

Rikard Blunck

List of Publications by Year in descending order

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75
papers

2,160
citations

304743

22
h-index

233421

45
g-index

79
all docs

79
docs citations

79
times ranked

2278
citing authors

#	ARTICLE	IF	CITATIONS
1	Gating charge displacement in voltage-gated ion channels involves limited transmembrane movement. <i>Nature</i> , 2005, 436, 852-856.	27.8	263
2	A hybrid approach to measuring electrical activity in genetically specified neurons. <i>Nature Neuroscience</i> , 2005, 8, 1619-1626.	14.8	169
3	Silicon chip-based patch-clamp electrodes integrated with PDMS microfluidics. <i>Biosensors and Bioelectronics</i> , 2004, 20, 509-517.	10.1	163
4	New Insights Into Endotoxin-Induced Activation of Macrophages: Involvement of a K ⁺ Channel in Transmembrane Signaling. <i>Journal of Immunology</i> , 2001, 166, 1009-1015.	0.8	129
5	Bilayer Reconstitution of Voltage-Dependent Ion Channels using a Microfabricated Silicon Chip. <i>Biophysical Journal</i> , 2001, 81, 2389-2394.	0.5	128
6	TACAN Is an Ion Channel Involved in Sensing Mechanical Pain. <i>Cell</i> , 2020, 180, 956-967.e17.	28.9	120
7	Detection of the Opening of the Bundle Crossing in KcsA with Fluorescence Lifetime Spectroscopy Reveals the Existence of Two Gates for Ion Conduction. <i>Journal of General Physiology</i> , 2006, 128, 569-581.	1.9	97
8	Dynamics of internal pore opening in K ^V channels probed by a fluorescent unnatural amino acid. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 8272-8277.	7.1	95
9	Automating Single Subunit Counting of Membrane Proteins in Mammalian Cells. <i>Journal of Biological Chemistry</i> , 2012, 287, 35912-35921.	3.4	85
10	Mechanism of Electromechanical Coupling in Voltage-Gated Potassium Channels. <i>Frontiers in Pharmacology</i> , 2012, 3, 166.	3.5	78
11	Black Lipid Membranes: Visualizing the Structure, Dynamics, and Substrate Dependence of Membranes. <i>Journal of Physical Chemistry B</i> , 2004, 108, 16040-16049.	2.6	72
12	An Intersubunit Interaction between S4-S5 Linker and S6 Is Responsible for the Slow Off-gating Component in Shaker K ⁺ Channels. <i>Journal of Biological Chemistry</i> , 2010, 285, 14005-14019.	3.4	72
13	Mode shift of the voltage sensors in Shaker K ⁺ channels is caused by energetic coupling to the pore domain. <i>Journal of General Physiology</i> , 2011, 137, 455-472.	1.9	67
14	Detecting Rearrangements of Shaker and NaChBac in Real-Time with Fluorescence Spectroscopy in Patch-Clamped Mammalian Cells. <i>Biophysical Journal</i> , 2004, 86, 3966-3980.	0.5	57
15	Fluorescence detection of the movement of single KcsA subunits reveals cooperativity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20263-20268.	7.1	56
16	S4-S5 linker movement during activation and inactivation in voltage-gated K ⁺ channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6751-E6759.	7.1	48
17	The isolated voltage sensing domain of the Shaker potassium channel forms a voltage-gated cation channel. <i>ELife</i> , 2016, 5, .	6.0	41
18	Distance measurements reveal a common topology of prokaryotic voltage-gated ion channels in the lipid bilayer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 15865-15870.	7.1	39

