Robert Eisenberg

List of Publications by Year
in descending order

243 papers	10,471 citations	18482 62 h-index	40979 93 g-index
258 all docs	258 docs citations	258 times ranked	3650 citing authors

#	Article	IF	Citations
1	Ion Permeation and Glutamate Residues Linked by Poisson-Nernst-Planck Theory in L-Type Calcium Channels. Biophysical Journal, 1998, 75, 1287-1305.	0.5	255
2	Tuning Transport Properties of Nanofluidic Devices with Local Charge Inversion. Journal of the American Chemical Society, 2009, 131, 5194-5202.	13.7	246
3	Coupling PoissonÂNernstÂPlanck and density functional theory to calculate ion flux. Journal of Physics Condensed Matter, 2002, 14, 12129-12145.	1.8	238
4	Binding and Selectivity in L-Type Calcium Channels:A Mean Spherical Approximation. Biophysical Journal, 2000, 79, 1976-1992.	0.5	208
5	Ionic Conductances of the Surface and Transverse Tubular Membranes of Frog Sartorius Fibers. Journal of General Physiology, 1969, 53, 279-297.	1.9	200
6	Electrical measurements on endomembranes. Science, 1992, 258, 873-874.	12.6	189
7	Permeation through an open channel: Poisson-Nernst-Planck theory of a synthetic ionic channel. Biophysical Journal, 1997, 72, 97-116.	0.5	179
8	Capacitance of the Surface and Transverse Tubular Membrane of Frog Sartorius Muscle Fibers. Journal of General Physiology, 1969, 53, 265-278.	1.9	177
9	Action Potentials, Afterpotentials, and Excitation-Contraction Coupling in Frog Sartorius Fibers without Transverse Tubules. Journal of General Physiology, 1969, 53, 298-310.	1.9	173
10	SELECTIVE DISRUPTION OF THE SARCOTUBULAR SYSTEM IN FROG SARTORIUS MUSCLE. Journal of Cell Biology, 1968, 39, 451-467.	5.2	171
11	Energy variational analysis of ions in water and channels: Field theory for primitive models of complex ionic fluids. Journal of Chemical Physics, 2010, 133, 104104.	3.0	170
12	Density functional theory of charged, hard-sphere fluids. Physical Review E, 2003, 68, 031503.	2.1	159
13	Charges, currents, and potentials in ionic channels of one conformation. Biophysical Journal, 1993, 64, 1405-1421.	0.5	157
14	Nanoprecipitation-assisted ion current oscillations. Nature Nanotechnology, 2008, 3, 51-57.	31.5	152
15	PNP Equations with Steric Effects: A Model of Ion Flow through Channels. Journal of Physical Chemistry B, 2012, 116, 11422-11441.	2.6	146
16	Ionic Channels in Biological Membranes:â€‰ Natural Nanotubes. Accounts of Chemical Research, 1998, 31, 117-123.	15.6	141
17	Calcium-Induced Voltage Gating in Single Conical Nanopores. Nano Letters, 2006, 6, 1729-1734.	9.1	140
18	Computing induced charges in inhomogeneous dielectric media: Application in a Monte Carlo simulation of complex ionic systems. Physical Review E, 2004, 69, 046702.	2.1	138

