Hiromu Yawo

List of Publications by Year
in descending order

116 papers	4,705 citations	109137 35 h-index	106150 65 g-index
131 all docs	131 docs citations	131 times ranked	5442 citing authors

#	Article	IF	Citations
1	Identification of a Novel Gene Family Encoding Human Liver-specific Organic Anion Transporter LST-1. Journal of Biological Chemistry, 1999, 274, 17159-17163.	1.6	482
2	Kinetic evaluation of photosensitivity in genetically engineered neurons expressing green algae light-gated channels. Neuroscience Research, 2006, 54, 85-94.	1.0	360
3	Molecular Characterization and Tissue Distribution of a New Organic Anion Transporter Subtype (oatp3) That Transports Thyroid Hormones and Taurocholate and Comparison with oatp2. Journal of Biological Chemistry, 1998, 273, 22395-22401.	1.6	306
4	Structural basis for Na+ transport mechanism by a light-driven Na+ pump. Nature, 2015, 521, 48-53.	13.7	224
5	Hindbrain V2a Neurons in the Excitation of Spinal Locomotor Circuits during Zebrafish Swimming. Current Biology, 2013, 23, 843-849.	1.8	180
6	Molecular Determinants Differentiating Photocurrent Properties of Two Channelrhodopsins from Chlamydomonas. Journal of Biological Chemistry, 2009, 284, 5685-5696.	1.6	160
7	Preferential inhibition of oÏ‰-conotoxin-sensitive presynaptic Ca2+ channels by adenosine autoreceptors. Nature, 1993, 365, 256-258.	13.7	156
8	Optogenetic stimulation of the auditory pathway. Journal of Clinical Investigation, 2014, 124, 1114-1129.	3.9	147
9	Restoration of Visual Response in Aged Dystrophic RCS Rats Using AAV-Mediated Channelopsin-2 Gene Transfer. , 2007, 48, 3821.		144
10	Visual Properties of Transgenic Rats Harboring the Channelrhodopsin-2 Gene Regulated by the Thy-1.2 Promoter. PLoS ONE, 2009, 4, e7679.	1.1	143
11	Integration of Organic Electrochemical and Fieldâ€Effect Transistors for Ultraflexible, High Temporal Resolution Electrophysiology Arrays. Advanced Materials, 2016, 28, 9722-9728.	11.1	131
12	Near-infrared (NIR) up-conversion optogenetics. Scientific Reports, 2015, 5, 16533.	1.6	109
13	Molecular characterization and functional regulation of a novel rat liver-specific organic anion transporter rlst-1. Gastroenterology, 1999, 117, 770-775.	0.6	99
14	Protein kinase C potentiates transmitter release from the chick ciliary presynaptic terminal by increasing the exocytotic fusion probability. Journal of Physiology, 1999, 515, 169-180.	1.3	80
15	Nobiletin, a citrus flavonoid with neurotrophic action, augments protein kinase A-mediated phosphorylation of the AMPA receptor subunit, GluR1, and the postsynaptic receptor response to glutamate in murine hippocampus. European Journal of Pharmacology, 2008, 578, 194-200.	1.7	78
16	Pravastatin, an HMG-CoA reductase inhibitor, is transported by rat organic anion transporting polypeptide, oatp2. Pharmaceutical Research, 1999, 16, 904-908.	1.7	76
17	Optogenetically Induced Seizure and the Longitudinal Hippocampal Network Dynamics. PLoS ONE, 2013, 8, e60928.	1.1	75
18	Immunohistochemical distribution and functional characterization of an organic anion transporting polypeptide 2 (oatp2). FEBS Letters, 1999, 445, 343-346.	1.3	74

