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Millisecond-timescale, genetically targeted optical control of neural activity

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2019	Fiber-optic probes for in vivo depth-resolved neuron-activity mapping. <b>2010</b> , 3, 660-9	13
2018	Optical Stimulation of Neurons. <b>2010</b> , 99-112	1
2017	Voltage- and temperature-dependent gating of heterologously expressed channelrhodopsin-2. <b>2010</b> , 193, 7-13	17
2016	Cellular prostheses: functional abiotic nanosystems to probe, manipulate, and endow function in live cells. <b>2010</b> , 6, 409-18	3
2015	Bridging the gaps between synapses, circuits, and behavior. <b>2010</b> , 17, 607-15	5
2014	Functional control of transplantable human ESC-derived neurons via optogenetic targeting. <b>2010</b> , 28, 2008-16	79
2013	Optogenetic control of striatal dopamine release in rats. <b>2010</b> , 114, 1344-52	68
2012	New approaches for the study of orexin function. <b>2010</b> , 22, 818-24	6
2011	High-performance genetically targetable optical neural silencing by light-driven proton pumps. <b>2010</b> , 463, 98-102	907
2010	Lateral competition for cortical space by layer-specific horizontal circuits. <b>2010</b> , 464, 1155-60	266
2009	Global and local fMRI signals driven by neurons defined optogenetically by type and wiring. <b>2010</b> , 465, 788-92	472
2008	Regulation of parkinsonian motor behaviours by optogenetic control of basal ganglia circuitry. <b>2010</b> , 466, 622-6	1246
2007	Activity-dependent relocation of the axon initial segment fine-tunes neuronal excitability. <b>2010</b> , 465, 1070-4	421
2006	Start/stop signals emerge in nigrostriatal circuits during sequence learning. <b>2010</b> , 466, 457-62	380
2005	Neuroscience: Illuminating the brain. <b>2010</b> , 465, 26-8	21
2004	Neuroscience: A plastic axonal hotspot. <b>2010</b> , 465, 1022-3	13
2003	Neuroscience: fMRI under the spotlight. <b>2010</b> , 465, 700-1	10
2002	A decade of chemical biology. <b>2010</b> , 6, 847-54	20

2001	Orderly recruitment of motor units under optical control in vivo. <b>2010</b> , 16, 1161-5		150
2000	Scanless two-photon excitation of channelrhodopsin-2. <b>2010</b> , 7, 848-54		304
1999	Optogenetic control of heart muscle in vitro and in vivo. <b>2010</b> , 7, 897-900		316
1998	Oxygen maps in the brain. <b>2010</b> , 7, 697-9		2
1997	Pacing lightly: optogenetics gets to the heart. <b>2010</b> , 7, 889-91		17
1996	A robust and high-throughput Cre reporting and characterization system for the whole mouse brain. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 133-40	25.5	3764
1995	Activation of groups of excitatory neurons in the mammalian spinal cord or hindbrain evokes locomotion. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 246-52	25.5	204
1994	Ultrafast optogenetic control. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 387-92	25.5	554
1993	C. elegans phototransduction requires a G protein-dependent cGMP pathway and a taste receptor homolog. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 715-22	25.5	137
1992	A light-gated, potassium-selective glutamate receptor for the optical inhibition of neuronal firing. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 1027-32	25.5	112
1991	Functional imaging of hippocampal place cells at cellular resolution during virtual navigation. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 1433-40	25.5	531
1990	The functional asymmetry of auditory cortex is reflected in the organization of local cortical circuits. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 1413-20	25.5	81
1989	Non-redundant odor coding by sister mitral cells revealed by light addressable glomeruli in the mouse. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 1404-12	25.5	174
1988	Tuning arousal with optogenetic modulation of locus coeruleus neurons. <i>Nature Neuroscience</i> , <b>2010</b> , 13, 1526-33	25.5	609
1987	Remote control of ion channels and neurons through magnetic-field heating of nanoparticles. <b>2010</b> , 5, 602-6		505
1986	Optogenetic interrogation of neural circuits: technology for probing mammalian brain structures. <b>2010</b> , 5, 439-56		740
1985	Targeted optogenetic stimulation and recording of neurons in vivo using cell-type-specific expression of Channelrhodopsin-2. <b>2010</b> , 5, 247-54		380
1984	Multi-array silicon probes with integrated optical fibers: light-assisted perturbation and recording of local neural circuits in the behaving animal. <b>2010</b> , 31, 2279-91		184

