## ReaChR: a red-shifted variant of channelrhodopsin enal excitation

Nature Neuroscience 16, 1499-1508 DOI: 10.1038/nn.3502

**Citation Report** 

#	Article	IF	CITATIONS
3	ChR2 Mutants at L132 and T159 with Improved Operational Light Sensitivity for Vision Restoration. PLoS ONE, 2014, 9, e98924.	1.1	42
4	Laserspritzer: A Simple Method for Optogenetic Investigation with Subcellular Resolutions. PLoS ONE, 2014, 9, e101600.	1.1	6
5	Optogenetics: illuminating the neural bases of rodent behavior. Open Access Animal Physiology, 2014, , 33.	0.3	0
6	Impaired activity-dependent neural circuit assembly and refinement in autism spectrum disorder genetic models. Frontiers in Cellular Neuroscience, 2014, 8, 30.	1.8	70
7	Optogenetic sensors and effectors: CHROMusââ,¬â€ŧhe Cornell Heart Lung Blood Institute Resource for Optogenetic Mouse Signaling. Frontiers in Physiology, 2014, 5, 428.	1.3	22
8	Optogenetic approaches to retinal prosthesis. Visual Neuroscience, 2014, 31, 345-354.	0.5	71
9	Optogeneticsâ€~ promise: pacing and cardioversion by light?. Future Cardiology, 2014, 10, 1-4.	0.5	25
10	Synthetic retinal analogues modify the spectral and kinetic characteristics of microbial rhodopsin optogenetic tools. Nature Communications, 2014, 5, 5810.	5.8	42
11	Neurite Guidance and Three-Dimensional Confinement <i>via</i> Compliant Semiconductor Scaffolds. ACS Nano, 2014, 8, 12219-12227.	7.3	19
12	Spatially Selective Holographic Photoactivation and Functional Fluorescence Imaging in Freely Behaving Mice with a Fiberscope. Neuron, 2014, 84, 1157-1169.	3.8	163
13	Neurophotonics applications to motor cortex research: a review. Neurophotonics, 2014, 1, 011008.	1.7	3
14	Prolonged Deficits in Parvalbumin Neuron Stimulation-Evoked Network Activity Despite Recovery of Dendritic Structure and Excitability in the Somatosensory Cortex following Global Ischemia in Mice. Journal of Neuroscience, 2014, 34, 14890-14900.	1.7	25
15	See the light: can optogenetics restore healthy heartbeats? And, if it can, is it really worth the effort?. Expert Review of Cardiovascular Therapy, 2014, 12, 17-20.	0.6	18
16	Optogenetics-enabled dynamic modulation of action potential duration in atrial tissue: feasibility of a novel therapeutic approach. Europace, 2014, 16, iv69-iv76.	0.7	34
17	Optogenetic studies of nicotinic contributions to cholinergic signaling in the central nervous system. Reviews in the Neurosciences, 2014, 25, 755-71.	1.4	12
18	Photons and neurons. Hearing Research, 2014, 311, 72-88.	0.9	67
19	Neuronal Control of <i>Drosophila</i> Walking Direction. Science, 2014, 344, 97-101.	6.0	186
20	Studying circadian rhythms in Drosophila melanogaster. Methods, 2014, 68, 140-150.	1.9	71

	CITATION	Report	
#	Article	IF	CITATIONS
21	Independent optical excitation of distinct neural populations. Nature Methods, 2014, 11, 338-346.	9.0	1,879
22	Optical Control of Muscle Function by Transplantation of Stem Cell–Derived Motor Neurons in Mice. Science, 2014, 344, 94-97.	6.0	148
23	Virally mediated optogenetic excitation and inhibition of pain in freely moving nontransgenic mice. Nature Biotechnology, 2014, 32, 274-278.	9.4	191
24	Structure-Guided Transformation of Channelrhodopsin into a Light-Activated Chloride Channel. Science, 2014, 344, 420-424.	6.0	354
25	Neural Mechanisms of Object-Based Attention. Science, 2014, 344, 424-427.	6.0	445
26	Gene therapy for inherited retinal degenerations. Comptes Rendus - Biologies, 2014, 337, 185-192.	0.1	52
27	Microbial and Animal Rhodopsins: Structures, Functions, and Molecular Mechanisms. Chemical Reviews, 2014, 114, 126-163.	23.0	897
28	Flow of Cortical Activity Underlying a Tactile Decision in Mice. Neuron, 2014, 81, 179-194.	3.8	622
29	Sleep replay meets brain–machine interface. Nature Neuroscience, 2014, 17, 1019-1021.	7.1	3
30	Beyond the bolus: transgenic tools for investigating the neurophysiology of learning and memory. Learning and Memory, 2014, 21, 506-518.	0.5	5
31	Optogenetic approaches for investigating neural pathways implicated in schizophrenia and related disorders. Human Molecular Genetics, 2014, 23, R64-R68.	1.4	16
32	Archaerhodopsin variants with enhanced voltage-sensitive fluorescence in mammalian and Caenorhabditis elegans neurons. Nature Communications, 2014, 5, 4894.	5.8	124
33	Light and chemical control of neuronal circuits: possible applications in neurotherapy. Expert Review of Neurotherapeutics, 2014, 14, 1007-1017.	1.4	6
34	Optogenetic control of selective neural activity in multiple freely moving <i>Drosophila</i> adults. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5367-5372.	3.3	36
35	Cardiac applications of optogenetics. Progress in Biophysics and Molecular Biology, 2014, 115, 294-304.	1.4	72
36	Noninvasive optical inhibition with a red-shifted microbial rhodopsin. Nature Neuroscience, 2014, 17, 1123-1129.	7.1	480
37	Getting it through your thick skull. Nature Neuroscience, 2014, 17, 1018-1019.	7.1	3
38	Optogenetics: the age of light. Nature Methods, 2014, 11, 1012-1014.	9.0	166

# 39	ARTICLE Channelrhodopsin-2–XXL, a powerful optogenetic tool for low-light applications. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13972-13977.	IF 3.3	CITATIONS 182
40	Toward a Science of Computational Ethology. Neuron, 2014, 84, 18-31.	3.8	366
41	Optogenetic control of Drosophila using a red-shifted channelrhodopsin reveals experience-dependent influences on courtship. Nature Methods, 2014, 11, 325-332.	9.0	272
42	Engineering a memory with LTD and LTP. Nature, 2014, 511, 348-352.	13.7	822
43	FlyMAD: rapid thermogenetic control of neuronal activity in freely walking Drosophila. Nature Methods, 2014, 11, 756-762.	9.0	128
44	Timing matters: using optogenetics to chronically manipulate neural circuitry and rhythms. Frontiers in Behavioral Neuroscience, 2014, 8, 41.	1.0	21
45	Internal States and Behavioral Decision-Making: Toward an Integration of Emotion and Cognition. Cold Spring Harbor Symposia on Quantitative Biology, 2014, 79, 199-210.	2.0	65
46	Non-invasive manipulation of Drosophila behavior by two-photon excited red-activatable channelrhodopsin. Biomedical Optics Express, 2015, 6, 4344.	1.5	10
47	Challenges in Retinal Circuit Regeneration. Biological and Pharmaceutical Bulletin, 2015, 38, 341-357.	0.6	7
48	Near-infrared (NIR) up-conversion optogenetics. Scientific Reports, 2015, 5, 16533.	1.6	109
49	Inhibitory luminopsins: genetically-encoded bioluminescent opsins for versatile, scalable and hardware-independent optogenetic inhibition. Scientific Reports, 2015, 5, 14366.	1.6	51
50	Long-duration animal tracking in difficult lighting conditions. Scientific Reports, 2015, 5, 10432.	1.6	8
51	Broadband activation by white-opsin lowers intensity threshold for cellular stimulation. Scientific Reports, 2015, 5, 17857.	1.6	9
52	Optogenetic Approaches to Restoring Vision. Annual Review of Vision Science, 2015, 1, 185-210.	2.3	39
53	Neurogenethics: An emerging discipline at the intersection of ethics, neuroscience, and genomics. Applied & Translational Genomics, 2015, 5, 18-22.	2.1	10
54	Using Optogenetics to Dissect the Neural Circuits Underlying OCD and Related Disorders. Current Treatment Options in Psychiatry, 2015, 2, 297-311.	0.7	10
55	Comparison of dopamine kinetics in the larval <i>Drosophila</i> ventral nerve cord and protocerebrum with improved optogenetic stimulation. Journal of Neurochemistry, 2015, 135, 695-704.	2.1	21
56	Investigating neuronal function with optically controllable proteins. Frontiers in Molecular Neuroscience, 2015, 8, 37.	1.4	17

	Сіта	TION REPORT	
#	Article	IF	CITATIONS
57	Design, fabrication, and packaging of an integrated, wirelessly-powered optrode array for optogenetics application. Frontiers in Systems Neuroscience, 2015, 9, 69.	1.2	76
58	Prospects for Optogenetic Augmentation of Brain Function. Frontiers in Systems Neuroscience, 2015, 9, 157.	1.2	25
59	Optical Stimulation of Neurons. Current Molecular Imaging, 2015, 3, 162-177.	0.7	83
60	Broad-Band Activatable White-Opsin. PLoS ONE, 2015, 10, e0136958.	1.1	8
61	Optogenetics in Mice Performing a Visual Discrimination Task: Measurement and Suppression of Retinal Activation and the Resulting Behavioral Artifact. PLoS ONE, 2015, 10, e0144760.	1.1	24
64	P1 interneurons promote a persistent internal state that enhances inter-male aggression in Drosophila. ELife, 2015, 4, .	2.8	169
65	Optogenetics and Epilepsy: Past, Present and Future. Epilepsy Currents, 2015, 15, 34-38.	0.4	51
66	Gene therapy for the eye focus on mutation-independent approaches. Current Opinion in Neurology, 2015, 28, 51-60.	1.8	16
68	Atomistic design of microbial opsin-based blue-shifted optogenetics tools. Nature Communications, 2015, 6, 7177.	5.8	78
69	Optogenetic control of contractile function in skeletal muscle. Nature Communications, 2015, 6, 7153.	5.8	101
70	Optical dissection of brain circuits with patterned illumination through the phase modulation of light. Journal of Neuroscience Methods, 2015, 241, 66-77.	1.3	41
71	Computational modeling of cardiac optogenetics: Methodology overview & review of findings from simulations. Computers in Biology and Medicine, 2015, 65, 200-208.	3.9	27
72	Recent advances in engineering microbial rhodopsins for optogenetics. Current Opinion in Structural Biology, 2015, 33, 8-15.	2.6	52
73	Optogenetics. Current Opinion in Ophthalmology, 2015, 26, 226-232.	1.3	71
74	Cyp27c1 Red-Shifts the Spectral Sensitivity of Photoreceptors by Converting Vitamin A1 into A2. Current Biology, 2015, 25, 3048-3057.	1.8	135
75	PPL2ab neurons restore sexual responses in aged Drosophila males through dopamine. Nature Communications, 2015, 6, 7490.	5.8	29
76	Light, heat, action: neural control of fruit fly behaviour. Philosophical Transactions of the Royal Society B: Biological Sciences, 2015, 370, 20140211.	1.8	80
77	Directed Evolution of Gloeobacter violaceus Rhodopsin Spectral Properties. Journal of Molecular Biology, 2015, 427, 205-220.	2.0	85