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19	Opto-Current-Clamp Actuation of Cortical Neurons Using a Strategically Designed Channelrhodopsin. PLoS ONE, 2010, 5, e12893.	1.1	74
20	Functional uncoupling between Ca2+ release and afterhyperpolarization in mutant hippocampal neurons lacking junctophilins. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10811-10816.	3.3	73
21	Photofunctional Nanomodulators for Bioexcitation. Angewandte Chemie - International Edition, 2014, 53, 13121-13125.	7.2	72
22	Expression of a Truncated Form of the Endoplasmic Reticulum Chaperone Protein, Ïƒ1 Receptor, Promotes Mitochondrial Energy Depletion and Apoptosis. Journal of Biological Chemistry, 2012, 287, 23318-23331.	1.6	71
23	Light-evoked Somatosensory Perception of Transgenic Rats That Express Channelrhodopsin-2 in Dorsal Root Ganglion Cells. PLoS ONE, 2012, 7, e32699.	1.1	62
24	Optogenetic Activation of Non-Nociceptive AÎ² Fibers Induces Neuropathic Pain-Like Sensory and Emotional Behaviors after Nerve Injury in Rats. ENeuro, 2018, 5, ENEURO.0450-17.2018.	0.9	58
25	Photocurrent attenuation by a single polar-to-nonpolar point mutation of channelrhodopsin-2. Photochemical and Photobiological Sciences, 2009, 8, 328-336.	1.6	55
26	Optically controlled contraction of photosensitive skeletal muscle cells. Biotechnology and Bioengineering, 2012, 109, 199-204.	1.7	54
27	Optogenetic induction of contractile ability in immature C2C12 myotubes. Scientific Reports, 2015, 5, 8317.	1.6	50
28	Optogenetic manipulation of neural and nonâ€neural functions. Development Growth and Differentiation, 2013, 55, 474-490.	0.6	49
29	In Vivo Spiking Dynamics of Intra- and Extratelencephalic Projection Neurons in Rat Motor Cortex. Cerebral Cortex, 2018, 28, 1024-1038.	1.6	49
30	Intrinsic and spontaneous neurogenesis in the postnatal slice culture of rat hippocampus. European Journal of Neuroscience, 2004, 20, 2499-2508.	1.2	48
31	Opto-fMRI analysis for exploring the neuronal connectivity of the hippocampal formation in rats. Neuroscience Research, 2012, 74, 248-255.	1.0	44
32	Ultraflexible organic light-emitting diodes for optogenetic nerve stimulation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 21138-21146.	3.3	44
33	Loss of Î±1,6-Fucosyltransferase Decreases Hippocampal Long Term Potentiation. Journal of Biological Chemistry, 2015, 290, 17566-17575.	1.6	41
34	Reâ€evaluation of phorbol esterâ€induced potentiation of transmitter release from mossy fibre terminals of the mouse hippocampus. Journal of Physiology, 2000, 529, 763-776.	1.3	39
35	Parallel and patterned optogenetic manipulation of neurons in the brain slice using a DMD-based projector. Neuroscience Research, 2013, 75, 59-64.	1.0	39
36	Involvement of cGMP-Dependent Protein Kinase in Adrenergic Potentiation of Transmitter Release from the Calyx-Type Presynaptic Terminal. Journal of Neuroscience, 1999, 19, 5293-5300.	1.7	34

