Hiroyoshi Miyakawa

List of Publications by Year
in descending order

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58 papers	2,955 citations	279798 23 h-index	168389 53 g-index
59 all docs	59 docs citations	59 times ranked	2650 citing authors

#	Article	IF	Citations
1	Effects of uniform extracellular DC electric fields on excitability in rat hippocampal slicesin vitro. Journal of Physiology, 2004, 557, 175-190.	2.9	629
2	The spread of Na+ spikes determines the pattern of dendritic Ca2+ entry into hippocampal neurons. Nature, 1992, 357, 244-246.	27.8	397
3	Reversal of long-term potentiation (depotentiation) induced by tetanus stimulation of the input to CA1 neurons of guinea pig hippocampal slices. Brain Research, 1991, 555, 112-122.	2.2	333
4	Synaptically activated increases in Ca2+ concentration in hippocampal CA1 pyramidal cells are primarily due to voltage-gated Ca2+ channels. Neuron, 1992, 9, 1163-1173.	8.1	254
5	Detecting cells using non-negative matrix factorization on calcium imaging data. Neural Networks, 2014, 55, 11-19.	5.9	120
6	High time resolution fluorescence imaging with a CCD camera. Journal of Neuroscience Methods, 1991, 36, 253-261.	2.5	115
7	Low-threshold potassium channels and a low-threshold calcium channel regulate Ca2+ spike firing in the dendrites of cerebellar Purkinje neurons: a modeling study. Brain Research, 2001, 891, 106-115.	2.2	105
8	Optical Detection of Synaptically Induced Glutamate Transport in Hippocampal Slices. Journal of Neuroscience, 1999, 19, 2580-2588.	3.6	97
9	Cytoplasmic calcium elevation in hippocampal granule cell induced by perforant path stimulation andl-glutamate application. Brain Research, 1987, 407, 168-172.	2.2	78
10	Organization of projection neurons and local neurons of the primary auditory center in the fruit fly Drosophila melanogaster. Journal of Comparative Neurology, 2016, 524, 1099-1164.	1.6	61
11	PACAP/PAC1 autocrine system promotes proliferation and astrogenesis in neural progenitor cells. Glia, 2007, 55, 317-327.	4.9	55
12	Voltage-gated Ca2+ channel blockers, Ï‰-AgaIVA and Ni2+, suppress the induction of Î¸-burst induced long-term potentiation in guinea-pig hippocampal CA1 neurons. Neuroscience Letters, 1995, 183, 112-115.	2.1	49
13	Differential roles of two types of voltage-gated Ca2+ channels in the dendrites of rat cerebellar Purkinje neurons. Brain Research, 1998, 791, 43-55.	2.2	47
14	Glutamate release increases during mossy-CA3 LTP but not during Schaffer-CA1 LTP. European Journal of Neuroscience, 2004, 19, 1591-1600.	2.6	38
15	Requirement of extracellular Ca2+ after tetanus for induction of long-term potentiation in guinea pig hippocampal slices. Neuroscience Letters, 1987, 77, 176-180.	2.1	31
16	Activation of dopamine D1 receptors enhances long-term depression of synaptic transmission induced by low frequency stimulation in rat hippocampal CA1 neurons. Neuroscience Letters, 1995, 188, 195-198.	2.1	30
17	Paired-pulse ratio of synaptically induced transporter currents at hippocampal CA1 synapses is not related to release probability. Brain Research, 2007, 1154, 71-79.	2.2	28
18	Extracellular DC electric fields induce nonuniform membrane polarization in rat hippocampal CA1 pyramidal neurons. Brain Research, 2011, 1383, 22-35.	2.2	28

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19	Selectivity and Plasticity in a Sound-Evoked Male-Male Interaction in Drosophila. PLoS ONE, 2013, 8, e74289.	2.5	28
20	Adenosine (A2) antagonist inhibits induction of long-term potentiation of evoked synaptic potentials but not of the population spike in hippocampal CA1 neurons. Biochemical and Biophysical Research Communications, 1991, 181, 1010-1014.	2.1	27
21	Adverse effects of an active fragment of parathyroid hormone on rat hippocampal organotypic cultures. British Journal of Pharmacology, 2000, 129, 21-28.	5.4	26
22	Dendritic attenuation of synaptic potentials in the CA1 region of rat hippocampal slices detected with an optical method. European Journal of Neuroscience, 2001, 13, 1711-1721.	2.6	26
23	Adenosine A1-receptor-mediated tonic inhibition of glutamate release at rat hippocampal CA3â€“CA1 synapses is primarily due to inhibition of N-type Ca2+ channels. European Journal of Pharmacology, 2004, 499, 265-274.	3.5	24
24	A plateau potential mediated by the activation of extrasynaptic NMDA receptors in rat hippocampal CA1 pyramidal neurons. European Journal of Neuroscience, 2008, 28, 521-534.	2.6	24
25	Estimated distribution of specific membrane resistance in hippocampal CA1 pyramidal neuron. Brain Research, 2006, 1125, 199-208.	2.2	18
26	Activation of the VIP/VPAC2 system induces reactive astrocytosis associated with increased expression of glutamate transporters. Brain Research, 2011, 1383, 43-53.	2.2	18
27	Properties of Calcium Spikes Revealed During GABAA Receptor Antagonism in Hippocampal CA1 Neurons From Guinea Pigs. Journal of Neurophysiology, 1997, 78, 2269-2279.	1.8	17
28	Measurement of infinitesimal phase response curves from noisy real neurons. Physical Review E, 2011, 84, 041902.	2.1	17
29	Adenosine A2 receptor antagonist facilitates the reversal of long-term potentiation (depotentiation) of evoked postsynaptic potentials but inhibits that of population spikes in hippocampal CA1 neurons. Neuroscience Letters, 1992, 148, 148-150.	2.1	16
30	NMDA receptor-mediated depolarizing after-potentials in the basal dendrites of CA1 pyramidal neurons. Neuroscience Research, 2004, 48, 325-333.	1.9	16
31	Steep decrease in the specific membrane resistance in the apical dendrites of hippocampal CA1 pyramidal neurons. Neuroscience Research, 2009, 64, 83-95.	1.9	16
32	An Analytic Solution of the Cable Equation Predicts Frequency Preference of a Passive Shunt-End Cylindrical Cable in Response to Extracellular Oscillating Electric Fields. Biophysical Journal, 2010, 98, 524-533.	0.5	15
33	A novel behavioral strategy, continuous biased running, during chemotaxis in Drosophila larvae. Neuroscience Letters, 2014, 570, 10-15.	2.1	15
34	Ca2+-Dependent Induction of Intracellular Ca2+ Oscillation in Hippocampal Astrocytes During Metabotropic Glutamate Receptor Activation. Journal of Pharmacological Sciences, 2005, 97, 212-218.	2.5	14
35	GABAergic control of synaptic summation in hippocampal CA1 pyramidal neurons. Hippocampus, 2001, 11, 683-689.	1.9	13
36	Activation of dihydropyridine sensitive Ca2+ channels in rat hippocampal neurons in culture by parathyroid hormone. Neuroscience Letters, 1998, 256, 139-142.	2.1	12

