Stephan J Sigrist

List of Publications by Year
in descending order

93 papers	9,083 citations	76326 40 h-index	46799 89 g-index
101 all docs	101 docs citations	101 times ranked	10148 citing authors

#	Article	IF	Citations
1	Variance of filtered signals: Characterization for linear reaction networks and application to neurotransmission dynamics. Mathematical Biosciences, 2022, 343, 108760.	1.9	4
2	The HSP40 chaperone Ydj1 drives amyloid beta 42 toxicity. EMBO Molecular Medicine, 2022, 14, e13952.	6.9	16
3	Effects of Spermidine Supplementation on Cognition and Biomarkers in Older Adults With Subjective Cognitive Decline. JAMA Network Open, 2022, 5, e2213875.	5.9	17
4	Presynaptic and postsynaptic long-term plasticity in sleep homeostasis. Current Opinion in Neurobiology, 2021, 69, 1-10.	4.2	9
5	Rapid Ca ²⁺ channel accumulation contributes to cAMP-mediated increase in transmission at hippocampal mossy fiber synapses. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	23
6	Unc13A and Unc13B contribute to the decoding of distinct sensory information in Drosophila. Nature Communications, 2021, 12, 1932.	12.8	16
7	Fat-body brummer lipase determines survival and cardiac function during starvation in Drosophila melanogaster. IScience, 2021, 24, 102288.	4.1	11
8	Dietary spermidine improves cognitive function. Cell Reports, 2021, 35, 108985.	6.4	98
9	eIF5A hypusination, boosted by dietary spermidine, protects from premature brain aging and mitochondrial dysfunction. Cell Reports, 2021, 35, 108941.	6.4	56
10	Antagonistic interactions between two Neuroligins coordinate pre- and postsynaptic assembly. Current Biology, 2021, 31, 1711-1725.e5.	3.9	10
11	Rab2 regulates presynaptic precursor vesicle biogenesis at the trans-Golgi. Journal of Cell Biology, 2021, 220, .	5.2	14
12	Recruitment of release sites underlies chemical presynaptic potentiation at hippocampal mossy fiber boutons. PLoS Biology, 2021, 19, e3001149.	5.6	18
13	Spermidine-induced hypusination preserves mitochondrial and cognitive function during aging. Autophagy, 2021, 17, 2037-2039.	9.1	35
14	Translational control of polyamine metabolism by CNBP is required for Drosophila locomotor function. ELife, 2021, 10, .	6.0	10
15	Novel aspects of age-protection by spermidine supplementation are associated with preserved telomere length. GeroScience, 2021, 43, 673-690.	4.6	18
16	(M)Unc13s in Active Zone Diversity: A Drosophila Perspective. Frontiers in Synaptic Neuroscience, 2021, 13, 798204.	2.5	6
17	Postsynaptic cAMP signalling regulates the antagonistic balance of Drosophila glutamate receptor subtypes. Development (Cambridge), 2020, 147, .	2.5	7
18	Structural Remodeling of Active Zones Is Associated with Synaptic Homeostasis. Journal of Neuroscience, 2020, 40, 2817-2827.	3.6	18

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19	Presynaptic Active Zone Plasticity Encodes Sleep Need in Drosophila. Current Biology, 2020, 30, 1077-1091.e5.	3.9	35
20	Interactions between amyloid precursor protein-like (APPL) and MAGUK scaffolding proteins contribute to appetitive long-term memory inDrosophila melanogaster. Journal of Neurogenetics, 2020, 34, 92-105.	1.4	10
21	The Unc13A isoform is important for phasic release and olfactory memory formation at mushroom body synapses. Journal of Neurogenetics, 2020, 34, 106-114.	1.4	4
22	RIM-binding protein couples synaptic vesicle recruitment to release sites. Journal of Cell Biology, 2020, 219, .	5.2	26
23	Maintenance of cell type-specific connectivity and circuit function requires Tao kinase. Nature Communications, 2019, 10, 3506.	12.8	17
24	4,4'Dimethoxychalcone: a natural flavonoid that promotes health through autophagy-dependent and -independent effects. Autophagy, 2019, 15, 1662-1664.	9.1	8
25	Network-Specific Synchronization of Electrical Slow-Wave Oscillations Regulates Sleep Drive in Drosophila. Current Biology, 2019, 29, 3611-3621.e3.	3.9	66
26	Attenuated palmitoylation of serotonin receptor 5-HT1A affects receptor function and contributes to depression-like behaviors. Nature Communications, 2019, 10, 3924.	12.8	100
27	Targeting GATA transcription factors â€“ a novel strategy for anti-aging interventions?. Microbial Cell, 2019, 6, 212-216.	3.2	6
28	Effects of spermidine supplementation on cognition and biomarkers in older adults with subjective cognitive decline (SmartAge)â€”study protocol for a randomized controlled trial. Alzheimer's Research and Therapy, 2019, 11, 36.	6.2	74
29	Autophagy within the mushroom body protects from synapse aging in a non-cell autonomous manner. Nature Communications, 2019, 10, 1318.	12.8	53
30	Rapid active zone remodeling consolidates presynaptic potentiation. Nature Communications, 2019, 10, 1085.	12.8	97
31	Homeostatic scaling of active zone scaffolds maintains global synaptic strength. Journal of Cell Biology, 2019, 218, 1706-1724.	5.2	66
32	Conserved regulation of neurodevelopmental processes and behavior by FoxP in Drosophila. PLoS ONE, 2019, 14, e0211652.	2.5	26
33	The flavonoid 4,4â€²-dimethoxychalcone promotes autophagy-dependent longevity across species. Nature Communications, 2019, 10, 651.	12.8	100
34	Phosphorylation of the Bruchpilot N-terminus unlocks axonal transport of active zone building blocks. Journal of Cell Science, 2019, 132, .	2.0	5
35	Spermidine protects from age-related synaptic alterations at hippocampal mossy fiber-CA3 synapses. Scientific Reports, 2019, 9, 19616.	3.3	33
36	RIM-BP2 primes synaptic vesicles via recruitment of Munc13-1 at hippocampal mossy fiber synapses. ELife, 2019, 8, .	6.0	46

