

Baron Chanda

List of Publications by Year in descending order

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61
papers

3,469
citations

147801
31
h-index

149698
56
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79
all docs

79
docs citations

79
times ranked

3020
citing authors

#	ARTICLE	IF	CITATIONS
1	Tracking Voltage-dependent Conformational Changes in Skeletal Muscle Sodium Channel during Activation. <i>Journal of General Physiology</i> , 2002, 120, 629-645.	1.9	309
2	The hitchhiker's guide to the voltage-gated sodium channel galaxy. <i>Journal of General Physiology</i> , 2016, 147, 1-24.	1.9	299
3	Gating charge displacement in voltage-gated ion channels involves limited transmembrane movement. <i>Nature</i> , 2005, 436, 852-856.	27.8	263
4	Domain IV voltage-sensor movement is both sufficient and rate limiting for fast inactivation in sodium channels. <i>Journal of General Physiology</i> , 2013, 142, 101-112.	1.9	175
5	A hybrid approach to measuring electrical activity in genetically specified neurons. <i>Nature Neuroscience</i> , 2005, 8, 1619-1626.	14.8	169
6	Two atomic constraints unambiguously position the S4 segment relative to S1 and S2 segments in the closed state of Shaker K channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 7904-7909.	7.1	164
7	Movement of ϵ gating charge is coupled to ligand binding in a G-protein-coupled receptor. <i>Nature</i> , 2006, 444, 106-109.	27.8	157
8	Coupling Interactions between Voltage Sensors of the Sodium Channel as Revealed by Site-specific Measurements. <i>Journal of General Physiology</i> , 2004, 123, 217-230.	1.9	103
9	Dynamics and number of trans-SNARE complexes determine nascent fusion pore properties. <i>Nature</i> , 2018, 554, 260-263.	27.8	103
10	A Molecular Framework for Temperature-Dependent Gating of Ion Channels. <i>Cell</i> , 2014, 158, 1148-1158.	28.9	98
11	A fluorophore attached to nicotinic acetylcholine receptor $\alpha 2$ detects productive binding of agonist to the β site. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 10195-10200.	7.1	92
12	β -Scorpion Toxin Impairs a Conformational Change that Leads to Fast Inactivation of Muscle Sodium Channels. <i>Journal of General Physiology</i> , 2008, 132, 251-263.	1.9	90
13	Nicotinic acetylcholine receptor is internalized via a Rac-dependent, dynamin-independent endocytic pathway. <i>Journal of Cell Biology</i> , 2008, 181, 1179-1193.	5.2	88
14	Estimating the voltage-dependent free energy change of ion channels using the median voltage for activation. <i>Journal of General Physiology</i> , 2012, 139, 3-17.	1.9	78
15	Multiple pore conformations driven by asynchronous movements of voltage sensors in a eukaryotic sodium channel. <i>Nature Communications</i> , 2013, 4, 1350.	12.8	76
16	Exocytotic fusion pores are composed of both lipids and proteins. <i>Nature Structural and Molecular Biology</i> , 2016, 23, 67-73.	8.2	74
17	β -Scorpion Toxin Modifies Gating Transitions in All Four Voltage Sensors of the Sodium Channel. <i>Journal of General Physiology</i> , 2007, 130, 257-268.	1.9	72
18	Local Anesthetics Disrupt Energetic Coupling between the Voltage-sensing Segments of a Sodium Channel. <i>Journal of General Physiology</i> , 2009, 133, 1-15.	1.9	63

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19	A Common Pathway for Charge Transport through Voltage-Sensing Domains. <i>Neuron</i> , 2008, 57, 345-351.	8.1	61
20	Improved Probes for Hybrid Voltage Sensor Imaging. <i>Biophysical Journal</i> , 2010, 99, 2355-2365.	0.5	61
21	Gating interaction maps reveal a noncanonical electromechanical coupling mode in the Shaker K ⁺ channel. <i>Nature Structural and Molecular Biology</i> , 2018, 25, 320-326.	8.2	61
22	Gating transitions in the selectivity filter region of a sodium channel are coupled to the domain IV voltage sensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 2648-2653.	7.1	57
23	Molecular determinants of coupling between the domain III voltage sensor and pore of a sodium channel. <i>Nature Structural and Molecular Biology</i> , 2010, 17, 230-237.	8.2	49
24	Helix breaking transition in the S4 of HCN channel is critical for hyperpolarization-dependent gating. <i>ELife</i> , 2019, 8, .	6.0	49
25	Molecular mechanism of allosteric modification of voltage-dependent sodium channels by local anesthetics. <i>Journal of General Physiology</i> , 2010, 136, 541-554.	1.9	47
26	Observing Single-Molecule Dynamics at Millimolar Concentrations. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 2399-2402.	13.8	42
27	Structure and dynamics underlying elementary ligand binding events in human pacemaking channels. <i>ELife</i> , 2016, 5, .	6.0	42
28	Optical detection of rate-determining ion-modulated conformational changes of the ether-a-go-go K ⁺ channel voltage sensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 18718-18723.	7.1	41
29	Evolutionarily conserved intracellular gate of voltage-dependent sodium channels. <i>Nature Communications</i> , 2014, 5, 3420.	12.8	39
30	Thermodynamics of electromechanical coupling in voltage-gated ion channels. <i>Journal of General Physiology</i> , 2012, 140, 613-623.	1.9	38
31	Free-energy relationships in ion channels activated by voltage and ligand. <i>Journal of General Physiology</i> , 2013, 141, 11-28.	1.9	34
32	Top-down machine learning approach for high-throughput single-molecule analysis. <i>ELife</i> , 2020, 9, .	6.0	33
33	Bipolar switching by HCN voltage sensor underlies hyperpolarization activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 670-678.	7.1	29
34	The contribution of voltage clamp fluorometry to the understanding of channel and transporter mechanisms. <i>Journal of General Physiology</i> , 2019, 151, 1163-1172.	1.9	24
35	The intrinsically liganded cyclic nucleotide-binding homology domain promotes KCNH channel activation. <i>Journal of General Physiology</i> , 2017, 149, 249-260.	1.9	23
36	Function of Shaker potassium channels produced by cell-free translation upon injection into <i>Xenopus</i> oocytes. <i>Scientific Reports</i> , 2013, 3, 1040.	3.3	22

