

# Toru Ishizuka

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9291005/publications.pdf>

Version: 2024-02-01

69  
papers

2,664  
citations

279487

23  
h-index

197535

49  
g-index

79  
all docs

79  
docs citations

79  
times ranked

3137  
citing authors

#	ARTICLE	IF	CITATIONS
1	Kinetic evaluation of photosensitivity in genetically engineered neurons expressing green algae light-gated channels. <i>Neuroscience Research</i> , 2006, 54, 85-94.	1.0	360
2	Structural basis for Na <sup>+</sup> transport mechanism by a light-driven Na <sup>+</sup> pump. <i>Nature</i> , 2015, 521, 48-53.	13.7	224
3	Hindbrain V2a Neurons in the Excitation of Spinal Locomotor Circuits during Zebrafish Swimming. <i>Current Biology</i> , 2013, 23, 843-849.	1.8	180
4	Molecular Determinants Differentiating Photocurrent Properties of Two Channelrhodopsins from <i>Chlamydomonas</i> . <i>Journal of Biological Chemistry</i> , 2009, 284, 5685-5696.	1.6	160
5	SNARE Complex Oligomerization by Synaphin/Complexin Is Essential for Synaptic Vesicle Exocytosis. <i>Cell</i> , 2001, 104, 421-432.	13.5	149
6	Restoration of Visual Response in Aged Dystrophic RCS Rats Using AAV-Mediated Channelopsin-2 Gene Transfer. , 2007, 48, 3821.		144
7	Visual Properties of Transgenic Rats Harboring the Channelrhodopsin-2 Gene Regulated by the Thy-1.2 Promoter. <i>PLoS ONE</i> , 2009, 4, e7679.	1.1	143
8	Expanding the Toolbox of Upconversion Nanoparticles for In Vivo Optogenetics and Neuromodulation. <i>Advanced Materials</i> , 2019, 31, e1803474.	11.1	118
9	Near-infrared (NIR) up-conversion optogenetics. <i>Scientific Reports</i> , 2015, 5, 16533.	1.6	109
10	A complex of rab3A, SNAP-25, VAMP/synaptobrevin-2 and syntaxins in brain presynaptic terminals. <i>FEBS Letters</i> , 1993, 330, 236-240.	1.3	80
11	Optogenetically Induced Seizure and the Longitudinal Hippocampal Network Dynamics. <i>PLoS ONE</i> , 2013, 8, e60928.	1.1	75
12	Opto-Current-Clamp Actuation of Cortical Neurons Using a Strategically Designed Channelrhodopsin. <i>PLoS ONE</i> , 2010, 5, e12893.	1.1	74
13	Expression of a Truncated Form of the Endoplasmic Reticulum Chaperone Protein, $\text{I}\beta\text{1}$ Receptor, Promotes Mitochondrial Energy Depletion and Apoptosis. <i>Journal of Biological Chemistry</i> , 2012, 287, 23318-23331.	1.6	71
14	Light-evoked Somatosensory Perception of Transgenic Rats That Express Channelrhodopsin-2 in Dorsal Root Ganglion Cells. <i>PLoS ONE</i> , 2012, 7, e32699.	1.1	62
15	Photocurrent attenuation by a single polar-to-nonpolar point mutation of channelrhodopsin-2. <i>Photochemical and Photobiological Sciences</i> , 2009, 8, 328-336.	1.6	55
16	Optogenetic induction of contractile ability in immature C2C12 myotubes. <i>Scientific Reports</i> , 2015, 5, 8317.	1.6	50
17	Optogenetic manipulation of neural and non-neural functions. <i>Development Growth and Differentiation</i> , 2013, 55, 474-490.	0.6	49
18	Intrinsic and spontaneous neurogenesis in the postnatal slice culture of rat hippocampus. <i>European Journal of Neuroscience</i> , 2004, 20, 2499-2508.	1.2	48

