Hideki Kandori

List of Publications by Year
in descending order

324 papers	12,281 citations	26567 56 h-index	43802 91 g-index
345 all docs	345 docs citations	345 times ranked	5207 citing authors

#	Article	IF	Citations
1	Microbial and Animal Rhodopsins: Structures, Functions, and Molecular Mechanisms. Chemical Reviews, 2014, 114, 126-163.	23.0	897
2	A light-driven sodium ion pump in marine bacteria. Nature Communications, 2013, 4, 1678.	5.8	360
3	High-speed atomic force microscopy shows dynamic molecular processes in photoactivated bacteriorhodopsin. Nature Nanotechnology, 2010, 5, 208-212.	15.6	292
4	Conversion of bacteriorhodopsin into a chloride ion pump. Science, 1995, 269, 73-75.	6.0	240
5	Glutamic Acid 204 is the Terminal Proton Release Group at the Extracellular Surface of Bacteriorhodopsin. Journal of Biological Chemistry, 1995, 270, 27122-27126.	1.6	227
6	Structural basis for Na+ transport mechanism by a light-driven Na+ pump. Nature, 2015, 521, 48-53.	13.7	224
7	Role of internal water molecules in bacteriorhodopsin. Biochimica Et Biophysica Acta - Bioenergetics, 2000, 1460, 177-191.	0.5	215
8	Structural basis for dynamic mechanism of proton-coupled symport by the peptide transporter POT. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11343-11348.	3.3	197
9	A distinct abundant group of microbial rhodopsins discovered using functional metagenomics. Nature, 2018, 558, 595-599.	13.7	190
10	Photoisomerization in rhodopsin. Biochemistry (Moscow), 2001, 66, 1197-1209.	0.7	187
11	A natural light-driven inward proton pump. Nature Communications, 2016, 7, 13415.	5.8	124
12	Femtosecond fluorescence study of the rhodopsin chromophore in solution. Journal of the American Chemical Society, 1995, 117, 2669-2670.	6.6	117
13	Role of Gln1029 in the Photoactivation Processes of the LOV2 Domain in Adiantum Phytochrome3. Biochemistry, 2004, 43, 8373-8379.	1.2	116
14	Light-Driven Chloride Ion Transport by Halorhodopsin from Natronobacterium pharaonis. I. The Photochemical Cycle. Biochemistry, 1995, 34, 14490-14499.	1.2	110
15	Light-Induced Structural Changes in the LOV2 Domain of Adiantum Phytochrome3 Studied by Low-Temperature FTIR and UVâˆ'Visible Spectroscopy. Biochemistry, 2003, 42, 8183-8191.	1.2	107
16	Structural Changes of pharaonis Phoborhodopsin upon Photoisomerization of the Retinal Chromophore:â€‰ Infrared Spectral Comparison with Bacteriorhodopsin. Biochemistry, 2001, 40, 9238-9246.	1.2	104
17	Reactive Cysteine Is Protonated in the Triplet Excited State of the LOV2 Domain in Adiantum Phytochrome3. Journal of the American Chemical Society, 2005, 127, 1088-1089.	6.6	102
18	FTIR Studies of Internal Water Molecules in the Schiff Base Region of Bacteriorhodopsinâ€. Biochemistry, 2005, 44, 7406-7413.	1.2	98

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19	Ion-pumping microbial rhodopsins. Frontiers in Molecular Biosciences, 2015, 2, 52.	1.6	98
20	Microbial Rhodopsins: The Last Two Decades. Annual Review of Microbiology, 2021, 75, 427-447.	2.9	98
21	Light-driven ion-translocating rhodopsins in marine bacteria. Trends in Microbiology, 2015, 23, 91-98.	3.5	97
22	Casting light on Asgardarchaeota metabolism in a sunlit microoxic niche. Nature Microbiology, 2019, 4, 1129-1137.	5.9	96
23	Excited-state dynamics of rhodopsin probed by femtosecond fluorescence spectroscopy. Chemical Physics Letters, 2001, 334, 271-276.	1.2	94
24	Water Molecules in the Schiff Base Region of Bacteriorhodopsin. Journal of the American Chemical Society, 2003, 125, 13312-13313.	6.6	94
25	Crystal structure of the natural anion-conducting channelrhodopsin GtACR1. Nature, 2018, 561, 343-348.	13.7	93
26	Vibrational Frequency and Dipolar Orientation of the Protonated Schiff Base in Bacteriorhodopsin before and after Photoisomerizationâ€. Biochemistry, 2002, 41, 6026-6031.	1.2	91
27	Direct Observation of the Bridged Water Stretching Vibrations Inside a Protein. Journal of the American Chemical Society, 2000, 122, 11745-11746.	6.6	87
28	FTIR Spectroscopy Reveals Microscopic Structural Changes of the Protein around the Rhodopsin Chromophore upon Photoisomerization. Biochemistry, 1995, 34, 14220-14229.	1.2	84
29	Structural Changes of Water in the Schiff Base Region of Bacteriorhodopsin:â€‰ Proposal of a Hydration Switch Model. Biochemistry, 2003, 42, 2300-2306.	1.2	84
30	Interaction of tryptophan-182 with the retinal 9-methyl group in the L intermediate of bacteriorhodopsin. Biochemistry, 1995, 34, 577-582.	1.2	83
31	Hydration switch model for the proton transfer in the Schiff base region of bacteriorhodopsin. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1658, 72-79.	0.5	82
32	Tight Asp-85-Thr-89 association during the pump switch of bacteriorhodopsin. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 1571-1576.	3.3	81
33	Protein Structural Changes in Bacteriorhodopsin upon Photoisomerization As Revealed by Polarized FTIR Spectroscopy. Journal of Physical Chemistry B, 1998, 102, 7899-7905.	1.2	80
34	Oligomeric states of microbial rhodopsins determined by high-speed atomic force microscopy and circular dichroic spectroscopy. Scientific Reports, 2018, 8, 8262.	1.6	76
35	Photoreaction of the Cysteine Sâ˜'H Group in the LOV2 Domain ofAdiantumPhytochrome3. Journal of the American Chemical Society, 2002, 124, 11840-11841.	6.6	75
36	Water and Peptide Backbone Structure in the Active Center of Bovine Rhodopsinâ€. Biochemistry, 1997, 36, 6164-6170.	1.2	74

