 103, 169-174.	0.2	72
275	Dynamics of the Primary Cilium in Shear Flow. Biophysical Journal, 2012, 103, 629-639.	0.2	48
276	UV–Visible and Infrared Methods for Investigating Lipid–Rhodopsin Membrane Interactions. Methods in Molecular Biology, 2012, 914, 127-153.	0.4	12
277	Controlled delivery of bioactive molecules into live cells using the bacterial mechanosensitive channel MscL. Nature Communications, 2012, 3, 990.	5.8	54

#	Article	IF	CITATIONS
278	Protein conducting channels—mechanisms, structures and applications. Molecular BioSystems, 2012, 8, 709.	2.9	5
280	Molecular mechanisms of root gravity sensing and signal transduction. Wiley Interdisciplinary Reviews: Developmental Biology, 2012, 1, 276-285.	<b>5.</b> 9	35
281	The Molecular Basis of Mechanosensory Transduction. Advances in Experimental Medicine and Biology, 2012, 739, 142-155.	0.8	36
282	Molecular force transduction by ion channels – diversity and unifying principles. Journal of Cell Science, 2012, 125, 3075-83.	1.2	168
283	Differential effects of lipids and lyso-lipids on the mechanosensitivity of the mechanosensitive channels MscL and MscS. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8770-8775.	3 <b>.</b> 3	170
284	Mechanosensitivity of nicotinic receptors. Pflugers Archiv European Journal of Physiology, 2012, 464, 193-203.	1.3	22
285	Structural transition in micelles: novel insight into microenvironmental changes in polarity and dynamics. Chemistry and Physics of Lipids, 2012, 165, 497-504.	1.5	23
286	Optical stretching as a tool to investigate the mechanical properties of lipid bilayers. RSC Advances, 2013, 3, 16632.	1.7	25
287	MscS-like Mechanosensitive Channels in Plants and Microbes. Biochemistry, 2013, 52, 5708-5722.	1.2	62
288	Analyzing the Effects of Hydrophobic Mismatch on Transmembrane α-Helices Using Tryptophan Fluorescence Spectroscopy. Methods in Molecular Biology, 2013, 1063, 95-116.	0.4	6
289	Antimicrobial dyes and mechanosensitive channels. Antonie Van Leeuwenhoek, 2013, 104, 155-167.	0.7	18
290	Impulses and pressure waves cause excitement and conduction in the nervous system. Medical Hypotheses, 2013, 81, 768-772.	0.8	26
291	Probing microscopic material properties inside simulated membranes through spatially resolved three-dimensional local pressure fields and surface tensions. Chemistry and Physics of Lipids, 2013, 169, 106-112.	1.5	11
292	Computational analysis of local membrane properties. Journal of Computer-Aided Molecular Design, 2013, 27, 845-858.	1.3	143
293	Electrophysiology of Bacteria. Annual Review of Microbiology, 2013, 67, 179-197.	2.9	29
294	Thermal fluctuations in shape, thickness, and molecular orientation in lipid bilayers. II. Finite surface tensions. Journal of Chemical Physics, 2013, 139, 084706.	1.2	23
295	Can long range mechanical interaction between drugs and membrane proteins define the notion of molecular promiscuity? Application to P-glycoprotein-mediated multidrug resistance (MDR). Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 5112-5118.	1.1	11
296	The cost of living in the membrane: A case study of hydrophobic mismatch for the multi-segment protein LeuT. Chemistry and Physics of Lipids, 2013, 169, 27-38.	1.5	41

#	Article	IF	Citations
297	The water permeability of lens aquaporin-0 depends on its lipid bilayer environment. Experimental Eye Research, 2013, 113, 32-40.	1.2	53
298	TRPV1 Channels Are Intrinsically Heat Sensitive and Negatively Regulated by Phosphoinositide Lipids. Neuron, 2013, 77, 667-679.	3.8	274
299	Computer simulation of cell entry of graphene nanosheet. Biomaterials, 2013, 34, 4296-4301.	5.7	89
300	Three-Dimensional Stress Field around a Membrane Protein: Atomistic andÂCoarse-Grained Simulation Analysis of Gramicidin A. Biophysical Journal, 2013, 104, 117-127.	0.2	24
301	Peptide-induced bilayer thinning structure of unilamellar vesicles and the related binding behavior as revealed by X-ray scattering. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 528-534.	1.4	14
302	Phosphatidylinositol Is Crucial for the Mechanosensitivity of <i>Mycobacterium tuberculosis</i> MscL. Biochemistry, 2013, 52, 5415-5420.	1.2	36
303	Structural evidence for functional lipid interactions in the betaine transporter BetP. EMBO Journal, 2013, 32, 3096-3105.	3.5	73
304	Connection between Oligomeric State and Gating Characteristics of Mechanosensitive Ion Channels. PLoS Computational Biology, 2013, 9, e1003055.	1.5	28
305	Recent Progress in Advanced Nanobiological Materials for Energy and Environmental Applications. Materials, 2013, 6, 5821-5856.	1.3	15
306	On the role of individual subunits in MscL gating: "All for one, one for all?― FASEB Journal, 2013, 27, 882-892.	0.2	22
307	Coupling Membrane Elasticity and Structure to Protein Function. Behavior Research Methods, 2013, 18, 81-109.	2.3	2
308	Directional interactions and cooperativity between mechanosensitive membrane proteins. Europhysics Letters, 2013, 101, 68002.	0.7	39
309	Stiffened lipid platforms at molecular force foci. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4886-4892.	3.3	87
310	Cardiac Stretch–Activated Channels and Mechano-Electric Coupling. , 2014, , 139-149.		0
311	The Bile Acid-Sensitive Ion Channel (BASIC) Is Activated by Alterations of Its Membrane Environment. PLoS ONE, 2014, 9, e111549.	1.1	19
312	Osmotic Stress. , 2014, , 133-156.		11
313	The effect of local bending on gating of MscL using a representative volume element and finite element simulation. Channels, 2014, 8, 344-349.	1.5	19
314	Mechanosensitive channels: feeling tension in a world under pressure. Frontiers in Plant Science, 2014, 5, 558.	1.7	89