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19	Single Molecule Fluorescence Study of the Bacillus thuringiensis Toxin Cry1Aa Reveals Tetramerization. <i>Journal of Biological Chemistry</i> , 2011, 286, 42274-42282.	3.4	39
20	Cell Activation by Ligands of the Toll-Like Receptor and Interleukin-1 Receptor Family Depends on the Function of the Large-Conductance Potassium Channel MaxiK in Human Macrophages. <i>Infection and Immunity</i> , 2006, 74, 4354-4356.	2.2	31
21	Double Mutant Cycle Analysis Identified a Critical Leucine Residue in the IIS4S5 Linker for the Activation of the CaV2.3 Calcium Channel. <i>Journal of Biological Chemistry</i> , 2011, 286, 27197-27205.	3.4	31
22	A Limited 4 Å... Radial Displacement of the S4-S5 Linker Is Sufficient for Internal Gate Closing in Kv Channels. <i>Journal of Biological Chemistry</i> , 2012, 287, 40091-40098.	3.4	28
23	Reinitiation at non-canonical start codons leads to leak expression when incorporating unnatural amino acids. <i>Scientific Reports</i> , 2015, 5, 11866.	3.3	28
24	Rapid topology probing using fluorescence spectroscopy in planar lipid bilayer: the pore-forming mechanism of the toxin Cry1Aa of <i>Bacillus thuringiensis</i> . <i>Journal of General Physiology</i> , 2010, 136, 497-513.	1.9	23
25	Full-length cellular $\hat{2}$ -secretase has a trimeric subunit stoichiometry, and its sulfur-rich transmembrane interaction site modulates cytosolic copper compartmentalization. <i>Journal of Biological Chemistry</i> , 2017, 292, 13258-13270.	3.4	21
26	Gating and permeation models of plant channels. <i>Journal of Experimental Botany</i> , 1997, 48, 365-382.	4.8	20
27	How Powerful is the Dwell-Time Analysis of Multichannel Records?. <i>Journal of Membrane Biology</i> , 1998, 165, 19-35.	2.1	19
28	Nano to Micro \hat{e} Fluorescence Measurements of Electric Fields in Molecules and Genetically Specified Neurons. <i>Journal of Membrane Biology</i> , 2005, 208, 91-102.	2.1	19
29	Structure of anthrax lethal toxin prepore complex suggests a pathway for efficient cell entry. <i>Journal of General Physiology</i> , 2016, 148, 313-324.	1.9	16
30	Determining the correct stoichiometry of Kv2.1/Kv6.4 heterotetramers, functional in multiple stoichiometrical configurations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 9365-9376.	7.1	16
31	Do Lipids Show State-dependent Affinity to the Voltage-gated Potassium Channel KvAP?. <i>Journal of Biological Chemistry</i> , 2014, 289, 16452-16461.	3.4	11
32	Disease-linked mutations alter the stoichiometries of HCN-KCNE2 complexes. <i>Scientific Reports</i> , 2019, 9, 9113.	3.3	11
33	A Novel KCNA2 Variant in a Patient with Non-Progressive Congenital Ataxia and Epilepsy: Functional Characterization and Sensitivity to 4-Aminopyridine. <i>International Journal of Molecular Sciences</i> , 2021, 22, 9913.	4.1	9
34	A Disease Mutation Causing Episodic Ataxia Type I in the S1 Links Directly to the Voltage Sensor and the Selectivity Filter in Kv Channels. <i>Journal of Neuroscience</i> , 2015, 35, 12198-12206.	3.6	8
35	Voltage-clamp Fluorometry in <i>Xenopus</i> Oocytes Using Fluorescent Unnatural Amino Acids. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	7
36	The Human Sodium-Glucose Cotransporter (hSGLT1) Is a Disulfide-Bridged Homodimer with a Re-Entrant C-Terminal Loop. <i>PLoS ONE</i> , 2016, 11, e0154589.	2.5	5

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37	A Common Kinetic Property of Mutations Linked to Episodic Ataxia Type 1 Studied in the Shaker Kv Channel. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7602.	4.1	5
38	Musculoskeletal Features without Ataxia Associated with a Novel de novo Mutation in KCNA1 Impairing the Voltage Sensitivity of Kv1.1 Channel. <i>Biomedicines</i> , 2021, 9, 75.	3.2	5
39	Functional Characterization of Two Novel Mutations in SCN5A Associated with Brugada Syndrome Identified in Italian Patients. <i>International Journal of Molecular Sciences</i> , 2021, 22, 6513.	4.1	4
40	A Step-by-Step Guide to Single-Subunit Counting of Membrane-Bound Proteins in Mammalian Cells. <i>Neuromethods</i> , 2016, , 15-30.	0.3	3
41	Movement of the S4-S5 Linker of KvAP during Gating. <i>Biophysical Journal</i> , 2012, 102, 13a.	0.5	2
42	Investigation of Ion Channel Structure Using Fluorescence Spectroscopy. , 2015, , 113-133.		2
43	Studying Clustering of KcsA Channels using Single-Channel Voltage-Clamp Fluorescence Imaging. <i>Biophysical Journal</i> , 2015, 108, 440a.	0.5	2
44	A Variant in the Nicotinic Acetylcholine Receptor Alpha 3 Subunit Gene Is Associated With Hypertension Risks in Hypogonadic Patients. <i>Frontiers in Genetics</i> , 2020, 11, 539862.	2.3	2
45	Determining stoichiometry of ion channel complexes using single subunit counting. <i>Methods in Enzymology</i> , 2021, 653, 377-404.	1.0	2
46	Studying KcsA Channel Clustering Using Single Channel Voltage-Clamp Fluorescence Imaging*. <i>Frontiers in Physiology</i> , 2022, 13, .	2.8	2
47	Investigating the Electromechanical Coupling in voltage-gated K ⁺ channels. <i>Biophysical Journal</i> , 2009, 96, 369a.	0.5	1
48	Rapid Topology Determination of Membrane Proteins: Pore-Forming Mechanism of Bt toxin Cry1Aa. <i>Biophysical Journal</i> , 2009, 96, 535a.	0.5	1
49	Reply to Pisupati et al.: Evaluating single subunit counting data to find the correct stoichiometry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 29290-29291.	7.1	1
50	Determining The Coupling Between Subunits In Kcsa Using Single Channel Fluorescence Spectroscopy. <i>Biophysical Journal</i> , 2009, 96, 24a.	0.5	0
51	Molecular Determinants of the Slow Off-Gating Component in Shaker K ⁺ Channels. <i>Biophysical Journal</i> , 2010, 98, 522a.	0.5	0
52	Towards Simultaneous Single Channel Current and Fluorescence Recordings in Planar Lipid Bilayer. <i>Biophysical Journal</i> , 2010, 98, 536a-537a.	0.5	0
53	Mode Shift of the Voltage Sensors in Shaker K ⁺ Channels is Caused by Energetic Coupling to the Pore Domain. <i>Biophysical Journal</i> , 2011, 100, 367a.	0.5	0
54	Gating and Stoichiometry of Heteromeric Kainate Receptors. <i>Biophysical Journal</i> , 2012, 102, 613a.	0.5	0