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19	Qualitative Properties of Steady-State Poisson--Nernst--Planck Systems: Perturbation and Simulation Study. SIAM Journal on Applied Mathematics, 1997, 57, 631-648.	1.8	136
20	Ion Flow through Narrow Membrane Channels: Part II. SIAM Journal on Applied Mathematics, 1992, 52, 1405-1425.	1.8	132
21	Three-dimensional electrical field problems in physiology. Progress in Biophysics and Molecular Biology, 1970, 20, 1-65.	2.9	130
22	Action Potentials without Contraction in Frog Skeletal Muscle Fibers with Disrupted Transverse Tubules. Science, 1967, 158, 1702-1703.	12.6	127
23	A cation channel in frog lens epithelia responsive to pressure and calcium. Journal of Membrane Biology, 1986, 93, 259-269.	2.1	127
24	Electrical Properties of Structural Components of the Crystalline Lens. Biophysical Journal, 1979, 25, 181-201.	0.5	125
25	Narrow Escape, Part I. Journal of Statistical Physics, 2006, 122, 437-463.	1.2	125
26	Progress and Prospects in Permeation. Journal of General Physiology, 1999, 113, 773-782.	1.9	119
27	Anomalous Mole Fraction Effect, Electrostatics, and Binding in Ionic Channels. Biophysical Journal, 1998, 74, 2327-2334.	0.5	113
28	Diffusion as a chemical reaction: Stochastic trajectories between fixed concentrations. Journal of Chemical Physics, 1995, 102, 1767-1780.	3.0	112
29	Steric Selectivity in Na Channels Arising from Protein Polarization and Mobile Side Chains. Biophysical Journal, 2007, 93, 1960-1980.	0.5	111
30	Poissonâ€"Nernstâ€"Planck Systems for Ion Channels with Permanent Charges. SIAM Journal on Mathematical Analysis, 2007, 38, 1932-1966.	1.9	104
31	Frog Skeletal Muscle Fibers: Changes in Electrical Properties after Disruption of Transverse Tubular System. Science, 1967, 158, 1700-1701.	12.6	100
32	Ion Accumulation in a Biological Calcium Channel:Â Effects of Solvent and Confining Pressure. Journal of Physical Chemistry B, 2001, 105, 6427-6436.	2.6	97
33	Paralysis of frog skeletal muscle fibres by the calcium antagonist Dâ€600.. Journal of Physiology, 1983, 341, 495-505.	2.9	96
34	The effect of protein dielectric coefficient on the ionic selectivity of a calcium channel. Journal of Chemical Physics, 2006, 125, 034901.	3.0	93
35	Electrical properties of spherical syncytia. Biophysical Journal, 1979, 25, 151-180.	0.5	91
36	Singular perturbation analysis of the steady-state Poissonâ€"Nernstâ€"Planck system: Applications to ion channels. European Journal of Applied Mathematics, 2008, 19, 541-560.	2.9	89

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37	Electrical models of excitation-contraction coupling and charge movement in skeletal muscle.. Journal of General Physiology, 1980, 76, 1-31.	1.9	88
38	The lens as a nonuniform spherical syncytium. Biophysical Journal, 1981, 34, 61-83.	0.5	88
39	Proteins, channels and crowded ions. Biophysical Chemistry, 2002, 100, 507-517.	2.8	84
40	Negative Incremental Resistance Induced by Calcium in Asymmetric Nanopores. Nano Letters, 2006, 6, 473-477.	9.1	84
41	Ionic channels in biological membranes- electrostatic analysis of a natural nanotube. Contemporary Physics, 1998, 39, 447-466.	1.8	83
42	Monte Carlo simulations of ion selectivity in a biological Na channel: Chargeâ€“space competition. Physical Chemistry Chemical Physics, 2002, 4, 5154-5160.	2.8	83
43	The maintenance of resting potentials in glycerol-treated muscle fibres. Journal of Physiology, 1971, 215, 95-102.	2.9	82
44	Bubbles, Gating, and Anesthetics in Ion Channels. Biophysical Journal, 2008, 94, 4282-4298.	0.5	82
45	A mathematical model for the hard sphere repulsion in ionic solutions. Communications in Mathematical Sciences, 2011, 9, 459-475.	1.0	81
46	Diffusion theory and discrete rate constants in ion permeation. Journal of Membrane Biology, 1988, 106, 95-105.	2.1	80
47	Physical descriptions of experimental selectivity measurements in ion channels. European Biophysics Journal, 2002, 31, 454-466.	2.2	78
48	Combined Effect of Pore Radius and Protein Dielectric Coefficient on the Selectivity of a Calcium Channel. Physical Review Letters, 2007, 98, 168102.	7.8	78
49	A Biological Porin Engineered into a Molecular, Nanofluidic Diode. Nano Letters, 2007, 7, 2886-2891.	9.1	78
50	Permeation Properties of an Engineered Bacterial OmpF Porin Containing the EEEE-Locus of Ca2+ Channels. Biophysical Journal, 2004, 87, 3137-3147.	0.5	77
51	Impedance of Frog Skeletal Muscle Fibers in Various Solutions. Journal of General Physiology, 1974, 63, 460-491.	1.9	76
52	Ionic selectivity in L-type calcium channels by electrostatics and hard-core repulsion. Journal of General Physiology, 2009, 133, 497-509.	1.9	76
53	The T-SR junction in contracting single skeletal muscle fibers.. Journal of General Physiology, 1982, 79, 1-19.	1.9	75
54	Hydrodynamic model of temperature change in open ionic channels. Biophysical Journal, 1995, 69, 2304-2322.	0.5	74