1983	Long-range connectivity of mouse primary somatosensory barrel cortex. <b>2010</b> , 31, 2221-33	209
1982	Optogenetic deconstruction of sleep-wake circuitry in the brain. <b>2010</b> , 2, 31	41
1981	Neural Circuits can Bridge Systems and Cognitive Neuroscience. <b>2010</b> , 3, 81	4
1980	What do we gain from gamma? Local dynamic gain modulation drives enhanced efficacy and efficiency of signal transmission. <b>2010</b> , 4, 185	31
1979	The enigmatic function of chandelier cells. <b>2010</b> , 4, 201	78
1978	STDP in the Developing Sensory Neocortex. <b>2010</b> , 2, 9	57
1977	Opto-current-clamp actuation of cortical neurons using a strategically designed channelrhodopsin. <b>2010</b> , 5, e12893	66
1976	Channelrhodopsin-2 localised to the axon initial segment. <b>2010</b> , 5, e13761	43
1975	Cholinergic interneurons control local circuit activity and cocaine conditioning. 2010, 330, 1677-81	350
1974	Identification of neuronal subpopulations that project from hypothalamus to both liver and adipose tissue polysynaptically. <b>2010</b> , 107, 7024-9	131
1973	Special issue on optical neural engineering: advances in optical stimulation technology. <b>2010</b> , 7, 040201	7
1972	Engineering scalable biological systems. <b>2010</b> , 1, 378-84	10
1971	Optical activation of lateral amygdala pyramidal cells instructs associative fear learning. <b>2010</b> , 107, 12692-7	218
1970	Potential solutions to several vestibular challenges facing clinicians. <b>2010</b> , 20, 71-7	26
1969	Structure and function relationships during ocular dominance plasticity in the visual cortex. <b>2010</b> , 21, 223-37	6
1968	Genetic dissection of rhythmic motor networks in mice. <b>2010</b> , 187, 19-37	44
1967	Visual function in mice with photoreceptor degeneration and transgenic expression of channelrhodopsin 2 in ganglion cells. <b>2010</b> , 30, 8745-58	106
1966	Generation of spatiotemporally correlated spike trains and local field potentials using a multivariate autoregressive process. <b>2010</b> , 103, 2912-30	20

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1965	Nanostimulation: manipulation of single neuron activity by juxtacellular current injection. <b>2010</b> , 103, 1696-704	256
1964	Two-photon single-cell optogenetic control of neuronal activity by sculpted light. <b>2010</b> , 107, 11981-6	162
1963	An optogenetic neural stimulation platform for concurrent induction and recording of neural activity. <b>2010</b> ,	
1962	Photostimulation of Phox2b medullary neurons activates cardiorespiratory function in conscious rats. <b>2010</b> , 182, 1184-94	73
1961	Milestones and mechanisms for generating specific synaptic connections between the eyes and the brain. <b>2010</b> , 93, 229-59	3
1960	Toward the second generation of optogenetic tools. <b>2010</b> , 30, 14998-5004	89
1959	Optical control of neuronal activity. <b>2010</b> , 39, 329-48	98
1958	Rewiring cells: synthetic biology as a tool to interrogate the organizational principles of living systems. <b>2010</b> , 39, 515-37	151
1957	Multi-site optical excitation using ChR2 and micro-LED array. <b>2010</b> , 7, 16004	184
1956	Structural guidance of the photocycle of channelrhodopsin-2 by an interhelical hydrogen bond. <b>2010</b> , 49, 267-78	179
1955	Dissecting the neural circuitry of addiction and psychiatric disease with optogenetics. <b>2010</b> , 35, 341-2	17
1954	Multiwaveguide implantable probe for light delivery to sets of distributed brain targets. <b>2010</b> , 35, 4133-5	140
1953	The branched photocycle of the slow-cycling channelrhodopsin-2 mutant C128T. <b>2010</b> , 398, 690-702	53
1952	Molecular and cellular approaches for diversifying and extending optogenetics. <b>2010</b> , 141, 154-165	729
1951	Pathway-specific feedforward circuits between thalamus and neocortex revealed by selective optical stimulation of axons. <b>2010</b> , 65, 230-45	324
1950	Elevated BDNF after cocaine withdrawal facilitates LTP in medial prefrontal cortex by suppressing GABA inhibition. <b>2010</b> , 67, 821-33	97
1949	Electrical coupling between olfactory glomeruli. <b>2010</b> , 67, 1034-47	132
1948	Single-cell optogenetic excitation drives homeostatic synaptic depression. <b>2010</b> , 68, 512-28	175

