John L Spudich

List of Publications by Year
in descending order

78 papers	4,353 citations	186265 28 h-index	175258 52 g-index
89 all docs	89 docs citations	89 times ranked	2977 citing authors

#	Article	IF	Citations
1	Kalium channelrhodopsins are natural light-gated potassium channels that mediate optogenetic inhibition. Nature Neuroscience, 2022, 25, 967-974.	14.8	56
2	The crystal structure of bromide-bound GtACR1 reveals a pre-activated state in the transmembrane anion tunnel. ELife, 2021, 10, .	6.0	11
3	Cation and Anion Channelrhodopsins: Sequence Motifs and Taxonomic Distribution. MBio, 2021, 12, e0165621.	4.1	21
4	Probing Channelrhodopsin Electrical Activity in Algal Cell Populations. Methods in Molecular Biology, 2021, 2191, 85-96.	0.9	1
5	Emerging Diversity of Channelrhodopsins and Their Structure-Function Relationships. Frontiers in Cellular Neuroscience, 2021, 15, 800313.	3.7	21
6	An Open Resource for Non-human Primate Optogenetics. Neuron, 2020, 108, 1075-1090.e6.	8.1	79
7	RubyACRs, nonalgal anion channelrhodopsins with highly red-shifted absorption. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 22833-22840.	7.1	45
8	Opposite Charge Movements Within the Photoactive Site Modulate Two-Step Channel Closing in GtACR1. Biophysical Journal, 2019, 117, 2034-2040.	0.5	7
9	Crystal structure of a natural light-gated anion channelrhodopsin. ELife, 2019, 8, .	6.0	31
10	Extending the Time Domain of Neuronal Silencing with Cryptophyte Anion Channelrhodopsins. ENeuro, 2018, 5, ENEURO.0174-18.2018.	1.9	27
11	Rhodopsin optogenetic toolbox v2.0 for light-sensitive excitation and inhibition in Caenorhabditis elegans. PLoS ONE, 2018, 13, e0191802.	2.5	44
12	Structural Changes in an Anion Channelrhodopsin: Formation of the K and L Intermediates at 80 K. Biochemistry, 2017, 56, 2197-2208.	2.5	13
13	The Expanding Family of Natural Anion Channelrhodopsins Reveals Large Variations in Kinetics, Conductance, and Spectral Sensitivity. Scientific Reports, 2017, 7, 43358.	3.3	90
14	Microbial Rhodopsins: Diversity, Mechanisms, and Optogenetic Applications. Annual Review of Biochemistry, 2017, 86, 845-872.	11.1	271
15	Bacteriorhodopsin-like channelrhodopsins: Alternative mechanism for control of cation conductance. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9512-E9519.	7.1	44
16	<i>Proteomonas sulcata</i> ACR1: A Fast Anion Channelrhodopsin. Photochemistry and Photobiology, 2016, 92, 257-263.	2.5	42
17	In Vitro Activity of a Purified Natural Anion Channelrhodopsin. Journal of Biological Chemistry, 2016, 291, 25319-25325.	3.4	11
18	Structurally Distinct Cation Channelrhodopsins from Cryptophyte Algae. Biophysical Journal, 2016, 110, 2302-2304.	0.5	50