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55	The Interpretation of Current-Voltage Relations Recorded from a Spherical Cell with a Single Microelectrode. Biophysical Journal, 1972, 12, 384-403.	0.5	69
56	Charge movement in skeletal muscle fibers paralyzed by the calcium-entry blocker D600.. Proceedings of the National Academy of Sciences of the United States of America, 1984, 81, 2582-2585.	7.1	68
57	Predicting Function from Structure Using the Poissonâ˘'Nernstâ˘'Planck Equations:Â Sodium Current in the Gramicidin A Channel. Langmuir, 2000, 16, 5509-5514.	3.5	68
58	Constant fields and constant gradients in open ionic channels. Biophysical Journal, 1992, 61, 1372-1393.	0.5	67
59	Sodium in gramicidin: an example of a permion. Biophysical Journal, 1995, 68, 906-924.	0.5	67
60	Title is missing!. Journal of Scientific Computing, 2001, 16, 373-409.	2.3	66
61	Flux, coupling, and selectivity in ionic channels of one conformation. Biophysical Journal, 1993, 65, 727-746.	0.5	64
62	Poisson-Nernst-Planck-Fermi theory for modeling biological ion channels. Journal of Chemical Physics, 2014, 141, 22D532.	3.0	63
63	Dielectric boundary force and its crucial role in gramicidin. Physical Review E, 2003, 68, 021905.	2.1	61
64	An efficient algorithm for classical density functional theory in three dimensions: Ionic solutions. Journal of Chemical Physics, 2010, 132, 124101.	3.0	61
65	Selectivity and Permeation in Calcium Release Channel of Cardiac Muscle: Alkali Metal Ions. Biophysical Journal, 1999, 76, 1346-1366.	0.5	59
66	Inverse Problems Related to Ion Channel Selectivity. SIAM Journal on Applied Mathematics, 2007, 67, 960-989.	1.8	58
67	Volume Exclusion in Calcium Selective Channels. Biophysical Journal, 2008, 94, 3486-3496.	0.5	58
68	Asymptotic Expansions of I-V Relations via a Poissonâ€“Nernstâ€“Planck System. SIAM Journal on Applied Dynamical Systems, 2008, 7, 1507-1526.	1.6	58
69	Molecular Dynamics in Physiological Solutions: Force Fields, Alkali Metal Ions, and Ionic Strength. Journal of Chemical Theory and Computation, 2010, 6, 2167-2175.	5.3	56
70	Electrical properties of frog skeletal muscle fibers interpreted with a mesh model of the tubular system. Biophysical Journal, 1977, 17, 57-93.	0.5	54
71	Surmounting barriers in ionic channels. Quarterly Reviews of Biophysics, 1988, 21, 331-364.	5.7	53
72	Permeation through the calcium release channel of cardiac muscle. Biophysical Journal, 1997, 73, 1337-1354.	0.5	53