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37	A unique choanoflagellate enzyme rhodopsin exhibits light-dependent cyclic nucleotide phosphodiesterase activity. Journal of Biological Chemistry, 2017, 292, 7531-7541.	1.6	74
38	Excited-state dynamics of a protonated Schiff base of all-trans retinal in methanol probed by femtosecond fluorescence measurement. Chemical Physics Letters, 1993, 216, 126-172.	1.2	73
39	FTIR Study of the Retinal Schiff Base and Internal Water Molecules of Proteorhodopsin. Biochemistry, 2007, 46, 5365-5373.	1.2	73
40	Structural Changes of Water Molecules during the Photoactivation Processes in Bovine Rhodopsinâ€. Biochemistry, 2003, 42, 9619-9625.	1.2	72
41	Photochromism ofAnabaenaSensory Rhodopsin. Journal of the American Chemical Society, 2007, 129, 8644-8649.	6.6	71
42	Crystal structure of heliorhodopsin. Nature, 2019, 574, 132-136.	13.7	71
43	Light-Driven Sodium-Pumping Rhodopsin: A New Concept of Active Transport. Chemical Reviews, 2018, 118, 10646-10658.	23.0	70
44	Rhodopsin Emission in Real Time:Â A New Aspect of the Primary Event in Vision. Journal of the American Chemical Society, 1998, 120, 9706-9707.	6.6	67
45	Hydrogen-Bonding Alterations of the Protonated Schiff Base and Water Molecule in the Chloride Pump ofNatronobacterium pharaonisâ€. Biochemistry, 2005, 44, 12279-12286.	1.2	67
46	Structural mechanisms of selectivity and gating in anion channelrhodopsins. Nature, 2018, 561, 349-354.	13.7	67
47	Structural Change of Threonine 89 upon Photoisomerization in Bacteriorhodopsin As Revealed by Polarized FTIR Spectroscopyâ€. Biochemistry, 1999, 38, 9676-9683.	1.2	65
48	Role of Hydrogen-Bond Network in Energy Storage of Bacteriorhodopsin's Light-Driven Proton Pump Revealed by ab Initio Normal-Mode Analysis. Journal of the American Chemical Society, 2004, 126, 10516-10517.	6.6	65
49	Active Internal Waters in the Bacteriorhodopsin Photocycle. A Comparative Study of the L and M Intermediates at Room and Cryogenic Temperatures by Infrared Spectroscopy. Biochemistry, 2008, 47, 4071-4081.	1.2	65
50	A Blue-shifted Light-driven Proton Pump for Neural Silencing. Journal of Biological Chemistry, 2013, 288, 20624-20632.	1.6	65
51	Schizorhodopsins: A family of rhodopsins from Asgard archaea that function as light-driven inward H ⁺ pumps. Science Advances, 2020, 6, eaaz2441.	4.7	65
52	Internal Water Molecules of pharaonis Phoborhodopsin Studied by Low-Temperature Infrared Spectroscopy. Biochemistry, 2001, 40, 15693-15698.	1.2	64
53	A Microbial Rhodopsin with a Unique Retinal Composition Shows Both Sensory Rhodopsin II and Bacteriorhodopsin-like Properties. Journal of Biological Chemistry, 2011, 286, 5967-5976.	1.6	62
54	FTIR Spectroscopy of the K Photointermediate ofNeurosporaRhodopsin:Â Structural Changes of the Retinal, Protein, and Water Molecules after Photoisomerizationâ€. Biochemistry, 2004, 43, 9636-9646.	1.2	61

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55	Salinibacter Sensory Rhodopsin. Journal of Biological Chemistry, 2008, 283, 23533-23541.	1.6	61
56	Toward Automatic Rhodopsin Modeling as a Tool for High-Throughput Computational Photobiology. Journal of Chemical Theory and Computation, 2016, 12, 6020-6034.	2.3	61
57	Engineering an Inward Proton Transport from a Bacterial Sensor Rhodopsin. Journal of the American Chemical Society, 2009, 131, 16439-16444.	6.6	60
58	Water-Containing Hydrogen-Bonding Network in the Active Center of Channelrhodopsin. Journal of the American Chemical Society, 2014, 136, 3475-3482.	6.6	59
59	Spectroscopic and Kinetic Evidence on How Bacteriorhodopsin Accomplishes Vectorial Proton Transport under Functional Conditions. Journal of the American Chemical Society, 2009, 131, 5891-5901.	6.6	58
60	Photoisomerization mechanism of the rhodopsin chromophore: picosecond photolysis of pigment containing 11-cis-locked eight-membered ring retinal.. Proceedings of the National Academy of Sciences of the United States of America, 1993, 90, 4072-4076.	3.3	57
61	FTIR Spectroscopy of the All-Trans Form ofAnabaenaSensory Rhodopsin at 77 K:Â Hydrogen Bond of a Water between the Schiff Base and Asp75â€. Biochemistry, 2005, 44, 12287-12296.	1.2	57
62	FTIR Study of the Photoisomerization Processes in the 13-cis and All-trans Forms of Anabaena Sensory Rhodopsin at 77 K. Biochemistry, 2006, 45, 4362-4370.	1.2	57
63	Time-Resolved Fourier Transform Infrared Study of Structural Changes in the Last Steps of the Photocycles of Glu-204 and Leu-93 Mutants of Bacteriorhodopsin. Biochemistry, 1997, 36, 5134-5141.	1.2	56
64	Interaction between Na⁺ Ion and Carboxylates of the PomAâ€"PomB Stator Unit Studied by ATR-FTIR Spectroscopy. Biochemistry, 2009, 48, 11699-11705.	1.2	55
65	Color Vision: â€œOH-Siteâ€•Rule for Seeing Red and Green. Journal of the American Chemical Society, 2012, 134, 10706-10712.	6.6	55
66	Thermal and Spectroscopic Characterization of a Proton Pumping Rhodopsin from an Extreme Thermophile. Journal of Biological Chemistry, 2013, 288, 21581-21592.	1.6	55
67	Local and distant protein structural changes on photoisomerization of the retinal in bacteriorhodopsin. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 4643-4648.	3.3	54
68	Functional Importance of the Interhelical Hydrogen Bond between Thr204 and Tyr174 of Sensory Rhodopsin II and Its Alteration during the Signaling Process. Journal of Biological Chemistry, 2006, 281, 34239-34245.	1.6	54
69	Light Signal Transduction Pathway from Flavin Chromophore to the JÎ± Helix of Arabidopsis Phototropin1. Biophysical Journal, 2009, 96, 2771-2778.	0.2	54
70	Structural Changes in Bacteriorhodopsin in Response to Alternate Illumination Observed by Highâ€Speed Atomic Force Microscopy. Angewandte Chemie - International Edition, 2011, 50, 4410-4413.	7.2	54
71	The photochemistry of sodium ion pump rhodopsin observed by watermarked femto- to submillisecond stimulated Raman spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 24729-24736.	1.3	54
72	Cysteine Sâˆ'H as a Hydrogen-Bonding Probe in Proteins. Journal of the American Chemical Society, 1998, 120, 5828-5829.	6.6	53

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73	Red-shifting mutation of light-driven sodium-pump rhodopsin. Nature Communications, 2019, 10, 1993.	5.8	53
74	Comparative Investigation of the LOV1 and LOV2 Domains inAdiantumPhytochrome3â€. Biochemistry, 2005, 44, 7427-7434.	1.2	52
75	Structural Changes of the Complex betweenpharaonisPhoborhodopsin and Its Cognate Transducer upon Formation of the M Photointermediateâ€. Biochemistry, 2005, 44, 2909-2915.	1.2	52
76	Converting a Light-Driven Proton Pump into a Light-Gated Proton Channel. Journal of the American Chemical Society, 2015, 137, 3291-3299.	6.6	52
77	Primary photochemical events in halorhodopsin studied by subpicosecond time-resolved spectroscopy. The Journal of Physical Chemistry, 1992, 96, 6066-6071.	2.9	51
78	Strongly hydrogen-bonded water molecules in the Schiff base region of rhodopsins. Photochemical and Photobiological Sciences, 2005, 4, 661.	1.6	51
79	FTIR Spectroscopy of a Light-Driven Compatible Sodium Ion-Proton Pumping Rhodopsin at 77 K. Journal of Physical Chemistry B, 2014, 118, 4784-4792.	1.2	51
80	Ultrafast Photoreaction Dynamics of a Light-Driven Sodium-Ion-Pumping Retinal Protein from <i>Krokinobacter eikastus</i> Revealed by Femtosecond Time-Resolved Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2015, 6, 4481-4486.	2.1	51
81	Protein-Bound Water as the Determinant of Asymmetric Functional Conversion between Light-Driven Proton and Chloride Pumps. Biochemistry, 2012, 51, 4677-4684.	1.2	50
82	Remote control of neural function by X-ray-induced scintillation. Nature Communications, 2021, 12, 4478.	5.8	50
83	Spectroscopic Study of a Light-Driven Chloride Ion Pump from Marine Bacteria. Journal of Physical Chemistry B, 2014, 118, 11190-11199.	1.2	49
84	Kinetic Analysis of H⁺â€“Na⁺ Selectivity in a Light-Driven Na⁺-Pumping Rhodopsin. Journal of Physical Chemistry Letters, 2015, 6, 5111-5115.	2.1	49
85	Asymmetric Functional Conversion of Eubacterial Light-driven Ion Pumps. Journal of Biological Chemistry, 2016, 291, 9883-9893.	1.6	48
86	Identification of the CO Stretching Vibrations of FMN and Peptide Backbone by13C-Labeling of the LOV2 Domain ofAdiantumPhytochrome3. Biochemistry, 2006, 45, 15384-15391.	1.2	47
87	Strong Donation of the Hydrogen Bond of Tyrosine during Photoactivation of the BLUF Domain. Journal of Physical Chemistry Letters, 2011, 2, 1015-1019.	2.1	47
88	Water Structural Changes Involved in the Activation Process of Photoactive Yellow Proteinâ€. Biochemistry, 2000, 39, 7902-7909.	1.2	46
89	X-ray Crystallographic Structure and Oligomerization of Gloeobacter Rhodopsin. Scientific Reports, 2019, 9, 11283.	1.6	46
90	Biophysics of rhodopsins and optogenetics. Biophysical Reviews, 2020, 12, 355-361.	1.5	46