	CHATION N	LPORT	
#	Article	IF	Citations
78	Large-scale recording of astrocyte activity. Current Opinion in Neurobiology, 2015, 32, 95-106.	2.0	56
79	Multifocal Fluorescence Microscope for Fast Optical Recordings of Neuronal Action Potentials. Biophysical Journal, 2015, 108, 520-529.	0.2	4
80	Systemic gene transfer enables optogenetic pacing of mouse hearts. Cardiovascular Research, 2015, 106, 338-343.	1.8	104
81	Two-photon brightness of azobenzene photoswitches designed for glutamate receptor optogenetics. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E776-85.	3.3	93
82	A motor cortex circuit for motor planning and movement. Nature, 2015, 519, 51-56.	13.7	474
83	Patterned Optogenetic Modulation of Neurovascular and Metabolic Signals. Journal of Cerebral Blood Flow and Metabolism, 2015, 35, 140-147.	2.4	15
84	Beyond the hammer and the scalpel: selective circuit control for the epilepsies. Nature Neuroscience, 2015, 18, 331-338.	7.1	97
85	TDP-43 repression of nonconserved cryptic exons is compromised in ALS-FTD. Science, 2015, 349, 650-655.	6.0	419
86	A Photostable Silicon Rhodamine Platform for Optical Voltage Sensing. Journal of the American Chemical Society, 2015, 137, 10767-10776.	6.6	186
87	Making Sense of Optogenetics. International Journal of Neuropsychopharmacology, 2015, 18, pyv079.	1.0	112
88	Biophysics of Channelrhodopsin. Annual Review of Biophysics, 2015, 44, 167-186.	4.5	172
89	Optogenetics for in vivo cardiac pacing and resynchronization therapies. Nature Biotechnology, 2015, 33, 750-754.	9.4	191
90	Photoactivatable genetically encoded calcium indicators for targeted neuronal imaging. Nature Methods, 2015, 12, 852-858.	9.0	85
91	Optrodes for combined optogenetics and electrophysiology in live animals. Neurophotonics, 2015, 2, 031205.	1.7	64
92	Genetically Encoded Spy Peptide Fusion System to Detect Plasma Membrane-Localized Proteins InÂVivo. Chemistry and Biology, 2015, 22, 1108-1121.	6.2	56
94	Beyond Gene Inactivation: Evolution of Tools for Analysis of Serotonergic Circuitry. ACS Chemical Neuroscience, 2015, 6, 1116-1129.	1.7	14
95	Optogenetic tools for modulating and probing the epileptic network. Epilepsy Research, 2015, 116, 15-26.	0.8	28
96	Natural light-gated anion channels: A family of microbial rhodopsins for advanced optogenetics. Science, 2015, 349, 647-650.	6.0	575

#	Article	IF	CITATIONS
97	Light-driven Na+ pumps as next-generation inhibitory optogenetic tools. Nature Structural and Molecular Biology, 2015, 22, 351-353.	3.6	4
98	Optical techniques in optogenetics. Journal of Modern Optics, 2015, 62, 949-970.	0.6	56
99	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
100	Dual-Channel Circuit Mapping Reveals Sensorimotor Convergence in the Primary Motor Cortex. Journal of Neuroscience, 2015, 35, 4418-4426.	1.7	87
101	Near-infrared (NIR) optogenetics using up-conversion system. , 2015, , .		1
102	A bumpy road for RNA polymerase II. Nature Structural and Molecular Biology, 2015, 22, 353-355.	3.6	1
103	Closed-Loop and Activity-Guided Optogenetic Control. Neuron, 2015, 86, 106-139.	3.8	328
104	Three-wavelength light control of freely moving Drosophila Melanogaster for less perturbation and efficient social-behavioral studies. Biomedical Optics Express, 2015, 6, 514.	1.5	17
105	Broad spectral excitation of opsin for enhanced stimulation of cells. Optics Letters, 2015, 40, 2465.	1.7	5
106	Projections from neocortex mediate top-down control of memory retrieval. Nature, 2015, 526, 653-659.	13.7	376
107	Hybrid upconversion nanomaterials for optogenetic neuronal control. Nanoscale, 2015, 7, 16571-16577.	2.8	108
108	Electrophysiology of Unconventional Channels and Pores. Springer Series in Biophysics, 2015, , .	0.4	9
109	Dual Color Neural Activation and Behavior Control with Chrimson and CoChR in <i>Caenorhabditis elegans</i> . Genetics, 2015, 200, 1029-1034.	1.2	61
110	All-Optical Interrogation of Neural Circuits. Journal of Neuroscience, 2015, 35, 13917-13926.	1.7	320
111	Negative Curvature and Control of Excitable Biological Media. Springer Series in Materials Science, 2015, , 237-258.	0.4	1
112	All-optical bidirectional neural interfacing using hybrid multiphoton holographic optogenetic stimulation. Neurophotonics, 2015, 2, 031208.	1.7	20
113	Miniaturized optogenetic neural implants: a review. Lab on A Chip, 2015, 15, 3838-3855.	3.1	84
114	Cardiac Arrhythmias: Mechanistic Knowledge and Innovation from Computer Models. Modeling, Simulation and Applications, 2015, , 1-27.	1.3	Ο

#	Article	IF	CITATIONS
115	Wirelessly powered, fully internal optogenetics for brain, spinal and peripheral circuits in mice. Nature Methods, 2015, 12, 969-974.	9.0	473
116	Optogenetics and the future of neuroscience. Nature Neuroscience, 2015, 18, 1200-1201.	7.1	140
117	Magnetogenetics: remote non-invasive magnetic activation of neuronal activity with a magnetoreceptor. Science Bulletin, 2015, 60, 2107-2119.	4.3	79
118	"Beauty is a light in the heartâ€ŧ The transformative potential of optogenetics for clinical applications in cardiovascular medicine1. Trends in Cardiovascular Medicine, 2015, 25, 73-81.	2.3	32
119	Targeting Channelrhodopsin-2 to ON-bipolar Cells With Vitreally Administered AAV Restores ON and OFF Visual Responses in Blind Mice. Molecular Therapy, 2015, 23, 7-16.	3.7	166
120	Optogenetic control of astrocytes: Is it possible to treat astrocyte-related epilepsy?. Brain Research Bulletin, 2015, 110, 20-25.	1.4	24
121	Defining inhibitory neurone function in respiratory circuits: opportunities with optogenetics?. Journal of Physiology, 2015, 593, 3033-3046.	1.3	16
122	Systems neuroscience in Drosophila: Conceptual and technical advantages. Neuroscience, 2015, 296, 3-14.	1.1	33
123	The Evolution of Neuroprosthetic Interfaces. Critical Reviews in Biomedical Engineering, 2016, 44, 123-152.	0.5	56
124	Investigating Basal Ganglia Function With Cell-Type-Specific Manipulations. Handbook of Behavioral Neuroscience, 2016, 24, 689-706.	0.7	0
125	Artificial Induction of Associative Olfactory Memory by Optogenetic and Thermogenetic Activation of Olfactory Sensory Neurons and Octopaminergic Neurons in Drosophila Larvae. Frontiers in Behavioral Neuroscience, 2016, 10, 137.	1.0	2
126	Two-Photon Holographic Stimulation of ReaChR. Frontiers in Cellular Neuroscience, 2016, 10, 234.	1.8	63
127	Estimating Fast Neural Input Using Anatomical and Functional Connectivity. Frontiers in Neural Circuits, 2016, 10, 99.	1.4	2
129	Opsin spectral sensitivity determines the effectiveness of optogenetic termination of ventricular fibrillation in the human heart: a simulation study. Journal of Physiology, 2016, 594, 6879-6891.	1.3	45
131	Optogenetic termination of ventricular arrhythmias in the whole heart: towards biological cardiac rhythm management. European Heart Journal, 2017, 38, ehw574.	1.0	82
132	Redâ€shifted channelrhodopsin stimulation restores light responses in blind mice, macaque retina, and human retina. EMBO Molecular Medicine, 2016, 8, 1248-1264.	3.3	139
133	Chronic activation of the D156A point mutant of Channelrhodopsin-2 signals apoptotic cell death: the good and the bad. Cell Death and Disease, 2016, 7, e2447-e2447.	2.7	17
134	Emerging therapies for inherited retinal degeneration. Science Translational Medicine, 2016, 8, 368rv6.	5.8	179

ARTICLE IF CITATIONS An evaluation of extracellular MEA versus optogenetic stimulation of cortical neurons. Biomedical 0.6 12 Physics and Engineering Express, 2016, 2, 055017. Retinal stimulation strategies to restore vision: Fundamentals and systems. Progress in Retinal and Eye Research, 2016, 53, 21-47. Capitalizing on Directed Evolution and Rational Protein Engineering to Expand the Neuroscientist's 1.7 1 Imaging Toolbox. Journal of Neuroscience, 2016, 36, 5431-5433. Maintaining ocular safety with light exposure, focusing on devices for optogenetic stimulation. Vision Research, 2016, 121, 57-71. Targeting Neural Circuits. Cell, 2016, 165, 524-534. 13.5 148 Electromagnetic control of neural activity â€" prospective physics for physicians. Nature Reviews 4.3 Endocrinology, 2016, 12, 316-317. Optical Probes for In Vivo Brain Imaging., 2016, , 378-399. 0 High-efficiency transduction and specific expression of ChR2opt for optogenetic manipulation of 1.9 primary cortical neurons mediated by recombinant adeno-associated viruses. Journal of Biotechnology, 2016, 233, 171-180. Probing pain pathways with light. Neuroscience, 2016, 338, 248-271. 19 1.1 The road to optogenetics: Microbial rhodopsins. Biochemistry (Moscow), 2016, 81, 928-940. A far-red fluorescent protein evolved from a cyanobacterial phycobiliprotein. Nature Methods, 2016, 9.0 169 13, 763-769. Automated analysis of sleep control via a single neuron active at sleep onset in <i>C. elegans</i>. 0.8 Genesis, 2016, 54, 212-219. Optogenetic Approaches for Controlling Seizure Activity. Brain Stimulation, 2016, 9, 801-810. 0.7 22 Optogenetic Approaches to Neural Circuit Analysis in the Mammalian Brain., 2016, 221-231. Semiconducting Polymer Nanobioconjugates for Targeted Photothermal Activation of Neurons. 404 6.6 Journal of the American Chemical Society, 2016, 138, 9049-9052. Toward Whole-Body Connectomics. Journal of Neuroscience, 2016, 36, 11375-11383. 24 Optogenetics design of mechanistically-based stimulation patterns for cardiac defibrillation. 1.6 105 Scientific Reports, 2016, 6, 35628. Optogenetic activation of serotonergic terminals facilitates GABAergic inhibitory input to

CITATION REPORT

34

orexin/hypocretin neurons. Scientific Reports, 2016, 6, 36039.