#	Article	IF	CITATIONS
315	Streptomycin potency is dependent on MscL channel expression. Nature Communications, 2014, 5, 4891.	5.8	51
316	The Role of Membrane-Mediated Interactions in the Assembly and Architecture of Chemoreceptor Lattices. PLoS Computational Biology, 2014, 10, e1003932.	1.5	32
317	One-dimensional nanoprobes for single-cell studies. Nanomedicine, 2014, 9, 153-168.	1.7	15
318	Signatures of protein structure in the cooperative gating of mechanosensitive ion channels. Europhysics Letters, 2014, 107, 48004.	0.7	7
319	Diacylglycerol Activates the Light-Dependent Channel TRP in the Photosensitive Microvilli of <i>Drosophila melanogaster </i> Photoreceptors. Journal of Neuroscience, 2014, 34, 6679-6686.	1.7	36
320	Phospholipids that Contain Polyunsaturated Fatty Acids Enhance Neuronal Cell Mechanics and Touch Sensation. Cell Reports, 2014, 6, 70-80.	2.9	98
321	Bacterial Mechanosensitive Channels: Models for Studying Mechanosensory Transduction. Antioxidants and Redox Signaling, 2014, 20, 952-969.	2.5	41
322	The ion channels to cytoskeleton connection as potential mechanism of mechanosensitivity. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 682-691.	1.4	104
323	Membrane Transport Mechanism. Springer Series in Biophysics, 2014, , .	0.4	2
324	<pre><scp><i>B</i>&lt; functions as a mechanosensitive channel. Molecular Microbiology, 2014, 92, 813-823.</scp></pre>	1.2	60
325	Geometrical Membrane Curvature as an Allosteric Regulator of Membrane Protein Structure and Function. Biophysical Journal, 2014, 106, 201-209.	0.2	44
326	Conformational interchange of a carbohydrate by mechanical compression at the air–water interface. Physical Chemistry Chemical Physics, 2014, 16, 10286.	1.3	15
327	Freezing of stressed bilayers and vesicles. Soft Matter, 2014, 10, 257-261.	1.2	4
328	Global structural changes of an ion channel during its gating are followed by ion mobility mass spectrometry. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17170-17175.	3.3	63
329	Phytochemicals Perturb Membranes and Promiscuously Alter Protein Function. ACS Chemical Biology, 2014, 9, 1788-1798.	1.6	241
330	Structural impact of cations on lipid bilayer models: Nanomechanical properties by AFM-force spectroscopy. Molecular Membrane Biology, 2014, 31, 17-28.	2.0	42
331	Biophysical implications of lipid bilayer rheometry for mechanosensitive channels. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13864-13869.	3.3	59
332	Feeling the hidden mechanical forces in lipid bilayer is an original sense. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7898-7905.	3.3	236

#	Article	IF	CITATIONS
333	Activation of a Bacterial Mechanosensitive Channel in Mammalian Cells by Cytoskeletal Stress. Cellular and Molecular Bioengineering, 2014, 7, 307-319.	1.0	57
334	The activation mode of the mechanosensitive ion channel, MscL, by lysophosphatidylcholine differs from tensionâ€induced gating. FASEB Journal, 2014, 28, 4292-4302.	0.2	42
335	Not Just an Oil Slick: How the Energetics of Protein-Membrane Interactions Impacts the Function and Organization of Transmembrane Proteins. Biophysical Journal, 2014, 106, 2305-2316.	0.2	52
336	Asymmetric perturbations of signalling oligomers. Progress in Biophysics and Molecular Biology, 2014, 114, 153-169.	1.4	13
337	Modulation of monocytic leukemia cell function and survival by high gradient magnetic fields and mathematical modeling studies. Biomaterials, 2014, 35, 3164-3171.	5.7	41
338	Microemulsions: Biomimetic Systems for Characterization of Biomembranes and Their Associated Biomolecules., 2014,, 196-215.		1
340	Influenza A M2 protein conformation depends on choice of model membrane. Biopolymers, 2015, 104, 405-411.	1.2	20
341	Breaking the Hydrophobicity of the MscL Pore: Insights into a Charge-Induced Gating Mechanism. PLoS ONE, 2015, 10, e0120196.	1.1	7
342	Chemical Signals and Mechanosensing in Bacterial Responses to Their Environment. PLoS Pathogens, 2015, 11, e1005057.	2.1	49
343	Negative and positive temperature dependence of potassium leak in MscS mutants: Implications for understanding thermosensitive channels. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 1678-1686.	1.4	3
344	The role of lipids in mechanosensation. Nature Structural and Molecular Biology, 2015, 22, 991-998.	3.6	160
345	Effects of neurosteroids on a model membrane including cholesterol: A micropipette aspiration study. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 1268-1276.	1.4	4
346	Membrane–drug interactions studied using model membrane systems. Saudi Journal of Biological Sciences, 2015, 22, 714-718.	1.8	64
347	Magnetic nanoparticles for "smart liposomes― European Biophysics Journal, 2015, 44, 647-654.	1.2	23
348	Measurements of the effect of membrane asymmetry on the mechanical properties of lipid bilayers. Chemical Communications, 2015, 51, 6976-6979.	2,2	93
349	Role of Lipids in Folding, Misfolding and Function of Integral Membrane Proteins. Advances in Experimental Medicine and Biology, 2015, 855, 1-31.	0.8	13
350	Buffer-Induced Swelling and Vesicle Budding in Binary Lipid Mixtures of Dioleoylphosphatidylcholine:Dioleoylphosphatidylethanolamine and Dioleoylphosphatidylcholine:Lysophosphatidylcholine Using Small-Angle X-ray Scattering and <a href="mailto:sup&gt;80.5"><sup>80.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"&gt;<sup>90.5"</sup>90.5"&gt;<sup>90.5"</sup>90.5"&gt;<sup>90.5"</sup>90.5"&gt;<sup>90.5"</sup>90.5"&gt;<sup>90.5"</sup>90.5"</sup>90.5"&gt;<sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</sup>90.5"</a>	1.6	2
351	Patch clamp characterization of the effect of cardiolipin on MscS of E. coli. European Biophysics Journal, 2015, 44, 567-576.	1.2	21