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73	Electrodiffusion in ionic channels of biological membranes. Journal of Molecular Liquids, 2000, 87, 149-162.	4.9	50
74	Ion Channels as Devices. Journal of Computational Electronics, 2003, 2, 245-249.	2.5	49
75	Ca2+ Selectivity of a Chemically Modified OmpF with Reduced Pore Volume. Biophysical Journal, 2006, 91, 4392-4400.	0.5	49
76	A conservative finite difference scheme for Poissonâ€"Nernstâ€"Planck equations. Journal of Computational Electronics, 2014, 13, 235-249.	2.5	49
77	Modified Donnan potentials for ion transport through biological ion channels. Physical Review E, 2001, 63, 061902.	2.1	46
78	Interacting Ions in Biophysics: Real is not Ideal. Biophysical Journal, 2013, 104, 1849-1866.	0.5	46
79	Computing numerically the access resistance of a pore. European Biophysics Journal, 2005, 34, 314-322.	2.2	45
80	Coulomb blockade model of permeation and selectivity in biological ion channels. New Journal of Physics, 2015, 17, 083021.	2.9	44
81	Energy variational approach to study charge inversion (layering) near charged walls. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 2725-2743.	0.9	43
82	Ionic diffusion through confined geometries: from Langevin equations to partial differential equations. Journal of Physics Condensed Matter, 2004, 16, S2153-S2165.	1.8	42
83	BioMOCAâ€"a Boltzmann transport Monte Carlo model for ion channel simulation. Molecular Simulation, 2005, 31, 151-171.	2.0	42
84	Protein structure and ionic selectivity in calcium channels: Selectivity filter size, not shape, matters. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 2471-2480.	2.6	42
85	Poissonâ€"Fermi model of single ion activities in aqueous solutions. Chemical Physics Letters, 2015, 637, 1-6.	2.6	42
86	A new approach to the Lennard-Jones potential and a new model: PNP-steric equations. Communications in Mathematical Sciences, 2014, 12, 149-173.	1.0	42
87	Correlated Ions in a Calcium Channel Model: A Poissonâ€"Fermi Theory. Journal of Physical Chemistry B, 2013, 117, 12051-12058.	2.6	40
88	Molecular Mean-Field Theory of Ionic Solutions: A Poisson-Nernst-Planck-Bikerman Model. Entropy, 2020, 22, 550.	2.2	40
89	A model of electrodiffusion and osmotic water flow and its energetic structure. Physica D: Nonlinear Phenomena, 2011, 240, 1835-1852.	2.8	38
90	A parallel finite element simulator for ion transport through threeâ€dimensional ion channel systems. Journal of Computational Chemistry, 2013, 34, 2065-2078.	3.3	38

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91	The effect of 2â€“4 dinitrophenol on cell to cellcommunication in the frog lens. Experimental Eye Research, 1982, 35, 597-609.	2.6	37
92	Analyzing the components of the free-energy landscape in a calcium selective ion channel by Widom's particle insertion method. Journal of Chemical Physics, 2011, 134, 055102.	3.0	37
93	The Equivalent Circuit of Single Crab Muscle Fibers As Determined by Impedance Measurements with Intracellular Electrodes. Journal of General Physiology, 1967, 50, 1785-1806.	1.9	36
94	Measurement of the Impedance of Frog Skeletal Muscle Fibers. Biophysical Journal, 1974, 14, 295-315.	0.5	36
95	Electrodiffusion Model Simulation of Ionic Channels: 1D Simulations. Journal of Computational Electronics, 2004, 3, 25-31.	2.5	36
96	Relating Microscopic Charge Movement to Macroscopic Currents: The Ramo-Shockley Theorem Applied to Ion Channels. Biophysical Journal, 2004, 87, 3716-3722.	0.5	36
97	Barrier crossing with concentration boundary conditions in biological channels and chemical reactions. Journal of Chemical Physics, 1993, 98, 1193-1212.	3.0	35
98	Monte Carlo Simulation Study of a System with a Dielectric Boundary: Application to Calcium Channel Selectivity. Molecular Simulation, 2004, 30, 89-96.	2.0	35
99	Multiple Scales in the Simulation of Ion Channels and Proteins. Journal of Physical Chemistry C, 2010, 114, 20719-20733.	3.1	35
100	Reversal permanent charge and reversal potential: case studies via classical Poissonâ€“Nernstâ€“Planck models. Nonlinearity, 2015, 28, 103-127.	1.4	35
101	Teflonâ„¢-coated silicon apertures for supported lipid bilayer membranes. Applied Physics Letters, 2004, 85, 3307-3309.	3.3	34
102	Three-Dimensional Brownian Dynamics Simulator for the Study of Ion Permeation through Membrane Pores. Journal of Chemical Theory and Computation, 2014, 10, 2911-2926.	5.3	33
103	A physical mechanism for large-ion selectivity of ion channels. Physical Chemistry Chemical Physics, 2002, 4, 4763-4769.	2.8	32
104	Mass action in ionic solutions. Chemical Physics Letters, 2011, 511, 1-6.	2.6	32
105	IONS IN FLUCTUATING CHANNELS: TRANSISTORS ALIVE. Fluctuation and Noise Letters, 2012, 11, 1240001.	1.5	31
106	Electrical properties of sheep Purkinje strands. Electrical and chemical potentials in the clefts. Biophysical Journal, 1983, 44, 225-248.	0.5	30
107	Integrated electrodes on a silicon based ion channel measurement platform. Biosensors and Bioelectronics, 2007, 23, 183-190.	10.1	30
108	Ionic Interactions Are Everywhere. Physiology, 2013, 28, 28-38.	3.1	30