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91	Role of trimerâ€“trimer interaction of bacteriorhodopsin studied by optical spectroscopy and high-speed atomic force microscopy. Journal of Structural Biology, 2013, 184, 2-11.	1.3	45
92	Nanosecond time-resolved infrared spectroscopy distinguishes two K species in the bacteriorhodopsin photocycle. Biophysical Journal, 1995, 68, 2073-2080.	0.2	44
93	The Role of the NDQ Motif in Sodiumâ€Pumping Rhodopsins. Angewandte Chemie - International Edition, 2015, 54, 11536-11539.	7.2	42
94	Mutant of a Light-Driven Sodium Ion Pump Can Transport Cesium Ions. Journal of Physical Chemistry Letters, 2016, 7, 51-55.	2.1	42
95	Strongly Hydrogen-Bonded Water Molecule Present near the Retinal Chromophore ofLeptosphaeriaRhodopsin, the Bacteriorhodopsin-like Proton Pump from a Eukaryoteâ€. Biochemistry, 2005, 44, 15159-15166.	1.2	41
96	Ultrafast Pumpâˆ'Probe Study of the Primary Photoreaction Process in <i>pharaonis</i> Halorhodopsin: Halide Ion Dependence and Isomerization Dynamics. Journal of Physical Chemistry B, 2008, 112, 12795-12800.	1.2	41
97	Time-resolved serial femtosecond crystallography reveals early structural changes in channelrhodopsin. ELife, 2021, 10, .	2.8	41
98	Fluorescence Enhancement of a Microbial Rhodopsin via Electronic Reprogramming. Journal of the American Chemical Society, 2019, 141, 262-271.	6.6	40
99	Isomer-Specific Interaction of the Retinal Chromophore with Threonine-118 in Rhodopsinâ€. Journal of Physical Chemistry A, 2002, 106, 1969-1975.	1.1	39
100	Low-Temperature FTIR Study of Gloeobacter Rhodopsin: Presence of Strongly Hydrogen-Bonded Water and Long-Range Structural Protein Perturbation upon Retinal Photoisomerization. Biochemistry, 2010, 49, 3343-3350.	1.2	39
101	Hydrogen Bonding Environments in the Photocycle Process around the Flavin Chromophore of the AppA-BLUF domain. Journal of the American Chemical Society, 2018, 140, 11982-11991.	6.6	39
102	Existence of Two L Photointermediates of Halorhodopsin fromHalobacterium salinarum, Differing in Their Protein and Water FTIR Bandsâ€. Biochemistry, 1999, 38, 9449-9455.	1.2	38
103	Structural Changes in the Schiff Base Region of Squid Rhodopsin upon Photoisomerization Studied by Low-Temperature FTIR Spectroscopyâ€. Biochemistry, 2006, 45, 2845-2851.	1.2	38
104	Absolute absorption spectra of batho- and photorhodopsins at room temperature. Picosecond laser photolysis of rhodopsin in polyacrylamide. Biophysical Journal, 1989, 56, 453-457.	0.2	37
105	Halide Binding by the D212N Mutant of Bacteriorhodopsin Affects Hydrogen Bonding of Water in the Active Site. Biochemistry, 2007, 46, 7525-7535.	1.2	37
106	Effects of Chloride Ion Binding on the Photochemical Properties of Salinibacter Sensory Rhodopsin I. Journal of Molecular Biology, 2009, 392, 48-62.	2.0	37
107	Protein Fluctuations as the Possible Origin of the Thermal Activation of Rod Photoreceptors in the Dark. Journal of the American Chemical Society, 2010, 132, 5693-5703.	6.6	37
108	Molecular properties of a DTD channelrhodopsin from <i>Guillardia theta</i>. Biophysics and Physicobiology, 2017, 14, 57-66.	0.5	37

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109	Distortion and a Strong Hydrogen Bond in the Retinal Chromophore Enable Sodium-Ion Transport by the Sodium-Ion Pump KR2. Journal of Physical Chemistry B, 2019, 123, 3430-3440.	1.2	36
110	Retinal Proteins: Photochemistry and Optogenetics. Bulletin of the Chemical Society of Japan, 2020, 93, 76-85.	2.0	36
111	Strongly hydrogen-bonded water molecule is observed only in the alkaline form of proteorhodopsin. Chemical Physics, 2006, 324, 705-708.	0.9	35
112	Color Change of Proteorhodopsin by a Single Amino Acid Replacement at a Distant Cytoplasmic Loop. Angewandte Chemie - International Edition, 2008, 47, 3923-3926.	7.2	35
113	A new group of eubacterial light-driven retinal-binding proton pumps with an unusual cytoplasmic proton donor. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1518-1529.	0.5	35
114	Understanding Colour Tuning Rules and Predicting Absorption Wavelengths of Microbial Rhodopsins by Data-Driven Machine-Learning Approach. Scientific Reports, 2018, 8, 15580.	1.6	35
115	Interaction between Photoactivated Rhodopsin and the C-Terminal Peptide of Transducin Î±-Subunit Studied by FTIR Spectroscopyâ€. Biochemistry, 1998, 37, 15816-15824.	1.2	34
116	Role of Phe1010 in Light-Induced Structural Changes of the neo1-LOV2 Domain of Adiantum. Biochemistry, 2008, 47, 922-928.	1.2	34
117	Photoreactions and Structural Changes of Anabaena Sensory Rhodopsin. Sensors, 2009, 9, 9741-9804.	2.1	34
118	Key Dynamics of Conserved Asparagine in a Cryptochrome/Photolyase Family Protein by Fourier Transform Infrared Spectroscopy. Biochemistry, 2010, 49, 8882-8891.	1.2	34
119	A Color-Determining Amino Acid Residue of Proteorhodopsin. Biochemistry, 2014, 53, 6032-6040.	1.2	34
120	Essential ion binding residues for Na+ flow in stator complex of the Vibrio flagellar motor. Scientific Reports, 2019, 9, 11216.	1.6	34
121	An FTIR Study of Monkey Greenâ€•and Redâ€Sensitive Visual Pigments. Angewandte Chemie - International Edition, 2010, 49, 891-894.	7.2	33
122	Protein-Bound Water Molecules in Primate Red- and Green-Sensitive Visual Pigments. Biochemistry, 2012, 51, 1126-1133.	1.2	33
123	Resonance Raman Investigation of the Chromophore Structure of Heliorhodopsins. Journal of Physical Chemistry Letters, 2018, 9, 6431-6436.	2.1	33
124	Trp86 â†' Phe Replacement in Bacteriorhodopsin Affects a Water Molecule near Asp85 and Light Adaptationâ€. Biochemistry, 1997, 36, 5493-5498.	1.2	32
125	Altered Hydrogen Bonding of Arg82 during the Proton Pump Cycle of Bacteriorhodopsin:â€‰ A Low-Temperature Polarized FTIR Spectroscopic Study. Biochemistry, 2004, 43, 9439-9447.	1.2	32
126	Sodium or Lithium Ion-Binding-Induced Structural Changes in the K-Ring of V-ATPase from Enterococcus hirae Revealed by ATR-FTIR Spectroscopy. Journal of the American Chemical Society, 2011, 133, 2860-2863.	6.6	32