#	Article	IF	Citations
352	Membrane Composition Variation and Underdamped Mechanics near Transmembrane Proteins and Coats. Physical Review Letters, 2015, 114, 098101.	2.9	14
353	A review of traditional and emerging methods to characterize lipid–protein interactions in biological membranes. Analytical Methods, 2015, 7, 7076-7094.	1.3	26
354	Lipid–protein interactions: Lessons learned from stress. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 1744-1756.	1.4	43
355	A new antibiotic with potent activity targets MscL. Journal of Antibiotics, 2015, 68, 453-462.	1.0	46
356	Inducible release of particulates from liposomes using the mechanosensitive channel of large conductance and l-î±-lysophosphatidylcholine. European Biophysics Journal, 2015, 44, 521-530.	1.2	3
357	Modulating bilayer mechanical properties to promote the coupled folding and insertion of an integral membrane protein. European Biophysics Journal, 2015, 44, 503-512.	1.2	16
358	Mechanically Activated Ion Channels. Neuron, 2015, 87, 1162-1179.	3.8	504
359	Hidden Markov analysis of improved bandwidth mechanosensitive ion channel data. European Biophysics Journal, 2015, 44, 545-556.	1.2	4
360	Membrane stiffening by STOML3 facilitates mechanosensation in sensory neurons. Nature Communications, 2015, 6, 8512.	5.8	127
361	Study of light-induced MscL gating by EPR spectroscopy. European Biophysics Journal, 2015, 44, 557-565.	1.2	6
362	The efficacy of trivalent cyclic hexapeptides to induce lipid clustering in PG/PE membranes correlates with their antimicrobial activity. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 2998-3006.	1.4	33
363	Mechanisms of mechanosensing — mechanosensitive channels, function and re-engineering. Current Opinion in Chemical Biology, 2015, 29, 120-127.	2.8	34
364	United in Diversity: Mechanosensitive Ion Channels in Plants. Annual Review of Plant Biology, 2015, 66, 113-137.	8.6	173
365	Elastic deformation and area per lipid of membranes: Atomistic view from solid-state deuterium NMR spectroscopy. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 246-259.	1.4	51
366	Theoretical Sum Frequency Generation Spectroscopy of Peptides. Journal of Physical Chemistry B, 2015, 119, 8969-8983.	1.2	25
367	The force-from-lipid (FFL) principle of mechanosensitivity, at large and in elements. Pflugers Archiv European Journal of Physiology, 2015, 467, 27-37.	1.3	155
368	Influence of Global and Local Membrane Curvature on Mechanosensitive Ion Channels: A Finite Element Approach. Membranes, 2016, 6, 14.	1.4	58
369	Dihydrostreptomycin Directly Binds to, Modulates, and Passes through the MscL Channel Pore. PLoS Biology, 2016, 14, e1002473.	2.6	35

#	ARTICLE	IF	CITATIONS
370	In situ, Reversible Gating of a Mechanosensitive Ion Channel through Protein-Lipid Interactions. Frontiers in Physiology, 2016, 7, 409.	1.3	7
371	The Water Permeability and Pore Entrance Structure of Aquaporin-4 Depend on Lipid Bilayer Thickness. Biophysical Journal, 2016, 111, 90-99.	0.2	20
372	Kinetic disruption of lipid rafts is a mechanosensor for phospholipase D. Nature Communications, 2016, 7, 13873.	5.8	87
373	Studying the effects of asymmetry on the bending rigidity of lipid membranes formed by microfluidics. Chemical Communications, 2016, 52, 5277-5280.	2.2	50
374	How do mechanosensitive channels sense membrane tension?. Biochemical Society Transactions, 2016, 44, 1019-1025.	1.6	25
375	Membrane mechanical properties of synthetic asymmetric phospholipid vesicles. Soft Matter, 2016, 12, 7521-7528.	1.2	56
376	From membrane tension to channel gating: A principal energy transfer mechanism for mechanosensitive channels. Protein Science, 2016, 25, 1954-1964.	3.1	25
377	The role of MscL amphipathic N terminus indicates a blueprint for bilayer-mediated gating of mechanosensitive channels. Nature Communications, 2016, 7, 11984.	5.8	87
378	Optically assembled droplet interface bilayer (OptiDIB) networks from cell-sized microdroplets. Soft Matter, 2016, 12, 7731-7734.	1.2	32
379	The Single Transmembrane Segment of Minimal Sensor DesK Senses Temperature via a Membrane-Thickness Caliper. Journal of Bacteriology, 2016, 198, 2945-2954.	1.0	20
380	Heterologously-expressed and Liposome-reconstituted Human Transient Receptor Potential Melastatin 4 Channel (TRPM4) is a Functional Tetramer. Scientific Reports, 2016, 6, 19352.	1.6	27
381	Reversible control of current across lipid membranes by local heating. Scientific Reports, 2016, 6, 22686.	1.6	44
382	On the gating of mechanosensitive channels by fluid shear stress. Acta Mechanica Sinica/Lixue Xuebao, 2016, 32, 1012-1022.	1.5	11
383	"Staying Out―Rather than "Cracking In― Asymmetric Membrane Insertion of 12:0 Lysophosphocholine. Langmuir, 2016, 32, 11655-11663.	1.6	15
384	Architecture and Function of Mechanosensitive Membrane Protein Lattices. Scientific Reports, 2016, 6, 19214.	1.6	19
385	Gating mechanism of mechanosensitive channel of large conductance: a coupled continuum mechanical-continuum solvation approach. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1557-1576.	1.4	10
386	Elastic deformations of bolalipid membranes. Soft Matter, 2016, 12, 2357-2364.	1.2	13
387	Adaptation Independent Modulation of Auditory Hair Cell Mechanotransduction Channel Open Probability Implicates a Role for the Lipid Bilayer. Journal of Neuroscience, 2016, 36, 2945-2956.	1.7	61