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37	Chimeras of Channelrhodopsin-1 and -2 from Chlamydomonas reinhardtii Exhibit Distinctive Light-induced Structural Changes from Channelrhodopsin-2. Journal of Biological Chemistry, 2015, 290, 11623-11634.	1.6	31
38	Frequency-dependent entrainment of neocortical slow oscillation to repeated optogenetic stimulation in the anesthetized rat. Neuroscience Research, 2013, 75, 35-45.	1.0	28
39	A Chimera Na+-Pump Rhodopsin as an Effective Optogenetic Silencer. PLoS ONE, 2016, 11, e0166820.	1.1	28
40	Targeted expression of a chimeric channelrhodopsin in zebrafish under regulation of Gal4-UAS system. Neuroscience Research, 2013, 75, 69-75.	1.0	27
41	Pharmacological dissection of calcium channel subtype-related components of strontium inflow in large mossy fiber boutons of mouse hippocampus. Hippocampus, 2004, 14, 570-585.	0.9	26
42	Functional characterization of sodium-pumping rhodopsins with different pumping properties. PLoS ONE, 2017, 12, e0179232.	1.1	26
43	A Phox2b BAC Transgenic Rat Line Useful for Understanding Respiratory Rhythm Generator Neural Circuitry. PLoS ONE, 2015, 10, e0132475.	1.1	23
44	Position- and quantity-dependent responses in zebrafish turning behavior. Scientific Reports, 2016, 6, 27888.	1.6	23
45	Kinetic Evaluation of Photosensitivity in Bi-Stable Variants of Chimeric Channelrhodopsins. PLoS ONE, 2015, 10, e0119558.	1.1	23
46	A Novel Reporter Rat Strain That Conditionally Expresses the Bright Red Fluorescent Protein tdTomato. PLoS ONE, 2016, 11, e0155687.	1.1	21
47	Synaptic vesicle dynamics in the mossy fiber-CA3 presynaptic terminals of mouse hippocampus. Neuroscience Research, 2007, 59, 481-490.	1.0	20
48	Development of a micro-imaging probe for functional brain imaging. Neuroscience Research, 2013, 75, 46-52.	1.0	19
49	Î¼â€Opioid receptor inhibits Nâ€type Ca 2+ channels in the calyx presynaptic terminal of the embryonic chick ciliary ganglion. Journal of Physiology, 2000, 524, 769-781.	1.3	18
50	Involvement of glutamate 97 in ion influx through photo-activated channelrhodopsin-2. Neuroscience Research, 2013, 75, 13-22.	1.0	18
51	A simple optogenetic system for behavioral analysis of freely moving small animals. Neuroscience Research, 2013, 75, 65-68.	1.0	17
52	Optogenetic Patterning of Whisker-Barrel Cortical System in Transgenic Rat Expressing Channelrhodopsin-2. PLoS ONE, 2014, 9, e93706.	1.1	17
53	Two components of transmitter release from the chick ciliary presynaptic terminal and their regulation by protein kinase C. Journal of Physiology, 1999, 516, 461-470.	1.3	16
54	Optogenetic Probing and Manipulation of the Calyx-Type Presynaptic Terminal in the Embryonic Chick Ciliary Ganglion. PLoS ONE, 2013, 8, e59179.	1.1	16

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55	Regulation of later neurogenic stages of adultâ€derived neural stem/progenitor cells by <scp>L</scp>â€type <scp>C</scp>a²⁺ channels. Development Growth and Differentiation, 2014, 56, 583-594.	0.6	16
56	Organelle Optogenetics: Direct Manipulation of Intracellular Ca2+ Dynamics by Light. Frontiers in Neuroscience, 2018, 12, 561.	1.4	16
57	An Improved Method for Perforated Patch Recordings Using Nystatin-Fluorescein Mixture.. The Japanese Journal of Physiology, 1993, 43, 267-273.	0.9	15
58	Exploration of natural red-shifted rhodopsins using a machine learning-based Bayesian experimental design. Communications Biology, 2021, 4, 362.	2.0	15
59	Transgenic mouse lines expressing synaptopHluorin in hippocampus and cerebellar cortex. Genesis, 2005, 42, 53-60.	0.8	14
60	Targeted expression of step-function opsins in transgenic rats for optogenetic studies. Scientific Reports, 2018, 8, 5435.	1.6	14
61	Lineage analysis of newly generated neurons in organotypic culture of rat hippocampus. Neuroscience Research, 2011, 69, 223-233.	1.0	11
62	Channelrhodopsinsâ€"Their potential in gene therapy for neurological disorders. Neuroscience Research, 2013, 75, 6-12.	1.0	10
63	Red-Tuning of the Channelrhodopsin Spectrum Using Long Conjugated Retinal Analogues. Biochemistry, 2018, 57, 5544-5556.	1.2	10
64	Physical disuse contributes to widespread chronic mechanical hyperalgesia, tactile allodynia, and cold allodynia through neurogenic inflammation and spino-parabrachio-amygdaloid pathway activation. Pain, 2020, 161, 1808-1823.	2.0	10
65	Positioning of the sensor cell on the sensing area using cell trapping pattern in incubation type planar patch clamp biosensor. Colloids and Surfaces B: Biointerfaces, 2012, 96, 44-49.	2.5	9
66	Adrenergic receptor-mediated modulation of striatal firing patterns. Neuroscience Research, 2016, 112, 47-56.	1.0	8
67	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
68	Regulation of axon arborization pattern in the developing chick ciliary ganglion: Possible involvement of caspase 3. Development Growth and Differentiation, 2017, 59, 115-128.	0.6	8
69	Kinetic characteristics of chimeric channelrhodopsins implicate the molecular identity involved in desensitization. Biophysics and Physicobiology, 2017, 14, 13-22.	0.5	8
70	Optogenetic study of the response interaction among multi-afferent inputs in the barrel cortex of rats. Scientific Reports, 2019, 9, 3917.	1.6	8
71	Paired stimulation between CA3 and CA1 alters excitability of CA3 in the rat hippocampus. Neuroscience Letters, 2013, 534, 182-187.	1.0	7
72	Driving Neurogenesis in Neural Stem Cells with High Sensitivity Optogenetics. NeuroMolecular Medicine, 2020, 22, 139-149.	1.8	7