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127	ATR-FTIR Spectroscopy Revealing the Different Vibrational Modes of the Selectivity Filter Interacting with K⁺ and Na⁺ in the Open and Collapsed Conformations of the KcsA Potassium Channel. Journal of Physical Chemistry Letters, 2012, 3, 3806-3810.	2.1	32
128	Mutation Study of Heliorhodopsin 48C12. Biochemistry, 2018, 57, 5041-5049.	1.2	32
129	Bathoiodopsin, a primary intermediate of iodopsin at physiological temperature.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 8908-8912.	3.3	31
130	Different Role of the JÎ± Helix in the Light-Induced Activation of the LOV2 Domains in Various Phototropins. Biochemistry, 2009, 48, 7621-7628.	1.2	31
131	Structure/Function Study of Photoreceptive Proteins by FTIR Spectroscopy. Bulletin of the Chemical Society of Japan, 2020, 93, 904-926.	2.0	31
132	Internal water molecules of light-driven chloride pump proteins. Chemical Physics Letters, 2004, 392, 330-333.	1.2	30
133	Spectroscopic Study of Proton-Transfer Mechanism of Inward Proton-Pump Rhodopsin, <i>Parvularcula oceani</i> Xenorhodopsin. Journal of Physical Chemistry B, 2018, 122, 6453-6461.	1.2	30
134	Structural insights into the mechanism of rhodopsin phosphodiesterase. Nature Communications, 2020, 11, 5605.	5.8	30
135	Chloride Effect on Iodopsin Studied by Low-Temperature Visible and Infrared Spectroscopiesâ€. Biochemistry, 2001, 40, 1385-1392.	1.2	29
136	Hydrogen-bonding changes of internal water molecules upon the actions of microbial rhodopsins studied by FTIR spectroscopy. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 598-605.	0.5	29
137	Single Hydrogen Bond Donation from Flavin N₅ to Proximal Asparagine Ensures FAD Reduction in DNA Photolyase. Journal of the American Chemical Society, 2016, 138, 4368-4376.	6.6	29
138	Heliorhodopsins are absent in diderm (Gramâ€negative) bacteria: Some thoughts and possible implications for activity. Environmental Microbiology Reports, 2019, 11, 419-424.	1.0	29
139	Mechanism of Inward Proton Transport in an Antarctic Microbial Rhodopsin. Journal of Physical Chemistry B, 2020, 124, 4851-4872.	1.2	29
140	Proton Release Group of <i>pharaonis</i> Phoborhodopsin Revealed by ATR-FTIR Spectroscopy. Biochemistry, 2009, 48, 1595-1603.	1.2	28
141	Origin of the Reactive and Nonreactive Excited States in the Primary Reaction of Rhodopsins: pH Dependence of Femtosecond Absorption of Light-Driven Sodium Ion Pump Rhodopsin KR2. Journal of Physical Chemistry B, 2018, 122, 4784-4792.	1.2	28
142	A Chimera Na+-Pump Rhodopsin as an Effective Optogenetic Silencer. PLoS ONE, 2016, 11, e0166820.	1.1	28
143	FTIR Spectroscopy of the O Photointermediate inpharaonisPhoborhodopsinâ€. Biochemistry, 2004, 43, 5204-5212.	1.2	27
144	Magnetic and Infrared Properties of the Azide Complex of (2,7,12,17-Tetrapropylporphycenato)iron(III): A Novel Admixing Mechanism of theS = 5/2 andS = 3/2 States. European Journal of Inorganic Chemistry, 2007, 2007, 3188-3194.	1.0	27

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145	Structural Changes of Salinibacter Sensory Rhodopsin I upon Formation of the K and M Photointermediates. Biochemistry, 2008, 47, 12750-12759.	1.2	27
146	100 fs photo-isomerization with vibrational coherences but low quantum yield in Anabaena Sensory Rhodopsin. Physical Chemistry Chemical Physics, 2015, 17, 25429-25439.	1.3	27
147	Role of Asn112 in a Light-Driven Sodium Ion-Pumping Rhodopsin. Biochemistry, 2016, 55, 5790-5797.	1.2	27
148	DEPENDENCY OF PHOTON DENSITY ON PRIMARY PROCESS OF CATTLE RHODOPSIN. Photochemistry and Photobiology, 1989, 49, 181-184.	1.3	26
149	Interaction of Asn105 with the Retinal Chromophore during Photoisomerization of pharaonis Phoborhodopsin. Biochemistry, 2002, 41, 4554-4559.	1.2	26
150	Vibrational Modes of the Protonated Schiff Base inpharaonisPhoborhodopsinâ€. Biochemistry, 2003, 42, 7801-7806.	1.2	26
151	Assignment of the Hydrogen-Out-Of-Plane and -in-Plane Vibrations of the Retinal Chromophore in the K Intermediate ofpharaonisPhoborhodopsinâ€. Biochemistry, 2006, 45, 11836-11843.	1.2	26
152	Dynamics of Dangling Bonds of Water Molecules in <i>pharaonis</i> Halorhodopsin during Chloride Ion Transportation. Journal of Physical Chemistry Letters, 2012, 3, 2964-2969.	2.1	26
153	Solid-State Nuclear Magnetic Resonance Structural Study of the Retinal-Binding Pocket in Sodium Ion Pump Rhodopsin. Biochemistry, 2017, 56, 543-550.	1.2	26
154	Crystal structure of schizorhodopsin reveals mechanism of inward proton pumping. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	26
155	Functional characterization of sodium-pumping rhodopsins with different pumping properties. PLoS ONE, 2017, 12, e0179232.	1.1	26
156	Polarized FTIR Spectroscopy Distinguishes Peptide Backbone Changes in the M and N Photointermediates of Bacteriorhodopsin. Journal of the American Chemical Society, 1998, 120, 4546-4547.	6.6	25
157	Internal Water Molecules of the Proton-Pumping Halorhodopsin in the Presence of Azide. Journal of the American Chemical Society, 2006, 128, 6294-6295.	6.6	25
158	Structural Changes in Bacteriorhodopsin following Retinal Photoisomerization from the 13-Cis Form. Biochemistry, 2006, 45, 10674-10681.	1.2	25
159	Heterogeneous Environment of the Sâ˘'H Group of Cys966 near the Flavin Chromophore in the LOV2 Domain of Adiantum Neochrome1. Biochemistry, 2007, 46, 10258-10265.	1.2	25
160	Time-resolved FTIR study of light-driven sodium pump rhodopsins. Physical Chemistry Chemical Physics, 2018, 20, 17694-17704.	1.3	25
161	Primary Processes During the Light-signal Transduction of Phototropin. Photochemistry and Photobiology, 2007, 83, 470-470.	1.3	24
162	Ultrafast Dynamics of Heliorhodopsins. Journal of Physical Chemistry B, 2019, 123, 2507-2512.	1.2	24