#	Article	IF	CITATIONS
388	Micellar dipole potential is sensitive to sphere-to-rod transition. Chemistry and Physics of Lipids, 2016, 195, 34-38.	1.5	14
390	GsMTx4: Mechanism of Inhibiting Mechanosensitive Ion Channels. Biophysical Journal, 2017, 112, 31-45.	0.2	152
391	Exogenous lysophospholipids with large head groups perturb clathrinâ€mediated endocytosis. Traffic, 2017, 18, 176-191.	1.3	12
392	High-Throughput Simulations Reveal Membrane-Mediated Effects of Alcohols on MscL Gating. Journal of the American Chemical Society, 2017, 139, 2664-2671.	6.6	41
393	Bilayer-Mediated Structural Transitions Control Mechanosensitivity of the TREK-2 K2P Channel. Structure, 2017, 25, 708-718.e2.	1.6	64
394	Artificial cell mimics as simplified models for the study of cell biology. Experimental Biology and Medicine, 2017, 242, 1309-1317.	1.1	91
395	Controlling the shape of membrane protein polyhedra. Europhysics Letters, 2017, 117, 58001.	0.7	4
396	Soft Matter in Lipid–Protein Interactions. Annual Review of Biophysics, 2017, 46, 379-410.	4.5	104
397	Differential profiles of membrane proteins, fatty acids, and sterols associated with genetic variations in heat tolerance for a perennial grass species, hard fescue (Festuca Trachyphylla). Environmental and Experimental Botany, 2017, 140, 65-75.	2.0	36
398	Substrate effects on cell-envelope deformation during early-stage Staphylococcus aureus biofilm formation. Soft Matter, 2017, 13, 2967-2976.	1.2	21
399	Activation of the mechanosensitive ion channel MscL by mechanical stimulation of supported Droplet-Hydrogel bilayers. Scientific Reports, 2017, 7, 45180.	1.6	35
400	Endocardial TRPC-6 Channels Act as AtrialÂMechanosensors and Load-Dependent Modulators of Endocardial/Myocardial Cross-Talk. JACC Basic To Translational Science, 2017, 2, 575-590.	1.9	23
401	The Biophysics of Cell Membranes. Springer Series in Biophysics, 2017, , .	0.4	9
402	Principles of Mechanosensing at the Membrane Interface. Springer Series in Biophysics, 2017, , 85-119.	0.4	15
403	Membrane Lipid-Protein Interactions. Springer Series in Biophysics, 2017, , 61-84.	0.4	2
404	Time-resolved measurements of an ion channel conformational change driven by a membrane phase transition. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10840-10845.	3.3	21
405	Diffusion coefficient in biomembrane critical pores. Journal of Bioenergetics and Biomembranes, 2017, 49, 445-450.	1.0	1
406	Molecular dynamics simulations of heterogeneous cell membranes in response to uniaxial membrane stretches at high loading rates. Scientific Reports, 2017, 7, 8316.	1.6	14

#	Article	IF	Citations
407	Origin of the Force. Current Topics in Membranes, 2017, 79, 59-96.	0.5	63
408	Differential Effect of Bilayer Thickness on Sticholysin Activity. Langmuir, 2017, 33, 11018-11027.	1.6	15
409	Lysophosphatidylcholine activates caspase-1 in microglia via a novel pathway involving two inflammasomes. Journal of Neuroimmunology, 2017, 310, 107-110.	1.1	35
410	Structural Dynamics of the MscL C-terminal Domain. Scientific Reports, 2017, 7, 17229.	1.6	16
411	Determination of Hydrophobic Lengths of Membrane Proteins with the HDGB Implicit Membrane Model. Journal of Chemical Information and Modeling, 2017, 57, 3032-3042.	2.5	8
412	Nanomechanical properties of MscL <b><math>\hat{l}_{\pm}</math></b> helices: A steered molecular dynamics study. Channels, 2017, 11, 209-223.	1.5	20
413	Mechanosensory Transduction: Focus on Ion Channels â~†., 2017,,.		16
414	Bacterial Mechanosensitive Channels. Sub-Cellular Biochemistry, 2018, 87, 83-116.	1.0	11
415	Preparation and Properties of Asymmetric Synthetic Membranes Based on Lipid and Polymer Self-Assembly. Langmuir, 2018, 34, 3376-3385.	1.6	16
416	Reversible Hydrophobicity–Hydrophilicity Transition Modulated by Surface Curvature. Journal of Physical Chemistry Letters, 2018, 9, 2346-2352.	2.1	22
417	Protonation state of glutamate 73 regulates the formation of a specific dimeric association of mVDAC1. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E172-E179.	3.3	26
418	"Force-from-lipids―gating of mechanosensitive channels modulated by PUFAs. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 79, 158-167.	1.5	43
419	Emergent heterogeneous microenvironments in biofilms: substratum surface heterogeneity and bacterial adhesion force-sensing. FEMS Microbiology Reviews, 2018, 42, 259-272.	3.9	66
420	Cellular volume regulation and substrate stiffness modulate the detachment dynamics of adherent cells. Journal of the Mechanics and Physics of Solids, 2018, 112, 594-618.	2.3	18
421	Potassium Channels. Methods in Molecular Biology, 2018, , .	0.4	0
422	Adhesion force sensing and activation of a membrane-bound sensor to activate nisin efflux pumps in Staphylococcus aureus under mechanical and chemical stresses. Journal of Colloid and Interface Science, 2018, 512, 14-20.	5.0	17
423	Cardiac Stretch-Activated Channels and Mechano-Electric Coupling. , 2018, , 128-139.		2
424	Integrated microfluidic biosensing platform for simultaneous confocal microscopy and electrophysiological measurements on bilayer lipid membranes and ion channels. Electrophoresis, 2018, 39, 496-503.	1.3	6