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37	The presynaptic active zone: molecules, plasticity, and diseases. Neuroscience Research, 2018, 127, 1-2.	1.9	2
38	Vesicle release site organization at synaptic active zones. Neuroscience Research, 2018, 127, 3-13.	1.9	36
39	Active Zone Scaffold Protein Ratios Tune Functional Diversity across Brain Synapses. Cell Reports, 2018, 23, 1259-1274.	6.4	47
40	Guidelines and recommendations on yeast cell death nomenclature. Microbial Cell, 2018, 5, 4-31.	3.2	158
41	The effect of spermidine on memory performance in older adults at risk for dementia: A randomized controlled trial. Cortex, 2018, 109, 181-188.	2.4	98
42	The Long and Short of It: A Dwarf Neurexin Suffices for Synapse Assembly. Neuron, 2018, 100, 6-8.	8.1	1
43	Coupling the Structural and Functional Assembly of Synaptic Release Sites. Frontiers in Neuroanatomy, 2018, 12, 81.	1.7	33
44	Presynaptic Biogenesis Requires Axonal Transport of Lysosome-Related Vesicles. Neuron, 2018, 99, 1216-1232.e7.	8.1	109
45	Inhibition of oxidative stress in cholinergic projection neurons fully rescues aging-associated olfactory circuit degeneration in Drosophila. ELife, 2018, 7, .	6.0	21
46	Structural and Molecular Properties of Insect Type II Motor Axon Terminals. Frontiers in Systems Neuroscience, 2018, 12, 5.	2.5	17
47	Diacylglycerol triggers Rim101 pathwayâ€“dependent necrosis in yeast: a model for lipotoxicity. Cell Death and Differentiation, 2018, 25, 767-783.	11.2	22
48	Dietary spermidine for lowering high blood pressure. Autophagy, 2017, 13, 767-769.	9.1	63
49	Presynaptic morphogenesis, active zone organization and structural plasticity in Drosophila. Current Opinion in Neurobiology, 2017, 43, 119-129.	4.2	43
50	Spermidine boosts autophagy to protect from synapse aging. Autophagy, 2017, 13, 444-445.	9.1	53
51	Stable Positioning of Unc13 Restricts Synaptic Vesicle Fusion to Defined Release Sites to Promote Synchronous Neurotransmission. Neuron, 2017, 95, 1350-1364.e12.	8.1	106
52	A new method to characterize function of theDrosophilaheart by means of optical flow. Journal of Experimental Biology, 2017, 220, 4644-4653.	1.7	4
53	Spermidine Suppresses Age-Associated Memory Impairment by Preventing Adverse Increase of Presynaptic Active Zone Size and Release. PLoS Biology, 2016, 14, e1002563.	5.6	82
54	Mechanisms controlling assembly and plasticity of presynaptic active zone scaffolds. Current Opinion in Neurobiology, 2016, 39, 69-76.	4.2	40

