Masayuki Iwamoto

List of Publications by Year
in descending order

101 papers	1,815 citations	218677 26 h-index	265206 42 g-index
104 all docs	104 docs citations	104 times ranked	1153 citing authors

#	Article	IF	Citations
1	Functional expression of pharaonis phoborhodopsin in Eschericha coli. FEBS Letters, 1997, 420, 54-56.	2.8	121
2	Global Twisting Motion of Single Molecular KcsA Potassium Channel upon Gating. Cell, 2008, 132, 67-78.	28.9	111
3	Structural Changes of pharaonis Phoborhodopsin upon Photoisomerization of the Retinal Chromophore:â€‰ Infrared Spectral Comparison with Bacteriorhodopsin. Biochemistry, 2001, 40, 9238-9246.	2.5	104
4	Oriented Reconstitution of a Membrane Protein in a Giant Unilamellar Vesicle: Experimental Verification with the Potassium Channel KcsA. Journal of the American Chemical Society, 2011, 133, 11774-11779.	13.7	104
5	Photo-Induced Proton Transport of Pharaonis Phoborhodopsin (Sensory Rhodopsin II) Is Ceased by Association with the Transducer. Biophysical Journal, 2001, 80, 916-922.	0.5	102
6	Environment around the chromophore in pharaonis phoborhodopsin: mutation analysis of the retinal binding site. Biochimica Et Biophysica Acta - Biomembranes, 2001, 1515, 92-100.	2.6	72
7	Amphipathic antenna of an inward rectifier K ⁺ channel responds to changes in the inner membrane leaflet. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 749-754.	7.1	68
8	Surface Structure and Its Dynamic Rearrangements of the KcsA Potassium Channel upon Gating and Tetrabutylammonium Blocking. Journal of Biological Chemistry, 2006, 281, 28379-28386.	3.4	54
9	Counting Ion and Water Molecules in a Streaming File through the Open-Filter Structure of the K Channel. Journal of Neuroscience, 2011, 31, 12180-12188.	3.6	52
10	Pharaonis Phoborhodopsin Binds to its Cognate Truncated Transducer Even in the Presence of a Detergent with a 1:1 StoichiometryÂ¶. Photochemistry and Photobiology, 2001, 74, 489.	2.5	51
11	Importance of the Broad Regional Interaction for Spectral Tuning in Natronobacterium pharaonis Phoborhodopsin (Sensory Rhodopsin II). Journal of Biological Chemistry, 2003, 278, 23882-23889.	3.4	50
12	Importance of Specific Hydrogen Bonds of Archaeal Rhodopsins for the Binding to the Transducer Protein. Journal of Molecular Biology, 2006, 357, 1274-1282.	4.2	47
13	A cytotoxic peptide from a marine sponge exhibits ion channel activity through vectorialâ€insertion into the membrane. FEBS Letters, 2010, 584, 3995-3999.	2.8	46
14	FTIR Spectroscopy of the M Photointermediate in pharaonis Phoborhodopsin. Biophysical Journal, 2002, 83, 3482-3489.	0.5	43
15	Contact Bubble Bilayers with Flush Drainage. Scientific Reports, 2015, 5, 9110.	3.3	43
16	Biased Brownian stepping rotation of FoF1-ATP synthase driven by proton motive force. Nature Communications, 2013, 4, 1631.	12.8	41
17	Rectified Proton Grotthuss Conduction Across a Long Water-Wire in the Test Nanotube of the Polytheonamide B Channel. Journal of the American Chemical Society, 2016, 138, 4168-4177.	13.7	39
18	Positioning proton-donating residues to the Schiff-base accelerates the M-decay of pharaonis phoborhodopsin expressed in Escherichia coli. Biophysical Chemistry, 1999, 79, 187-192.	2.8	38

#	Article	IF	Citations
19	Tyr-199 and Charged Residues of pharaonis PhoborhodopsinAre Important for the Interaction with its Transducer. Biophysical Journal, 2002, 83, 427-432.	0.5	38
20	Interaction of Natronobacterium pharaonis Phoborhodopsin (Sensory Rhodopsin II) with its Cognate Transducer Probed by Increase in the Thermal StabilityÂ¶. Photochemistry and Photobiology, 2003, 78, 511.	2.5	37
21	Light-Induced Proton Uptake and Release ofpharaonisPhoborhodopsin Detected by a Photoelectrochemical Cell. Journal of Physical Chemistry B, 1999, 103, 10311-10315.	2.6	35