1947	Neural syntax: cell assemblies, synapsembles, and readers. <b>2010</b> , 68, 362-85	748
1946	Homeostatic plasticity: single hippocampal neurons see the light. <b>2010</b> , 68, 326-8	2
1945	Superresolution imaging of chemical synapses in the brain. <b>2010</b> , 68, 843-56	507
1944	Play it again: reactivation of waking experience and memory. <b>2010</b> , 33, 220-9	289
1943	Motor control by sensory cortex. <b>2010</b> , 330, 1240-3	265
1942	A neurophotonic device for stimulation and recording of neural microcircuits. <b>2010</b> , 2010, 2935-8	6
1941	A New Individually Addressable Micro-LED Array for Photogenetic Neural Stimulation. <b>2010</b> , 4, 469-76	41
1940	Two-photon-based photoactivation in live zebrafish embryos. <b>2010</b> ,	4
1939	Making and Using Transgenic Organisms. <b>2010</b> , 243-262	1
1938	Natural and engineered photoactivated nucleotidyl cyclases for optogenetic applications. <b>2010</b> , 285, 41501-8	153
1937	Imaging the Brain with Optical Methods. <b>2010</b> ,	2
1936	. 2010,	3
1935	Addressable floating light activated micro-electrical stimulators for wireless neurostimulation. <b>2011</b> ,	3
1934	Approaches to optical neuromodulation from rodents to non-human primates by integrated optoelectronic devices. <b>2011</b> , 2011, 7525-8	4
1933	A flexible optrode for deep brain neurophotonics. 2011,	1
1932	Human embryonic stem cell-derived neurons adopt and regulate the activity of an established neural network. <b>2011</b> , 108, 20189-94	72
1931	Seeing again through ancient eyes: microbial opsins and the promise of restoring vision. <b>2011</b> , 6, 585-588	
1930	Development of Si neural probe with optical waveguide for highly accurate optical stimulation of neuron. <b>2011</b> ,	5

1929	Optogenetics in the teaching laboratory: using channelrhodopsin-2 to study the neural basis of behavior and synaptic physiology in Drosophila. <b>2011</b> , 35, 82-91	25
1928	An in vivo optical system: Control and monitor cortical activity with improved laser speckle contrast imaging and optogenetics. <b>2011</b> ,	2
1927	Using the Q system in Drosophila melanogaster. <b>2011</b> , 6, 1105-20	44
1926	Towards optogenetic sensory replacement. <b>2011</b> , 2011, 3139-41	6
1925	Two Roads Less Travelled by Psychoanalysis. <b>2011</b> , 13, 48-50	
1924	Multiscale computational models for optogenetic control of cardiac function. <b>2011</b> , 101, 1326-34	77
1923	Neuronal filtering of multiplexed odour representations. <b>2011</b> , 479, 493-8	80
1922	Osteoblast differentiation of amniotic fluid-derived stem cells irradiated with visible light. <b>2011</b> , 17, 2593-602	20
1921	Let there be light: zebrafish neurobiology and the optogenetic revolution. <b>2011</b> , 22, 121-30	28
1920	Optogenetic Probing of HypocretinsIRegulation of Wakefulness. <b>2011</b> , 129-137	
1919	A new mode of corticothalamic transmission revealed in the Gria4(-/-) model of absence epilepsy.  Nature Neuroscience, 2011, 14, 1167-73	134
1918	Optical Stimulation of the Auditory Nerve. <b>2011</b> , 135-156	2
1917	Optical Interrogation of Neural Circuits. <b>2011</b> , 3-20	
1916	Electrophysiological Approaches for Studying Neuronal Circuits In Vivo. <b>2011</b> , 191-203	
1915	Light-Activated Ion Pumps and Channels for Temporally Precise Optical Control of Activity in Genetically Targeted Neurons. <b>2011</b> , 305-338	
1914	Integrated Optogenetic and Electrophysiological Dissection of Local Cortical Circuits In Vivo. <b>2011</b> , 339-355	1
1913	Time-resolved FT-IR Spectroscopy of Membrane Proteins. <b>2011</b> , 64, 9	9
1912	Dendritic coding of multiple sensory inputs in single cortical neurons in vivo. <b>2011</b> , 108, 15420-5	108

1911 Chemical and genetic engineering of selective ion channel-ligand interactions. <b>2011</b> , 333, 1292-6	202
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1909 Stimulating cardiac muscle by light: cardiac optogenetics by cell delivery. <b>2011</b> , 4, 753-60	138
Neural probes integrated with optical mixer/splitter waveguides and multiple stimulation sites. <b>2011</b> ,	18
1907 A vertical micro-scale light guiding silicon dioxide tube array for optical neurostimulator. <b>2011</b> ,	1
1906 Photonic-crystal-fiber platform for multicolor multilabel neurophotonic studies. <b>2011</b> , 98, 253706	20
Technologies for micromanipulating, imaging, and phenotyping small invertebrates and vertebrates. <b>2011</b> , 13, 185-217	55
Hunger states switch a flip-flop memory circuit via a synaptic AMPK-dependent positive feedback loop. <b>2011</b> , 146, 992-1003	308
1903 Driving opposing behaviors with ensembles of piriform neurons. <b>2011</b> , 146, 1004-15	170
1902 The neural circuits and synaptic mechanisms underlying motor initiation in C. elegans. <b>2011</b> , 147, 92	2-33 188
1901 Dynamics of retrieval strategies for remote memories. <b>2011</b> , 147, 678-89	373
1900 The microbial opsin family of optogenetic tools. <b>2011</b> , 147, 1446-57	388
1899 Shining a light on energy homeostasis. <b>2011</b> , 13, 235-6	4
$_{ m 1898}$ Shining light on Drosophila oogenesis: live imaging of egg development. <b>2011</b> , 21, 612-9	40
Glutamate residue 90 in the predicted transmembrane domain 2 is crucial for cation flux through channelrhodopsin 2. <b>2011</b> , 410, 737-43	42
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1895 The serotonergic system in fish. <b>2011</b> , 41, 294-308	200
1894 Optogenetic investigation of neural circuits in vivo. <b>2011</b> , 17, 197-206	64