#	Article	IF	CITATIONS
425	Bacterial Mechanosensors. Annual Review of Physiology, 2018, 80, 71-93.	5.6	140
426	A Membrane Burial Potential with H-Bonds and Applications to Curved Membranes and Fast Simulations. Biophysical Journal, 2018, 115, 1872-1884.	0.2	9
427	Effects of Passive Phospholipid Flip-Flop and Asymmetric External Fields on Bilayer Phase Equilibria. Biophysical Journal, 2018, 115, 1956-1965.	0.2	3
428	Effects of Low Intensity Focused Ultrasound on Liposomes Containing Channel proteins. Scientific Reports, 2018, 8, 17250.	1.6	23
429	Physico-chemistry from initial bacterial adhesion to surface-programmed biofilm growth. Advances in Colloid and Interface Science, 2018, 261, 1-14.	7.0	245
430	Tuning ion channel mechanosensitivity by asymmetry of the transbilayer pressure profile. Biophysical Reviews, 2018, 10, 1377-1384.	1.5	36
431	Structure of the mechanosensitive OSCA channels. Nature Structural and Molecular Biology, 2018, 25, 850-858.	3.6	133
432	The voltage-dependence of MscL has dipolar and dielectric contributions and is governed by local intramembrane electric field. Scientific Reports, 2018, 8, 13607.	1.6	6
433	Mechanosensitivity of mitochondrial large-conductance calcium-activated potassium channels. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 797-805.	0.5	39
434	Reconstitution of Ion Channels in Planar Lipid Bilayers: New Approaches. Advances in Biomembranes and Lipid Self-Assembly, 2018, 27, 147-185.	0.3	4
435	Characterization of the Lipid Binding Pocket in GM2AP and SapB with EPR Spectroscopy. Applied Magnetic Resonance, 2018, 49, 1181-1199.	0.6	0
436	Purification and Reconstitution of TRPV1 for Spectroscopic Analysis. Journal of Visualized Experiments, 2018, , .	0.2	1
437	Effects of Cholesterol Concentration and Osmolarity on the Fluidity and Membrane Tension of Free-standing Black Lipid Membranes. Analytical Sciences, 2018, 34, 1237-1242.	0.8	5
438	Stability of Biological Membranes upon Mechanical Indentation. Journal of Physical Chemistry B, 2018, 122, 7073-7079.	1.2	3
439	Xenon-inhibition of the MscL mechano-sensitive channel and the CopB copper ATPase under different conditions suggests direct effects on these proteins. PLoS ONE, 2018, 13, e0198110.	1.1	8
440	Flexible lipid nanomaterials studied by NMR spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 18422-18457.	1.3	19
441	Allosteric activation of an ion channel triggered by modification of mechanosensitive nano-pockets. Nature Communications, 2019, 10, 4619.	5.8	39
442	The influence of membrane bilayer thickness on KcsA channel activity. Channels, 2019, 13, 424-439.	1.5	12

#	Article	IF	Citations
443	The host-defense peptide piscidin P1 reorganizes lipid domains in membranes and decreases activation energies in mechanosensitive ion channels. Journal of Biological Chemistry, 2019, 294, 18557-18570.	1.6	14
444	Piezo1 mechanosensitive channels: what are they and why are they important. Biophysical Reviews, 2019, 11, 795-805.	1.5	97
445	Biophysical Principles of Ion-Channel-Mediated Mechanosensory Transduction. Cell Reports, 2019, 29, 1-12.	2.9	154
446	Regulation of Membrane Calcium Transport Proteins by the Surrounding Lipid Environment. Biomolecules, 2019, 9, 513.	1.8	37
447	Ultrasound Neuromodulation: A Review of Results, Mechanisms and Safety. Ultrasound in Medicine and Biology, 2019, 45, 1509-1536.	0.7	297
448	A Change in ECM Composition Affects Sensory Organ Mechanics and Function. Cell Reports, 2019, 27, 2272-2280.e4.	2.9	17
449	Antibiotic Susceptibility of Escherichia coli Cells during Early-Stage Biofilm Formation. Journal of Bacteriology, 2019, 201, .	1.0	14
450	Interaction of natural compounds with biomembrane models: A biophysical approach for the Alzheimer's disease therapy. Colloids and Surfaces B: Biointerfaces, 2019, 180, 83-92.	2.5	27
451	"Force-From-Lipids―mechanosensation in Corynebacterium glutamicum. Biophysical Reviews, 2019, 11, 327-333.	1.5	16
452	Molecular Dynamics-Decorated Finite Element Method (MDeFEM): Application to the Gating Mechanism of Mechanosensitive Channels. , 2019, , 77-128.		0
453	Remembering Mechanosensitivity of NMDA Receptors. Frontiers in Cellular Neuroscience, 2019, 13, 533.	1.8	16
454	A Model of Piezo1-Based Regulation of Red Blood Cell Volume. Biophysical Journal, 2019, 116, 151-164.	0.2	34
455	Novel compounds that specifically bind and modulate MscL: insights into channel gating mechanisms. FASEB Journal, 2019, 33, 3180-3189.	0.2	17
456	Membrane curvature affects the stability and folding kinetics of bacteriorhodopsin. Process Biochemistry, 2019, 76, 111-117.	1.8	5
457	A Skeptic's Guide to Bacterial Mechanosensing. Journal of Molecular Biology, 2020, 432, 523-533.	2.0	41
458	Interaction between mechanosensitive channels embedded in lipid membrane. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103543.	1.5	2
459	Calcium and plasma membrane force-gated ion channels behind development. Current Opinion in Plant Biology, 2020, 53, 57-64.	3.5	18
460	Piezo1 Forms Specific, Functionally Important Interactions with Phosphoinositides and Cholesterol. Biophysical Journal, 2020, 119, 1683-1697.	0.2	60