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55	RIM-binding protein 2 regulates release probability by fine-tuning calcium channel localization at murine hippocampal synapses. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11615-11620.	7.1	86
56	Active zone scaffolds differentially accumulate Unc13 isoforms to tune Ca2+ channelâ€“vesicle coupling. Nature Neuroscience, 2016, 19, 1311-1320.	14.8	166
57	Cardioprotection and lifespan extension by the natural polyamine spermidine. Nature Medicine, 2016, 22, 1428-1438.	30.7	801
58	Ultrafast, temporally stochastic STED nanoscopy of millisecond dynamics. Nature Methods, 2015, 12, 827-830.	19.0	104
59	Structures ofDrosophila melanogasterRab2 and Rab3 bound to GMPPNP. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 34-40.	0.8	5
60	Systematic interaction network filtering identifies CRMP1 as a novel suppressor of huntingtin misfolding and neurotoxicity. Genome Research, 2015, 25, 701-713.	5.5	24
61	Lights On for the Molecular Players of Presynaptic Plasticity. Neuron, 2015, 86, 603-604.	8.1	5
62	Presynaptic spinophilin tunes neurexin signalling to control active zone architecture and function. Nature Communications, 2015, 6, 8362.	12.8	51
63	Dynamical Organization of Syntaxin-1A at the Presynaptic Active Zone. PLoS Computational Biology, 2015, 11, e1004407.	3.2	65
64	A high affinity RIM-binding protein/Aplip1 interaction prevents the formation of ectopic axonal active zones. ELife, 2015, 4, .	6.0	26
65	Spermidine-triggered autophagy ameliorates memory during aging. Autophagy, 2014, 10, 178-179.	9.1	62
66	A histone point mutation that switches on autophagy. Autophagy, 2014, 10, 1143-1145.	9.1	18
67	Acetyl-coenzyme A. Autophagy, 2014, 10, 1335-1337.	9.1	42
68	Neurotransmission: Spontaneous and Evoked Release Filing for Divorce. Current Biology, 2014, 24, R192-R194.	3.9	17
69	Nucleocytosolic Depletion of the Energy Metabolite Acetyl-Coenzyme A Stimulates Autophagy and Prolongs Lifespan. Cell Metabolism, 2014, 19, 431-444.	16.2	221
70	Differential centrifugationâ€“based biochemical fractionation of the Drosophila adult CNS. Nature Protocols, 2014, 9, 2796-2808.	12.0	21
71	Synaptogenesis. Current Biology, 2014, 24, R1076-R1080.	3.9	20
72	Drosophila Syd-1, Liprin-Â, and Protein Phosphatase 2A B' Subunit Wrd Function in a Linear Pathway to Prevent Ectopic Accumulation of Synaptic Materials in Distal Axons. Journal of Neuroscience, 2014, 34, 8474-8487.	3.6	26

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73	A Presynaptic Role for the Cytomatrix Protein GIT in Synaptic Vesicle Recycling. Cell Reports, 2014, 7, 1417-1425.	6.4	35
74	Drep-2 is a novel synaptic protein important for learning and memory. ELife, 2014, 3, .	6.0	39
75	Restoring polyamines protects from age-induced memory impairment in an autophagy-dependent manner. Nature Neuroscience, 2013, 16, 1453-1460.	14.8	283
76	Seeing the forest tree by tree: super-resolution light microscopy meets the neurosciences. Nature Neuroscience, 2013, 16, 790-797.	14.8	143
77	The Bruchpilot cytomatrix determines the size of the readily releasable pool of synaptic vesicles. Journal of Cell Biology, 2013, 202, 667-683.	5.2	101
78	RIM Controls Homeostatic Plasticity through Modulation of the Readily-Releasable Vesicle Pool. Journal of Neuroscience, 2012, 32, 16574-16585.	3.6	180
79	In Vivo Imaging of the Drosophila Larval Neuromuscular Junction. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot068593.	0.3	18
80	Quantitative Analysis of Drosophila Larval Neuromuscular Junction Morphology. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot068601.	0.3	29
81	Optical super-resolution microscopy in neurobiology. Current Opinion in Neurobiology, 2012, 22, 86-93.	4.2	53
82	RIM-Binding Protein, a Central Part of the Active Zone, Is Essential for Neurotransmitter Release. Science, 2011, 334, 1565-1569.	12.6	257
83	Protein scaffolds in the coupling of synaptic exocytosis and endocytosis. Nature Reviews Neuroscience, 2011, 12, 127-138.	10.2	497
84	Structural and functional plasticity of the cytoplasmic active zone. Current Opinion in Neurobiology, 2011, 21, 144-150.	4.2	60
85	Presynapses in Kenyon Cell Dendrites in the Mushroom Body Calyx of Drosophila. Journal of Neuroscience, 2011, 31, 9696-9707.	3.6	83
86	Structural Long-Term Changes at Mushroom Body Input Synapses. Current Biology, 2010, 20, 1938-1944.	3.9	93
87	Naked Dense Bodies Provoke Depression. Journal of Neuroscience, 2010, 30, 14340-14345.	3.6	338
88	A Syd-1 homologue regulates pre- and postsynaptic maturation in Drosophila. Journal of Cell Biology, 2010, 188, 565-579.	5.2	427
89	Maturation of active zone assembly by Drosophila Bruchpilot. Journal of Cell Biology, 2009, 186, 129-145.	5.2	627
90	The Yin and Yang of Synaptic Active Zone Assembly. Science Signaling, 2009, 2, pe32.	3.6	5

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91	Bruchpilot Promotes Active Zone Assembly, Ca2+ Channel Clustering, and Vesicle Release. Science, 2006, 312, 1051-1054.	12.6	976
92	Bruchpilot, a Protein with Homology to ELKS/CAST, Is Required for Structural Integrity and Function of Synaptic Active Zones in Drosophila. Neuron, 2006, 49, 833-844.	8.1	802
93	Experience-Dependent Strengthening ofDrosophilaNeuromuscular Junctions. Journal of Neuroscience, 2003, 23, 6546-6556.	3.6	175