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1893	Simultaneous visualization of multiple neuronal properties with single-cell resolution in the living rodent brain. <b>2011</b> , 48, 246-57	34
1892	Projection structure of channelrhodopsin-2 at 6 Iresolution by electron crystallography. <b>2011</b> , 414, 86-95	60
1891	Challenges for emerging neurostimulation-based therapies for real-time seizure control. <b>2011</b> , 22, 118-25	6
1890	Optogenetic tools for analyzing the neural circuits of behavior. <b>2011</b> , 15, 592-600	207
1889	Mechanisms of specificity in neuronal activity-regulated gene transcription. <b>2011</b> , 94, 259-95	140
1888	Habenula "cholinergic" neurons co-release glutamate and acetylcholine and activate postsynaptic neurons via distinct transmission modes. <b>2011</b> , 69, 445-52	244
1887	Synaptic mechanisms underlying sparse coding of active touch. <b>2011</b> , 69, 1160-75	176
1886	Optogenetics in neural systems. <b>2011</b> , 71, 9-34	1303
1885	New rabies virus variants for monitoring and manipulating activity and gene expression in defined neural circuits. <b>2011</b> , 71, 617-31	231
1884	Role of astrocytes in neurovascular coupling. <b>2011</b> , 71, 782-97	285
1883	Recurrent circuitry dynamically shapes the activation of piriform cortex. <b>2011</b> , 72, 49-56	136
1882	Genetic manipulation of genes and cells in the nervous system of the fruit fly. <b>2011</b> , 72, 202-30	322
1881	A history of optogenetics: the development of tools for controlling brain circuits with light. <b>2011</b> , 3, 11	131
1880	A scalable CMOS sensor array for neuronal recording and imaging. <b>2011</b> ,	2
1879	High-frequency limit of neural stimulation with ChR2. <b>2011</b> , 2011, 4167-70	13
1878	Deep brain stimulation emerging indications. <b>2011</b> , 194, 83-95	32
1877	Toward a whole-body neuroprosthetic. <b>2011</b> , 194, 47-60	33
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1874	Real-time multimodal optical control of neurons and muscles in freely behaving Caenorhabditis elegans. <b>2011</b> , 8, 153-8	167
1873	The development and application of optogenetics. <b>2011</b> , 34, 389-412	1251
1872	Optogenetic control of cells and circuits. <b>2011</b> , 27, 731-58	133
1871	Olfactory ensheathing glia: repairing injury to the mammalian visual system. <b>2011</b> , 229, 99-108	21
1870	High Precision and Fast Functional Mapping of Brain Circuitry through Laser Scanning Photostimulation and Fast Dye Imaging. <b>2011</b> ,	2
1869	Future developments in brain-machine interface research. <b>2011</b> , 66 Suppl 1, 25-32	76
1868	Mouse Models of Depression. <b>2011</b> ,	7
1867	Deciphering the Actions of Antiparkinsonian and Antipsychotic Drugs on cAMP/DARPP-32 Signaling. <b>2011</b> , 5, 38	14
1866	Targeting neuronal populations of the striatum. <b>2011</b> , 5, 40	51
	A guide to delineate the logic of neurovascular signaling in the brain. <b>2011</b> , 3, 1	59
1865	A guide to delineate the logic of neurovascular signaling in the brain. <b>2011</b> , 3, 1  Tracing activity across the whole brain neural network with optogenetic functional magnetic	59
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1852	Designing optimal stimuli to control neuronal spike timing. <b>2011</b> , 106, 1038-53		41
1851	Mapping inhibitory neuronal circuits by laser scanning photostimulation. 2011,		5
1850	Using affordable LED arrays for photo-stimulation of neurons. 2011,		5
1849	Optogenetics: potentials for addiction research. <b>2011</b> , 16, 519-31		13
1848	Decoding the transcriptional basis for GABAergic interneuron diversity in the mouse neocortex. <b>2011</b> , 34, 1542-52		21
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1837	A user's guide to channelrhodopsin variants: features, limitations and future developments. <b>2011</b> , 96, 19-25	228
1836	Light- and drug-activated G-protein-coupled receptors to control intracellular signalling. <b>2011</b> , 96, 51-6	21
1835	Optogenetic probing of functional brain circuitry. <b>2011</b> , 96, 26-33	48
1834	Transcranial electrical stimulation of cortico-cortical connections in anesthetized mice. <b>2011</b> , 201, 315-21	11
1833	Addressing neurological disorders with neuromodulation. <b>2011</b> , 58, 1907-17	11
1832	Challenges and opportunities for next-generation intracortically based neural prostheses. <b>2011</b> , 58, 1891-9	119
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1830	The role of NPY in hypothalamic mediated food intake. <b>2011</b> , 32, 398-415	126
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1829 1828	Optogenetic manipulation of neural circuitry in vivo. <b>2011</b> , 21, 433-9  Cholinergic modulation of synaptic integration and dendritic excitability in the striatum. <b>2011</b> , 21, 425-32	60 65
1829 1828 1827	Optogenetic manipulation of neural circuitry in vivo. <b>2011</b> , 21, 433-9  Cholinergic modulation of synaptic integration and dendritic excitability in the striatum. <b>2011</b> , 21, 425-32  Cell types, circuits, computation. <b>2011</b> , 21, 664-71	60 65 28
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1819	Limb-state information encoded by peripheral and central somatosensory neurons: implications for an afferent interface. <b>2011</b> , 19, 501-13	72
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1810	Neural integration of reward, arousal, and feeding: recruitment of VTA, lateral hypothalamus, and ventral striatal neurons. <b>2011</b> , 63, 824-30	28
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1804	Correlation of spatial intensity distribution of light reaching the retina and restoration of vision by optogenetic stimulation. <b>2011</b> ,	3