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73	Membrane depolarization regulates intracellular RANKL transport in non-excitable osteoblasts. Bone, 2015, 81, 306-314.	1.4	6
74	Quantitative study of the somatosensory sensitization underlying cross-modal plasticity. PLoS ONE, 2018, 13, e0208089.	1.1	5
75	Optogenetic analysis of respiratory neuronal networks in the ventral medulla of neonatal rats producing channelrhodopsin in Phox2b-positive cells. Pflugers Archiv European Journal of Physiology, 2019, 471, 1419-1439.	1.3	5
76	Gate-keeper of ion transportâ€"a highly conserved helix-3 tryptophan in a channelrhodopsin chimera, C1C2/ChRWR. Biophysics and Physicobiology, 2020, 17, 59-70.	0.5	5
77	Application of Optogenetics for Muscle Cells and Stem Cells. Advances in Experimental Medicine and Biology, 2021, 1293, 359-375.	0.8	5
78	Optogenetic conditioning of paradigm and pattern discrimination in the rat somatosensory system. PLoS ONE, 2017, 12, e0189439.	1.1	5
79	Evaluation of a Sindbis virus vector displaying an immunoglobulin-binding domain: Antibody-dependent infection of neurons in living mice. Neuroscience Research, 2011, 71, 328-334.	1.0	4
80	Whole-Cell Patch Method. Springer Protocols, 2012, , 43-69.	0.1	4
81	Improvements in the performance of an incubation-type planar patch clamp biosensor using a salt bridge electrode and a plastic (PMMA) substrate. Sensors and Actuators B: Chemical, 2014, 193, 660-668.	4.0	4
82	Diversity of Calcium Channel Subtypes in Presynaptic Terminals of the Chick Ciliary Ganglion. Annals of the New York Academy of Sciences, 1993, 707, 379-381.	1.8	3
83	Muscle Tissue Actuator Driven with Light-gated Ion Channels Channelrhodopsin. Procedia CIRP, 2013, 5, 169-174.	1.0	3
84	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
85	General Description: Future Prospects of Optogenetics. , 2015, , 111-131.		3
86	Principal component analysis of systemic lupus erythematosus (SLE): A proposal for handling data with many missing values. Journal of Biomedical Informatics, 1981, 14, 248-261.	0.7	2
87	Remodeling of hippocampal network in pilocarpine-treated mice expressing synaptopHluorin in the mossy fiber terminals. Neuroscience Research, 2012, 74, 25-31.	1.0	2
88	Field-Effect Transistors: Integration of Organic Electrochemical and Field-Effect Transistors for Ultraflexible, High Temporal Resolution Electrophysiology Arrays (Adv. Mater. 44/2016). Advanced Materials, 2016, 28, 9869-9869.	11.1	2
89	Functional emergence of a column-like architecture in layer 5 of mouse somatosensory cortex in vivo. Journal of Physiological Sciences, 2019, 69, 65-77.	0.9	2
90	Analysis of Neuroâ€Neuronal Synapses Using Embryonic Chick Ciliary Ganglion via Singleâ€Axon Tracing, Electrophysiology, and Optogenetic Techniques. Current Protocols in Neuroscience, 2019, 87, e64.	2.6	2

