U Valentin NÃ¤gerl

List of Publications by Year
in descending order

62 papers	5,490 citations	94381 37 h-index	155592 55 g-index
74 all docs	74 docs citations	74 times ranked	6350 citing authors

#	Article	IF	Citations
1	Bidirectional Activity-Dependent Morphological Plasticity in Hippocampal Neurons. Neuron, 2004, 44, 759-767.	3.8	517
2	Live-cell imaging of dendritic spines by STED microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18982-18987.	3.3	364
3	Spine neck plasticity regulates compartmentalization of synapses. Nature Neuroscience, 2014, 17, 678-685.	7.1	362
4	A Balance of Protein Synthesis and Proteasome-Dependent Degradation Determines the Maintenance of LTP. Neuron, 2006, 52, 239-245.	3.8	272
5	STED Nanoscopy of Actin Dynamics in Synapses Deep Inside Living Brain Slices. Biophysical Journal, 2011, 101, 1277-1284.	0.2	270
6	Live imaging of effector cell trafficking and autoantigen recognition within the unfolding autoimmune encephalomyelitis lesion. Journal of Experimental Medicine, 2005, 201, 1805-1814.	4.2	249
7	Super-Resolution Imaging of the Extracellular Space in Living Brain Tissue. Cell, 2018, 172, 1108-1121.e15.	13.5	219
8	Early synaptic deficits in the APP/PS1 mouse model of Alzheimerâ€™s disease involve neuronal adenosine A2A receptors. Nature Communications, 2016, 7, 11915.	5.8	184
9	Binding Kinetics of Calbindin-D28k Determined by Flash Photolysis of Caged Ca2+. Biophysical Journal, 2000, 79, 3009-3018.	0.2	176
10	LTP Induction Boosts Glutamate Spillover by Driving Withdrawal of Perisynaptic Astroglia. Neuron, 2020, 108, 919-936.e11.	3.8	159
11	Protracted Synaptogenesis after Activity-Dependent Spinogenesis in Hippocampal Neurons. Journal of Neuroscience, 2007, 27, 8149-8156.	1.7	153
12	Surviving Granule Cells of the Sclerotic Human Hippocampus Have Reduced Ca²⁺Influx Because of a Loss of Calbindin-D_{28k}in Temporal Lobe Epilepsy. Journal of Neuroscience, 2000, 20, 1831-1836.	1.7	137
13	Neuronal activity determines the protein synthesis dependence of long-term potentiation. Nature Neuroscience, 2006, 9, 478-480.	7.1	135
14	Structural basis of astrocytic Ca2+ signals at tripartite synapses. Nature Communications, 2020, 11, 1906.	5.8	133
15	LTD Induction Causes Morphological Changes of Presynaptic Boutons and Reduces Their Contacts with Spines. Neuron, 2008, 60, 590-597.	3.8	131
16	Chronic 2P-STED imaging reveals high turnover of dendritic spines in the hippocampus in vivo. ELife, 2018, 7, .	2.8	130
17	Competing for MemoryHippocampal LTP under Regimes of Reduced Protein Synthesis. Neuron, 2004, 44, 1011-1020.	3.8	124
18	Two-Photon Excitation STED Microscopy in Two Colors in Acute Brain Slices. Biophysical Journal, 2013, 104, 778-785.	0.2	123

#	Article	IF	Citations
19	Two-Color STED Microscopy of Living Synapses Using A Single Laser-Beam Pair. Biophysical Journal, 2011, 101, 2545-2552.	0.2	121
20	Dendritic Spines as Tunable Regulators of Synaptic Signals. Frontiers in Psychiatry, 2016, 7, 101.	1.3	109
21	Superresolution imaging reveals activity-dependent plasticity of axon morphology linked to changes in action potential conduction velocity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1401-1406.	3.3	108
22	Competing for Memory. Neuron, 2004, 44, 1011-1020.	3.8	92
23	In VivoImaging of Intersynaptic Vesicle Exchange Using VGLUT1^{Venus}Knock-In Mice. Journal of Neuroscience, 2011, 31, 15544-15559.	1.7	88
24	Unveiling the Extracellular Space of the Brain: From Super-resolved Microstructure toIn VivoFunction. Journal of Neuroscience, 2018, 38, 9355-9363.	1.7	79
25	Convergence of Hippocampal Pathophysiology inSyngap^{+/â^'}andFmr1^{â^'/y}Mice. Journal of Neuroscience, 2015, 35, 15073-15081.	1.7	76
26	Superresolution imaging for neuroscience. Experimental Neurology, 2013, 242, 33-40.	2.0	71
27	Altered morphological dynamics of activated microglia after induction of status epilepticus. Journal of Neuroinflammation, 2015, 12, 202.	3.1	66
28	Evidence for altered dendritic spine compartmentalization in Alzheimerâ€™s disease and functional effects in a mouse model. Acta Neuropathologica, 2018, 135, 839-854.	3.9	60
29	Stimulated Emission Depletion (STED) Microscopy Reveals Nanoscale Defects in the Developmental Trajectory of Dendritic Spine Morphogenesis in a Mouse Model of Fragile X Syndrome. Journal of Neuroscience, 2014, 34, 6405-6412.	1.7	57
30	Induction of hippocampal long-term potentiation increases the morphological dynamics of microglial processes and prolongs their contacts with dendritic spines. Scientific Reports, 2016, 6, 32422.	1.6	57
31	Salivary gland macrophages and tissue-resident CD8 ⁺ T cells cooperate for homeostatic organ surveillance. Science Immunology, 2020, 5, .	5.6	57
32	Dissecting tripartite synapses with STED microscopy. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130597.	1.8	55
33	A super-resolution platform for correlative live single-molecule imaging and STED microscopy. Nature Methods, 2019, 16, 1263-1268.	9.0	53
34	Simulation of calcium signaling in fine astrocytic processes: Effect of spatial properties on spontaneous activity. PLoS Computational Biology, 2019, 15, e1006795.	1.5	50
35	Imaging Living Synapses at the Nanoscale by STED Microscopy. Journal of Neuroscience, 2010, 30, 9341-9346.	1.7	47
36	APC/C ^{Cdh1} -Rock2 pathway controls dendritic integrity and memory. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4513-4518.	3.3	44