1803	Synthetic physiology strategies for adapting tools from nature for genetically targeted control of fast biological processes. <b>2011</b> , 497, 425-43	7
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145	OMNIDIRECTIONAL LEAKY OPTO-ELECTRICAL FIBER FOR OPTOGENETIC CONTROL OF NEURONS IN CELL REPLACEMENT THERAPY. <b>2022</b> , 108306	0
144	Automating the High-Throughput Screening of Protein-Based Optical Indicators and Actuators.	O
143	Studying Synaptic Connectivity and Strength with Optogenetics and Patch-Clamp Electrophysiology. <b>2022</b> , 23, 11612	0
142	In vivo direct imaging of neuronal activity at high temporospatial resolution. <b>2022</b> , 378, 160-168	2
141	Manipulation-specific cortical activity as mice handle food. 2022,	0
140	Electrical signaling in cochlear efferents is driven by an intrinsic neuronal oscillator. <b>2022</b> , 119,	O
139	Significance of an Electrochemical Sensor and Nanocomposites: Toward the Electrocatalytic Detection of Neurotransmitters and Their Importance within the Physiological System.	4
138	Light-regulated gene expression in Bacteria: Fundamentals, advances, and perspectives. 10,	O
137	Time-resolved Spectroscopic Mapping of Vibrational Energy Flow in Proteins: Understanding Thermal Diffusion at the Nanoscale.	0
136	Single-Transistor Neuron with Excitatory-Inhibitory Spatiotemporal Dynamics Applied for Neuronal Oscillations. 2207371	O
135	Identification of the Channelrhodopsin Genes in the Green and Cryptophytic Algae from the White and Black Seas. <b>2022</b> , 87, 1187-1198	O
134	Optogenetic manipulation of Gq- and Gi/o-coupled receptor signaling in neurons and heart muscle cells.	O
133	Activity in a prefrontal-periaqueductal gray circuit overcomes behavioral and endocrine features of the passive coping stress response. <b>2022</b> , 119,	0
132	Structural basis for ion selectivity in potassium-selective channelrhodopsins.	O
131	Closed-loop optogenetic control of the dynamics of neural activity in non-human primates.	0
130	Optogenetic manipulation of second messengers in neurons and cardiomyocytes with microbial rhodopsins and adenylyl cyclase.	O