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91	Quantal Transmission. , 2009, , 3350-3356.		2
92	Î²-Phorbol ester-induced enhancement of exocytosis in large mossy fiber boutons of mouse hippocampus. Journal of Physiological Sciences, 2009, 59, 263-274.	0.9	1
93	Adventure beyond borders of scientific fields with optogenetics. Neuroscience Research, 2013, 75, 1-2.	1.0	1
94	Near-infrared (NIR) optogenetics using up-conversion system. , 2015, , .		1
95	Development of biotrandcusers driven by photostimulation. , 2015, , .		1
96	Molecular Dynamics of Photo-electrical Transducing Proteins, Channelrhodopsins. Seibutsu Butsuri, 2012, 52, 226-229.	0.0	1
97	Activation of presynaptically silent synapsesâ€"One of underlying mechanisms enhancing mossy fiber transmission in the hippocampus. Neuroscience Research, 2007, 58, S190.	1.0	0
98	Glu-97 of channelrhodopsin-2 is one of the molecular determinants involved in the ion flux. Neuroscience Research, 2009, 65, S196.	1.0	0
99	Molecular determinant differenciating Chlamydomonas channelrhodopsins. Neuroscience Research, 2009, 65, S196.	1.0	0
100	Localization of the actin binding protein, coactosin that expressed in the developing chick ciliary ganglion. Neuroscience Research, 2011, 71, e333.	1.0	0
101	APACOP, a FRET apoptosis probe with manipulation of neuronal acitivity. Neuroscience Research, 2011, 71, e343.	1.0	0
102	Analysis of functional connectivity among cortical layers during optogenetically induced perturbations. Neuroscience Research, 2011, 71, e312.	1.0	0
103	A new optogenetic probe for evaluating the activity dependent survival of the newborn neurons in hippocampal slice culture. Neuroscience Research, 2011, 71, e239.	1.0	0
104	Frequency response characterization of hippocampal CA3 dendrites: Opto-current clamp analysis. Neuroscience Research, 2011, 71, e120.	1.0	0
105	3PT218 Whisker photostimulation induces spike and LFP responses in barrel cortex of ChR2 transgenic rat(The 50th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2012, 52, S178.	0.0	0
106	Channelrhodopsin as a Noble Biomaterial Useful for the Operation and Performance Test of the Ionchannel Devices. Materials Transactions, 2012, 53, 1305-1309.	0.4	0
107	Optically controllable muscle for cell-based microdevice. , 2014, , .		0
108	Engineering Biological Systems for Light. Seibutsu Butsuri, 2015, 55, 311-316.	0.0	0

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109	Multimodal Functional Analysis Platform: 4. Optogenetics-Induced Oscillatory Activation to Explore Neural Circuits. Advances in Experimental Medicine and Biology, 2021, 1293, 501-509.	0.8	0
110	Biorobotic Actuator with a Muscle Tissue Driven by a Photostimulation. Lecture Notes in Computer Science, 2012, , 394-395.	1.0	0
111	Controlling Neuronal Circuits with Light. The Review of Laser Engineering, 2012, 40, 254.	0.0	0
112	Functional Analysis of the Hippocampus Using Opto-fMRI. , 2013, , 803-807.		0
113	Strategies to Probe Mechanoreception: From Mechanical to Optogenetic Approaches. , 2015, , 305-314.		0
114	Myogenic Maturation by Optical-Training in Cultured Skeletal Muscle Cells. Methods in Molecular Biology, 2017, 1668, 135-145.	0.4	0
115	Optogenetic activation of non-nociceptive AÎ² fibers induces neuropathic pain-like sensory and emotional behaviors after nerve injury in rats. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO2-2-31.	0.0	0
116	Quantitative Analysis of the Somatosensory Cross-modal Plasticity Using Optogenetics. Seibutsu Butsuri, 2019, 59, 317-319.	0.0	0