#

135

137

139

141

142

143

144

145

147

148

149

#	Article	IF	CITATIONS
153	Beyond the brain: Optogenetic control in the spinal cord and peripheral nervous system. Science Translational Medicine, 2016, 8, 337rv5.	5.8	129
154	Proteins brighten the brain. Life Sciences, 2016, 167, 1-5.	2.0	2
155	Circuit modules linking internal states and social behaviour in flies and mice. Nature Reviews Neuroscience, 2016, 17, 692-704.	4.9	233
156	DREADDS: Use and application in behavioral neuroscience Behavioral Neuroscience, 2016, 130, 137-155.	0.6	199
157	The Serotonergic System Tracks the Outcomes of Actions to Mediate Short-Term Motor Learning. Cell, 2016, 167, 933-946.e20.	13.5	130
158	Functional Mechanism of Channelrhodopsins. Nippon Laser Igakkaishi, 2016, 36, 451-459.	0.0	0
159	Optogenetic Functional MRI. Journal of Visualized Experiments, 2016, , .	0.2	14
160	Spotlight on pain: optogenetic approaches for interrogating somatosensory circuits. Pain, 2016, 157, 2424-2433.	2.0	31
161	Light-based Approaches to Cardiac Arrhythmia Research: From Basic Science to Translational Applications. Clinical Medicine Insights: Cardiology, 2016, 10s1, CMC.S39711.	0.6	7
162	Nanomaterial mediated optogenetics: opportunities and challenges. RSC Advances, 2016, 6, 60896-60906.	1.7	125
163	Tissue-Engineering for the Study of Cardiac Biomechanics. Journal of Biomechanical Engineering, 2016, 138, 021010.	0.6	8
164	Restoring motor function using optogenetics and neural engraftment. Current Opinion in Biotechnology, 2016, 40, 75-81.	3.3	19
165	Simultaneous fast measurement of circuit dynamics at multiple sites across the mammalian brain. Nature Methods, 2016, 13, 325-328.	9.0	359
166	Luminopsins integrate opto- and chemogenetics by using physical and biological light sources for opsin activation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E358-67.	3.3	94
167	The regulatory mechanism of ion permeation through a channelrhodopsin derived from Mesostigma viride (MvChR1). Photochemical and Photobiological Sciences, 2016, 15, 365-374.	1.6	8
168	Selective Manipulation of Neural Circuits. Neurotherapeutics, 2016, 13, 311-324.	2.1	25
169	Sensory experience regulates cortical inhibition by inducing IGF1 in VIP neurons. Nature, 2016, 531, 371-375.	13.7	146
170	Optogenetics. Methods in Molecular Biology, 2016, , .	0.4	4

#	Article	IF	CITATIONS
171	Optogenetic Approaches to Target Specific Neural Circuits in Post-stroke Recovery. Neurotherapeutics, 2016, 13, 325-340.	2.1	34
172	Dye-Sensitized Core/Active Shell Upconversion Nanoparticles for Optogenetics and Bioimaging Applications. ACS Nano, 2016, 10, 1060-1066.	7.3	395
173	Optogenetics. , 2016, , 147-155.		0
174	The fiber-optic imaging and manipulation of neural activity during animal behavior. Neuroscience Research, 2016, 103, 1-9.	1.0	64
175	Optogenetic approaches to treat epilepsy. Journal of Neuroscience Methods, 2016, 260, 215-220.	1.3	44
176	Optogenetic toolkit for precise control of calcium signaling. Cell Calcium, 2017, 64, 36-46.	1.1	56
177	Non-invasive, Focused Ultrasound-Facilitated Gene Delivery for Optogenetics. Scientific Reports, 2017, 7, 39955.	1.6	53
178	Simultaneous high-speed imaging and optogenetic inhibition in the intact mouse brain. Scientific Reports, 2017, 7, 40041.	1.6	48
179	Light controls cerebral blood flow in naive animals. Nature Communications, 2017, 8, 14191.	5.8	136
180	Stimulating Neurons with Heterologously Expressed Light-Gated Ion Channels. Cold Spring Harbor Protocols, 2017, 2017, pdb.top089714.	0.2	6
181	Remote Regulation of Membrane Channel Activity by Site‧pecific Localization of Lanthanideâ€Doped Upconversion Nanocrystals. Angewandte Chemie - International Edition, 2017, 56, 3031-3035.	7.2	121
182	Implantable optoelectronic probes for <i>in vivo</i> optogenetics. Journal of Neural Engineering, 2017, 14, 031001.	1.8	39
183	Optogenetics: Applications in psychiatric research. Psychiatry and Clinical Neurosciences, 2017, 71, 363-372.	1.0	17
184	Transdermal optogenetic peripheral nerve stimulation. Journal of Neural Engineering, 2017, 14, 034002.	1.8	33
186	Remote Regulation of Membrane Channel Activity by Site‧pecific Localization of Lanthanideâ€Doped Upconversion Nanocrystals. Angewandte Chemie, 2017, 129, 3077-3081.	1.6	11
187	Optical properties of mice skull bone in the 455- to 705-nm range. Journal of Biomedical Optics, 2017, 22, 010503.	1.4	47
188	Photochemical Properties of the Redâ€shifted Channelrhodopsin Chrimson. Photochemistry and Photobiology, 2017, 93, 782-795.	1.3	15
189	Optogenetics gets to the heart: A guiding light beyond defibrillation. Progress in Biophysics and Molecular Biology, 2017, 130, 132-139.	1.4	19

#	Article	IF	Citations
190	Voltage imaging with genetically encoded indicators. Current Opinion in Chemical Biology, 2017, 39, 1-10.	2.8	156
191	Wide-field three-photon excitation in biological samples. Light: Science and Applications, 2017, 6, e16255-e16255.	7.7	67
192	Optogenetic manipulation of anatomical re-entry by light-guided generation of a reversible local conduction block. Cardiovascular Research, 2017, 113, 354-366.	1.8	31
193	At Light Speed: Advances in Optogenetic Systems for Regulating Cell Signaling and Behavior. Annual Review of Chemical and Biomolecular Engineering, 2017, 8, 13-39.	3.3	133
194	Thermogenetic neurostimulation with single-cell resolution. Nature Communications, 2017, 8, 15362.	5.8	55
195	Optogenetic Approaches to Drug Discovery in Neuroscience and Beyond. Trends in Biotechnology, 2017, 35, 625-639.	4.9	31
196	Methods for Simultaneous Electrophysiology and Optogenetics In Vivo. , 0, , 93-108.		0
197	Bioluminescence Activation of Light-sensing Molecules. , 0, , 151-166.		0
198	Optogenetic Control of Astroglia. , 0, , 181-195.		0
199	Optogenetic Approaches to Investigating Brain Circuits. , 0, , 206-223.		0
200	Optogenetics Research in Behavioral Neuroscience: Insights into the Brain Basis of Reward Learning and Goal-directed Behavior. , 0, , 276-291.		1
201	Using Optogenetics and Stem Cell-derived Neural Engraftment Techniques to Restore Lost Motor Function. , 0, , 308-324.		0
202	A Promise of Vision Restoration. , 0, , 356-370.		0
203	Optogenetic Dissection of a Top-down Prefrontal to Hippocampus Memory Circuit. , 0, , 393-404.		0
204	Optogenetics and Auditory Implants. , 0, , 421-441.		0
205	Next-generation probes, particles, and proteins for neural interfacing. Science Advances, 2017, 3, e1601649.	4.7	377
206	Visual Responses of Photoreceptor-Degenerated Rats Expressing Two Different Types of Channelrhodopsin Genes. Scientific Reports, 2017, 7, 41210.	1.6	14
207	Complex Photochemistry within the Green-Absorbing Channelrhodopsin ReaChR. Biophysical Journal, 2017, 112, 1166-1175.	0.2	18

#	Article	IF	CITATIONS
208	Integration of optogenetics with complementary methodologies in systems neuroscience. Nature Reviews Neuroscience, 2017, 18, 222-235.	4.9	562
209	Microbial Rhodopsins: Diversity, Mechanisms, and Optogenetic Applications. Annual Review of Biochemistry, 2017, 86, 845-872.	5.0	271
210	Optogenetic Tools for Subcellular Applications in Neuroscience. Neuron, 2017, 96, 572-603.	3.8	274
211	Recent advances in patterned photostimulation for optogenetics. Journal of Optics (United Kingdom), 2017, 19, 113001.	1.0	79
212	Locomotor speed control circuits in the caudal brainstem. Nature, 2017, 551, 373-377.	13.7	235
213	Proton transfer reactions in the red light-activatable channelrhodopsin variant ReaChR and their relevance for its function. Journal of Biological Chemistry, 2017, 292, 14205-14216.	1.6	11
214	A Circuit Node that Integrates Convergent Input from Neuromodulatory and Social Behavior-Promoting Neurons to Control Aggression in Drosophila. Neuron, 2017, 95, 1112-1128.e7.	3.8	77
215	Molecular determinants of proton selectivity and gating in the red-light activated channelrhodopsin Chrimson. Scientific Reports, 2017, 7, 9928.	1.6	37
216	The form and function of channelrhodopsin. Science, 2017, 357, .	6.0	212
217	A high-conductance chemo-optogenetic system based on the vertebrate channel Trpa1b. Scientific Reports, 2017, 7, 11839.	1.6	15
218	Targeted Manipulation of Neuronal Activity in Behaving Adult Flies. , 2017, , 191-222.		4
219	Odorant Receptor Sensitivity Modulation in <i>Drosophila</i> . Journal of Neuroscience, 2017, 37, 9465-9473.	1.7	45
220	Origins of Cell-Type-Specific Olfactory Processing in the Drosophila Mushroom Body Circuit. Neuron, 2017, 95, 357-367.e4.	3.8	57
221	A New Promoter Allows Optogenetic Vision Restoration with Enhanced Sensitivity in Macaque Retina. Molecular Therapy, 2017, 25, 2546-2560.	3.7	131
222	Optogenetics. , 2017, , 123-134.		1
223	Will optogenetics be used to treat chronic pain patients?. Pain Management, 2017, 7, 269-278.	0.7	7
224	Tetherless near-infrared control of brain activity in behaving animals using fully implantable upconversion microdevices. Biomaterials, 2017, 142, 136-148.	5.7	74
225	An optogenetic toolbox for unbiased discovery of functionally connected cells in neural circuits. Nature Communications, 2017, 8, 116.	5.8	60

#	Article	IF	CITATIONS
226	Reaction dynamics of the chimeric channelrhodopsin C1C2. Scientific Reports, 2017, 7, 7217.	1.6	48
228	Multiplexed Optogenetic Stimulation of Neurons with Spectrumâ€Selective Upconversion Nanoparticles. Advanced Healthcare Materials, 2017, 6, 1700446.	3.9	58
229	Modulating upconversion luminescence through fluorescent dyes. Journal of Solid State Chemistry, 2017, 255, 139-144.	1.4	7
230	Optogenetics and pharmacogenetics: principles and applications. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2017, 313, R633-R645.	0.9	22
231	Neural Circuitry that Evokes Escape Behavior upon Activation of Nociceptive Sensory Neurons in Drosophila Larvae. Current Biology, 2017, 27, 2499-2504.e3.	1.8	49
232	Deep tissue optical focusing and optogenetic modulation with time-reversed ultrasonically encoded light. Science Advances, 2017, 3, eaao5520.	4.7	60
233	A wireless system for combined heart optogenetics and electrocardiography recording. , 2017, , .		4
234	Nonhuman Primate Optogenetics: Recent Advances and Future Directions. Journal of Neuroscience, 2017, 37, 10894-10903.	1.7	111
235	Anion-conducting channelrhodopsins with tuned spectra and modified kinetics engineered for optogenetic manipulation of behavior. Scientific Reports, 2017, 7, 14957.	1.6	54
236	Fully implantable, battery-free wireless optoelectronic devices for spinal optogenetics. Pain, 2017, 158, 2108-2116.	2.0	93
237	Investigation of Seizure-Susceptibility in a <i>Drosophila melanogaster</i> Model of Human Epilepsy with Optogenetic Stimulation. Genetics, 2017, 206, 1739-1746.	1.2	13
238	Implantable Optical Neural Interface. , 2017, , 209-236.		0
239	Modulation of voltage-gated conductances of retinal horizontal cells by UV-excited TiO2 nanoparticles. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 1031-1040.	1.7	9
241	Odorant Receptor Desensitization in Insects. Journal of Experimental Neuroscience, 2017, 11, 117906951774860.	2.3	15
242	Cardiac optogenetics: a novel approach to cardiovascular disease therapy. Europace, 2018, 20, 1741-1749.	0.7	19
243	Alternative Formation of Red-Shifted Channelrhodopsins: Noncovalent Incorporation with Retinal-Based Enamine-Type Schiff Bases and Mutated Channelopsin. Chemical and Pharmaceutical Bulletin, 2017, 65, 356-358.	0.6	3
244	Conversion of microbial rhodopsins: insights into functionally essential elements and rational protein engineering. Biophysical Reviews, 2017, 9, 861-876.	1.5	19
245	Genetically Encoded Photoactuators and Photosensors for Characterization and Manipulation of Pluripotent Stem Cells. Theranostics, 2017, 7, 3539-3558.	4.6	17