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109	Numerical methods for a Poisson-Nernst-Planck-Fermi model of biological ion channels. Physical Review E, 2015, 92, 012711.	2.1	29
110	Interpretation of Some Microelectrode Measurements of Electrical Properties of Cells. Annual Review of Biophysics and Bioengineering, 1973, 2, 65-79.	5.3	28
111	Predictions of diffusion models for one-ion membrane channels. Progress in Biophysics and Molecular Biology, 1989, 53, 153-196.	2.9	28
112	Self-consistent analytic solution for the current and the access resistance in open ion channels. Physical Review E, 2009, 80, 021925.	2.1	28
113	Selectivity sequences in a model calcium channel: role of electrostatic field strength. European Biophysics Journal, 2011, 40, 775-782.	2.2	26
114	A Singular Perturbation Analysis of Induced Electric Fields in Nerve Cells. SIAM Journal on Applied Mathematics, 1971, 21, 339-354.	1.8	25
115	Ionizable side chains at catalytic active sites of enzymes. European Biophysics Journal, 2012, 41, 449-460.	2.2	25
116	K+-selective channel from sarcoplasmic reticulum of split lobster muscle fibers.. Journal of General Physiology, 1989, 94, 261-278.	1.9	24
117	Discretization of the induced-charge boundary integral equation. Physical Review E, 2009, 80, 011906.	2.1	24
118	Title is missing!. Journal of Computational Electronics, 2002, 1, 335-340.	2.5	23
119	Saturation of conductance in single ion channels: The blocking effect of the near reaction field. Physical Review E, 2004, 70, 051912.	2.1	23
120	Self-organized models of selectivity in calcium channels. Physical Biology, 2011, 8, 026004.	1.8	23
121	Multi-ion conduction bands in a simple model of calcium ion channels. Physical Biology, 2013, 10, 026007.	1.8	23
122	Flux Ratios and Channel Structures. Journal of Dynamics and Differential Equations, 2019, 31, 1141-1183.	1.9	23
123	Silicon-based ion channel sensor. Superlattices and Microstructures, 2003, 34, 451-457.	3.1	22
124	Calcium Ion Permeation through the Calcium Release Channel (Ryanodine Receptor) of Cardiac Muscle. Journal of Physical Chemistry B, 2003, 107, 9139-9145.	2.6	22
125	Comparison of three-dimensional Poisson solution methods for particle-based simulation and inhomogeneous dielectrics. Physical Review E, 2012, 86, 011912.	2.1	22
126	Multiple solutions of steady-state Poissonâ€“Nernstâ€“Planck equations with steric effects. Nonlinearity, 2015, 28, 2053-2080.	1.4	22

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127	Continuum Gating Current Models Computed withÂConsistent Interactions. Biophysical Journal, 2019, 116, 270-282.	0.5	21
128	Field theory of reaction-diffusion: Law of mass action with an energetic variational approach. Physical Review E, 2020, 102, 062147.	2.1	21
129	The Simulation of Ionic Charge Transport in Biological Ion Channels: An Introduction to Numerical Methods. Reviews in Computational Chemistry, 2006, , 229-293.	1.5	20
130	Transverse Tubular System in Glycerol-Treated Skeletal Muscle. Science, 1968, 160, 1243-1244.	12.6	19
131	Analytical models of calcium binding in a calcium channel. Journal of Chemical Physics, 2014, 141, 075102.	3.0	19
132	Conductance and selectivity fluctuations in D127 mutants of the bacterial porin OmpF. European Biophysics Journal, 2006, 36, 13-22.	2.2	18
133	Bidirectional shot noise in a singly occupied channel. Physical Review E, 1996, 54, 1161-1175.	2.1	17
134	A method for treating the passage of a charged hard sphere ion as it passes through a sharp dielectric boundary. Journal of Chemical Physics, 2011, 135, 064105.	3.0	17
135	Origins of open-channel noise in the large potassium channel of sarcoplasmic reticulum.. Journal of General Physiology, 1994, 104, 857-883.	1.9	16
136	A New Poisson-Nernst-Planck Equation (PNP-FS-IF) for Charge Inversion Near Walls. Biophysical Journal, 2011, 100, 578a.	0.5	16
137	Energetics of discrete selectivity bands and mutation-induced transitions in the calcium-sodium ion channels family. Physical Review E, 2013, 88, 052712.	2.1	16
138	An effect of large permanent charge: decreasing flux with increasing transmembrane potential. European Physical Journal: Special Topics, 2019, 227, 2575-2601.	2.6	16
139	The effects of the antibiotics gramicidina, amphotericin B, and nystatin on the electrical properties of frog skeletal muscle. Biochimica Et Biophysica Acta - Biomembranes, 1973, 298, 718-723.	2.6	15
140	Ions and Inhibitors in the Binding Site of HIV Protease: Comparison ofÂMonte Carlo Simulations and the Linearized Poisson-Boltzmann Theory. Biophysical Journal, 2009, 96, 1293-1306.	0.5	15
141	A Bidomain Model for Lens Microcirculation. Biophysical Journal, 2019, 116, 1171-1184.	0.5	15
142	Concentration-Dependent Shielding of Electrostatic Potentials Inside the Gramicidin A Channels. Langmuir, 2002, 18, 3626-3631.	3.5	14
143	Engineering channels: Atomic biology. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6211-6212.	7.1	14
144	Ionic interactions in biological and physical systems: a variational treatment. Faraday Discussions, 2013, 160, 279-296.	3.2	14