129	A Light-Triggered Synthetic Nanopore for Controlling Molecular Transport Across Biological Membranes.	1
128	A Light-Triggered Synthetic Nanopore for Controlling Molecular Transport Across Biological Membranes.	Ο
127	Progress on Cutting-Edge Infrared-Terahertz Biophysics. <b>2022</b> , 70, 5117-5140	0
126	High-precision neural stimulation by a highly efficient candle soot fiber optoacoustic emitter. 16,	O
125	Wireless neuromodulation in vitro and in vivo by intrinsic TRPC-mediated magnetomechanical stimulation. <b>2022</b> , 5,	0
124	The gut-to-brain axis for toxin-induced defensive responses. <b>2022</b> ,	1
123	Optically-generated focused ultrasound for noninvasive brain stimulation with ultrahigh precision. <b>2022</b> , 11,	0
122	Recent advances in optical manipulation of cells and molecules for biological science. <b>2022</b> , 53, 100554	Ο
121	Phenotypic assay development with iPSC-derived neurons. 2023, 25-43	0
120	Cryo-EM structures of kalium channelrhodopsins KCRs.	Ο
119	Optogenetic induction of hibernation-like state with modified human Opsin4 in mice. 2022, 100336	О
118	Expanding the molecular versatility of an optogenetic switch in yeast. 10,	Ο
117	Cationic Channelrhodopsin from the Alga Platymonas subcordiformis as a Promising Optogenetic Tool. <b>2022</b> , 87, 1327-1334	0
116	A one-photon endoscope for simultaneous patterned optogenetic stimulation and calcium imaging in freely behaving mice.	0
115	An upconversion nanoparticle-integrated fibrillar scaffold combined with a NIR-optogenetic strategy to regulate neural cell performance.	0
114	Detection and modulation of neurodegenerative processes using graphene-based nanomaterials: Nanoarchitectonics and applications. <b>2023</b> , 311, 102824	0
113	Advanced theragnostics for the central nervous system (CNS) and neurological disorders using functional inorganic nanomaterials. <b>2023</b> , 192, 114636	0
112	Multiomics and optobiotechnological approaches for the development of microalgal strain for production of aviation biofuel and biorefinery. <b>2023</b> , 369, 128457	1

111	Recent advances in optogenetics: Report for the session 12 at the 19th International Conference on Retinal Proteins. <b>2022</b> ,	О
110	A Multi-Parametric Finite Element Analysis of Heat Distributions in Implanted Micro-LEDs. <b>2022</b> ,	O
109	Targeted drug or gene delivery to the phrenic motoneuron pool.	O
108	Evaluation of Non-invasive Optogenetic Stimulation with Transcranial Functional Ultrasound Imaging. <b>2022</b> ,	O
107	Developing Clinical Grade Flexible Implantable Electronics.	O
106	Neuromorphic-Based Neuroprostheses for Brain Rewiring: State-of-the-Art and Perspectives in Neuroengineering. <b>2022</b> , 12, 1578	O
105	Photoactive Nanomaterials for Wireless Neural Biomimetics, Stimulation, and Regeneration.	O
104	A non-invasive, fast on/off <b>D</b> dourgenetic <b>I</b> Method to Manipulate Physiology.	O
103	Molecular basis for selective activation of DREADD-based chemogenetics. <b>2022</b> , 612, 354-362	3
102	Rapid and reversible optogenetic silencing of synaptic transmission by clustering of synaptic vesicles. <b>2022</b> , 13,	O
101	A Review: Research Progress of Neural Probes for Brain Research and BrainComputer Interface. <b>2022</b> , 12, 1167	O
100	Optogenetic polymerization and assembly of electrically functional polymers for modulation of single-neuron excitability. <b>2022</b> , 8,	O
99	Cellular and subcellular optogenetic approaches towards neuroprotection and vision restoration. <b>2022</b> , 101153	O
98	Functional roles of REM sleep. <b>2022</b> ,	O
97	Current perspective on retinal remodeling: Implications for therapeutics. 16,	O
96	On the Fabrication and Characterization of Polymer-Based Waveguide Probes for Use in Future Optical Cochlear Implants. <b>2023</b> , 16, 106	O
95	Precise modulation of embryonic development through optogenetics.	O
94	A dedicated hypothalamic oxytocin circuit controls aversive social learning.	O

93	Large-scale multimodal surface neural interfaces for primates. 2022, 105866	О
92	GABAergic neurons in the rostromedial tegmental nucleus are essential for rapid eye movement sleep suppression. <b>2022</b> , 13,	o
91	Neuron-Glia Interaction at the Receptor Level Affects Olfactory Perception in Adult Drosophila. <b>2022</b> , 105837	0
90	Structural Foundations of Potassium Selectivity in Channelrhodopsins. <b>2022</b> , 13,	O
89	Optogenetics and electron tomography for structure-function analysis of cochlear ribbon synapses. 11,	О
88	pOpsicle: An all-optical reporter system for synaptic vesicle recycling combining pH-sensitive fluorescent proteins with optogenetic manipulation of neuronal activity.	O
87	Bio-hybrid electronic and photonic devices. 153537022211440	0
86	Inhibitory stabilized network behaviour in a balanced neural mass model of a cortical column.	O
85	Optogenetics: Emerging strategies for neuropathic pain treatment. 13,	O
84	The prelimbic cortex regulates itch processing by controlling attentional bias. 2022, 105829	О
83	Mapping light distribution in the brain via MRI.	О
82	Optogenetic Low-Frequency Stimulation of Principal Neurons, but Not Parvalbumin-Positive Interneurons, Prevents Generation of Ictal Discharges in Rodent Entorhinal Cortex in an In Vitro 4-Aminopyridine Model. <b>2023</b> , 24, 195	0
81	Phase-adaptive brain stimulation of striatal D1 medium spiny neurons in dopamine-depleted mice. <b>2022</b> , 12,	0
80	Interdisciplinary approaches to brain organoid biology. <b>2023</b> , 158, 64-70	O
79	Distribution and inflammatory cell response to intracranial delivery of radioluminescent Y2(SiO4)O:Ce particles. <b>2023</b> , 18, e0276819	0
78	Optogenetics in Taste Research: A Decade of Enlightenment.	o
77	Cre-dependent ACR2-expressing reporter mouse strain for efficient long-lasting inhibition of neuronal activity.	0
76	Central Nervous System Nanotechnology. <b>2023</b> , 655-692	О