#	ARTICLE	IF	CITATIONS
19	Parallel and patterned optogenetic manipulation of neurons in the brain slice using a DMD-based projector. <i>Neuroscience Research</i> , 2013, 75, 59-64.	1.0	39
20	Chimeras of Channelrhodopsin-1 and -2 from <i>Chlamydomonas reinhardtii</i> Exhibit Distinctive Light-induced Structural Changes from Channelrhodopsin-2. <i>Journal of Biological Chemistry</i> , 2015, 290, 11623-11634.	1.6	31
21	A Chimera Na <sup>+</sup> -Pump Rhodopsin as an Effective Optogenetic Silencer. <i>PLoS ONE</i> , 2016, 11, e0166820.	1.1	28
22	Targeted expression of a chimeric channelrhodopsin in zebrafish under regulation of Gal4-UAS system. <i>Neuroscience Research</i> , 2013, 75, 69-75.	1.0	27
23	Pharmacological dissection of calcium channel subtype-related components of strontium inflow in large mossy fiber boutons of mouse hippocampus. <i>Hippocampus</i> , 2004, 14, 570-585.	0.9	26
24	Functional characterization of sodium-pumping rhodopsins with different pumping properties. <i>PLoS ONE</i> , 2017, 12, e0179232.	1.1	26
25	A Phox2b BAC Transgenic Rat Line Useful for Understanding Respiratory Rhythm Generator Neural Circuitry. <i>PLoS ONE</i> , 2015, 10, e0132475.	1.1	23
26	Position- and quantity-dependent responses in zebrafish turning behavior. <i>Scientific Reports</i> , 2016, 6, 27888.	1.6	23
27	Kinetic Evaluation of Photosensitivity in Bi-Stable Variants of Chimeric Channelrhodopsins. <i>PLoS ONE</i> , 2015, 10, e0119558.	1.1	23
28	A Novel Reporter Rat Strain That Conditionally Expresses the Bright Red Fluorescent Protein tdTomato. <i>PLoS ONE</i> , 2016, 11, e0155687.	1.1	21
29	Synaptic vesicle dynamics in the mossy fiber-CA3 presynaptic terminals of mouse hippocampus. <i>Neuroscience Research</i> , 2007, 59, 481-490.	1.0	20
30	Involvement of glutamate 97 in ion influx through photo-activated channelrhodopsin-2. <i>Neuroscience Research</i> , 2013, 75, 13-22.	1.0	18
31	Optogenetic Patterning of Whisker-Barrel Cortical System in Transgenic Rat Expressing Channelrhodopsin-2. <i>PLoS ONE</i> , 2014, 9, e93706.	1.1	17
32	Optogenetic Probing and Manipulation of the Calyx-Type Presynaptic Terminal in the Embryonic Chick Ciliary Ganglion. <i>PLoS ONE</i> , 2013, 8, e59179.	1.1	16
33	Regulation of later neurogenic stages of adult-derived neural stem/progenitor cells by $\text{Ca}^{2+}$ channels. <i>Development Growth and Differentiation</i> , 2014, 56, 583-594.	0.6	16
34	Organelle Optogenetics: Direct Manipulation of Intracellular Ca <sup>2+</sup> Dynamics by Light. <i>Frontiers in Neuroscience</i> , 2018, 12, 561.	1.4	16
35	Transgenic mouse lines expressing synaptopHluorin in hippocampus and cerebellar cortex. <i>Genesis</i> , 2005, 42, 53-60.	0.8	14
36	Targeted expression of step-function opsins in transgenic rats for optogenetic studies. <i>Scientific Reports</i> , 2018, 8, 5435.	1.6	14