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145	Poissonâ€“Fermi Modeling of the Ion Exchange Mechanism of the Sodium/Calcium Exchanger. Journal of Physical Chemistry B, 2016, 120, 2658-2669.	2.6	13
146	Poisson-Fermi modeling of ion activities in aqueous single and mixed electrolyte solutions at variable temperature. Journal of Chemical Physics, 2018, 148, 054501.	3.0	13
147	Effects of Diffusion Coefficients and Permanent Charge on Reversal Potentials in Ionic Channels. Entropy, 2020, 22, 325.	2.2	13
148	Electrical properties of the myotendon region of frog twitch muscle fibers measured in the frequency domain. Biophysical Journal, 1985, 48, 253-267.	0.5	12
149	A dynamic model of open vesicles in fluids. Communications in Mathematical Sciences, 2012, 10, 1273-1285.	1.0	12
150	Why Canâ€™t Protons Move through Water Channels?. Biophysical Journal, 2003, 85, 3427-3428.	0.5	11
151	Memoryless control of boundary concentrations of diffusing particles. Physical Review E, 2004, 70, 061106.	2.1	11
152	Nonlocal Poisson-Fermi model for ionic solvent. Physical Review E, 2016, 94, 012114.	2.1	11
153	Dynamics of Current, Charge and Mass. Computational and Mathematical Biophysics, 2017, 5, 78-115.	1.1	11
154	Asking biological questions of physical systems: The device approach to emergent properties. Journal of Molecular Liquids, 2018, 270, 212-217.	4.9	11
155	Multiscale modeling shows that dielectric differences make NaV channels faster than KV channels. Journal of General Physiology, 2021, 153, .	1.9	11
156	Computational Issues in Modeling Ion Transport in Biological Channels: Self-Consistent Particle-Based Simulations. Journal of Computational Electronics, 2003, 2, 239-243.	2.5	9
157	Attenuation of the Electric Potential and Field in Disordered Systems. Journal of Statistical Physics, 2005, 119, 1397-1418.	1.2	9
158	Shockley-Ramo theorem measures conformation changes of ion channels and proteins. Journal of Computational Electronics, 2007, 6, 363-365.	2.5	9
159	Single-channel measurements of an N-acetylneuraminic acid-inducible outer membrane channel in Escherichia coli. European Biophysics Journal, 2012, 41, 259-271.	2.2	9
160	Electrodiffusion Model of Rectangular Current Pulses in Ionic Channels of Cellular Membranes. SIAM Journal on Applied Mathematics, 2000, 61, 792-802.	1.8	8
161	Ionic Channels as Natural Nanodevices. Journal of Computational Electronics, 2002, 1, 331-333.	2.5	8
162	Energetic Variational Analysis EnVarA of Ions in Calcium and Sodium Channels. Biophysical Journal, 2010, 98, 515a.	0.5	8