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37	Deconstructing thermodynamic parameters of a coupled system from site-specific observables. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18856-18861.	7.1	21
38	Functional reconstitution of bacterially expressed human potassium channels in proteoliposomes: membrane potential measurements with JC-1 to assay ion channel activity. Biochimica Et Biophysica Acta - Biomembranes, 1999, 1416, 92-100.	2.6	18
39	Observing Single-Molecule Dynamics at Millimolar Concentrations. Angewandte Chemie, 2017, 129, 2439-2442.	2.0	18
40	cAMP binding to closed pacemaker ion channels is non-cooperative. Nature, 2021, 595, 606-610.	27.8	18
41	Interfacial gating triad is crucial for electromechanical transduction in voltage-activated potassium channels. Journal of General Physiology, 2014, 144, 457-467.	1.9	15
42	A self-consistent approach for determining pairwise interactions that underlie channel activation. Journal of General Physiology, 2014, 144, 441-455.	1.9	15
43	SnapShot: Channel Gating Mechanisms. Cell, 2017, 170, 594-594.e1.	28.9	14
44	Minimal molecular determinants of isoform-specific differences in efficacy in the HCN channel family. Journal of General Physiology, 2018, 150, 1203-1213.	1.9	14
45	Mapping Electromechanical Coupling Pathways in Voltage-Gated Ion Channels: Challenges and the Way Forward. Journal of Molecular Biology, 2021, 433, 167104.	4.2	13
46	Activation of the archaeal ion channel MthK is exquisitely regulated by temperature. ELife, 2020, 9, .	6.0	13
47	Tethered Spectroscopic Probes Estimate Dynamic Distances with Subnanometer Resolution in Voltage-Dependent Potassium Channels. Biophysical Journal, 2013, 105, 2724-2732.	0.5	11
48	Transplanting the N-terminus from Kv1.4 to Kv1.1 generates an inwardly rectifying K ⁺ channel. NeuroReport, 1999, 10, 237-241.	1.2	10
49	Congruent pattern of accessibility identifies minimal pore gate in a non-symmetric voltage-gated sodium channel. Nature Communications, 2016, 7, 11608.	12.8	10
50	Modeling of ion permeation in calcium and sodium channel selectivity filters. , 2000, 38, 384-392.		8
51	Exploring the Architecture of Potassium Channels Using Chimera ² to Reveal Signal Transduction. Bioscience Reports, 1999, 19, 301-306.	2.4	7
52	Mapping temperature-dependent conformational change in the voltage-sensing domain of an engineered heat-activated K ⁺ channel. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	7
53	Probing Gating Mechanisms of Sodium Channels Using Pore Blockers. Handbook of Experimental Pharmacology, 2014, 221, 183-201.	1.8	7
54	Arranging the elements of the potassium channel: the T1 domain occludes the cytoplasmic face of the channel. European Biophysics Journal, 2004, 33, 370-6.	2.2	5

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55	Re-evaluation of the mechanism of cytotoxicity of dialkylated lariat ether compounds. RSC Advances, 2020, 10, 40391-40394.	3.6	5
56	Sodium channels caught in the act. Science, 2019, 363, 1278-1279.	12.6	4
57	NMR Structural Analysis of Isolated Shaker Voltage-Sensing Domain in LPPG Micelles. Biophysical Journal, 2019, 117, 388-398.	0.5	3
58	Generalized Interaction Energy Analysis of Intersubunit Linkage in Shaker Potassium Channels. Biophysical Journal, 2014, 106, 742a.	0.5	2
59	How to open a proton pore “more than S4?”. Nature Structural and Molecular Biology, 2015, 22, 277-278.	8.2	2
60	Acylated and alkylated benzo(crown-ethers) form ion-dependent ion channels in biological membranes. Biophysical Journal, 2022, 121, 1105-1114.	0.5	2
61	Preparation of Giant Escherichia coli spheroplasts for Electrophysiological Recordings. Bio-protocol, 2021, 11, e4261.	0.4	0