#	Article	IF	Citations
163	Excited-State Dynamics ofpharaonisPhoborhodopsin Probed by Femtosecond Fluorescence Spectroscopyâ€. Journal of Physical Chemistry A, 2002, 106, 2091-2095.	1.1	23
164	FTIR Study of Light-Dependent Activation and DNA Repair Processes of (6â€"4) Photolyase. Biochemistry, 2011, 50, 3591-3598.	1.2	23
165	The lightâ€driven sodium ion pump: A new player in rhodopsin research. BioEssays, 2016, 38, 1274-1282.	1.2	23
166	Rhodopsin-bestrophin fusion proteins from unicellular algae form gigantic pentameric ion channels. Nature Structural and Molecular Biology, 2022, 29, 592-603.	3.6	23
167	Transmembrane Signaling Mediated by Water in Bovine Rhodopsin. Photochemistry and Photobiology, 1997, 66, 796-801.	1.3	22
168	Low-frequency dynamics of bacteriorhodopsin studied by terahertz time-domain spectroscopy. Physical Chemistry Chemical Physics, 2010, 12, 10255.	1.3	22
169	Spectral Tuning Mechanism of Primate Blue-sensitive Visual Pigment Elucidated by FTIR Spectroscopy. Scientific Reports, 2017, 7, 4904.	1.6	22
170	Spectroscopic study of the transmembrane domain of a rhodopsinâ€"phosphodiesterase fusion protein from a unicellular eukaryote. Journal of Biological Chemistry, 2019, 294, 3432-3443.	1.6	22
171	Retinal Binding Proteins. , 0, , 53-75.		22
172	Hydrogen-Bonding Interaction of the Protonated Schiff Base with Halides in a Chloride-Pumping Bacteriorhodopsin Mutant. Biochemistry, 2006, 45, 10633-10640.	1.2	21
173	Clay Mimics Color Tuning in Visual Pigments. Angewandte Chemie - International Edition, 2007, 46, 8010-8012.	7.2	21
174	Structural Evolution of a Retinal Chromophore in the Photocycle of Halorhodopsin from <i>Natronobacterium pharaonis</i>. Journal of Physical Chemistry A, 2018, 122, 2411-2423.	1.1	21
175	Hydration and Temperature Similarly Affect Light-Induced Protein Structural Changes in the Chromophoric Domain of Phototropin. Biochemistry, 2007, 46, 7016-7021.	1.2	20
176	Detection of Distinct Î±-Helical Rearrangements of Cyclobutane Pyrimidine Dimer Photolyase upon Substrate Binding by Fourier Transform Infrared Spectroscopy. Biochemistry, 2013, 52, 1019-1027.	1.2	20
177	Identical Hydrogen-Bonding Strength of the Retinal Schiff Base between Primate Green- and Red-Sensitive Pigments: New Insight into Color Tuning Mechanism. Journal of Physical Chemistry Letters, 2015, 6, 1130-1133.	2.1	20
178	Functional Conversion of CPD and (6â€"4) Photolyases by Mutation. Biochemistry, 2016, 55, 4173-4183.	1.2	20
179	FTIR Analysis of a Lightâ€driven Inward Protonâ€pumping Rhodopsin at 77 K. Photochemistry and Photobiology, 2017, 93, 1381-1387.	1.3	20
180	Quantum yields for the light adaptations in Anabaena sensory rhodopsin and bacteriorhodopsin. Chemical Physics Letters, 2008, 453, 105-108.	1.2	19

#	Article	IF	Citations
181	Conversion of microbial rhodopsins: insights into functionally essential elements and rational protein engineering. Biophysical Reviews, 2017, 9, 861-876.	1.5	19
182	Unique Hydrogen Bonds in Membrane Protein Monitored by Whole Mid-IR ATR Spectroscopy in Aqueous Solution. Journal of Physical Chemistry B, 2018, 122, 165-170.	1.2	19
183	Ion Channel Properties of a Cation Channelrhodopsin, Gt_CCR4. Applied Sciences (Switzerland), 2019, 9, 3440.	1.3	19
184	Deprotonation of Glu234 during the photocycle of Natronomonas pharaonis halorhodopsin. Chemical Physics Letters, 2006, 432, 545-547.	1.2	18
185	Fourier-Transform Infrared Study of the Photoactivation Process of <i>Xenopus</i> (6â€“4) Photolyase. Biochemistry, 2012, 51, 5774-5783.	1.2	18
186	Effect of point mutations on the ultrafast photo-isomerization of Anabaena sensory rhodopsin. Faraday Discussions, 2018, 207, 55-75.	1.6	18
187	Zn²⁺-Binding to the Voltage-Gated Proton Channel Hv1/VSOP. Journal of Physical Chemistry B, 2018, 122, 9076-9080.	1.2	18
188	Anion binding to mutants of the Schiff base counterion in heliorhodopsin 48C12. Physical Chemistry Chemical Physics, 2019, 21, 23663-23671.	1.3	18
189	Zinc Binding to Heliorhodopsin. Journal of Physical Chemistry Letters, 2020, 11, 8604-8609.	2.1	17
190	Specific residues in the cytoplasmic domain modulate photocurrent kinetics of channelrhodopsin from Klebsormidium nitens. Communications Biology, 2021, 4, 235.	2.0	17
191	Chimeric Proton-Pumping Rhodopsins Containing the Cytoplasmic Loop of Bovine Rhodopsin. PLoS ONE, 2014, 9, e91323.	1.1	16
192	Mapping the ultrafast vibrational dynamics of all-<i>trans</i>and 13-<i>cis</i>retinal isomerization in Anabaena Sensory Rhodopsin. Physical Chemistry Chemical Physics, 2018, 20, 30159-30173.	1.3	16
193	Importance of Alanine at Position 178 in Proteorhodopsin for Absorption of Prevalent Ambient Light in the Marine Environment. Biochemistry, 2010, 49, 2416-2423.	1.2	15
194	Substrate Assignment of the (6-4) Photolyase Reaction by FTIR Spectroscopy. Journal of Physical Chemistry Letters, 2011, 2, 2774-2777.	2.1	15
195	Chimeric Microbial Rhodopsins Containing the Third Cytoplasmic Loop of Bovine Rhodopsin. Biophysical Journal, 2011, 100, 1874-1882.	0.2	15
196	Long-distance perturbation on Schiff baseâ€“counterion interactions by His30 and the extracellular Na⁺-binding site in <i>Krokinobacter</i> rhodopsin 2. Physical Chemistry Chemical Physics, 2018, 20, 8450-8455.	1.3	15
197	Effect of Temperature and Hydration Level on Purple Membrane Dynamics Studied Using Broadband Dielectric Spectroscopy from Sub-GHz to THz Regions. Journal of Physical Chemistry B, 2018, 122, 1367-1377.	1.2	15
198	Allosteric Communication with the Retinal Chromophore upon Ion Binding in a Light-Driven Sodium Ion-Pumping Rhodopsin. Biochemistry, 2020, 59, 520-529.	1.2	15