P

TATION

		CHATION RE		
# 246	ARTICLE In vivo Optical Imaging and Manipulation of Pericytes in the Mouse Brain. , 2017, , .		IF	CITATIONS 2
247	How to Train a Cell–Cutting-Edge Molecular Tools. Frontiers in Chemistry, 2017, 5, 12.		1.8	8
248	Genetic and neuronal regulation of sleep by neuropeptide VF. ELife, 2017, 6, .		2.8	49
249	And Then There Was Light: Perspectives of Optogenetics for Deep Brain Stimulation and Neuromodulation. Frontiers in Neuroscience, 2017, 11, 663.		1.4	70
250	Neural Networks for a Reward System in Drosophila. , 2017, , 505-522.			0
251	Microbial Rhodopsins. Sub-Cellular Biochemistry, 2018, 87, 19-56.		1.0	39
252	Kinetic profiles of photocurrents in cells expressing two types of channelrhodopsin genes. Biochemical and Biophysical Research Communications, 2018, 496, 814-819.		1.0	5
253	Genetic Dissection of Neural Circuits: A Decade of Progress. Neuron, 2018, 98, 256-281.		3.8	374
254	Towards circuit optogenetics. Current Opinion in Neurobiology, 2018, 50, 179-189.		2.0	74
255	Cardiac Optogenetics: 2018. JACC: Clinical Electrophysiology, 2018, 4, 155-167.		1.3	49
256	Near-infrared deep brain stimulation via upconversion nanoparticle–mediated optogene 2018, 359, 679-684.	tics. Science,	6.0	856
257	Drosophila as a Model System for Neurotransmitter Measurements. ACS Chemical Neuros 9, 1872-1883.	cience, 2018,	1.7	38
258	Retinal Prosthesis. Essentials in Ophthalmology, 2018, , .		0.0	5
259	Retinal Prostheses: Other Therapies and Future Directions. Essentials in Ophthalmology, 2	018, , 105-125.	0.0	1
260	Photothermalâ€Responsive Conjugated Polymer Nanoparticles for Remote Control of Gen in Living Cells. Advanced Materials, 2018, 30, 1705418.	e Expression	11.1	110
261	Biosynthesis of Orthogonal Molecules Using Ferredoxin and Ferredoxin-NADP <sup>+Systems Enables Genetically Encoded PhyB Optogenetics. ACS Synthetic Biology, 2018, 7</sup>	>> Reductase , 706-717.	1.9	35
262	Cardiac optogenetics: the next frontier. Europace, 2018, 20, 1910-1918.		0.7	7
263	Optogenetic regulation of transcription. BMC Neuroscience, 2018, 19, 12.		0.8	29

#	Article	IF	CITATIONS
264	High frequency neural spiking and auditory signaling by ultrafast red-shifted optogenetics. Nature Communications, 2018, 9, 1750.	5.8	128
265	In Vivo Functional Imaging of Retinal Neurons Using Red and Green Fluorescent Calcium Indicators. Advances in Experimental Medicine and Biology, 2018, 1074, 135-144.	0.8	2
266	Diminishing fear: Optogenetic approach toward understanding neural circuits of fear control. Pharmacology Biochemistry and Behavior, 2018, 174, 64-79.	1.3	10
267	Optogenetics: Lighting a Path from the Laboratory to the Clinic. Neuromethods, 2018, , 277-300.	0.2	3
268	Optogenetics: A Roadmap. Neuromethods, 2018, , .	0.2	5
269	CMOS Circuits for Biological Sensing and Processing. , 2018, , .		2
270	Photonic Interaction with the Nervous System. , 2018, , 233-258.		2
271	Optogenetic and chemogenetic techniques for neurogastroenterology. Nature Reviews Gastroenterology and Hepatology, 2018, 15, 21-38.	8.2	40
272	Optogenetic manipulation of ENS - The brain in the gut. Life Sciences, 2018, 192, 18-25.	2.0	7
273	Studies of cortical connectivity using optical circuit mapping methods. Journal of Physiology, 2018, 596, 145-162.	1.3	17
274	A bright future? Optogenetics in the periphery for pain research and therapy. Pain, 2018, 159, S65-S73.	2.0	23
275	Sleep Counteracts Aging Phenotypes to Survive Starvation-Induced Developmental Arrest in C.Âelegans. Current Biology, 2018, 28, 3610-3624.e8.	1.8	44
276	Octopamine Shifts the Behavioral Response From Indecision to Approach or Aversion in Drosophila melanogaster. Frontiers in Behavioral Neuroscience, 2018, 12, 131.	1.0	26
277	High-efficiency optogenetic silencing with soma-targeted anion-conducting channelrhodopsins. Nature Communications, 2018, 9, 4125.	5.8	209
278	Potassium channel-based optogenetic silencing. Nature Communications, 2018, 9, 4611.	5.8	71
279	In vivo Optogenetic Approach to Study Neuron-Oligodendroglia Interactions in Mouse Pups. Frontiers in Cellular Neuroscience, 2018, 12, 477.	1.8	14
280	Bi-directional Control of Walking Behavior by Horizontal Optic Flow Sensors. Current Biology, 2018, 28, 4037-4045.e5.	1.8	34
281	A Guide to Optogenetic Applications, With Special Focus on Behavioral and InÂVivo Electrophysiological Experiments. Handbook of Behavioral Neuroscience, 2018, 28, 263-284.	0.7	1

#	Article	IF	CITATIONS
282	Optogenetic Approaches for Controlling Neuronal Activity and Plasticity. Handbook of Behavioral Neuroscience, 2018, , 285-310.	0.7	7
283	A natural variant and engineered mutation in a GPCR promote DEET resistance in C. elegans. Nature, 2018, 562, 119-123.	13.7	18
284	Crystal structure of the red light-activated channelrhodopsin Chrimson. Nature Communications, 2018, 9, 3949.	5.8	112
285	Synthetic Light-Activated Ion Channels for Optogenetic Activation and Inhibition. Frontiers in Neuroscience, 2018, 12, 643.	1.4	42
286	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
287	Theoretical Principles of Multiscale Spatiotemporal Control of Neuronal Networks: A Complex Systems Perspective. Frontiers in Computational Neuroscience, 2018, 12, 81.	1.2	3
288	Expanding the Optogenetics Toolkit by Topological Inversion of Rhodopsins. Cell, 2018, 175, 1131-1140.e11.	13.5	30
289	Optogenetic Light Sensors in Human Retinal Organoids. Frontiers in Neuroscience, 2018, 12, 789.	1.4	48
290	Innovative Optogenetic Strategies for Vision Restoration. Frontiers in Cellular Neuroscience, 2018, 12, 316.	1.8	39
291	Optical and thermal simulations for the design of optodes for minimally invasive optogenetics stimulation or photomodulation of deep and large cortical areas in non-human primate brain. Journal of Neural Engineering, 2018, 15, 065004.	1.8	9
292	Dual hannel Photostimulation for Independent Excitation of Two Populations. Current Protocols in Neuroscience, 2018, 85, e52.	2.6	6
293	Crystal structure of the natural anion-conducting channelrhodopsin GtACR1. Nature, 2018, 561, 343-348.	13.7	93
294	A Robust Optomotor Assay for Assessing the Efficacy of Optogenetic Tools for Vision Restoration. , 2018, 59, 1288.		13
295	Multifunctional Neural Interfaces for Closed‣oop Control of Neural Activity. Advanced Functional Materials, 2018, 28, 1703523.	7.8	22
296	Spectrally distinct channelrhodopsins for two-colour optogenetic peripheral nerve stimulation. Nature Biomedical Engineering, 2018, 2, 485-496.	11.6	32
297	Nociceptive interneurons control modular motor pathways to promote escape behavior in Drosophila. ELife, 2018, 7, .	2.8	70
298	Specificity, Versatility, and Continual Development: The Power of Optogenetics for Epilepsy Research. Frontiers in Cellular Neuroscience, 2018, 12, 151.	1.8	23
299	Nano functional neural interfaces. Nano Research, 2018, 11, 5065-5106.	5.8	23

#	Article	IF	CITATIONS
300	A Suite of Transgenic Driver and Reporter Mouse Lines with Enhanced Brain-Cell-Type Targeting and Functionality. Cell, 2018, 174, 465-480.e22.	13.5	571
301	Optogenetics Dissection of Sleep Circuits and Functions. , 2018, , 535-564.		0
302	Optogenetic surface stimulation of the rat cervical spinal cord. Journal of Neurophysiology, 2018, 120, 795-811.	0.9	19
303	Simultaneous Optogenetics and Cellular Resolution Calcium Imaging During Active Behavior Using a Miniaturized Microscope. Frontiers in Neuroscience, 2018, 12, 496.	1.4	73
304	Fan-Shaped Body Neurons in the Drosophila Brain Regulate Both Innate and Conditioned Nociceptive Avoidance. Cell Reports, 2018, 24, 1573-1584.	2.9	42
305	The Organization of Projections from Olfactory Glomeruli onto Higher-Order Neurons. Neuron, 2018, 98, 1198-1213.e6.	3.8	85
306	A sensory-motor neuron type mediates proprioceptive coordination of steering in C. elegans via two TRPC channels. PLoS Biology, 2018, 16, e2004929.	2.6	50
307	Recent Trends in Invertebrate Neuroscience. , 0, , 3-30.		0
308	Patterned Two-Photon Illumination for High-Speed Functional Imaging of Brain Networks In Vivo. Progress in Optical Science and Photonics, 2019, , 123-141.	0.3	1
309	Optical modulation goes deep in the brain. Science, 2019, 365, 456-457.	6.0	13
310	Expanding the Toolbox of Upconversion Nanoparticles for In Vivo Optogenetics and Neuromodulation. Advanced Materials, 2019, 31, e1803474.	11.1	118
311	Acetylcholine Release Inhibits Distinct Excitatory Inputs Onto Hippocampal CA1 Pyramidal Neurons via Different Cellular and Network Mechanisms. Frontiers in Cellular Neuroscience, 2019, 13, 267.	1.8	11
312	High-potency ligands for DREADD imaging and activation in rodents and monkeys. Nature Communications, 2019, 10, 4627.	5.8	128
313	Target-wide Induction and Synapse Type-Specific Robustness of Presynaptic Homeostasis. Current Biology, 2019, 29, 3863-3873.e2.	1.8	26
314	A high-speed, bright, red fluorescent voltage sensor to detect neural activity. Scientific Reports, 2019, 9, 15878.	1.6	23
315	Optogenetic Stimulation for Restoring Vision to Patients Suffering From Retinal Degenerative Diseases: Current Strategies and Future Directions. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 1792-1807.	2.7	7
316	Orofacial Movements Involve Parallel Corticobulbar Projections from Motor Cortex to Trigeminal Premotor Nuclei. Neuron, 2019, 104, 765-780.e3.	3.8	30
317	Flexible and Lightweight Devices for Wireless Multi-Color Optogenetic Experiments Controllable via Commercial Cell Phones. Frontiers in Neuroscience, 2019, 13, 819.	1.4	17