75	Recent developments in multifunctional neural probes for simultaneous neural recording and modulation. <b>2023</b> , 9,	0
74	Wirelessly Operated, Implantable Flexible Optoelectrical Probes for Optogenetics Neural Stimulation. <b>2023</b> , 35, 233-236	O
73	Subcortical glutamatergic inputs exhibit a Hebbian form of long-term potentiation in the dentate gyrus. <b>2022</b> , 41, 111871	Ο
<del>7</del> 2	Potential Therapeutic Strategies for Skeletal Muscle Atrophy. <b>2023</b> , 12, 44	1
71	High-Density Fiberless Optoelectrodes with Integrated Waveguides and LEDs. 2023, 467-503	O
70	Graded optogenetic activation of the auditory pathway for hearing restoration. 2023,	O
69	Wireless Self-Powered Optogenetic System for Long-Term Cardiac Neuromodulation to Improve Post-MI Cardiac Remodeling and Malignant Arrhythmia. 2205551	O
68	Energy-Efficient Electrical Stimulation Systems. <b>2023</b> , 825-850	O
67	Transcranial Ultrasound Stimulation. <b>2023</b> , 2135-2173	О
66	Potassium-selective channelrhodopsins. 2023,	O
65	Enhancers for Selective Targeting. <b>2023</b> , 169-184	О
64	Neuroinnovation in Medicine: History and Future. <b>2023</b> , 13-55	O
63	Reporter Selection and Postmortem Methods to Verify Transgene Expression. 2023, 275-292	О
62	Segregation of D1 and D2 dopamine receptors in the striatal direct and indirect pathways: An historical perspective. 14,	O
61	Design Considerations for Implantable Neural Circuits and Systems. 2023, 695-719	О
60	Vision: Optogenetics Addressing AMD Diseases. <b>2023</b> , 1069-1090	O
59	Optimized Conditions for the Long-Term Maintenance of Precision-Cut Murine Myocardium in Biomimetic Tissue Culture. <b>2023</b> , 10, 171	О
58	Production, Testing, and Verification of Lentivirus for Regional Targeting in the Old-World Monkey Brain. <b>2023</b> , 3-15	O

57	An updated suite of viral vectors for in vivo calcium imaging using intracerebral and retro-orbital injections in male mice. <b>2023</b> , 14,	Ο
56	Optogenetics. <b>2023</b> , 201-244	O
55	Principles and applications of sono-optogenetics. <b>2023</b> , 194, 114711	0
54	Temperature-Gated Light-Guiding Hydrogel Fiber for Thermoregulation During Optogenetic Neuromodulation.	Ο
53	Sensory photoreceptors in Chlamydomonas. <b>2023</b> , 205-222	Ο
52	An All-Optical Physiology Pipeline Toward Highly Specific and Artifact-Free Circuit Mapping. <b>2023</b> , 137-163	Ο
51	Advances in AAV technology for delivering genetically encoded cargo to the nonhuman primate nervous system. <b>2023</b> , 4, 100086	0
50	Bioelectricity in Developmental Patterning and Size Control: Evidence and Genetically Encoded Tools in the Zebrafish Model. <b>2023</b> , 12, 1148	Ο
49	Sensitivity optimization of a rhodopsin-based fluorescent voltage indicator. 2023,	1
48	On the value of diverse organisms in auditory research: From fish to flies to humans. <b>2023</b> , 432, 108754	Ο
47	Optogenetic ion pumps differ with respect to the secondary pattern of K+redistribution.	Ο
46	Quantifying single cell lipid signaling kinetics after photo-stimulation.	Ο
45	Neural modulation with photothermally active nanomaterials. <b>2023</b> , 1, 193-207	1
44	Neural coding: Stimulating cortex to alter visual perception. <b>2023</b> , 33, R117-R118	Ο
43	The Mechanism of Channel Opening of Anion Channelrhodopsin GtACR1: A Molecular Dynamics Simulation. <b>2023</b> , 11, 510	Ο
42	Subdural CMOS optical probe (SCOPe) for bidirectional neural interfacing.	Ο
41	Computational analysis of multichannel magnetothermal neural stimulation using magnetic resonator array.	0
40	Examining the low-voltage fast seizure-onset and its response to optogenetic stimulation in a biophysical network model of the hippocampus.	O