22	Gating-Associated Clusteringâ€“Dispersion Dynamics of the KcsA Potassium Channel in a Lipid Membrane. Journal of Physical Chemistry Letters, 2014, 5, 578-584.	4.6	34
23	Involvement of two groups in reversal of the bathochromic shift of pharaonis phoborhodopsin by chloride at low pH. Biophysical Chemistry, 2000, 87, 225-230.	2.8	31
24	Association of pharaonis phoborhodopsin with its cognate transducer decreases the photo-dependent reactivity by water-soluble reagents of azide and hydroxylamine. Biochimica Et Biophysica Acta - Biomembranes, 2002, 1558, 63-69.	2.6	30
25	Effects of Three Characteristic Amino Acid Residues of Pharaonis Phoborhodopsin on the Absorption Maximum Â¶. Photochemistry and Photobiology, 2000, 72, 141-145.	2.5	29
26	The Open Gate Structure of the Membrane-Embedded KcsA Potassium Channel Viewed From the Cytoplasmic Side. Scientific Reports, 2013, 3, 1063.	3.3	28
27	Correlation of the O-Intermediate Rate with the pKa of Asp-75 in the Dark, the Counterion of the Schiff Base of Pharaonis Phoborhodopsin (Sensory Rhodopsin II). Biophysical Journal, 2005, 88, 1215-1223.	0.5	26
28	Selective reaction of hydroxylamine with chromophore during the photocycle of pharaonis phoborhodopsin. Biochimica Et Biophysica Acta - Biomembranes, 2001, 1514, 152-158.	2.6	24
29	Transient movement of helix F revealed by photo-induced inactivation by reaction of a bulky SH-reagent to cysteine-introduced pharaonis phoborhodopsin (sensory rhodopsin II). Photochemical and Photobiological Sciences, 2004, 3, 537.	2.9	21
30	Arg-72 of pharaonis Phoborhodopsin (Sensory Rhodopsin II) is Important for the Maintenance of the Protein Structure in the Solubilized StateÂ¶. Photochemistry and Photobiology, 2003, 77, 96.	2.5	20
31	Constitutive boost of a K ⁺ channel via inherent bilayer tension and a unique tension-dependent modality. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 13117-13122.	7.1	19
32	Conductance selectivity of Na ⁺ across the K ⁺ channel via Na ⁺ trapped in a tortuous trajectory. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	18
33	Association between a photo-intermediate of a M-lacking mutant D75N of pharaonis phoborhodopsin and its cognate transducer. Journal of Photochemistry and Photobiology B: Biology, 2002, 67, 171-176.	3.8	17
34	Cycle Flux Algebra for Ion and Water Flux through the KcsA Channel Single-File Pore Links Microscopic Trajectories and Macroscopic Observables. PLoS ONE, 2011, 6, e16578.	2.5	17
35	Channel Formation and Membrane Deformation via Sterol-Aided Polymorphism of Amphidinol 3. Scientific Reports, 2017, 7, 10782.	3.3	17
36	Role of Asp193 in Chromophore-Protein Interaction of pharaonis Phoborhodopsin (Sensory Rhodopsin) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.5	16

#	Article	IF	Citations
37	Role of Charged Residues ofpharaonisPhoborhodopsin (Sensory Rhodopsin II) in Its Interaction with the Transducer Proteinâ€. Biochemistry, 2004, 43, 13748-13754.	2.5	16
38	Paradoxical One-ion Pore Behavior of the Long Î²-Helical Peptide of Marine Cytotoxic Polytheonamide B. Scientific Reports, 2014, 4, 3636.	3.3	15
39	Proton Transfer Reactions in the F86D and F86E Mutants ofpharaonisPhoborhodopsin (Sensory) Tj ETQq1 1 0.784314 rgBT /Overlock 1	2.5	14
40	Participation of the Surface Structure of Pharaonis Phoborhodopsin, ppR and its A149S and A149V mutants, Consisting of the C-terminal Î±-helix and E-F Loop, in the Complex-formation with the Cognate Transducer pHtrII, as Revealed by Site-directed 13C Solid. Photochemistry and Photobiology, 2007, 83, 339-345.	2.5	14
41	Membrane Perfusion of Hydrophobic Substances Around Channels Embedded in the Contact Bubble Bilayer. Scientific Reports, 2017, 7, 6857.	3.3	13
