

Ralf Schneggenburger

List of Publications by Year in descending order

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57
papers

6,600
citations

81900

39
h-index

138484

58
g-index

62
all docs

62
docs citations

62
times ranked

4862
citing authors

#	ARTICLE	IF	CITATIONS
1	Intracellular calcium dependence of transmitter release rates at a fast central synapse. <i>Nature</i> , 2000, 406, 889-893.	27.8	699
2	Released Fraction and Total Size of a Pool of Immediately Available Transmitter Quanta at a Calyx Synapse. <i>Neuron</i> , 1999, 23, 399-409.	8.1	544
3	RIM Determines Ca ²⁺ Channel Density and Vesicle Docking at the Presynaptic Active Zone. <i>Neuron</i> , 2011, 69, 304-316.	8.1	316
4	Vesicle pools and short-term synaptic depression: lessons from a large synapse. <i>Trends in Neurosciences</i> , 2002, 25, 206-212.	8.6	312
5	Presynaptic calcium and control of vesicle fusion. <i>Current Opinion in Neurobiology</i> , 2005, 15, 266-274.	4.2	301
6	Allosteric modulation of the presynaptic Ca ²⁺ sensor for vesicle fusion. <i>Nature</i> , 2005, 435, 497-501.	27.8	276
7	The Synaptic Vesicle Protein CSP β Prevents Presynaptic Degeneration. <i>Neuron</i> , 2004, 42, 237-251.	8.1	254
8	Presynaptic Depression at a Calyx Synapse: The Small Contribution of Metabotropic Glutamate Receptors. <i>Journal of Neuroscience</i> , 1997, 17, 8137-8146.	3.6	251
9	A Munc13/RIM/Rab3 tripartite complex: from priming to plasticity?. <i>EMBO Journal</i> , 2005, 24, 2839-2850.	7.8	230
10	The calyx of Held. <i>Cell and Tissue Research</i> , 2006, 326, 311-337.	2.9	202
11	Probing the Intracellular Calcium Sensitivity of Transmitter Release during Synaptic Facilitation. <i>Neuron</i> , 2003, 37, 801-811.	8.1	169
12	Parvalbumin Is a Mobile Presynaptic Ca ²⁺ Buffer in the Calyx of Held that Accelerates the Decay of Ca ²⁺ and Short-Term Facilitation. <i>Journal of Neuroscience</i> , 2007, 27, 2261-2271.	3.6	142
13	The Epithelial Inward Rectifier Channel Kir7.1 Displays Unusual K ⁺ Permeation Properties. <i>Journal of Neuroscience</i> , 1998, 18, 8625-8636.	3.6	139
14	Estimation of Quantal Size and Number of Functional Active Zones at the Calyx of Held Synapse by Nonstationary EPSC Variance Analysis. <i>Journal of Neuroscience</i> , 2001, 21, 7889-7900.	3.6	133
15	Nigrostriatal overabundance of α -synuclein leads to decreased vesicle density and deficits in dopamine release that correlate with reduced motor activity. <i>Acta Neuropathologica</i> , 2012, 123, 653-669.	7.7	132
16	Interplay between Na ⁺ /Ca ²⁺ Exchangers and Mitochondria in Ca ²⁺ Clearance at the Calyx of Held. <i>Journal of Neuroscience</i> , 2005, 25, 6057-6065.	3.6	120
17	Separation of Presynaptic and Postsynaptic Contributions to Depression by Covariance Analysis of Successive EPSCs at the Calyx of Held Synapse. <i>Journal of Neuroscience</i> , 2002, 22, 728-739.	3.6	112
18	A Mechanism Intrinsic to the Vesicle Fusion Machinery Determines Fast and Slow Transmitter Release at a Large CNS Synapse. <i>Journal of Neuroscience</i> , 2007, 27, 3198-3210.	3.6	112