#	Article	IF	Citations
19	Resonance Raman Study of an Anion Channelrhodopsin: Effects of Mutations near the Retinylidene Schiff Base. Biochemistry, 2016, 55, 2371-2380.	2.5	30
20	Photochemical reaction cycle transitions during anion channelrhodopsin gating. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1993-2000.	7.1	49
21	Cation-Specific Conformations in a Dual-Function Ion-Pumping Microbial Rhodopsin. Biochemistry, 2015, 54, 3950-3959.	2.5	21
22	Platymonas subcordiformis Channelrhodopsin-2 Function. Journal of Biological Chemistry, 2015, 290, 16573-16584.	3.4	9
23	Natural light-gated anion channels: A family of microbial rhodopsins for advanced optogenetics. Science, 2015, 349, 647-650.	12.6	575
24	Gating mechanisms of a natural anion channelrhodopsin. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14236-14241.	7.1	65
25	InÂVitro Demonstration of Dual Light-Driven Na+/H+ Pumping by a Microbial Rhodopsin. Biophysical Journal, 2015, 109, 1446-1453.	0.5	28
26	Mechanism divergence in microbial rhodopsins. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 546-552.	1.0	54
27	A Molecular Voltmeter Based on Fluorescence Dynamics. Biophysical Journal, 2014, 106, 497-499.	0.5	1
28	Channelrhodopsin Photochromic Reactions Provide Multicolor Optogenetic Control. Biophysical Journal, 2014, 107, 1489-1490.	0.5	0
29	Role of a Helix B Lysine Residue in the Photoactive Site in Channelrhodopsins. Biophysical Journal, 2014, 106, 1607-1617.	0.5	13
30	Intramolecular Proton Transfer in Channelrhodopsins. Biophysical Journal, 2013, 104, 807-817.	0.5	62
31	Enhancement of the Long-Wavelength Sensitivity of Optogenetic Microbial Rhodopsins by 3,4-Dehydroretinal. Biochemistry, 2012, 51, 4499-4506.	2.5	30
32	His-75 in Proteorhodopsin, a Novel Component in Light-driven Proton Translocation by Primary Pumps. Journal of Biological Chemistry, 2009, 284, 2836-2843.	3.4	71
33	Microbial Rhodopsins: Receptors, Channels, and Pumps from a Single Design. FASEB Journal, 2009, 23, 432.3.	0.5	0
34	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.	0.1	0
35	3P238 Study on the signal transduction dynamics of Sensory rhodopsin II Transducer protein(Photobiology- vision and photoreception. Actinobiology,Oral Presentations). Seibutsu Butsuri, 2007, 47, S262.	0.1	0
36	The multitalented microbial sensory rhodopsins. Trends in Microbiology, 2006, 14, 480-487.	7.7	176

#	Article	IF	Citations
37	Microbial Rhodopsins: Phylogenetic and Functional Diversity. , 2005, , 1-23.		53
38	Plant Cryptochromes: Their Genes, Biochemistry, and Physiological Roles. , 2005, , 211-246.		6
39	Plant Cryptochromes and Signaling. , 2005, , 247-258.		2
40	Animal Cryptochromes. , 2005, , 259-276.		2
41	Blue Light Sensing and Signaling by the Phototropins. , 2005, , 277-303.		15
42	LOV-Domain Photochemistry. , 2005, , 305-321.		9
43	LOV-Domain Structure, Dynamics, and Diversity. , 2005, , 323-336.		4
44	The ZEITLUPE Family of Putative Photoreceptors. , 2005, , 337-347.		8
45	Photoreceptor Gene Families in Lower Plants. , 2005, , 349-369.		12
46	Neurospora Photoreceptors. , 2005, , 371-389.		14
47	Photoactive Yellow Protein, the Xanthopsin. , 2005, , 391-415.		0
48	Sensory Rhodopsin Signaling in Green Flagellate Algae. , 2005, , 25-42.		20
49	Hypericin-Like Photoreceptors. , 2005, , 417-432.		2
50	The Antirepressor AppA Uses the Novel Flavin-Binding BLUF Domain as a Blue-Light-Absorbing Photoreceptor to Control Photosystem Synthesis. , 2005, , 433-445.		7
51	Discovery and Characterization of Photoactivated Adenylyl Cyclase (PAC), a Novel Blue-Light Receptor Flavoprotein, from Euglena gracilis. , 2005, , 447-460.		4
52	Visual Pigments as Photoreceptors. , 2005, , 43-76.		7
53	Structural and Functional Aspects of the Mammalian Rod-Cell Photoreceptor Rhodopsin. , 2005, , 77-92.		2
54	A Novel Light Sensing Pathway in the Eye: Conserved Features of Inner Retinal Photoreception in Rodents, Man and Teleost Fish. , 2005, , 93-119.		0