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37	Optical monitoring of progressive synchronization in dentate granule cells during population burst activities. European Journal of Neuroscience, 2005, 21, 3349-3360.	2.6	12
38	Weak Sinusoidal Electric Fields Entrain Spontaneous Ca Transients in the Dendritic Tufts of CA1 Pyramidal Cells in Rat Hippocampal Slice Preparations. PLoS ONE, 2015, 10, e0122263.	2.5	11
39	Novel method for quantification of brain cell swelling in rat hippocampal slices. Journal of Neuroscience Research, 2004, 76, 723-733.	2.9	10
40	Low-frequency dielectric dispersion of brain tissue due to electrically long neurites. Physical Review E, 2012, 86, 061911.	2.1	10
41	Imaging data analysis using non-negative matrix factorization. Neuroscience Research, 2022, 179, 51-56.	1.9	10
42	Expression of Group I Metabotropic Glutamate Receptors in Rat Hippocampal Cells in Culture and Their Characterization by Intracellular Calcium Ion Dynamics. Journal of Pharmacological Sciences, 2003, 92, 245-251.	2.5	9
43	Estimation of Intracellular Calcium Ion Concentration by Nonlinear State Space Modeling and Expectation-Maximization Algorithm for Parameter Estimation. Journal of the Physical Society of Japan, 2010, 79, 124801.	1.6	8
44	Experience-dependent Plasticity of the Optomotor Response in Drosophila melanogaster. Developmental Neuroscience, 2012, 34, 533-542.	2.0	8
45	Effects of Mannitol on Ischemia-Induced Degeneration in Rat Hippocampus. Journal of Pharmacological Sciences, 2004, 95, 341-348.	2.5	7
46	Intracellular calcium elevation during plateau potentials mediated by extrasynaptic <scp>NMDA</scp> receptor activation in rat hippocampal <scp>CA</scp>1 pyramidal neurons is primarily due to calcium entry through voltageâ€gated calcium channels. European Journal of Neuroscience, 2014, 39, 1613-1623.	2.6	5
47	Noise-robust recognition of wide-field motion direction and the underlying neural mechanisms in Drosophila melanogaster. Scientific Reports, 2015, 5, 10253.	3.3	5
48	Higher-Order Spike Triggered Analysis of Neural Oscillators. PLoS ONE, 2012, 7, e50232.	2.5	5
49	Individual differences in sensory responses influence decision making by Drosophila melanogaster larvae on exposure to contradictory cues. Journal of Neurogenetics, 2016, 30, 288-296.	1.4	4
50	Effects of Bifemelane on the Calcium Level and ATP Release of the Human Origin Astrocyte Clonal Cell. Journal of Pharmacological Sciences, 2006, 102, 121-128.	2.5	3
51	Is the Langevin phase equation an efficient model for oscillating neurons?. Journal of Physics: Conference Series, 2009, 197, 012016.	0.4	3
52	Frequency-dependent entrainment of spontaneous Ca transients in the dendritic tufts of CA1 pyramidal cells in rat hippocampal slice preparations by weak AC electric field. Brain Research Bulletin, 2019, 153, 202-213.	3.0	3
53	Automatic Cell Detection from Calcium Imaging Data Using Non-negative Matrix Factorization. Seibutsu Butsuri, 2017, 57, 036-039.	0.1	2
54	Optical Bioimaging: From Living Tissue to a Single Molecule: Optical Detection of Synaptically Induced Glutamate Transporter Activity in Hippocampal Slices. Journal of Pharmacological Sciences, 2003, 93, 234-241.	2.5	1

#	Article	IF	Citations
55	Cooperative Integration and Representation Underlying Bilateral Network of Fly Motion-Sensitive Neurons. PLoS ONE, 2014, 9, e85790.	2.5	1
56	An analytical solution of the cable equation predicts the frequency preference of a passive non-uniform cylindrical cable in response to extracellular oscillating electrical fields. BMC Neuroscience, 2009, 10, .	1.9	0
57	Organization of projection neurons and local neurons of the primary auditory center in the fruit fly Drosophila melanogaster. Journal of Comparative Neurology, 2016, 524, Spc1.	1.6	0
58	Recent development of image analysis of intracellular Ca2+ concentration.. Seibutsu Butsuri, 1996, 36, 30-34.	0.1	0