#	Article	IF	Citations
199	Infrared spectroscopic analysis on structural changes around the protonated Schiff base upon retinal isomerization in light-driven sodium pump KR2. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148190.	0.5	15
200	Exploration of natural red-shifted rhodopsins using a machine learning-based Bayesian experimental design. Communications Biology, 2021, 4, 362.	2.0	15
201	FTIR Spectroscopy of Flavin-Binding Photoreceptors. Methods in Molecular Biology, 2014, 1146, 361-376.	0.4	15
202	Assignment of the Vibrational Modes of the Chromophores of Iodopsin and Bathoiodopsin: Low-Temperature Fourier Transform Infrared Spectroscopy of 13C- and 2H-Labeled Iodopsins. Biochemistry, 2006, 45, 1285-1294.	1.2	14
203	â€œ<i>In situ</i>â€•observation of the role of chloride ion binding to monkey green sensitive visual pigment by ATR-FTIR spectroscopy. Physical Chemistry Chemical Physics, 2018, 20, 3381-3387.	1.3	14
204	Role of Gln114 in Spectral Tuning of a Long-Wavelength Sensitive Visual Pigment. Biochemistry, 2019, 58, 2944-2952.	1.2	14
205	Structural basis for unique color tuning mechanism in heliorhodopsin. Biochemical and Biophysical Research Communications, 2020, 533, 262-267.	1.0	14
206	Heliorhodopsin Evolution Is Driven by Photosensory Promiscuity in Monoderms. MSphere, 2021, 6, e0066121.	1.3	14
207	Unique temperature dependence in the adduct formation between FMN and cysteine S-H group in the LOV2 domain of Adiantum phytochrome3. Chemical Physics Letters, 2005, 410, 59-63.	1.2	13
208	Flavin Adenine Dinucleotide Chromophore Charge Controls the Conformation of Cyclobutane Pyrimidine Dimer Photolyase Î±-Helices. Biochemistry, 2014, 53, 5864-5875.	1.2	13
209	Low-temperature FTIR spectroscopy provides evidence for protein-bound water molecules in eubacterial light-driven ion pumps. Physical Chemistry Chemical Physics, 2018, 20, 3165-3171.	1.3	13
210	Hydrogen-bonding network at the cytoplasmic region of a light-driven sodium pump rhodopsin KR2. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 684-691.	0.5	13
211	Novel optogenetics tool: Gt_CCR4, a light-gated cation channel with high reactivity to weak light. Biophysical Reviews, 2020, 12, 453-459.	1.5	13
212	Saccharibacteria harness light energy using type-1 rhodopsins that may rely on retinal sourced from microbial hosts. ISME Journal, 2022, 16, 2056-2059.	4.4	13
213	Effect of Anion Binding on Iodopsin Studied by Low-Temperature Fourier Transform Infrared Spectroscopy. Biochemistry, 1999, 38, 11749-11754.	1.2	12
214	Steady state emission of the fluorescent intermediate of Anabaena Sensory Rhodopsin as a function of light adaptation conditions. Chemical Physics Letters, 2013, 587, 75-80.	1.2	12
215	FTIR study of CPD photolyase with substrate in single strand DNA. Biophysics (Nagoya-shi, Japan), 2015, 11, 39-45.	0.4	12
216	Production of a Light-Gated Proton Channel by Replacing the Retinal Chromophore with Its Synthetic Vinylene Derivative. Journal of Physical Chemistry Letters, 2018, 9, 2857-2862.	2.1	12

#	Article	IF	Citations
217	A Unified View on Varied Ultrafast Dynamics of the Primary Process in Microbial Rhodopsins. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
218	Intramolecular Interactions That Induce Helical Rearrangement upon Rhodopsin Activation. Journal of Biological Chemistry, 2014, 289, 13792-13800.	1.6	11
219	Electron Fate and Mutational Robustness in the Mechanism of (6-4)Photolyase-Mediated DNA Repair. ACS Catalysis, 2017, 7, 4835-4845.	5.5	11
220	Unique Photochemistry Observed in a New Microbial Rhodopsin. Journal of Physical Chemistry Letters, 2019, 10, 5117-5121.	2.1	11
221	Redox-induced Protein Structural Changes in Cytochrome bo Revealed by Fourier Transform Infrared Spectroscopy and [13C]Tyr Labeling. Journal of Biological Chemistry, 2005, 280, 32821-32826.	1.6	10
222	DEPENDENCY OF APPARENT RELATIVE QUANTUM YIELD OF ISORHODOPSIN TO RHODOPSIN ON THE PHOTON DENSITY OF PICOSECOND LASER PULSE. Photochemistry and Photobiology, 1988, 48, 93-97.	1.3	10
223	An inward proton transport using anabaena sensory rhodopsin. Journal of Microbiology, 2011, 49, 1-6.	1.3	10
224	Comparative FTIR Study of a New Fungal Rhodopsin. Journal of Physical Chemistry B, 2012, 116, 11881-11889.	1.2	10
225	Structureâ€affinity insights into the Na+and Ca2+interactions with multiple sites of a sodiumâ€calcium exchanger. FEBS Journal, 2020, 287, 4678-4695.	2.2	10
226	Molecular Properties of New Enzyme Rhodopsins with Phosphodiesterase Activity. ACS Omega, 2020, 5, 10602-10609.	1.6	10
227	Strongly Hydrogen-Bonded Schiff Base and Adjoining Polyene Twisting in the Retinal Chromophore of Schizorhodopsins. Biochemistry, 2021, 60, 3050-3057.	1.2	10
228	Optogenetic reprogramming of carbon metabolism using light-powering microbial proton pump systems. Metabolic Engineering, 2022, 72, 227-236.	3.6	10
229	Ligand Binding-Induced Structural Changes in the M2Muscarinic Acetylcholine Receptor Revealed by Vibrational Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 7270-7276.	2.1	9
230	Acidâ€"base equilibrium of the chromophore counterion results in distinct photoisomerization reactivity in the primary event of proteorhodopsin. Physical Chemistry Chemical Physics, 2019, 21, 25728-25734.	1.3	9
231	Molecular Properties and Optogenetic Applications of Enzymerhodopsins. Advances in Experimental Medicine and Biology, 2021, 1293, 153-165.	0.8	9
232	TAT Rhodopsin Is an Ultraviolet-Dependent Environmental pH Sensor. Biochemistry, 2021, 60, 899-907.	1.2	9
233	Resonance Raman Determination of Chromophore Structures of Heliorhodopsin Photointermediates. Journal of Physical Chemistry B, 2021, 125, 7155-7162.	1.2	9
234	Inverse Hydrogen-Bonding Change Between the Protonated Retinal Schiff Base and Water Molecules upon Photoisomerization in Heliorhodopsin 48C12. Journal of Physical Chemistry B, 2021, 125, 8331-8341.	1.2	9