39	New and emerging approaches to treat psychiatric disorders. <b>2023</b> , 29, 317-333	0
38	Nanoparticles-mediated ion channels manipulation: From their membrane interactions to bioapplications. <b>2023</b> , 195, 114763	O
37	Spatial and Temporal Considerations of Optogenetic Tools in an All-Optical Single-Beam Experiment. <b>2023</b> , 165-185	O
36	Optical Manipulation and Recording of Neural Activity with Wavefront Engineering. 2023, 1-48	O
35	Optical and Analytical Methods to Visualize and Manipulate Cortical Ensembles and Behavior. <b>2023</b> , 331-361	О
34	Dual Behavior Regulation: Tether-Free Deep-Brain Stimulation by Photothermal and Upconversion Hybrid Nanoparticles.	O
33	A flexible and versatile system for multi-color fiber photometry and optogenetic manipulation. <b>2023</b> , 3, 100418	О
32	Coelenterazine-Type Bioluminescence-Induced Optical Probes for Sensing and Controlling Biological Processes. <b>2023</b> , 24, 5074	O
31	Graphene-enabled optical cardiac control in Drosophila melanogaster. 2023,	О
<b>3</b> 0	Cre-dependent ACR2-expressing reporter mouse strain for efficient long-lasting inhibition of neuronal activity. <b>2023</b> , 13,	O
29	Flexible and smart electronics for single-cell resolved brainthachine interfaces. 2023, 10, 011314	O
28	Advances in Microscopy Tech Offer Better Views. <b>2023</b> , 14, 2-7	O
27	Photochemistry of the Light-Driven Sodium Pump Krokinobacter eikastus Rhodopsin 2 and Its Implications on Microbial Rhodopsin Research: Retrospective and Perspective.	О
26	Mid-infrared Photons Released by NAD+ Reduction in the Tricarboxylic Acid Cycle of Myelinated Neuron.	O
25	The Evolving Role of Animal Models in the Discovery and Development of Novel Treatments for Psychiatric Disorders. <b>2023</b> , 37-99	О
24	The Mechanism of the Channel Opening in Channelrhodopsin-2: A Molecular Dynamics Simulation. <b>2023</b> , 24, 5667	O
23	Development and Application of an Optogenetic Manipulation System to Suppress Actomyosin Activity in Ciona Epidermis. <b>2023</b> , 24, 5707	O
22	Nociception in fruit fly larvae. 4,	O

21	Engineering optical tools for remotely controlled brain stimulation and regeneration.	O
20	Optogenetic Activation of Astrocytes Reduces Blood-Brain Barrier Disruption via IL-10 In Stroke. <b>2023</b> , 0	O
19	Remote control of cellular immunotherapy.	O
18	Retuning high Q inductive power transfer systems at MHz frequencies: a switched capacitor design method incorporating C OSS . <b>2023</b> , 16, 975-989	O
17	A custom-made AAV1 variant (AAV1-T593K) enables efficient transduction of Japanese quail neurons in vitro and in vivo. <b>2023</b> , 6,	О
16	Whole-brain mapping of effective connectivity by fMRI with cortex-wide patterned optogenetics. <b>2023</b> ,	O
15	pOpsicle: An all-optical reporter system for synaptic vesicle recycling combining pH-sensitive fluorescent proteins with optogenetic manipulation of neuronal activity. 17,	О
14	Optical neuromodulation at all scales: from nanomaterials to wireless optoelectronics and integrated systems.	O
13	Neural engineering with photons as synaptic transmitters.	O
12	Developments in application of optogenetics in pain and anxiety: a literature review. <b>2023</b> , 209-225	O
11	Optogenetic stimulation of the primary visual cortex drives activity in the visual association cortex (Revision to CRNEUR-D-22-00114). <b>2023</b> , 4, 100087	O
10	Optogenetic stimulation reveals frequency-dependent resonance and encoding in V1 excitatory and inhibitory neurons.	O
9	Optogenetic-Induced Muscle Loading Leads to Mechanical Adaptation of the Achilles Tendon Enthesis in Mice.	О
8	Tailoring baker yeast Saccharomyces cerevisiae for functional testing of channelrhodopsin. <b>2023</b> , 18, e0280711	O
7	High resolution recording of local field currents simultaneously with sound-evoked calcium signals by a photometric patch electrode in the auditory cortex field L of the chick. <b>2023</b> , 109863	O
6	Photoexcited Anhydrous Proton Conductivity in Coordination Polymer Glass.	O
5	Nanotransducer-Enabled Deep-Brain Neuromodulation with NIR-II Light.	0
4	A wireless and battery-less implant for multimodal closed-loop neuromodulation in small animals.	O

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