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55	Single Molecule Fluorescence Study of the B. Thuringiensis Toxin Cry1Aa Reveals Tetramerization. Biophysical Journal, 2012, 102, 214a.	0.5	0
56	An Automated Method to Study Oligomerization of Single Membrane-Bound Proteins using Fluorescence Imaging. Biophysical Journal, 2012, 102, 114a-115a.	0.5	0
57	A Molecular Mechanics Model of a Closed Voltage-Gated Potassium Channel Generated from S4-S5 Linker LRET Measurements. Biophysical Journal, 2013, 104, 124a.	0.5	0
58	FRET Quenching by a Hybrid Voltage Sensor (Hvos) Reveals that the Na/Glucose Cotransporter (SGLT1) Is a Disulfide-Bridged Homodimer with Re-Entrant 12-13 Loop. Biophysical Journal, 2013, 104, 223a.	0.5	0
59	Occupancy of a Single Binding Site is Sufficient for AMPAR Activation. Biophysical Journal, 2014, 106, 30a.	0.5	0
60	Cytosolic Activation Dynamics in the KV Channel Probed by a Fluorescent Unnatural Amino Acid. Biophysical Journal, 2014, 106, 536a-537a.	0.5	0
61	Lipid Affinity to the Voltage-Gated Potassium Channel KvAP. Biophysical Journal, 2014, 106, 15a-16a.	0.5	0
62	Influence of Lipid Bilayer Thickness on Ion Channels Using Single-Channel Voltage-Clamp Fluorescence Imaging. Biophysical Journal, 2014, 106, 738a-739a.	0.5	0
63	Non-Canonical Start Codons Reinitiate Translation in N-Terminal Truncated Kv Channels. Biophysical Journal, 2015, 108, 118a.	0.5	0
64	A Point Mutation Causing Episodic Ataxia Reveals Functional Link between Voltage Sensor and Selectivity Filter in Shaker Kv Channels. Biophysical Journal, 2015, 108, 24a.	0.5	0
65	Role of the Voltage Sensing Domain S1-S4 in TRPV1 Channels. Biophysical Journal, 2015, 108, 427a.	0.5	0
66	Probing the S4-S5 Linker Movement During Activation in KV Channels. Biophysical Journal, 2016, 110, 104a.	0.5	0
67	Stoichiometries of HCN-KCNE2 Channel. Biophysical Journal, 2017, 112, 183a.	0.5	0
68	Molecular Interactions between Kv4.3 and DPP6 - The Biochemical Anatomy of Idiopathic Ventricular Fibrillation. Biophysical Journal, 2017, 112, 183a.	0.5	0
69	The Isolated Voltage Sensing Domain of the Shaker Potassium Channel forms a Cation Channel. Biophysical Journal, 2017, 112, 249a.	0.5	0
70	Probing the Movement of the Ball and Chain during N-type Inactivation in Kv Channels. Biophysical Journal, 2017, 112, 39a.	0.5	0
71	Mode Shift of Shaker Isolated-Voltage Sensing Domain. Biophysical Journal, 2018, 114, 546a.	0.5	0
72	Molecular Interactions that Contribute to the Regulation of HCN Channels by KCNE2. Biophysical Journal, 2018, 114, 120a.	0.5	0

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73	Single Channel Studies of the Cation Permeation Pathway of the Shaker Kv Isolated Voltage-Sensing Domain (iVSD). Biophysical Journal, 2019, 116, 543a.	0.5	0
74	Choosing the Correct Stoichiometry from Single Subunit Counting Data. Biophysical Journal, 2020, 118, 262a.	0.5	0
75	Position of Inactivation Particle of Shaker Kv Channels in Resting State. Biophysical Journal, 2020, 118, 169a.	0.5	0