#	Article	IF	CITATIONS
318	Principles of Optogenetic Methods and Their Application to Cardiac Experimental Systems. Frontiers in Physiology, 2019, 10, 1096.	1.3	53
319	Novel Optogenetic Approaches in Epilepsy Research. Frontiers in Neuroscience, 2019, 13, 947.	1.4	29
320	Increasing the expression level of ChR2 enhances the optogenetic excitability of cochlear neurons. Journal of Neurophysiology, 2019, 122, 1962-1974.	0.9	15
321	Tracking Pore Hydration in Channelrhodopsin by Site-Directed Infrared-Active Azido Probes. Biochemistry, 2019, 58, 1275-1286.	1.2	8
323	Perspective Tools for Optogenetics and Photopharmacology: From Design to Implementation. Springer Series in Chemical Physics, 2019, , 139-172.	0.2	4
324	Three Families of Channelrhodopsins and Their Use in Optogenetics (review). Neuroscience and Behavioral Physiology, 2019, 49, 163-168.	0.2	4
325	Multiplexed temporally focused light shaping through a gradient index lens for precise in-depth optogenetic photostimulation. Scientific Reports, 2019, 9, 7603.	1.6	25
326	An update for epilepsy research and antiepileptic drug development: Toward precise circuit therapy. , 2019, 201, 77-93.		102
327	Thermal constraints on in vivo optogenetic manipulations. Nature Neuroscience, 2019, 22, 1061-1065.	7.1	319
328	Engineering Adenylate Cyclase Activated by Near-Infrared Window Light for Mammalian Optogenetic Applications. ACS Synthetic Biology, 2019, 8, 1314-1324.	1.9	20
329	Nanotransducers for Nearâ€Infrared Photoregulation in Biomedicine. Advanced Materials, 2019, 31, e1901607.	11.1	125
330	In Vitro Modeling of Nerve–Muscle Connectivity in a Compartmentalized Tissue Culture Device. Advanced Biology, 2019, 3, 1800307.	3.0	38
331	A flexible geometry for panoramic visual and optogenetic stimulation during behavior and physiology. Journal of Neuroscience Methods, 2019, 323, 48-55.	1.3	22
332	Prospects of Optogenetic Prosthesis of the Degenerative Retina of the Eye. Biochemistry (Moscow), 2019, 84, 479-490.	0.7	6
333	Improved CoChR Variants Restore Visual Acuity and Contrast Sensitivity in a Mouse Model of Blindness under Ambient Light Conditions. Molecular Therapy, 2019, 27, 1195-1205.	3.7	40
334	Color-Tunablility in GaN LEDs Based on Atomic Emission Manipulation under Current Injection. ACS Photonics, 2019, 6, 1153-1161.	3.2	15
335	Gene and Induced Pluripotent Stem Cell Therapy for Retinal Diseases. Annual Review of Genomics and Human Genetics, 2019, 20, 201-216.	2.5	32
336	Electrostatic Spectral Tuning Maps for Biological Chromophores. Journal of Physical Chemistry B, 2019, 123, 4813-4824.	1.2	23

#	Article	IF	CITATIONS
337	<i>In vivo</i> sub-millisecond two-photon optogenetics with temporally focused patterned light. Journal of Neuroscience, 2019, 39, 1785-18.	1.7	53
338	Cardiac Optogenetics and Optical Mapping – Overcoming Spectral Congestion in All-Optical Cardiac Electrophysiology. Frontiers in Physiology, 2019, 10, 182.	1.3	38
339	<i>a</i> -ARM: Automatic Rhodopsin Modeling with Chromophore Cavity Generation, Ionization State Selection, and External Counterion Placement. Journal of Chemical Theory and Computation, 2019, 15, 3134-3152.	2.3	44
340	Design of an Ultrafast G Protein Switch Based on a Mouse Melanopsin Variant. ChemBioChem, 2019, 20, 1766-1771.	1.3	6
341	Direct Neural Interface. , 2019, , 139-174.		0
342	An Optogenetic Kindling Model of Neocortical Epilepsy. Scientific Reports, 2019, 9, 5236.	1.6	54
343	A light in the dark: state of the art and perspectives in optogenetics and optopharmacology for restoring vision. Future Medicinal Chemistry, 2019, 11, 463-487.	1.1	7
344	Parallel Multimodal Circuits Control an Innate Foraging Behavior. Neuron, 2019, 102, 407-419.e8.	3.8	60
345	Ion channel engineering for modulation and de novo generation of electrical excitability. Current Opinion in Biotechnology, 2019, 58, 100-107.	3.3	7
346	Optogenetic Control of the Peripheral Nervous System. Cold Spring Harbor Perspectives in Medicine, 2019, 9, a034397.	2.9	9
347	An automated hybrid bioelectronic system for autogenous restoration of sinus rhythm in atrial fibrillation. Science Translational Medicine, 2019, 11, .	5.8	50
348	Flexible fiber-based optoelectronics for neural interfaces. Chemical Society Reviews, 2019, 48, 1826-1852.	18.7	100
349	Sono-optogenetics facilitated by a circulation-delivered rechargeable light source for minimally invasive optogenetics. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26332-26342.	3.3	118
350	Machine learning-guided channelrhodopsin engineering enables minimally invasive optogenetics. Nature Methods, 2019, 16, 1176-1184.	9.0	141
351	The primate model for understanding and restoring vision. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26280-26287.	3.3	73
352	Next-Generation Tools to Study Autonomic Regulation In Vivo. Neuroscience Bulletin, 2019, 35, 113-123.	1.5	6
353	A wireless closed-loop system for optogenetic peripheral neuromodulation. Nature, 2019, 565, 361-365.	13.7	358
354	Conjugated Polymer Nanoparticles for Imaging, Cell Activity Regulation, and Therapy. Advanced Functional Materials, 2019, 29, 1806818.	7.8	204

#	Article	IF	CITATIONS
355	Functional brain stem circuits for control of nose motion. Journal of Neurophysiology, 2019, 121, 205-217.	0.9	15
356	Reprogramming the brain with synthetic neurobiology. Current Opinion in Biotechnology, 2019, 58, 37-44.	3.3	2
357	Nearâ€Infraredâ€Light Activatable Nanoparticles for Deepâ€Tissueâ€Penetrating Wireless Optogenetics. Advanced Healthcare Materials, 2019, 8, e1801132.	3.9	94
358	Interacting neural ensembles in orbitofrontal cortex for social and feeding behaviour. Nature, 2019, 565, 645-649.	13.7	165
359	Mapping Structure-Function Relationships in theÂBrain. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2019, 4, 510-521.	1.1	11
360	Development of a human skeletal micro muscle platform with pacing capabilities. Biomaterials, 2019, 198, 217-227.	5.7	38
361	No light without the dark: Perspectives and hindrances for translation of cardiac optogenetics. Progress in Biophysics and Molecular Biology, 2020, 154, 39-50.	1.4	13
362	Optogenetics sheds new light on tissue engineering and regenerative medicine. Biomaterials, 2020, 227, 119546.	5.7	25
363	Structural Basis of Design and Engineering for Advanced Plant Optogenetics. Trends in Plant Science, 2020, 25, 35-65.	4.3	25
364	Analog Retinal Redshifts Visible Absorption of QuasAr Transmembrane Voltage Sensors into Nearâ€infrared. Photochemistry and Photobiology, 2020, 96, 55-66.	1.3	6
365	Optogenetics: Illuminating neuronal circuits of memory formation. Journal of Neurogenetics, 2020, 34, 47-54.	0.6	6
366	The Unlimited Potential of Microbial Rhodopsins as Optical Tools. Biochemistry, 2020, 59, 218-229.	1.2	27
367	Retinal Proteins: Photochemistry and Optogenetics. Bulletin of the Chemical Society of Japan, 2020, 93, 76-85.	2.0	36
368	Minimally invasive neural stimulation with a novel ultra-sensitive step function opsin: implications and future directions. Journal of Neurophysiology, 2020, 124, 1312-1314.	0.9	0
369	Chemical Biology Toolbox for Studying Pancreatic Islet Function – A Perspective. Cell Chemical Biology, 2020, 27, 1015-1031.	2.5	4
370	Challenges for Therapeutic Applications of Opsin-Based Optogenetic Tools in Humans. Frontiers in Neural Circuits, 2020, 14, 41.	1.4	61
371	Non-invasive red-light optogenetic control of Drosophila cardiac function. Communications Biology, 2020, 3, 336.	2.0	10
372	Optogenetic Gene Therapy for the Degenerate Retina: Recent Advances. Frontiers in Neuroscience, 2020, 14, 570909.	1.4	34

#	Article	IF	CITATIONS
373	Cardiac Optogenetics in Atrial Fibrillation: Current Challenges and Future Opportunities. BioMed Research International, 2020, 2020, 1-13.	0.9	10
374	An efficient cell type specific conjugating method for incorporating various nanostructures to genetically encoded AviTag expressed optogenetic opsins. Biochemical and Biophysical Research Communications, 2020, 530, 581-587.	1.0	1
375	Modulation of Light Energy Transfer from Chromophore to Protein in the Channelrhodopsin ReaChR. Biophysical Journal, 2020, 119, 705-716.	0.2	6
376	Luminescent molecules towards precise cellular event regulation. Chemical Communications, 2020, 56, 10231-10234.	2.2	3
377	Seeing the sound. Science, 2020, 369, 638-638.	6.0	34
378	Parallel ascending spinal pathways for affective touch and pain. Nature, 2020, 587, 258-263.	13.7	149
379	In vivo localization of chronically implanted electrodes and optic fibers in mice. Nature Communications, 2020, 11, 4686.	5.8	15
380	Optical stimulation of neural tissue. Healthcare Technology Letters, 2020, 7, 58-65.	1.9	25
381	Novel Modular Rhodopsins from Green Algae Hold Great Potential for Cellular Optogenetic Modulation Across the Biological Model Systems. Life, 2020, 10, 259.	1.1	5
382	Further-reaching optogenetics. Nature Biomedical Engineering, 2020, 4, 1028-1029.	11.6	4
383	CaMKIIα-Positive Interneurons Identified via a microRNA-Based Viral Gene Targeting Strategy. Journal of Neuroscience, 2020, 40, 9576-9588.	1.7	15
384	An Ultra-Sensitive Step-Function Opsin for Minimally Invasive Optogenetic Stimulation in Mice and Macaques. Neuron, 2020, 107, 38-51.e8.	3.8	99
385	Towards the clinical translation of optogenetic skeletal muscle stimulation. Pflugers Archiv European Journal of Physiology, 2020, 472, 527-545.	1.3	12
386	Light Up the Brain: The Application of Optogenetics in Cell-Type Specific Dissection of Mouse Brain Circuits. Frontiers in Neural Circuits, 2020, 14, 18.	1.4	39
387	Long-Range Optogenetic Control of Axon Guidance Overcomes Developmental Boundaries and Defects. Developmental Cell, 2020, 53, 577-588.e7.	3.1	27
388	Insights Into Spinal Dorsal Horn Circuit Function and Dysfunction Using Optical Approaches. Frontiers in Neural Circuits, 2020, 14, 31.	1.4	22
389	The OptoGenBox – a device for long-term optogenetics in <i>C. elegans</i> . Journal of Neurogenetics, 2020, 34, 466-474.	0.6	7
390	Synthesis of One Double Bond-Inserted Retinal Analogs and Their Binding Experiments with Opsins: Preparation of Novel Red-Shifted Channelrhodopsin Variants. Chemical and Pharmaceutical Bulletin, 2020, 68, 265-272.	0.6	4