42	Lipid Bilayers Manipulated through Monolayer Technologies for Studies of Channel-Membrane Interplay. Biological and Pharmaceutical Bulletin, 2018, 41, 303-311.	1.4	13
43	A Long-Lived M-Like State of Phoborhodopsin that Mimics the Active State. Biophysical Journal, 2008, 95, 753-760.	0.5	10
44	A mesoscopic approach to understanding the mechanisms underlying the ion permeation on the discrete-state diagram. Journal of General Physiology, 2010, 136, 363-365.	1.9	10
45	Role of Arg-72 of pharaonis Phoborhodopsin (Sensory Rhodopsin II) on its Photochemistry. Biophysical Journal, 2004, 86, 3112-3120.	0.5	8
46	Mechanism for attenuated outward conductance induced by mutations in the cytoplasmic pore of Kir2.1 channels. Scientific Reports, 2015, 5, 18404.	3.3	7
47	Lipid Bilayer Experiments with Contact Bubble Bilayers for Patch-Clampers. Journal of Visualized Experiments, 2019, , .	0.3	6
48	Hysteresis of a Tension-Sensitive K⁺ Channel Revealed by Time-Lapse Tension Measurements. Jacs Au, 2021, 1, 467-474.	7.9	6
49	Structural Changes in the O-Decay Accelerated Mutants of <i>pharaonis</i> Phoborhodopsin. Biochemistry, 2008, 47, 2866-2874.	2.5	5
50	Normal Mode Analysis of Polytheonamide B. Journal of the Physical Society of Japan, 2007, 76, 094801.	1.6	4
51	pH-dependent promotion of phospholipid flip-flop by the KcsA potassium channel. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 145-150.	2.6	4
52	Thylakoid membranes contain a non-selective channel permeable to small organic molecules. Journal of Biological Chemistry, 2018, 293, 7777-7785.	3.4	3
53	Concurrent <i>In Vitro</i> Synthesis and Functional Detection of Nascent Activity of the KcsA Channel under a Membrane Potential. ACS Synthetic Biology, 2018, 7, 1004-1011.	3.8	3
54	Illumination Accelerates the Decay of the O-intermediate of pharaonis Phoborhodopsin (Sensory) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	2.5	3

#	Article	IF	Citations
55	Structure and Dynamics of Membrane-embedded KcsA Potassium Channel Revealed by Atomic Force Microscopy. Seibutsu Butsuri, 2015, 55, 005-010.	0.1	2
56	Drop-in-well chamber for droplet interface bilayer with built-in electrodes. Methods in Enzymology, 2019, 621, 347-363.	1.0	2
57	In bulla functional channel expression systems that mimic bacterial synthetic membranes. Methods in Enzymology, 2019, 621, 231-244.	1.0	2
58	Visualizing the osmotic water permeability of a lipid bilayer under measured bilayer tension using a moving membrane method. Journal of Membrane Science, 2021, 627, 119231.	8.2	2
59	Fluorescent labeling in sizeâ€controlled liposomes reveals membrane curvatureâ€induced structural changes in the KcsA potassium channel. FEBS Letters, 2021, 595, 1914-1919.	2.8	2
60	Illumination Accelerates the Decay of the O-intermediate of pharaonis Phoborhodopsin (Sensory) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5	2.5	1
61	Interaction of Natronobacterium pharaonis Phoborhodopsin (Sensory Rhodopsin II) with its Cognate Transducer Probed by Increase in the Thermal StabilityÂ¶. Photochemistry and Photobiology, 2007, 78, 511-516.	2.5	1
62	A Cytotoxic Peptide from a Marine Sponge, Polytheonamide B: I. Channel Activity and Vectorial-Insertion Into the Membrane. Biophysical Journal, 2010, 98, 110a.	0.5	1
63	Laser-Triggered Single Molecular Gating Motions of the KcsA Potassium Channels Recorded in a Sub-Millisecond Time Resolution. Biophysical Journal, 2012, 102, 37a.	0.5	1
64	Physical and Chemical Interplay Between the Membrane and a Prototypical Potassium Channel Reconstituted on a Lipid Bilayer Platform. Frontiers in Molecular Neuroscience, 2021, 14, 634121.	2.9	1
65	Geometrical and electrophysiological data of the moving membrane method for the osmotic water permeability of a lipid bilayer. Data in Brief, 2021, 38, 107309.	1.0	1