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19	Phorbol Esters Modulate Spontaneous and Ca ²⁺ -Evoked Transmitter Release via Acting on Both Munc13 and Protein Kinase C. <i>Journal of Neuroscience</i> , 2008, 28, 8257-8267.	3.6	111
20	Developmental expression of the Ca ²⁺ -binding proteins calretinin and parvalbumin at the calyx of Held of rats and mice. <i>European Journal of Neuroscience</i> , 2004, 20, 1473-1482.	2.6	108
21	Heterogeneous Presynaptic Release Probabilities: Functional Relevance for Short-Term Plasticity. <i>Biophysical Journal</i> , 2003, 84, 1563-1579.	0.5	107
22	Control of Exocytosis by Synaptotagmins and Otoferlin in Auditory Hair Cells. <i>Journal of Neuroscience</i> , 2010, 30, 13281-13290.	3.6	106
23	Synaptotagmin Increases the Dynamic Range of Synapses by Driving Ca ²⁺ -Evoked Release and by Clamping a Near-Linear Remaining Ca ²⁺ Sensor. <i>Neuron</i> , 2011, 69, 736-748.	8.1	102
24	Coupling of Permeation and Gating in an NMDA-Channel Pore Mutant. <i>Neuron</i> , 1997, 18, 167-177.	8.1	96
25	Presynaptic Ca ²⁺ Requirements and Developmental Regulation of Posttetanic Potentiation at the Calyx of Held. <i>Journal of Neuroscience</i> , 2005, 25, 5127-5137.	3.6	90
26	BMP signaling specifies the development of a large and fast CNS synapse. <i>Nature Neuroscience</i> , 2013, 16, 856-864.	14.8	90
27	Molecular mechanisms governing Ca ²⁺ regulation of evoked and spontaneous release. <i>Nature Neuroscience</i> , 2015, 18, 935-941.	14.8	86
28	Properties of a Model of Ca ⁺⁺ -Dependent Vesicle Pool Dynamics and Short Term Synaptic Depression. <i>Biophysical Journal</i> , 1999, 77, 2418-2429.	0.5	85
29	Regulation of transmitter release by Ca ²⁺ and synaptotagmin: insights from a large CNS synapse. <i>Trends in Neurosciences</i> , 2011, 34, 237-246.	8.6	83
30	Posttetanic potentiation critically depends on an enhanced Ca ²⁺ sensitivity of vesicle fusion mediated by presynaptic PKC. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 15923-15928.	7.1	77
31	Estimation of quantal parameters at the calyx of Held synapse. <i>Neuroscience Research</i> , 2002, 44, 343-356.	1.9	73
32	A VTA to Basal Amygdala Dopamine Projection Contributes to Signal Salient Somatosensory Events during Fear Learning. <i>Journal of Neuroscience</i> , 2020, 40, 3969-3980.	3.6	72
33	Munc18-1 is a dynamically regulated PKC target during short-term enhancement of transmitter release. <i>ELife</i> , 2014, 3, e01715.	6.0	70
34	Presynaptic Capacitance Measurements and Ca ²⁺ Uncaging Reveal Submillisecond Exocytosis Kinetics and Characterize the Ca ²⁺ Sensitivity of Vesicle Pool Depletion at a Fast CNS Synapse. <i>Journal of Neuroscience</i> , 2003, 23, 7059-7068.	3.6	66
35	Developmental regulation of the intracellular Ca ²⁺ sensitivity of vesicle fusion and Ca ²⁺ secretion coupling at the rat calyx of Held. <i>Journal of Physiology</i> , 2009, 587, 3009-3023.	2.9	64
36	A limited contribution of Ca ²⁺ current facilitation to paired-pulse facilitation of transmitter release at the rat calyx of Held. <i>Journal of Physiology</i> , 2008, 586, 5503-5520.	2.9	56