	Сітатіо	n Report	
#	Article	IF	Citations
391	Emerging approaches for restoration of hearing and vision. Physiological Reviews, 2020, 100, 1467-1525.	13.1	45
392	Long-range Channelrhodopsin-assisted Circuit Mapping of Inferior Colliculus Neurons with Blue and Red-shifted Channelrhodopsins. Journal of Visualized Experiments, 2020, , .	0.2	0
393	Advanced Nearâ€Infrared Light for Monitoring and Modulating the Spatiotemporal Dynamics of Cell Functions in Living Systems. Advanced Science, 2020, 7, 1903783.	5.6	79
394	Biophysics of rhodopsins and optogenetics. Biophysical Reviews, 2020, 12, 355-361.	1.5	46
395	Optogenetics: Background, Methodological Advances and Potential Applications for Cardiovascular Research and Medicine. Frontiers in Bioengineering and Biotechnology, 2019, 7, 466.	2.0	57
396	New Vision for Visual Prostheses. Frontiers in Neuroscience, 2020, 14, 36.	1.4	33
397	Animal Functional Magnetic Resonance Imaging: Trends and Path Toward Standardization. Frontiers in Neuroinformatics, 2019, 13, 78.	1.3	78
398	Opsins for vision restoration. Biochemical and Biophysical Research Communications, 2020, 527, 325-330.	1.0	22
399	Towards minimally invasive deep brain stimulation and imaging: A near-infrared upconversion approach. Neuroscience Research, 2020, 152, 59-65.	1.0	10
400	Upconversion Nanoparticles–Based Multiplex Protein Activation to Neuron Ablation for Locomotion Regulation. Small, 2020, 16, e1906797.	5.2	16
401	ORANGE: A CRISPR/Cas9-based genome editing toolbox for epitope tagging of endogenous proteins in neurons. PLoS Biology, 2020, 18, e3000665.	2.6	107
402	The functional characteristics of optogenetic gene therapy for vision restoration. Cellular and Molecular Life Sciences, 2021, 78, 1597-1613.	2.4	8
403	A micro-LED implant and technique for optogenetic stimulation of the rat spinal cord. Experimental Neurology, 2021, 335, 113480.	2.0	14
404	Deep brain optogenetics without intracranial surgery. Nature Biotechnology, 2021, 39, 161-164.	9.4	139
405	Imaging and optogenetic modulation of vascular mural cells in the live brain. Nature Protocols, 2021, 16, 472-496.	5.5	32
406	Cardiac optogenetics: a decade of enlightenment. Nature Reviews Cardiology, 2021, 18, 349-367.	6.1	97
408	Optogenetics in Drosophila. Advances in Experimental Medicine and Biology, 2021, 1293, 309-320.	0.8	6
409	Cell-Type-Specific Optogenetic Techniques Reveal Neural Circuits Crucial for Episodic Memories. Advances in Experimental Medicine and Biology, 2021, 1293, 429-447.	0.8	3

#	Article	IF	Citations
410	Electrophysiology Read-Out Tools for Brain-on-Chip Biotechnology. Micromachines, 2021, 12, 124.	1.4	26
411	Optogenetics. , 2021, , 283-302.		1
412	Structure–Function Relationship of Channelrhodopsins. Advances in Experimental Medicine and Biology, 2021, 1293, 35-53.	0.8	12
414	Membrane potential regulates Hedgehog signalling in the <i>Drosophila</i> wing imaginal disc. EMBO Reports, 2021, 22, e51861.	2.0	13
415	Performance in even a simple perceptual task depends on mouse secondary visual areas. ELife, 2021, 10, .	2.8	21
416	Wireless Optogenetic Modulation of Cortical Neurons Enabled by Radioluminescent Nanoparticles. ACS Nano, 2021, 15, 5201-5208.	7.3	31
417	Neural and behavioral control in <i>Caenorhabditis elegans</i> by a yellow-light–activatable caged compound. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	2
418	Wireless and battery-free technologies for neuroengineering. Nature Biomedical Engineering, 2023, 7, 405-423.	11.6	141
419	Photothermal Modulation of Depressionâ€Related Ion Channel Function through Conjugated Polymer Nanoparticles. Advanced Functional Materials, 2021, 31, 2010757.	7.8	22
420	Optogenetic activation of spinal microglia triggers chronic pain in mice. PLoS Biology, 2021, 19, e3001154.	2.6	39
421	Simple Models to Study Spectral Properties of Microbial and Animal Rhodopsins: Evaluation of the Electrostatic Effect of Charged and Polar Residues on the First Absorption Band Maxima. International Journal of Molecular Sciences, 2021, 22, 3029.	1.8	9
425	OptoGap is an optogenetics-enabled assay for quantification of cell–cell coupling in multicellular cardiac tissue. Scientific Reports, 2021, 11, 9310.	1.6	11
427	Early and late stage gene therapy interventions for inherited retinal degenerations. Progress in Retinal and Eye Research, 2022, 86, 100975.	7.3	85
428	Fully autonomous mouse behavioral and optogenetic experiments in home-cage. ELife, 2021, 10, .	2.8	21
429	Nanotransducers for wireless neuromodulation. Matter, 2021, 4, 1484-1510.	5.0	20
431	Optogenetic strategies for high-efficiency all-optical interrogation using blue-light-sensitive opsins. ELife, 2021, 10, .	2.8	29
432	A photoswitchable GPCR-based opsin for presynaptic inhibition. Neuron, 2021, 109, 1791-1809.e11.	3.8	62
433	Illuminating Neural Circuits in Alzheimer's Disease. Neuroscience Bulletin, 2021, 37, 1203-1217.	1.5	16

#	Article	IF	CITATIONS
434	Multiplexing viral approaches to the study of the neuronal circuits. Journal of Neuroscience Methods, 2021, 357, 109142.	1.3	1
435	Convergence Circuit Mapping: Genetic Approaches From Structure to Function. Frontiers in Systems Neuroscience, 2021, 15, 688673.	1.2	4
437	In Situ Selfâ€Assembly of Quantum Dots at the Plasma Membrane Mediates Energy Transferâ€Based Activation of Channelrhodopsin. Particle and Particle Systems Characterization, 2021, 38, 2100053.	1.2	0
438	Structure-based insights into evolution of rhodopsins. Communications Biology, 2021, 4, 821.	2.0	14
439	Theoretical analysis of optogenetic spiking with ChRmine, bReaChES and CsChrimson-expressing neurons for retinal prostheses. Journal of Neural Engineering, 2021, 18, 0460b8.	1.8	11
440	Wireless, battery-free, subdermally implantable platforms for transcranial and long-range optogenetics in freely moving animals. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	31
441	Nearâ€Infraredâ€Light Remoteâ€Controlled Activation of Cancer Immunotherapy Using Photothermal Conjugated Polymer Nanoparticles. Advanced Materials, 2021, 33, e2102570.	11.1	58
442	Neurohumoral Cardiac Regulation: Optogenetics Gets Into the Groove. Frontiers in Physiology, 2021, 12, 726895.	1.3	14
443	Advances and prospects of rhodopsin-based optogenetics in plant research. Plant Physiology, 2021, 187, 572-589.	2.3	6
444	Functional diversity for body actions in the mesencephalic locomotor region. Cell, 2021, 184, 4564-4578.e18.	13.5	53
445	Olfactory Optogenetics: Light Illuminates the Chemical Sensing Mechanisms of Biological Olfactory Systems. Biosensors, 2021, 11, 309.	2.3	1
446	The state of the art of biomedical applications of optogenetics. Lasers in Surgery and Medicine, 2022, 54, 202-216.	1.1	11
447	Optogenetic Neuromodulation of the Urinary Bladder. Neuromodulation, 2021, 24, 1229-1236.	0.4	5
448	Applications of upconversion nanoparticles in cellular optogenetics. Acta Biomaterialia, 2021, 135, 1-12.	4.1	20
449	The Effects of Repetitive Use and Pathological Remodeling on Channelrhodopsin Function in Cardiomyocytes. Frontiers in Physiology, 2021, 12, 710020.	1.3	4
450	Optical ventricular cardioversion by local optogenetic targeting and LED implantation in a cardiomyopathic rat model. Cardiovascular Research, 2022, 118, 2293-2303.	1.8	12
451	Lighting the Path: Light Delivery Strategies to Activate Photoresponsive Biomaterials In Vivo. Advanced Functional Materials, 2021, 31, 2105989.	7.8	35
452	Optogenetic Control of Arrhythmias. , 2021, , 363-379.		0