66	1P368 Changes in surface exposing sites of the KcsA potassium channel upon active gating : Effect of a channel blocker, tetrabutylammonium (TBA)(14. Ion channels and receptors,Poster) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 297 Td (Sessi	0.1	0
67	1P374 Normal Mode Analysis of a Small Membrane Polypeptide(14. Ion channels and receptors,Poster) Tj ETQq1 1 0.784314 rgBT /Ov	0.1	0
68	1P375 Single-molecular gating dynamics of KcsA potassium channel measured by diffracted X-ray tracking(14. Ion channels and receptors,Poster Session,Abstract,Meeting Program of EABS & BSJ) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.1	0
69	Pharaonis Phoborhodopsin Binds to its Cognate Truncated Transducer Even in the Presence of a Detergent with a 1:1 StoichiometryÂ¶. Photochemistry and Photobiology, 2007, 74, 489-494.	2.5	0
70	Arg-72 of pharaonis Phoborhodopsin (Sensory Rhodopsin II) is Important for the Maintenance of the Protein Structure in the Solubilized StateÂ¶. Photochemistry and Photobiology, 2003, 77, 96-100.	2.5	0
71	3P-204 Water-ion coupling in ion permeation through KcsA potassium channel revealed by streaming potential measurements(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S159.	0.1	0
72	3P-205 Visualization of conformational changes of single molecular KcsA potassium channels revealed global twisting motions upon gating(The 46th Annual Meeting of the Biophysical Society of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.1	0

#	Article	IF	Citations
73	3P-209 Temperature-dependence of Proton Permeation through a Voltage-Gated Proton Channel(The) Tj ETQq1 1 0.784314 rgBT /Overl	0.1	0
74	1P-194 Conformational Changes of Single-Molecular KcsA Potassium Channels during Gating Recorded in a Sub-Millisecond Time Resolution(Biol & Artifi memb.:Excitation & Channels, The 47th) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.1	0
75	The Water-ion Coupling Ratio for Ion Permeation through the KcsA Potassium Channel: Dependencies on Concentration and Species of Permeating Ions. Biophysical Journal, 2009, 96, 179a.	0.5	0
76	3P-187 Steady state distribution of ion and water in the open structure of KcsA potassium channel evaluated by the streaming potential(Biol & Artifi memb.:Excitation & Channels,The 47th) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.1	0
77	2SP5-05 Single-molecular measurements for structural and functional fluctuations of KcsA potassium channel.(2SP5 How are biological molecules fluctuating?,The 47th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlo	0.1	0
78	1P-193 pH-dependent gating of KcsA potassium channel examined by using an "inactivation-free" mutant, E71A(Biol & Artifi memb.:Excitation & Channels, The 47th Annual Meeting of the Biophysical Society of) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
79	3P239 A novel unusual peptide forms monovalent cation-selective pore through vectorial membrane insertion(Biol & Artifi memb.: Excitation & Channels,The 48th Annual Meeting of the Biophysical) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.1	0
80	pH-Dependent Gating of KcsA Potassium Channel. Biophysical Journal, 2010, 98, 314a.	0.5	0
81	A Cytotoxic Peptide from a Marine Sponge, Polytheonamide B; II. Properties for Ion Conduction and Voltage Dependent Gating. Biophysical Journal, 2010, 98, 109a.	0.5	0
82	3A1124 Oriented reconstitution of a potassium channel KcsA in a giant unilamellar vesicle(3A Biol &) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Seibutsu Butsuri, 2011, 51, S105.	0.1	0
83	2SH-07 Tracking the Motions of Single Potassium Channels by Time resolved X-ray Diffraction(2SH New) Tj ETQq1 1 0.784314 rgBT /Ov	0.1	0