#	Article	IF	Citations
55	The Phytochromes. , 2005, , 121-149.		18
56	Phytochrome Signaling. , 2005, , 151-170.		18
57	Phytochromes in Microorganisms. , 2005, , 171-195.		16
58	Light-Activated Intracellular Movement of Phytochrome. , 2005, , 197-210.		2
59	Structural Changes in the Photoactive Site of Proteorhodopsin during the Primary Photoreactionâ€. Biochemistry, 2004, 43, 9075-9083.	2.5	59
60	2SA51 Microbial Rhodopsins : Structure and Mechanism in Sensory Signaling and Transport. Seibutsu Butsuri, 2004, 44, S1.	0.1	0
61	Conformational Changes Detected in a Sensory Rhodopsin II-Transducer Complex. Journal of Biological Chemistry, 2003, 278, 36556-36562.	3.4	43
62	Two rhodopsins mediate phototaxis to low- and high-intensity light in Chlamydomonas reinhardtii. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 8689-8694.	7.1	521
63	A Fourier Transform Infrared Study of Neurospora Rhodopsin: Similarities with Archaeal RhodopsinsÂ¶â€. Photochemistry and Photobiology, 2002, 76, 341.	2.5	34
64	Sensory rhodopsin II: functional insights from structure. Current Opinion in Structural Biology, 2002, 12, 540-546.	5.7	99
65	A Fourier Transform Infrared Study of Neurospora Rhodopsin: Similarities with Archaeal RhodopsinsÂ¶â€. Photochemistry and Photobiology, 2002, 76, 341-349.	2.5	4
66	Light-Induced Structural Changes Occur in the Transmembrane Helices of the Natronobacterium pharaonis HtrII Transducer. Biochemistry, 2001, 40, 14207-14214.	2.5	48
67	Genomic perspective on the photobiology of Halobacterium species NRC-1, a phototrophic, phototactic, and UV-tolerant haloarchaeon. Photosynthesis Research, 2001, 70, 3-17.	2.9	54
68	Retinylidene Proteins: Structures and Functions from Archaea to Humans. Annual Review of Cell and Developmental Biology, 2000, 16, 365-392.	9.4	605
69	FTIR Analysis of the SII540Intermediate of Sensory Rhodopsin II:Â Asp73 Is the Schiff Base Proton Acceptorâ€. Biochemistry, 2000, 39, 2823-2830.	2.5	38
70	Variations on a molecular switch: transport and sensory signalling by archaeal rhodopsins. Molecular Microbiology, 1998, 28, 1051-1058.	2.5	136
71	Complexation of the Signal Transducing Protein HtrI to Sensory Rhodopsin I and Its Effect on Thermodynamics of Signaling State Deactivation. Journal of Physical Chemistry B, 1997, 101, 109-113.	2.6	11
72	MOLECULAR MECHANISM OF PHOTOSIGNALING BY ARCHAEAL SENSORY RHODOPSINS. Annual Review of Biophysics and Biomolecular Structure, 1997, 26, 223-258.	18.3	324

#	Article	IF	Citations
73	Effects of Substitutions D73E, D73N, D103N and V106M on Signaling and pH Titration of Sensory Rhodopsin II. Photochemistry and Photobiology, 1997, 66, 788-791.	2.5	23
74	Gain setting inChlamydomonas reinhardtii: Mechanism of phototaxis and the role of the photophobic response. Cytoskeleton, 1994, 29, 225-230.	4.4	17
75	New tool for spectroscopists. Nature Structural Biology, 1994, 1, 495-496.	9.7	6
76	TRANSFORMATION OF A BOP-HOP-SOP-I-SOP-II-Halobacterium halobium MUTANT TO BOP+: EFFECTS OF BACTERIORHODOPSIN PHOTOACTIVATION ON CELLULAR PROTON FLUXES AND SWIMMING BEHAVIOR. Photochemistry and Photobiology, 1992, 56, 553-561.	2.5	16
77	SENSITIVITY INCREASE IN THE PHOTOPHOBIC RESPONSE OF Halobacterium halobium RECONSTITUTED WITH RETINAL ANALOGS: A NOVEL INTERPRETATION FOR THE FLUENCE-RESPONSE RELATIONSHIP AND A KINETIC MODELING. Photochemistry and Photobiology, 1992, 56, 1119-1128.	2.5	8
78	ABSORPTION AND PHOTOCHEMISTRY OF SENSORY RHODOPSINâ€"I: pH EFFECTS. Photochemistry and Photobiology, 1992, 56, 1181-1187.	2.5	32