#	Article	IF	CITATIONS
461	Cryo-EM analysis of a membrane protein embedded in the liposome. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18497-18503.	3.3	89
462	Rat Auditory Inner Hair Cell Mechanotransduction and Stereociliary Membrane Diffusivity Are Similarly Modulated by Calcium. IScience, 2020, 23, 101773.	1.9	10
463	Discoveries in structure and physiology of mechanically activated ion channels. Nature, 2020, 587, 567-576.	13.7	299
464	The Lipid Activation Mechanism of a Transmembrane Potassium Channel. Journal of the American Chemical Society, 2020, 142, 14102-14116.	6.6	18
465	Cell membrane mechanics and mechanosensory transduction. Current Topics in Membranes, 2020, 86, 83-141.	0.5	31
466	Role of adhesion forces in mechanosensitive channel gating in Staphylococcus aureus adhering to surfaces. Npj Biofilms and Microbiomes, 2020, 6, 31.	2.9	13
467	Surface Sensing and Adaptation in Bacteria. Annual Review of Microbiology, 2020, 74, 735-760.	2.9	49
468	Regulation of membrane proteins through local heterogeneity in lipid bilayer thickness. Physical Review E, 2020, 102, 060401.	0.8	7
469	Effect of protein steric constraints on the symmetry of membrane protein polyhedra. Physical Review E, 2020, 102, 042411.	0.8	1
470	The MscS-like channel Ynal has a gating mechanism based on flexible pore helices. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 28754-28762.	3.3	30
471	The more the merrier: effects of macromolecular crowding on the structure and dynamics of biological membranes. FEBS Journal, 2020, 287, 5039-5067.	2.2	48
472	A dietary fatty acid counteracts neuronal mechanical sensitization. Nature Communications, 2020, 11, 2997.	5.8	40
473	Streptococcus mutans adhesion force sensing in multi-species oral biofilms. Npj Biofilms and Microbiomes, 2020, 6, 25.	2.9	29
474	Novel MscL agonists that allow multiple antibiotics cytoplasmic access activate the channel through a common binding site. PLoS ONE, 2020, 15, e0228153.	1.1	14
475	Membrane stiffness is one of the key determinants of E. coli MscS channel mechanosensitivity. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183203.	1.4	23
476	Life with Bacterial Mechanosensitive Channels, from Discovery to Physiology to Pharmacological Target. Microbiology and Molecular Biology Reviews, 2020, 84, .	2.9	41
477	Mechanomicrobiology: how bacteria sense and respond to forces. Nature Reviews Microbiology, 2020, 18, 227-240.	13.6	171
478	TMT-based proteomic analysis of the fish-borne spoiler Pseudomonas psychrophila subjected to chitosan oligosaccharides in fish juice system. Food Microbiology, 2020, 90, 103494.	2.1	24

#	Article	IF	Citations
479	Mechanical Activation of MscL Revealed by a Locally Distributed Tension Molecular Dynamics Approach. Biophysical Journal, 2021, 120, 232-242.	0.2	13
480	Activating mechanosensitive channels embedded in droplet interface bilayers using membrane asymmetry. Chemical Science, 2021, 12, 2138-2145.	3.7	15
481	Microscopy Methods for Biofilm Imaging: Focus on SEM and VP-SEM Pros and Cons. Biology, 2021, 10, 51.	1.3	77
482	Mechanisms and Applications of Neuromodulation Using Surface Acoustic Waves—A Mini-Review. Frontiers in Neuroscience, 2021, 15, 629056.	1.4	13
483	Interface mobility between monomers in dimeric bovine ATP synthase participates in the ultrastructure of inner mitochondrial membranes. Proceedings of the National Academy of Sciences of the United States of America, 2021, $118$ , .	3.3	26
486	Manufacture of Multilayered Artificial Cell Membranes through Sequential Bilayer Deposition on Emulsion Templates. ChemBioChem, 2021, 22, 2275-2281.	1.3	8
487	Hysteresis of a Tension-Sensitive K <sup>+</sup> Channel Revealed by Time-Lapse Tension Measurements. Jacs Au, 2021, 1, 467-474.	3.6	6
489	Hyperosmolarity stimulates transporter-mediated insertion of estrone sulfate into the plasma membrane, but inhibits the uptake by SLC10A1 (NTCP). Biochemical Pharmacology, 2021, 186, 114484.	2.0	3
490	Mechanical properties of ester- and ether-DPhPC bilayers: A molecular dynamics study. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 117, 104386.	1.5	3
491	Mechanical properties of anionic asymmetric bilayers from atomistic simulations. Journal of Chemical Physics, 2021, 154, 224701.	1.2	7
492	Stiffening Effect of the [Bmim][Cl] Ionic Liquid on the Bending Dynamics of DMPC Lipid Vesicles. Journal of Physical Chemistry B, 2021, 125, 7241-7250.	1.2	16
493	How Can a Histidine Kinase Respond to Mechanical Stress?. Frontiers in Microbiology, 2021, 12, 655942.	1.5	5
494	Biomechanical micromotion at the neural interface modulates intracellular membrane potentials in vivo. Journal of Neural Engineering, 2021, 18, 045010.	1.8	11
495	Assessing the Role of Lipids in the Molecular Mechanism of Membrane Proteins. International Journal of Molecular Sciences, 2021, 22, 7267.	1.8	9
496	Protein Assembly by Design. Chemical Reviews, 2021, 121, 13701-13796.	23.0	123
497	Cyclodextrins increase membrane tension and are universal activators of mechanosensitive channels. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
498	Membrane-Mediated Activity of Local Anesthetics. Molecular Pharmacology, 2021, 100, 502-512.	1.0	10
499	Photoswitching of model ion channels in lipid bilayers. Journal of Photochemistry and Photobiology B: Biology, 2021, 224, 112320.	1.7	17