84	3A1036 Effects of lipid bilayer components on the gating of the KcsA potassium channel(3A Biol & Artifi) Tj ETQq0 0 0 rgBT /Overlock 10 Butsuri, 2011, 51, S105.	0.1	0
85	3A1048 Mechanism of the Open Pore Selectivity of the KcsA Potassium Channel: Na^+ trapping in the filter(3A Biol & Artifi memb 3: Excitation & Channels,The 49th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.1	0
86	3A1148 Envisioning the ion permeation through the KcsA potassium channel as queues of ion and water arrays(3A Biol & Artifi memb 3: Excitation & Channels,The 49th Annual Meeting of the Biophysical) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
87	3PT164 Identification of the interaction site with the effective phospholipids for the KcsA potassium channel activity(The 50th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2012, 52, S169.	0.1	0
88	2SH-01 Analysis of Single Molecular Gating Dynamics of the KcsA Potassium Channels Responding to Rapid Changes of Solutior Conditions(2SH Star of life shined by frontier microscopies,Symposium,The) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.1	0
89	2G1558 Direct Observation of Ion Entryway of Potassium Channel KcsA in Lipid Bilayer by Atomic Force Microscopy(Biological & Artificial Membranes,Oral Presentation,The 50th Annual Meeting of the) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.1	0
90	The Asymmetric Lipid Bilayer Revealed Sidedness of the Effective Phospholipids on the Single-Channel Properties of the KcsA Potassium Channel. Biophysical Journal, 2012, 102, 537a.	0.5	0

#	Article	IF	Citations
91	The Sensing Sites for the Membrane Inner Lipids Regulate the Activation Gating of the KcsA Potassium Channel. Biophysical Journal, 2013, 104, 128a.	0.5	0
92	2P221 Rolling of N-terminal amphipathic helix on the anionic inner membrane leaflet stabilizes the open state of the KcsA potassium channel(13C. Biological & Artifical membrane: Excitation &) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
93	3P030 The Refinement of the Diffracted X-ray Tracking Method for Recording the Single-Molecule Motions of Proteins with Higher Time Resolution(01A. Protein: Structure,Poster). Seibutsu Butsuri, 2013, 53, S216.	0.1	0
94	2SCA-01 Gating-related clustering-dispersion dynamics of the KcsA potassium channel on the membrane(2SCA Single Ion Channels updated : From elementary processes to disease) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (tre 2013, 53, S93.	0.1	0
95	Gating-Coupled Clustering-Dispersion Dynamics of the KcsA Potassium Channel in a Lipid Membrane. Biophysical Journal, 2014, 106, 746a.	0.5	0
96	3P021 The Enhancement of Structural Fluctuations Prior to The Opening Conformational Changes of The KcsA Potassium Channel(01B. Protein: Structure & Function,Poster,The 52nd Annual Meeting) Tj ETQq0 0 0 rgBT /Overlock 10	0.1	0
97	1P221 Gating-associated clustering-dispersion dynamics of the KcsA potassium channel in a lipid membrane environment(13C. Biological & Artificial membrane: Excitation & Channels,Poster,The 52nd) Tj ETQq1 1 0.784314 rgBT /Over	0.1	0
98	2SEA-05 How do lipids regulate the gating activity of the channel protein? : Mechanism of a novel type of the lipid sensor(2SEA Which is important for biophysicists, pump or channel?,Symposium,The 52nd) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.1	0
99	Contact Bubble Bilayer Method as a Hybrid of the Planar Lipid Bilayer and Patch-clamp Methods. Seibutsu Butsuri, 2017, 57, 313-317.	0.1	0
100	Microfabricated Solution Chamber for High Resolution Diffracted X-Ray Tracking Method to Observe Ion-Channel Gating Motion. , 2019, , .		0
101	Single-Molecule Twisting Motions During Gating of the Human TRPV1 Channel Recorded with Sub-Millisecond Time Resolution. Biophysical Journal, 2020, 118, 22a.	0.5	0