#	ARTICLE	IF	CITATIONS
37	Molecular cloning of synaphins/complexins, cytosolic proteins involved in transmitter release, in the electric organ of an electric ray ( <i>Narke japonica</i> ). <i>Neuroscience Letters</i> , 1997, 232, 107-110.	1.0	12
38	Lineage analysis of newly generated neurons in organotypic culture of rat hippocampus. <i>Neuroscience Research</i> , 2011, 69, 223-233.	1.0	11
39	Channelrhodopsins—Their potential in gene therapy for neurological disorders. <i>Neuroscience Research</i> , 2013, 75, 6-12.	1.0	10
40	Red-Tuning of the Channelrhodopsin Spectrum Using Long Conjugated Retinal Analogues. <i>Biochemistry</i> , 2018, 57, 5544-5556.	1.2	10
41	Positioning of the sensor cell on the sensing area using cell trapping pattern in incubation type planar patch clamp biosensor. <i>Colloids and Surfaces B: Biointerfaces</i> , 2012, 96, 44-49.	2.5	9
42	The regulatory mechanism of ion permeation through a channelrhodopsin derived from <i>Mesostigma viride</i> (MvChR1). <i>Photochemical and Photobiological Sciences</i> , 2016, 15, 365-374.	1.6	8
43	Kinetic characteristics of chimeric channelrhodopsins implicate the molecular identity involved in desensitization. <i>Biophysics and Physicobiology</i> , 2017, 14, 13-22.	0.5	8
44	Optogenetic study of the response interaction among multi-afferent inputs in the barrel cortex of rats. <i>Scientific Reports</i> , 2019, 9, 3917.	1.6	8
45	Paired stimulation between CA3 and CA1 alters excitability of CA3 in the rat hippocampus. <i>Neuroscience Letters</i> , 2013, 534, 182-187.	1.0	7
46	Driving Neurogenesis in Neural Stem Cells with High Sensitivity Optogenetics. <i>NeuroMolecular Medicine</i> , 2020, 22, 139-149.	1.8	7
47	Membrane depolarization regulates intracellular RANKL transport in non-excitabile osteoblasts. <i>Bone</i> , 2015, 81, 306-314.	1.4	6
48	Evaluation of a Sindbis virus vector displaying an immunoglobulin-binding domain: Antibody-dependent infection of neurons in living mice. <i>Neuroscience Research</i> , 2011, 71, 328-334.	1.0	4
49	Improvements in the performance of an incubation-type planar patch clamp biosensor using a salt bridge electrode and a plastic (PMMA) substrate. <i>Sensors and Actuators B: Chemical</i> , 2014, 193, 660-668.	4.0	4
50	Alternative Formation of Red-Shifted Channelrhodopsins: Noncovalent Incorporation with Retinal-Based Enamine-Type Schiff Bases and Mutated Channelopsin. <i>Chemical and Pharmaceutical Bulletin</i> , 2017, 65, 356-358.	0.6	3
51	Remodeling of hippocampal network in pilocarpine-treated mice expressing synaptophysin in the mossy fiber terminals. <i>Neuroscience Research</i> , 2012, 74, 25-31.	1.0	2
52	Functional emergence of a column-like architecture in layer 5 of mouse somatosensory cortex in vivo. <i>Journal of Physiological Sciences</i> , 2019, 69, 65-77.	0.9	2
53	$\hat{1}$ -Phorbol ester-induced enhancement of exocytosis in large mossy fiber boutons of mouse hippocampus. <i>Journal of Physiological Sciences</i> , 2009, 59, 263-274.	0.9	1
54	Near-infrared (NIR) optogenetics using up-conversion system. , 2015, , .		1

#	ARTICLE	IF	CITATIONS
55	Development of biotransducers driven by photostimulation. , 2015, , .		1
56	Molecular Dynamics of Photo-electrical Transducing Proteins, Channelrhodopsins. Seibutsu Butsuri, 2012, 52, 226-229.	0.0	1
57	Activation of presynaptically silent synapses—One of underlying mechanisms enhancing mossy fiber transmission in the hippocampus. Neuroscience Research, 2007, 58, S190.	1.0	0
58	Glu-97 of channelrhodopsin-2 is one of the molecular determinants involved in the ion flux. Neuroscience Research, 2009, 65, S196.	1.0	0
59	Molecular determinant differentiating Chlamydomonas channelrhodopsins. Neuroscience Research, 2009, 65, S196.	1.0	0
60	APACOP, a FRET apoptosis probe with manipulation of neuronal activity. Neuroscience Research, 2011, 71, e343.	1.0	0
61	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
62	Frequency response characterization of hippocampal CA3 dendrites: Opto-current clamp analysis. Neuroscience Research, 2011, 71, e120.	1.0	0
63	A background correction method for Raman spectra of mixed neurotransmitters: Toward a new label-free imaging technology of brain activity. Neuroscience Research, 2011, 71, e205.	1.0	0
64	Channelrhodopsin as a Noble Biomaterial Useful for the Operation and Performance Test of the Ion-channel Devices. Materials Transactions, 2012, 53, 1305-1309.	0.4	0
65	Optically controllable muscle for cell-based microdevice. , 2014, , .		0
66	Engineering Biological Systems for Light. Seibutsu Butsuri, 2015, 55, 311-316.	0.0	0
67	Controlling Neuronal Circuits with Light. The Review of Laser Engineering, 2012, 40, 254.	0.0	0
68	Strategies to Probe Mechanoreception: From Mechanical to Optogenetic Approaches. , 2015, , 305-314.		0
69	Myogenic Maturation by Optical-Training in Cultured Skeletal Muscle Cells. Methods in Molecular Biology, 2017, 1668, 135-145.	0.4	0