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163	An energetic variational approach to ion channel dynamics. Mathematical Methods in the Applied Sciences, 2014, 37, 952-961.	2.3	8
164	Mass Action and Conservation of Current. Hungarian Journal of Industrial Chemistry, 2016, 44, 1-28.	0.3	8
165	Do Bistable Steric Poissonâ€"Nernstâ€"Planck Models Describe Single-Channel Gating?. Journal of Physical Chemistry B, 2018, 122, 5183-5192.	2.6	8
166	On the polarization of ligands by proteins. Physical Chemistry Chemical Physics, 2020, 22, 12044-12057.	2.8	8
167	Electrodiffusion Model Simulation of Rectangular Current Pulses in a Voltage-Biased Biological Channel. Journal of Theoretical Biology, 2002, 219, 291-299.	1.7	7
168	The value of Einsteinâ€™s mistakes. Physics Today, 2006, 59, 12-13.	0.3	7
169	Ion channels as electrostatic amplifiers of charge fluctuations. Journal of Physics: Conference Series, 2008, 142, 012049.	0.4	7
170	Charge fluctuations and their effect on conduction in biological ion channels. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01010.	2.3	7
171	NONEQUILIBRIUM RATE THEORY FOR CONDUCTION IN OPEN ION CHANNELS. Fluctuation and Noise Letters, 2012, 11, 1240016.	1.5	7
172	Localizing the Charged Side Chains of Ion Channels within the Crowded Charge Models. Journal of Chemical Theory and Computation, 2013, 9, 766-773.	5.3	7
173	Poisson-Fermi Formulation of Nonlocal Electrostatics in Electrolyte Solutions. Computational and Mathematical Biophysics, 2017, 5, 116-124.	1.1	7
174	Relative dielectric constants and selectivity ratios in open ionic channels. Computational and Mathematical Biophysics, 2017, 5, 125-137.	1.1	7
175	A tridomain model for potassium clearance in optic nerve of Necturus. Biophysical Journal, 2021, 120, 3008-3027.	0.5	7
176	Gating current noise produced by Brownian models of a voltage sensor. Biophysical Journal, 2021, 120, 3983-4001.	0.5	7
177	Models of boundary behavior of particles diffusing between two concentrations. , 2004, , .		6
178	Ion channels allow atomic control of macroscopic transport. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 708-713.	0.8	6
179	Ion Permeation in the NanC Porin from Escherichia coli: Free Energy Calculations along Pathways Identified by Coarse-Grain Simulations. Journal of Physical Chemistry B, 2013, 117, 13534-13542.	2.6	6
180	Maxwell Equations without a Polarization Field, Using a Paradigm from Biophysics. Entropy, 2021, 23, 172.	2.2	6

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181	Optic nerve microcirculation: Fluid flow and electrodiffusion. Physics of Fluids, 2021, 33, .	4.0	6
182	Analytical Diffusion Models for Membrane Channels. , 1990, 2, 223-281.		6
183	Ionic Coulomb blockade and anomalous mole fraction effect in the NaChBac bacterial ion channel and its charge-varied mutants. EPJ Nonlinear Biomedical Physics, 2017, 5, 4.	0.8	6
184	Action of Î3-Aminobutyric Acid on Cancer borealis Muscle. Nature, 1963, 198, 1002-1003.	27.8	5
185	Inverse problems related to ion channels. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1120801-1120802.	0.2	5
186	Putative resolution of the EEEE selectivity paradox in L-type Ca²⁺and bacterial Na⁺biological ion channels. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 054027.	2.3	5
187	Ion Channels on Silicon. E-Journal of Surface Science and Nanotechnology, 2005, 3, 184-189.	0.4	5
188	Active Sites of Enzymes are Crowded with Charge. Biophysical Journal, 2011, 100, 218a.	0.5	4
189	Coulomb blockade oscillations in biological ion channels. , 2015, , .		4
190	Ionic channels: natural nanotubes described by the drift diffusion equations. Superlattices and Microstructures, 2000, 27, 545-549.	3.1	3
191	Error Analysis of the Poisson P3M Force Field Scheme for Particle-Based Simulations of Biological Systems. Journal of Computational Electronics, 2005, 4, 179-183.	2.5	3
192	Brownian dynamics simulations of ionic current through an open channel. AIP Conference Proceedings, 2005, , .	0.4	3
193	Ion Channel Conductance Measurements on a Silicon-Based Platform. Journal of Physics: Conference Series, 2006, 38, 21-24.	0.4	3
194	Self-organized Models of Selectivity in Ca and Na Channels. Biophysical Journal, 2009, 96, 253a.	0.5	3
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