#	Article	IF	Citations
235	Ion transport activity and optogenetics capability of light-driven Na+-pump KR2. PLoS ONE, 2021, 16, e0256728.	1.1	9
236	Pro219 is an electrostatic color determinant in the light-driven sodium pump KR2. Communications Biology, 2021, 4, 1185.	2.0	9
237	<i>Cis</i>â€“<i>Trans</i> Reisomerization Precedes Reprotonation of the Retinal Chromophore in the Photocycle of Schizorhodopsin 4. Angewandte Chemie - International Edition, 2022, 61, .	7.2	9
238	L105K Mutant of Proteorhodopsin. Biochemistry, 2012, 51, 3198-3204.	1.2	8
239	His166 Is the Schiff Base Proton Acceptor in Attractant Phototaxis Receptor Sensory Rhodopsin I. Biochemistry, 2014, 53, 5923-5929.	1.2	8
240	Na+ Transport by a Sodium Ion Pump Rhodopsin is Resistant to Environmental Change: A Comparison of the Photocycles of the Na+ and Li+ Transport Processes. Chemistry Letters, 2015, 44, 294-296.	0.7	8
241	Structural role of two histidines in the (6-4) photolyase reaction. Biophysics and Physicobiology, 2015, 12, 139-144.	0.5	8
242	Infrared spectroscopic studies on the V-ATPase. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 134-141.	0.5	8
243	Structural Changes of the Active Center during the Photoactivation of <i>Xenopus</i> (6â€“4) Photolyase. Biochemistry, 2016, 55, 715-723.	1.2	8
244	History and Perspectives of Ion-Transporting Rhodopsins. Advances in Experimental Medicine and Biology, 2021, 1293, 3-19.	0.8	8
245	Hydrogen Bonding Environment of the N3â€“H Group of Flavin Mononucleotide in the Light Oxygen Voltage Domains of Phototropins. Biochemistry, 2017, 56, 3099-3108.	1.2	7
246	FTIR Study of S180A Mutant of Primate Red-sensitive Pigment. Chemistry Letters, 2019, 48, 1142-1144.	0.7	7
247	Engineered Functional Recovery of Microbial Rhodopsin Without Retinalâ€Binding Lysine. Photochemistry and Photobiology, 2019, 95, 1116-1121.	1.3	7
248	Detection of a protein-bound water vibration of halorhodopsin in aqueous solution. Biophysics (Nagoya-shi, Japan), 2013, 9, 167-172.	0.4	7
249	Light-induced structural changes during early photo-intermediates of the eubacterial Cl^{âˆ’}pump Fulvimarina rhodopsin observed by FTIR difference spectroscopy. RSC Advances, 2016, 6, 383-392.	1.7	6
250	Potential Second-Harmonic Ghost Bands in Fourier Transform Infrared (FT-IR) Difference Spectroscopy of Proteins. Applied Spectroscopy, 2018, 72, 956-963.	1.2	6
251	Point Mutation of <i>Anabaena</i> Sensory Rhodopsin Enhances Ground-State Hydrogen Out-of-Plane Wag Raman Activity. Journal of Physical Chemistry Letters, 2019, 10, 1012-1017.	2.1	6
252	Role of Thr82 for the unique photochemistry of TAT rhodopsin. Biophysics and Physicobiology, 2021, 18, 108-115.	0.5	6

#	Article	IF	Citations
253	Orientations and water dynamics of photoinduced secondary charge-separated states for magnetoreception by cryptochrome. Communications Chemistry, 2021, 4, .	2.0	6
254	Vibrational Analysis of Internal Water Molecules in Bacteriorhodopsin. Seibutsu Butsuri, 2004, 44, 113-117.	0.0	6
255	Vibrational spectroscopy analysis of ligand efficacy in human M2 muscarinic acetylcholine receptor (M2R). Communications Biology, 2021, 4, 1321.	2.0	6
256	Water structural changes in the activation process of the LOV2 domain of Adiantum phytochrome3. Journal of Molecular Structure, 2005, 735-736, 259-265.	1.8	5
257	Protein-Protein Interaction Changes in an Archaeal Light-Signal Transduction. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-14.	3.0	5
258	Anomalous pH Effect of Blue Proteorhodopsin. Journal of Physical Chemistry Letters, 2012, 3, 800-804.	2.1	5
259	Mapping of the local environmental changes in proteins by cysteine scanning. Biophysics (Nagoya-shi,) Tj ETQq1 1 0.784314 rgBT /Over	0.4	5
260	Gate-keeper of ion transportâ€"a highly conserved helix-3 tryptophan in a channelrhodopsin chimera, C1C2/ChRWR. Biophysics and Physicobiology, 2020, 17, 59-70.	0.5	5
261	History and Perspectives of Light-Sensing Proteins. , 2015, , 3-16.		5
262	Calcium Binding to TAT Rhodopsin. Journal of Physical Chemistry B, 2022, 126, 2203-2207.	1.2	5
263	Manipulation of protein-complex function by using an engineered heterotrimeric coiled-coil switch. Organic and Biomolecular Chemistry, 2009, 7, 3102.	1.5	4
264	Chimeric microbial rhodopsins for optical activation of Gs-proteins. Biophysics and Physicobiology, 2017, 14, 183-190.	0.5	4
265	Effect of a bound anion on the structure and dynamics of halorhodopsin from Natronomonas pharaonis. Structural Dynamics, 2019, 6, 054703.	0.9	4
266	Unique Retinal Binding Pocket of Primate Blue-Sensitive Visual Pigment. Biochemistry, 2020, 59, 2602-2607.	1.2	4
267	Disruption of Hydrogen-Bond Network in Rhodopsin Mutations Cause Night Blindness. Journal of Molecular Biology, 2020, 432, 5378-5389.	2.0	4
268	Vibrational analysis of acetylcholine binding to the M₂ receptor. RSC Advances, 2021, 11, 12559-12567.	1.7	4
269	Light-induced difference FTIR spectroscopy of primate blue-sensitive visual pigment at 163 K. Biophysics and Physicobiology, 2021, 18, 40-49.	0.5	4
270	Structural Changes during the Photorepair and Binding Processes of Xenopus (6â€"4) Photolyase with (6â€"4) Photoproducts in Single- and Double-Stranded DNA. Biochemistry, 2021, 60, 3253-3261.	1.2	4

#	Article	IF	Citations
271	Proteinâ€"Protein Interaction of a <i>Pharaonis</i> Halorhodopsin Mutant Forming a Complex with <i>Pharaonis</i> Halobacterial Transducer Protein II Detected by Fourierâ€Transform Infrared Spectroscopy^{â€}. Photochemistry and Photobiology, 2008, 84, 874-879.	1.3	3
272	FTIR study of primate color visual pigments. Biophysics (Nagoya-shi, Japan), 2015, 11, 61-66.	0.4	3
273	ATP binding promotes light-induced structural changes to the protein moiety of Arabidopsis cryptochrome 1. Photochemical and Photobiological Sciences, 2020, 19, 1326-1331.	1.6	3
274	Retinal Vibrations in Bacteriorhodopsin are Mechanically Harmonic but Electrically Anharmonic: Evidence From Overtone and Combination Bands. Frontiers in Molecular Biosciences, 2021, 8, 749261.	1.6	3
275	Photochemistry in Phototropin, a Blue Light Sensor Protein in Plants. Journal of the Chinese Chemical Society, 2006, 53, 67-73.	0.8	2
276	Ion Transport Activity Assay for Microbial Rhodopsin Expressed in Escherichia coli Cells. Bio-protocol, 2021, 11, e4115.	0.2	2
277	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. PLoS ONE, 2020, 15, e0243387.	1.1	2
278	Mapping the ultrafast vibrational dynamics of all-trans and 13-Cis retinal isomerization in Anabaena Sensory Rhodopsin. EPJ Web of Conferences, 2019, 205, 10001.	0.1	1
279	Introduction to the Biophysical Society of Japan (BSJ). Biophysical Reviews, 2019, 11, 265-266.	1.5	1
280	Light-induced difference Fourier-transform infrared spectroscopy of photoreceptive proteins. , 2020, , 23-57.		1
281	A Unified View on Varied Ultrafast Dynamics of the Primary Process in Microbial Rhodopsins. Angewandte Chemie, 0, , .	1.6	1
282	Molecular Origin of the Anomalous pH Effect in Blue Proteorhodopsin. Journal of Physical Chemistry Letters, 2021, 12, 12225-12229.	2.1	1
283	1P412 Identification of the N-H stretch of Asn1008 by FTIR spectroscopy in the LOV2 domain of Adiantum Phytochrome3(17. Light driven system,Poster Session,Abstract,Meeting Program of EABS &BSJ 2006). Seibutsu Butsuri, 2006, 46, S249.	0.0	0
284	1P413 Role of Phe-1010 in the light-induced structural changes of LOV2 domain of Adiantum Phytochrome3(17. Light driven system,Poster Session,Abstract,Meeting Program of EABS &BSJ) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.0	0
285	1P418 FTIR study of Internal Water Molecules in the Schiff Base Region of Proteorhodopsin(17. Light) Tj ETQq1 1 0.784314 rgBT /Overl S251.	0.0	0
286	1P421 FTIR Study of the O Intermediate in the Complex between pharaonis Phoborhodopsin and Its Cognate Transducer(17. Light driven system,Poster Session,Abstract,Meeting Program of EABS &BSJ) Tj ETQq0 0 0 rgBT /Overlock	0.0	0
287	1P441 Color Tuning of the Rhodopsin Chromophore Using Clay(17. Light driven system,Poster) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.0	0
288	1P511 Kinetic analysis of bacteriorhodopsin photocycle by transforming time-resolved FTIR spectroscopic data into a 2D-lifetime distribution(25. New methods and tools (I),Poster) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 57 Td (Se	0.0	0