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37	Interaction between Facilitation and Depression at a Large CNS Synapse Reveals Mechanisms of Short-Term Plasticity. <i>Journal of Neuroscience</i> , 2010, 30, 2007-2016.	3.6	56
38	The timing of phasic transmitter release is Ca ²⁺ -dependent and lacks a direct influence of presynaptic membrane potential. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 15200-15205.	7.1	51
39	An Exclusion Zone for Ca ²⁺ Channels around Docked Vesicles Explains Release Control by Multiple Channels at a CNS Synapse. <i>PLoS Computational Biology</i> , 2015, 11, e1004253.	3.2	49
40	Ca ²⁺ channels and transmitter release at the active zone. <i>Cell Calcium</i> , 2012, 52, 199-207.	2.4	47
41	Parvalbumin-Interneuron Output Synapses Show Spike-Timing-Dependent Plasticity that Contributes to Auditory Map Remodeling. <i>Neuron</i> , 2018, 99, 720-735.e6.	8.1	45
42	A Synaptotagmin Isoform Switch during the Development of an Identified CNS Synapse. <i>Neuron</i> , 2016, 90, 984-999.	8.1	39
43	Robo3-Driven Axon Midline Crossing Conditions Functional Maturation of a Large Commissural Synapse. <i>Neuron</i> , 2013, 78, 855-868.	8.1	34
44	RIM1 and RIM2 redundantly determine Ca ²⁺ channel density and readily releasable pool size at a large hindbrain synapse. <i>Journal of Neurophysiology</i> , 2015, 113, 255-263.	1.8	34
45	Synaptotagmin2 (Syt2) Drives Fast Release Redundantly with Syt1 at the Output Synapses of Parvalbumin-Expressing Inhibitory Neurons. <i>Journal of Neuroscience</i> , 2017, 37, 4604-4617.	3.6	33
46	Specific synaptic input strengths determine the computational properties of excitation-inhibition integration in a sound localization circuit. <i>Journal of Physiology</i> , 2018, 596, 4945-4967.	2.9	29
47	GABA-mediated synaptic transmission in neuroendocrine cells: a patch-clamp study in a pituitary slice preparation. <i>Pflügers Archiv European Journal of Physiology</i> , 1992, 421, 364-373.	2.8	25
48	Altered Voltage Dependence of Fractional Ca ²⁺ Current in N-Methyl-d-Aspartate Channel Pore Mutants with a Decreased Ca ²⁺ Permeability. <i>Biophysical Journal</i> , 1998, 74, 1790-1794.	0.5	20
49	Developmental expression of Synaptotagmin isoforms in single calyx of Held-generating neurons. <i>Molecular and Cellular Neurosciences</i> , 2010, 44, 374-385.	2.2	20
50	Depolarization-induced calcium signals in the somata of cerebellar Purkinje neurons. <i>Neuroscience Research</i> , 1995, 24, 87-95.	1.9	18
51	An Alien Divalent Ion Reveals a Major Role for Ca ²⁺ Buffering in Controlling Slow Transmitter Release. <i>Journal of Neuroscience</i> , 2014, 34, 12622-12635.	3.6	18
52	Stimulation of medial amygdala GABA neurons with kinetically different channelrhodopsins yields opposite behavioral outcomes. <i>Cell Reports</i> , 2022, 39, 110850.	6.4	16
53	Ultrastructural basis of strong unitary inhibition in a binocular neuron. <i>Journal of Physiology</i> , 2018, 596, 4969-4982.	2.9	10
54	Role of BMP Signaling for the Formation of Auditory Brainstem Nuclei and Large Auditory Relay Synapses. <i>Developmental Neurobiology</i> , 2019, 79, 155-174.	3.0	8

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55	An organotypic slice culture to study the formation of calyx of Held synapses in-vitro. PLoS ONE, 2017, 12, e0175964.	2.5	8
56	LTP of inhibition at PV interneuron output synapses requires developmental BMP signaling. Scientific Reports, 2020, 10, 10047.	3.3	4
57	Fear Learning: An Evolving Picture for Plasticity at Synaptic Afferents to the Amygdala. Neuroscientist, 2024, 30, 87-104.	3.5	3