#	Article	IF	CITATIONS
501	SDSL: A Survey of Biological Applications. , 2005, , 269-308.		8
502	Mechanosensitive Channels. , 2007, , 369-398.		3
503	Lipids in Charge. The Frontiers Collection, 2005, , 159-172.	0.1	1
505	Mechanosensitive Channels Gated by Membrane Tension. , 2008, , 71-101.		6
506	CW-EPR Spectroscopy and Site-Directed Spin Labeling to Study the Structural Dynamics of Ion Channels. Methods in Molecular Biology, 2018, 1684, 279-288.	0.4	3
507	Single-Molecule Methods for Monitoring Changes in Bilayer Elastic Properties. Methods in Molecular Biology, 2007, 400, 543-570.	0.4	35
508	Functional Liposomal Membranes for Triggered Release. Methods in Molecular Biology, 2010, 605, 243-255.	0.4	7
509	The Use of Isothermal Titration Calorimetry to Study Multidrug Transport Proteins in Liposomes. Methods in Molecular Biology, 2010, 606, 233-245.	0.4	4
510	Mechanosensitive Channels and Sensing Osmotic Stimuli in Bacteria. Springer Series in Biophysics, 2008, , 25-45.	0.4	2
511	TRPC Family of Ion Channels and Mechanotransduction. Springer Series in Biophysics, 2008, , 121-160.	0.4	1
512	Development of Refined Homology Models: Adding the Missing Information to the Medically Relevant Neurotransmitter Transporters. Springer Series in Biophysics, 2014, , 99-120.	0.4	2
513	Mechanoelectric Transduction. , 2004, , 96-102.		4
516	Towards an Understanding of Membrane Channels. , 0, , 153-190.		3
517	Caveolae Regulation of Mechanosensitive Channel Function in Myotubes. PLoS ONE, 2013, 8, e72894.	1.1	32
518	Force Transduction and Lipid Binding in MscL: A Continuum-Molecular Approach. PLoS ONE, 2014, 9, e113947.	1.1	37
519	The Combined Effect of Hydrophobic Mismatch and Bilayer Local Bending on the Regulation of Mechanosensitive Ion Channels. PLoS ONE, 2016, 11, e0150578.	1.1	25
520	Regulation of Aquaporin Z osmotic permeability in ABA tri-block copolymer. AIMS Biophysics, 2015, 2, 381-397.	0.3	8
521	Single molecule FRET reveals pore size and opening mechanism of a mechano-sensitive ion channel. ELife, 2014, 3, e01834.	2.8	116

#	Article	IF	CITATIONS
522	Membrane cholesterol regulates TRPV4 function, cytoskeletal expression, and the cellular response to tension. Journal of Lipid Research, 2021, 62, 100145.	2.0	21
523	Experimental Methods of Studying Mechanosensitive Channels and Possible Errors in Data Interpretation., 2008,, 3-35.		1
524	Computational Studies of the Bacterial Mechanosensitive Channels., 2008, , 103-116.		1
526	Computational Molecular Biomechanics: A Hierarchical Multiscale Framework With Applications to Gating of Mechanosensitive Channels of Large Conductance. Challenges and Advances in Computational Chemistry and Physics, 2010, , 535-556.	0.6	1
527	Natural constraints, folding, motion, and structural stability in transmembrane helical proteins. , $2010,  205-229.$		0
528	Collective Response of Self-Organised Clusters of Mechanosensitive Channels. , 2012, , 31-67.		1
529	Lipid-Mediated Mechanisms Involved in the Mechanical Activation of TRPC6 and TRPV4 Channels in the Vascular Tone Regulation., 2012,, 281-301.		0
530	Force from Lipids: A Multidisciplinary Approach to Study Bacterial Mechanosensitive Ion Channels. , 2012, , 1-33.		2
531	Stretching of Lipid Membranes Using Optical Forces. , 2013, , .		0
532	MscL, a Bacterial Mechanosensitive Channel. , 0, , 259-290.		2
533	The Bacterial Mechanosensitive Channel MscS and Its Extended Family., 0,, 247-258.		2
534	TRP Channels in Visual Transduction. , 2015, , 97-109.		0
536	Membrane Protein–Lipid Match and Mismatch â~†., 2017,,.		0
537	Molecular Dynamics-Decorated Finite Element Method (MDeFEM): Application to the Gating Mechanism of Mechanosensitive Channels. , 2018, , 1-52.		0
538	Programming Water Transporter Aquaporin Z by Lipid Composition-Altered Protein Dynamics. SSRN Electronic Journal, 0, , .	0.4	0
544	Regulation of Intracellular Signal Transduction Pathways by Mechanosensitive Ion Channels. , 2008, , 303-327.		4
546	Pocket delipidation induced by membrane tension or modification leads to a structurally analogous mechanosensitive channel state. Structure, 2022, 30, 608-622.e5.	1.6	16
548	Mechanisms of Pannexin 1 (PANX1) Channel Mechanosensitivity and Its Pathological Roles. International Journal of Molecular Sciences, 2022, 23, 1523.	1.8	10