#	Article	IF	CITATIONS
453	History and Perspectives of Ion-Transporting Rhodopsins. Advances in Experimental Medicine and Biology, 2021, 1293, 3-19.	0.8	8
454	In Utero Electroporation Methods in the Study of Cerebral Cortical Development. Neuromethods, 2016, , 21-39.	0.2	3
455	Enhancing Channelrhodopsins: An Overview. Methods in Molecular Biology, 2016, 1408, 141-165.	0.4	32
456	Optogenetics in Drosophila Neuroscience. Methods in Molecular Biology, 2016, 1408, 167-175.	0.4	28
457	Imaging Glutamate with Genetically Encoded Fluorescent Sensors. Neuromethods, 2018, , 117-153.	0.2	3
458	Two-Photon Optogenetics by Computer-Generated Holography. Neuromethods, 2018, , 175-197.	0.2	13
459	Cell Type-Specific Targeting Strategies for Optogenetics. Neuromethods, 2018, , 25-42.	0.2	4
461	From Phototaxis to Biomedical Applications: Investigating the Molecular Mechanism of Channelrhodopsins. Springer Series in Biophysics, 2015, , 361-381.	0.4	3
462	When Photons Meet Protons: Optogenetics, Calcium Signal Detection, and fMRI in Small Animals. , 2017, , 773-791.		4
469			
463	Optogenetic Analysis of Striatal Connections to Determine Functional Connectomes. , 2015, , 265-277.		2
403	Optogenetic Analysis of Striatal Connections to Determine Functional Connectomes. , 2015, , 265-277. General Description: Future Prospects of Optogenetics. , 2015, , 111-131.		2 3
		0.2	
464	General Description: Future Prospects of Optogenetics. , 2015, , 111-131. CHAPTER 10. Optogenetic and Chemogenetic Tools for Drug Discovery in Schizophrenia. RSC Drug	0.2	3
464 465	<ul> <li>General Description: Future Prospects of Optogenetics. , 2015, , 111-131.</li> <li>CHAPTER 10. Optogenetic and Chemogenetic Tools for Drug Discovery in Schizophrenia. RSC Drug Discovery Series, 2015, , 234-272.</li> <li>CerebraLux: a low-cost, open-source, wireless probe for optogenetic stimulation. Neurophotonics,</li> </ul>		3
464 465 480	<ul> <li>General Description: Future Prospects of Optogenetics. , 2015, , 111-131.</li> <li>CHAPTER 10. Optogenetic and Chemogenetic Tools for Drug Discovery in Schizophrenia. RSC Drug Discovery Series, 2015, , 234-272.</li> <li>CerebraLux: a low-cost, open-source, wireless probe for optogenetic stimulation. Neurophotonics, 2017, 4, 1.</li> <li>Investigating the feasibility of channelrhodopsin variants for nanoscale optogenetics.</li> </ul>	1.7	3 1 11
464 465 480 481	General Description: Future Prospects of Optogenetics., 2015,, 111-131.         CHAPTER 10. Optogenetic and Chemogenetic Tools for Drug Discovery in Schizophrenia. RSC Drug Discovery Series, 2015,, 234-272.         CerebraLux: a low-cost, open-source, wireless probe for optogenetic stimulation. Neurophotonics, 2017, 4, 1.         Investigating the feasibility of channelrhodopsin variants for nanoscale optogenetics. Neurophotonics, 2019, 6, 1.         Theoretical optimization of high-frequency optogenetic spiking of red-shifted very	1.7 1.7	3 1 11 15
464 465 480 481 482	General Description: Future Prospects of Optogenetics., 2015, , 111-131.         CHAPTER 10. Optogenetic and Chemogenetic Tools for Drug Discovery in Schizophrenia. RSC Drug Discovery Series, 2015, , 234-272.         CerebraLux: a low-cost, open-source, wireless probe for optogenetic stimulation. Neurophotonics, 2017, 4, 1.         Investigating the feasibility of channelrhodopsin variants for nanoscale optogenetics. Neurophotonics, 2019, 6, 1.         Theoretical optimization of high-frequency optogenetic spiking of red-shifted very fast-Chrimson-expressing neurons. Neurophotonics, 2019, 6, 1.         Optogenetic defibrillation terminates ventricular arrhythmia in mouse hearts and human simulations.	1.7 1.7 1.7	3 1 11 15 15

#	Article	IF	CITATIONS
486	Blue Light Increases Neuronal Activity-Regulated Gene Expression in the Absence of Optogenetic Proteins. ENeuro, 2019, 6, ENEURO.0085-19.2019.	0.9	41
487	Activation of Distinct Channelrhodopsin Variants Engages Different Patterns of Network Activity. ENeuro, 2020, 7, ENEURO.0222-18.2019.	0.9	13
488	Genetic Analysis of Histamine Signaling in Larval Zebrafish Sleep. ENeuro, 2017, 4, ENEURO.0286-16.2017.	0.9	29
490	A Suite of Transgenic Driver and Reporter Mouse Lines with Enhanced Brain Cell Type Targeting and Functionality. SSRN Electronic Journal, 0, , .	0.4	2
491	Plasticity at Thalamo-Amygdala Synapses Regulates Cocaine-Cue Memory Formation and Extinction. SSRN Electronic Journal, 0, , .	0.4	1
492	Genetic and epigenetic editing inâ€`nervous system. Dialogues in Clinical Neuroscience, 2019, 21, 359-368.	1.8	7
493	Optogenetics and its application in neural degeneration and regeneration. Neural Regeneration Research, 2017, 12, 1197.	1.6	42
494	Optogenetics, Tools and Applications in Neurobiology. Journal of Medical Signals and Sensors, 2017, 7, 71.	0.5	36
495	Cell type-specific and time-dependent light exposure contribute to silencing in neurons expressing Channelrhodopsin-2. ELife, 2014, 3, e01481.	2.8	93
496	Brain-wide mapping of neural activity controlling zebrafish exploratory locomotion. ELife, 2016, 5, e12741.	2.8	246
497	Cellular resolution circuit mapping with temporal-focused excitation of soma-targeted channelrhodopsin. ELife, 2016, 5, .	2.8	140
498	Immediate perception of a reward is distinct from the reward's long-term salience. ELife, 2016, 5, .	2.8	8
499	Analysis of the NK2 homeobox gene ceh-24 reveals sublateral motor neuron control of left-right turning during sleep. ELife, 2017, 6, .	2.8	8
500	Sparse recurrent excitatory connectivity in the microcircuit of the adult mouse and human cortex. ELife, 2018, 7, .	2.8	142
501	Targeting light-gated chloride channels to neuronal somatodendritic domain reduces their excitatory effect in the axon. ELife, 2018, 7, .	2.8	64
502	A bidirectional network for appetite control in larval zebrafish. ELife, 2019, 8, .	2.8	50
503	Spatiotemporal constraints on optogenetic inactivation in cortical circuits. ELife, 2019, 8, .	2.8	150
504	Inhibition stabilization is a widespread property of cortical networks. ELife, 2020, 9, .	2.8	101

		CITATION REPORT		
#	Article		IF	CITATIONS
505	Enabling comprehensive optogenetic studies of mouse hearts by simultaneous opto-ele panoramic mapping and stimulation. Nature Communications, 2021, 12, 5804.	ectrical	5.8	6
506	Pro219 is an electrostatic color determinant in the light-driven sodium pump KR2. Com Biology, 2021, 4, 1185.	munications	2.0	9
507	Specialized Mechanosensory Epithelial Cells in Mouse Gut Intrinsic Tactile Sensitivity. Gastroenterology, 2022, 162, 535-547.e13.		0.6	44
508	Optogenetics. , 2014, , 1-5.			0
510	Beyond Localization of Function: Dissecting a Neural Code with Optogenetics. Biologic Physics Series, 2015, , 271-292.	al and Medical	0.3	0
512	Discovery and Development of Spectrally Diverse Channelrhodopsins (ChR) for Neurob Applications. Biological and Medical Physics Series, 2015, , 129-146.	iological	0.3	0
513	Two-photon excited ReaChR by a three-stage femtosecond optical parametric amplifier	.,2015,,.		0
514	Optogenetic Manipulation of Selective Neural Activity in Free-Moving Drosophila Adult Molecular Biology, 2016, 1408, 377-387.	s. Methods in	0.4	2
515	Revolutionizing Causal Circuitry Neurostimulation Utilizing the Optogenetic Technique Advanced Microsystems Development. Series in Bioengineering, 2017, , 61-80.	Through	0.3	0
517	Restoring vision in mice with retinal degeneration using multicharacteristic opsin. Neur 2017, 4, 1.	ophotonics,	1.7	14
520	Towards optogenetic control of spatiotemporal cardiac dynamics. , 2018, , .			0
536	Optogenetics. , 2020, , 409-421.			0
537	Near-infrared Deep Brain Stimulation in Living Mice. Methods in Molecular Biology, 202	20, 2173, 71-82.	0.4	2
538	Optogenetics for cardiac pacing, resynchronization, and arrhythmia termination. , 2020	0, , 861-890.		0
539	Diseases and Repair Approaches in Vision. , 2020, , 54-65.			0
542	Remote Optogenetics Using Up/Down-Conversion Phosphors. Frontiers in Molecular Bi 2021, 8, 771717.	osciences,	1.6	6
544	Two-Photon Optogenetic Stimulation of Drosophila Neurons. Methods in Molecular Bio 2191, 97-108.	ology, 2021,	0.4	0
545	Optogenetics, Tools and Applications in Neurobiology. Journal of Medical Signals and S 71-79.	ensors, 2017, 7,	0.5	11

#	Article	IF	Citations
546	Molecular Tools for Targeted Control of Nerve Cell Electrical Activity. Part I. Acta Naturae, 2021, 13, 52-64.	1.7	0
547	An Autonomous Molecular Bioluminescent Reporter (AMBER) for Voltage Imaging in Freely Moving Animals. Advanced Biology, 2021, 5, e2100842.	1.4	6
548	Cortical responses to touch reflect subcortical integration of LTMR signals. Nature, 2021, 600, 680-685.	13.7	26
549	Molecular Tools for Targeted Control of Nerve Cell Electrical Activity. Part I. Acta Naturae, 2021, 13, 52-64.	1.7	2
550	Fluorescence imaging of large-scale neural ensemble dynamics. Cell, 2022, 185, 9-41.	13.5	68
551	Toward Multiplexed Optogenetic Circuits. Frontiers in Bioengineering and Biotechnology, 2021, 9, 804563.	2.0	7
552	Mechanism of peripheral nerve modulation and recent applications. International Journal of Optomechatronics, 2021, 15, 182-198.	3.3	8
553	Review of Noninvasive or Minimally Invasive Deep Brain Stimulation. Frontiers in Behavioral Neuroscience, 2021, 15, 820017.	1.0	17
554	Shedding light on neurons: optical approaches for neuromodulation. National Science Review, 2022, 9, .	4.6	26
555	Towards translational optogenetics. Nature Biomedical Engineering, 2023, 7, 349-369.	11.6	54
556	Animal Models of Epilepsy: A Phenotype-oriented Review. , 2022, 13, 215.		17
557	Distinct limbic dopamine regulation across olfactoryâ€ŧubercle subregions through integration of in vivo fastâ€scan cyclic voltammetry and optogenetics. Journal of Neurochemistry, 2022, , .	2.1	5
558	Optophysiology: Illuminating cell physiology with optogenetics. Physiological Reviews, 2022, 102, 1263-1325.	13.1	51
559	Near-Infrared Activation of Sensory Rhodopsin II Mediated by NIR-to-Blue Upconversion Nanoparticles. Frontiers in Molecular Biosciences, 2021, 8, 782688.	1.6	2
560	Powerâ€effective scanning with <scp>AODs</scp> for <scp>3D</scp> optogenetic applications. Journal of Biophotonics, 2022, 15, e202100256.	1.1	5
561	Metal-free bioorthogonal click chemistry in cancer theranostics. Chemical Society Reviews, 2022, 51, 1336-1376.	18.7	76
562	Serotonergic neurons translate taste detection into internal nutrient regulation. Neuron, 2022, 110, 1036-1050.e7.	3.8	14
563	High-performance microbial opsins for spatially and temporally precise perturbations of large neuronal networks. Neuron, 2022, 110, 1139-1155.e6.	3.8	47