#	Article	IF	Citations
289	2P306 H-D unexchangeable N-H group of Trp182 in Bacteriorhodopsin(41. Proton and ion) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf S372.	0.0	0
290	2P330 Photochromism of Anabaena sensory rhodopsin(42. Sensory signal transduction,Poster) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70	0.0	0
291	1P436 Structural Changes in the L_2-intermediate of pharaonis Halorhodopsin Studied by FTIR Spectroscopy(17. Light driven system,Poster Session,Abstract,Meeting Program of EABS &BSJ 2006). Seibutsu Butsuri, 2006, 46, S255.	0.0	0
292	2P336 Characteristics of the Rhodopsin Chromophore in Clay Interlayers(Photobiology-photosynthesis, and vision and photoreception,Oral Presentations). Seibutsu Butsuri, 2007, 47, S197.	0.0	0
293	2P357 The transduction mechanism of light-induced conformational changes from the LOV2 domain to the Jα helix in Arabidopsis phot1(Photobiology-Photosynthesis, and vision and photoreception,Oral) Tj ETQq1 1 0.784314 rgBT /Overlock	0.0	0
294	3P229 Protein-protein interaction in the pharaonis phoborhodopsin-pHtrl1 complex under the aqueous environment studied by ATR-FTIR spectroscopy(Photobiology- vision and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 537 Td (photor	0.0	0
295	2P337 Structural fluctuations affecting the retinal-binding pocket in bovine rhodopsin studied by hydrogen/deuterium exchange of Thr118(Photobiology-vision and photoreception,Poster) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	0.0	0
296	3P224 FTIR Study of Nitrate-bound pharaonis Halorhodopsin(Photobiology- vision and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td (ph	0.0	0
297	3P226 Ultrafast Pump-Probe Study of Primary Reaction Dynamics of Halorhodopsin : Halide Dependence and Isomerization Dynamics(Photobiology- vision and photoreception,Poster Presentations). Seibutsu Butsuri, 2007, 47, S259.	0.0	0
298	3P234 Structural changes in the cytoplasmic region of the L photointermediate of Anabaena sensory rhodopsin(Photobiology- vision and photoreception. Actinobiology,Oral Presentations). Seibutsu Butsuri, 2007, 47, S261.	0.0	0
299	3P242 A Proteorhodopsin mutant engineered like a "dry-battery"(Photobiology- vision and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	0.0	0
300	S05I1 FT-IR Study of Protein-Protein Interaction : Rhodopsin as a Model System(Vibrational) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 T	0.0	0
301	3P235 Structural and Interaction Changes of Sensory Rhodopsin I with its Transducer Protein studied by FTIR Spectroscopy.(Photobiology- vision and photoreception,Poster Presentations). Seibutsu Butsuri, 2007, 47, S261.	0.0	0
302	S11I4 How do molecular pumps work?(Discussion on the mechanisms of energy / signal transductions) Tj ETQq0 0 0 rgBT /Overlock 10	0.0	0
303	3P225 Role of proline in the chloride pump of pharaonis Halorhodopsin(Photobiology- vision and) Tj ETQq1 1 0.784314 rgBT /Overlock	0.0	0
304	3P236 Specific Protein-Chromophore Interaction Initiates Light Signal Transduction of pharaonis Sensory Rhodopsin II(Photobiology- vision and photoreception. Actinobiology,Oral Presentations). Seibutsu Butsuri, 2007, 47, S262.	0.0	0
305	3P240 The Proton Donor for the Schiff base is perturbed upon retinal photoisomerization in Gloeobacter rhodopsin(Photobiology- vision and photoreception. Actinobiology,Oral Presentations). Seibutsu Butsuri, 2007, 47, S263.	0.0	0
306	2P332 Water Molecules around the Secondary Quinone (Q_B) Binding Pockets in the Reaction Center from Rhodobacter sphaeroides(Photobiology-photosynthesis, and vision and photoreception,Oral) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.0	0

#	Article	IF	Citations
307	2P359 Light-induced structural changes of the LOV2 domain and the JÎ± helix in various phototropins(Photobiology-vision and photoreception,Poster Presentations). Seibutsu Butsuri, 2007, 47, S202.	0.0	0
308	The Determinant of Light-Energy and Light-Signal Conversion in Rhodopsins. AIP Conference Proceedings, 2007, , .	0.3	0
309	FTIR Studies of Internal Water Molecules of Bacteriorhodopsin: Structural Analysis of Halide-bound D85S and D212N Mutants in the Schiff Base Region. AIP Conference Proceedings, 2007, , .	0.3	0
310	2P-254 Hydration dependent thermal equilibrium of retinal configuration between all-trans and 13-cis forms in Gloeobacter Rhodopsin(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S114.	0.0	0
311	3P273 Proteorhodopsin functions as a light-driven proton pump in native cell membranes(Photobiology: Vision & Photoreception,The 48th Annual Meeting of the Biophysical Society) Tj ETQq1 1 0.784314 rgBT /Ov	0.0	0
312	Anabaena Sensory Rhodopsin: Effect of point mutations on PSBR photo-isomerization speed. EPJ Web of Conferences, 2019, 205, 10004.	0.1	0
313	Active Learning of Bayesian Linear Models with High-Dimensional Binary Features by Parameter Confidence-Region Estimation. Neural Computation, 2020, 32, 1998-2031.	1.3	0
314	Engineering an Inward Proton Transport Protein. Seibutsu Butsuri, 2010, 50, 236-237.	0.0	0
315	Discovery of Sodium Ion Pump Rhodopsin. Seibutsu Butsuri, 2014, 54, 106-107.	0.0	0
316	Ultrafast Spectroscopy as a Challenger in Biophysics. Primary Processes in Retinal Proteins.. Seibutsu Butsuri, 1994, 34, 149-155.	0.0	0
317	Report on US-Japan Seminar on "Structural Basis of Information Transfer and Energy Transduction in Rhodopsins". Seibutsu Butsuri, 1998, 38, 30-32.	0.0	0
318	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. , 2020, 15, e0243387.		0
319	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. , 2020, 15, e0243387.		0
320	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. , 2020, 15, e0243387.		0
321	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. , 2020, 15, e0243387.		0
322	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. , 2020, 15, e0243387.		0
323	Expression analysis of microbial rhodopsin-like genes in Guillardia theta. , 2020, 15, e0243387.		0
324	Cisâ€Trans Reisomerization Precedes Reprotonation of the Retinal Chromophore in the Photocycle of Schizorhodopsin 4. Angewandte Chemie, 0, , .	1.6	0