#	Article	IF	CITATIONS
549	Mechanotransduction Ion Channels in Hearing and Touch. Advances in Experimental Medicine and Biology, 2021, 1349, 371-385.	0.8	0
550	Ion Channels in Biophysics and Physiology: Methods & Deallenges to Study Mechanosensitive Ion Channels. Advances in Experimental Medicine and Biology, 2021, 1349, 33-49.	0.8	0
551	Differential Interaction of Cannabidiol with Biomembranes Dependent on Cholesterol Concentration. ACS Chemical Neuroscience, 2022, 13, 1046-1054.	1.7	5
552	Native-like environments afford novel mechanistic insights into membrane proteins. Trends in Biochemical Sciences, 2022, 47, 561-569.	3.7	6
553	In Silico Screen Identifies a New Family of Agonists for the Bacterial Mechanosensitive Channel MscL. Antibiotics, 2022, 11, 433.	1.5	4
554	Fatty acids as biomodulators of Piezo1 mediated glial mechanosensitivity in Alzheimer's disease. Life Sciences, 2022, 297, 120470.	2.0	9
555	Spreading rates of bacterial colonies depend on substrate stiffness and permeability. , 2022, 1, .		12
556	Probing and Manipulating the Lateral Pressure Profile in Lipid Bilayers Using Membrane-Active Peptides—A Solid-State 19F NMR Study. International Journal of Molecular Sciences, 2022, 23, 4544.	1.8	3
557	Elucidating the molecular basis of spontaneous activation in an engineered mechanosensitive channel. Computational and Structural Biotechnology Journal, 2022, 20, 2539-2550.	1.9	5
559	Mechanochemical coupling of lipid organization and protein function through membrane thickness deformations. Physical Review E, 2022, 105, .	0.8	1
560	Studying KcsA Channel Clustering Using Single Channel Voltage-Clamp Fluorescence Imaging*. Frontiers in Physiology, 2022, 13, .	1.3	2
562	Roles of Bacterial Mechanosensitive Channels in Infection and Antibiotic Susceptibility. Pharmaceuticals, 2022, 15, 770.	1.7	10
563	Asymmetric effects of amphipathic molecules on mechanosensitive channels. Scientific Reports, 2022, 12, .	1.6	3
564	Membrane Stretch Gates NMDA Receptors. Journal of Neuroscience, 2022, 42, 5672-5680.	1.7	8
565	Membrane Dipole Potential: An Emerging Approach to Explore Membrane Organization and Function. Journal of Physical Chemistry B, 2022, 126, 4415-4430.	1.2	3
566	Photoactivation of a Mechanosensitive Channel. Frontiers in Molecular Biosciences, 0, 9, .	1.6	6
567	Mechanotransduction in the spotlight of mechano-sensitive channels. Current Opinion in Plant Biology, 2022, 68, 102252.	3.5	12
568	The force-from-lipid principle and its origin, a <i>what is true for E. coli is true for the elephant'</i> refrain. Journal of Neurogenetics, 2022, 36, 44-54.	0.6	11

#	ARTICLE	IF	CITATIONS
569	Rotor orientation direction controls geometric curvature and chirality for assemblies of motor amphiphiles in water. Aggregate, 2023, 4, .	5.2	4
570	Division of the role and physiological impact of multiple lysophosphatidic acid acyltransferase paralogs. BMC Microbiology, 2022, 22, .	1.3	2
571	Dynamic Interactions between Brilliant Green and MscL Investigated by Solidâ€State NMR Spectroscopy and Molecular Dynamics Simulations. Chemistry - A European Journal, 0, , .	1.7	0
572	Fluorescence microscopy imaging of a neurotransmitter receptor and its cell membrane lipid milieu. Frontiers in Molecular Biosciences, 0, 9, .	1.6	1
573	Mechanosensitive Channels: History, Diversity, and Mechanisms. Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology, 2022, 16, 291-310.	0.3	1
574	How Functional Lipids Affect the Structure and Gating of Mechanosensitive MscS-like Channels. International Journal of Molecular Sciences, 2022, 23, 15071.	1.8	7
575	Feeling the tension: the bacterial mechanosensitive channel of large conductance as a model system and drug target. Current Opinion in Physiology, 2023, 31, 100627.	0.9	4
576	Vascular mechanotransduction. Physiological Reviews, 2023, 103, 1247-1421.	13.1	36
577	Vascular and Neural Response to Focal Vibration, Sensory Feedback, and Piezo Ion Channel Signaling., 2023, 2, 42-90.		0
578	"Force-From-Lipids―Dependence of the MscCG Mechanosensitive Channel Gating on Anionic Membranes. Microorganisms, 2023, 11, 194.	1.6	1
579	Nanofluidics at the crossroads. Journal of Chemical Physics, 2023, 158, .	1.2	11
580	Mechanosensitive membrane proteins: Usual and unusual suspects in mediating mechanotransduction. Journal of General Physiology, 2023, 155, .	0.9	5
581	Capturing Lipid Nanodisc Shape and Properties Using a Continuum Elastic Theory. Journal of Chemical Theory and Computation, 2023, 19, 1360-1369.	2.3	1
582	Dependence of protein-induced lipid bilayer deformations on protein shape. Physical Review E, 2023, 107, .	0.8	2
583	Linoleic acid improves PIEZO2 dysfunction in a mouse model of Angelman Syndrome. Nature Communications, 2023, 14, .	5.8	11
584	Mechanosensitive pore opening of a prokaryotic voltage-gated sodium channel. ELife, 0, 12, .	2.8	1
585	Approaches for the modulation of mechanosensitive MscL channel pores. Frontiers in Chemistry, 0, $11$ ,	1.8	3
586	Disentangling 1/ <i>f</i> i>fi> noise from confined ion dynamics. Faraday Discussions, 0, 246, 556-575.	1.6	2

#	Article	IF	CITATIONS
587	The power and challenge of lipid (a)symmetry across the membrane and cell. Emerging Topics in Life Sciences, 2023, 7, 1-6.	1.1	0
588	Allosteric modulation of integral protein activity by differential stress in asymmetric membranes. , 2023, 2, .		4