#	Article	IF	Citations
564	Colocalized, bidirectional optogenetic modulations in freely behaving mice with a wireless dual-color optoelectronic probe. Nature Communications, 2022, 13, 839.	5.8	31
565	Optogenetics for Understanding and Treating Brain Injury: Advances in the Field and Future Prospects. International Journal of Molecular Sciences, 2022, 23, 1800.	1.8	7
566	Adaptive polymer fiber neural device for drug delivery and enlarged illumination angle for neuromodulation. Journal of Neural Engineering, 2022, 19, 016035.	1.8	14
567	Restoring vision in mice with retinal degeneration using multicharacteristic opsin. Neurophotonics, 2017, 4, 1.	1.7	3
569	Photonic Nanojetâ€Mediated Optogenetics. Advanced Science, 2022, 9, e2104140.	5.6	17
570	Engineering rhodopsins' activation spectra using a FRET-based approach. Biophysical Journal, 2022, , .	0.2	0
571	Semiconducting Polymer Nanoparticles for Photoactivatable Cancer Immunotherapy and Imaging of Immunoactivation. Biomacromolecules, 2022, 23, 1490-1504.	2.6	16
572	Antibody-conjugated gold nanoparticles as nanotransducers for second near-infrared photo-stimulation of neurons in rats. Nano Convergence, 2022, 9, 13.	6.3	15
573	Tether-free photothermal deep-brain stimulation in freely behaving mice via wide-field illumination in the near-infrared-II window. Nature Biomedical Engineering, 2022, 6, 754-770.	11.6	78
575	A systematic comparison of optogenetic approaches to visual restoration. Molecular Therapy - Methods and Clinical Development, 2022, 25, 111-123.	1.8	13
576	Pipeline for 2-photon all-optical physiology in mouse: From viral titration and optical window implantation to binarization of calcium transients. STAR Protocols, 2021, 2, 101010.	0.5	6
580	Viral Transduction of Human Rod Opsin or Channelrhodopsin Variants to Mouse ON Bipolar Cells Does Not Impact Retinal Anatomy or Cause Measurable Death in the Targeted Cells. International Journal of Molecular Sciences, 2021, 22, 13111.	1.8	4
582	Remote neural regulation mediated by nanomaterials. Nanotechnology, 2022, 33, 272002.	1.3	4
612	Single Cell in vivo Optogenetic Stimulation by Two-Photon Excitation Fluorescence Transfer. SSRN Electronic Journal, 0, , .	0.4	0
613	Retinitis Pigmentosa: Progress in Molecular Pathology and Biotherapeutical Strategies. International Journal of Molecular Sciences, 2022, 23, 4883.	1.8	40
614	Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. Neurophotonics, 2022, 9, 013001.	1.7	17
615	Social isolation modulates appetite and avoidance behavior via a common oxytocinergic circuit in larval zebrafish. Nature Communications, 2022, 13, 2573.	5.8	18
616	Structure-guided optimization of light-activated chimeric G-protein-coupled receptors. Structure, 2022, 30, 1075-1087.e4.	1.6	9

		CITATION RE	PORT	
#	Article		IF	CITATIONS
617	Conjugated polymers for biomedical applications. Chemical Communications, 2022, 5	8, 7232-7244.	2.2	35
620	Advancements in the Quest to Map, Monitor, and Manipulate Neural Circuitry. Frontier Circuits, 0, 16, .	rs in Neural	1.4	14
621	Optogenetic Methods to Investigate Brain Alterations in Preclinical Models. Cells, 2022	2, 11, 1848.	1.8	7
622	Rhodopsins: An Excitingly Versatile Protein Species for Research, Development and Cre Engineering. Frontiers in Chemistry, 0, 10, .	ative	1.8	17
623	Non-invasive optogenetics with ultrasound-mediated gene delivery and red-light excita Stimulation, 2022, 15, 927-941.	tion. Brain	0.7	15
624	Optogenetics. , 2022, , 2561-2565.			0
625	Optogenetics. , 2022, , .			0
626	Optogenetics for visual restoration: From proof of principle to translational challenges Retinal and Eye Research, 2022, 91, 101089.	. Progress in	7.3	15
627	Remote Manipulation of ROS-Sensitive Calcium Channel Using Near-Infrared-Responsiv Oligomer Nanoparticles for Enhanced Tumor Therapy <i>In Vivo</i> . Nano Letters, 202	/e Conjugated 2, 22, 5427-5433.	4.5	23
628	Combining magnetic resonance imaging with readout and/or perturbation of neural ac models: Advantages and pitfalls. Frontiers in Neuroscience, 0, 16, .	tivity in animal	1.4	3
629	The Integration of Optical Stimulation in a Mechanically Dynamic Cell Culture Substrat Bioengineering and Biotechnology, 0, 10, .	e. Frontiers in	2.0	1
630	Optogenetics for light control of biological systems. Nature Reviews Methods Primers,	2022, 2, .	11.8	95
632	Chemogenetic and Optogenetic Manipulations of Microglia in Chronic Pain. Neuroscie 2023, 39, 368-378.	nce Bulletin,	1.5	18
633	All-fiber-transmission photometry for simultaneous optogenetic stimulation and multi- neuronal activity recording. Opto-Electronic Advances, 2022, 5, 210081-210081.	color	6.4	5
634	Rhodopsin-Based Optogenetics: Basics and Applications. Methods in Molecular Biolog	y, 2022, , 71-100.	0.4	8
635	Electrophysiological Characterization of Microbial Rhodopsins by Patch-Clamp Experim in Molecular Biology, 2022, , 277-288.	ents. Methods	0.4	0
636	Microbial Rhodopsins. Methods in Molecular Biology, 2022, , 1-52.		0.4	11
637	Optogenetic approaches to gene therapy for vision restoration in retinal degenerative , 581-606.	diseases. , 2022,		0

# 638	ARTICLE The whisking oscillator circuit. Nature, 2022, 609, 560-568.	IF 13.7	Citations 26
639	Advances in optogenetic studies of depressive-like behaviors and underlying neural circuit mechanisms. Frontiers in Psychiatry, 0, 13, .	1.3	1
640	Applications and challenges of rhodopsin-based optogenetics in biomedicine. Frontiers in Neuroscience, 0, 16, .	1.4	3
643	Ultraâ€low power deep sustained optogenetic excitation of human ventricular cardiomyocytes with redâ€shifted opsins: a computational study. Journal of Physiology, 2022, 600, 4653-4676.	1.3	7
644	A kinetic-optimized CoChR variant with enhanced high-frequency spiking fidelity. Biophysical Journal, 2022, , .	0.2	0
645	3D optogenetic control of arteriole diameter in vivo. ELife, 0, 11, .	2.8	6
646	Engineered Materials for Probing and Perturbing Brain Chemistry. , 2022, , 89-168.		1
647	Studying Synaptic Connectivity and Strength with Optogenetics and Patch-Clamp Electrophysiology. International Journal of Molecular Sciences, 2022, 23, 11612.	1.8	14
649	Optogenetic restoration of high sensitivity vision with bReaChES, a red-shifted channelrhodopsin. Scientific Reports, 2022, 12, .	1.6	1
650	Patterned Stimulation of the Chrimson Opsin in Glutamatergic Motor Thalamus Neurons Improves Forelimb Akinesia in Parkinsonian Rats. Neuroscience, 2022, , .	1.1	0
651	Mechanoreceptor signal convergence and transformation in the dorsal horn flexibly shape a diversity of outputs to the brain. Cell, 2022, 185, 4541-4559.e23.	13.5	24
652	Evaluation of Non-invasive Optogenetic Stimulation with Transcranial Functional Ultrasound Imaging. Ultrasound in Medicine and Biology, 2023, 49, 908-917.	0.7	4
653	Optogenetic Therapy for Visual Restoration. International Journal of Molecular Sciences, 2022, 23, 15041.	1.8	14
654	Calcium-permeable channelrhodopsins for the photocontrol of calcium signalling. Nature Communications, 2022, 13, .	5.8	4
655	Recent advances in developing active targeting and multi-functional drug delivery systems via bioorthogonal chemistry. Signal Transduction and Targeted Therapy, 2022, 7, .	7.1	30
657	Gene-agnostic therapeutic approaches for inherited retinal degenerations. Frontiers in Molecular Neuroscience, 0, 15, .	1.4	9
658	Brainstem serotonin neurons selectively gate retinal information flow to thalamus. Neuron, 2023, 111, 711-726.e11.	3.8	5
660	Vision: Optogenetics Addressing AMD Diseases. , 2023, , 1069-1090.		0

	CHAIION		
#	Article	IF	Citations
661	Principles and applications of sono-optogenetics. Advanced Drug Delivery Reviews, 2023, 194, 114711.	6.6	10
662	Channelrhodopsin fluorescent tag replacement for clinical translation of optogenetic hearing restoration. Molecular Therapy - Methods and Clinical Development, 2023, 29, 202-212.	1.8	3
663	Functional integrity of visual coding following advanced photoreceptor degeneration. Current Biology, 2023, 33, 474-486.e5.	1.8	3
664	A red light-controlled probiotic bio-system for in-situ gut-brain axis regulation. Biomaterials, 2023, 294, 122005.	5.7	6
665	Neuroscience: Visual restoration with optogenetics. Current Biology, 2023, 33, R110-R112.	1.8	1
666	A New Tool for Quantifying Mouse Facial Expressions. ENeuro, 2023, 10, ENEURO.0349-22.2022.	0.9	6
667	Integrated cardio-behavioral responses to threat define defensive states. Nature Neuroscience, 2023, 26, 447-457.	7.1	16
668	High-Speed All-Optical Neural Interfaces with 3D Temporally Focused Holography. Neuromethods, 2023, , 101-135.	0.2	1
669	Balancing the Fluorescence Imaging Budget for All-Optical Neurophysiology Experiments. Neuromethods, 2023, , 49-74.	0.2	1
670	Properties of a Single Amino Acid Residue in the Third Transmembrane Domain Determine the Kinetics of Ambient Light-Sensitive Channelrhodopsin. International Journal of Molecular Sciences, 2023, 24, 5054.	1.8	1
671	Graphene-enabled optical cardiac control in Drosophila melanogaster. , 2023, , .		0
672	A sleep-active neuron can promote survival while sleep behavior is disturbed. PLoS Genetics, 2023, 19, e1010665.	1.5	3
673	In vivo optogenetic stimulation using Parylene photonic waveguides for light delivery. , 2023, , .		0
674	Nociception in fruit fly larvae. Frontiers in Pain Research, 0, 4, .	0.9	1
675	Ultrafast light targeting for high-throughput precise control of neuronal networks. Nature Communications, 2023, 14, .	5.8	9
677	Evaluating the Potential of Light Exposure on Reducing the Frequency of Epileptic Seizures. CNS and Neurological Disorders - Drug Targets, 2024, 23, 463-467.	0.8	0
678	Optogenetic Control of Muscles: Potential Uses and Limitations. Human Gene Therapy, 2023, 34, 416-429.	1.4	3
679	Tailoring baker's yeast Saccharomyces cerevisiae for functional testing of channelrhodopsin. PLoS ONE, 2023, 18, e0280711.	1.1	0

		CITATION R	EPORT	
#	Article		IF	Citations
681	Nanotransducer-Enabled Deep-Brain Neuromodulation with NIR-II Light. ACS Nano, 202	23, 17, 7941-7952.	7.3	11
687	Neuro-urology research: a comprehensive overview. , 2023, , 1-28.			0
694	Recent Advances in Optogenetic Retinal Prostheses. , 0, , .			0
697	Recent advances and current limitations of available technology to optically manipulat cardiac electrophysiology. Pflugers Archiv European Journal of Physiology, 2023, 475, 2	e and observe 1357-1366.	1.3	1
698	Bioinspired nanotransducers for neuromodulation. Nano Research, 2024, 17, 618-632		5.8	1
711	Enlightening Cardiac Arrhythmia with Optogenetics. , 2023, , 359-374.			Ο