#	Article	IF	Citations
37	Ultrastructural Imaging of Activity-Dependent Synaptic Membrane-Trafficking Events in Cultured Brain Slices. Neuron, 2020, 108, 843-860.e8.	3.8	42
38	STED microscopy for nanoscale imaging in living brain slices. Methods, 2015, 88, 57-66.	1.9	40
39	Calcium-dependent inactivation of high-threshold calcium currents in human dentate gyrus granule cells. Journal of Physiology, 1998, 509, 39-45.	1.3	38
40	SpineJ: A software tool for quantitative analysis of nanoscale spine morphology. Methods, 2020, 174, 49-55.	1.9	33
41	Superâ€resolution shadow imaging reveals local remodeling of astrocytic microstructures and brain extracellular space after osmotic challenge. Glia, 2021, 69, 1605-1613.	2.5	33
42	Spines slow down dendritic chloride diffusion and affect short-term ionic plasticity of GABAergic inhibition. Scientific Reports, 2016, 6, 23196.	1.6	31
43	Two-Photon STED Microscopy for Nanoscale Imaging of Neural Morphology In Vivo. Methods in Molecular Biology, 2017, 1663, 45-64.	0.4	21
44	Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. Neurophotonics, 2022, 9, 013001.	1.7	17
45	Aberration correction in stimulated emission depletion microscopy to increase imaging depth in living brain tissue. Neurophotonics, 2021, 8, 035001.	1.7	14
46	A Global Spatial Similarity Optimization Scheme to Track Large Numbers of Dendritic Spines in Time-Lapse Confocal Microscopy. IEEE Transactions on Medical Imaging, 2011, 30, 632-641.	5.4	13
47	Deciphering the functional nanoâ€anatomy of the tripartite synapse using <scp>s</scp>timulated emission depletion microscopy. Glia, 2022, 70, 607-618.	2.5	13
48	Two-Color STED Imaging of Synapses in Living Brain Slices. Methods in Molecular Biology, 2013, 950, 65-80.	0.4	10
49	A simple tissue clearing method for increasing the depth penetration of STED microscopy of fixed brain slices. Journal Physics D: Applied Physics, 2020, 53, 184001.	1.3	10
50	Lattice light sheet microscopy and photo-stimulation in brain slices. , 2019, , .		10
51	Stimulated Emission Depletion (STED) Imaging of Dendritic Spines in Living Hippocampal Slices. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot069260.	0.2	6
52	Nanoscale imaging of the functional anatomy of the brain. Neuroforum, 2021, .	0.2	3
53	Special Section Guest Editorial: Super-resolution microscopy of neural structure and function. Neurophotonics, 2016, 3, 041801.	1.7	2
54	Simulation of Astrocytic Calcium Dynamics in Lattice Light Sheet Microscopy Images. , 2021, , .		2

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55	Biochemical compartmentalization in dendrites. , 2016, , 285-324.		2
56	Structural Basis of Astrocytic Ca ² Signals at Tripartite Synapses. SSRN Electronic Journal, 0, , .	0.4	2
57	Beyond Abbeâ€™s Resolution Barrier. , 2012, , 35-54.		1
58	STED Nanoscopy in Living Cells using Live Cell Compatible Markers. Biophysical Journal, 2009, 96, 17a.	0.2	0
59	3SBA-04 STED imaging of synapses in living brain slices : from structure to function(3SBA Cutting-edge) Tj ETQq1 1 0.784314 rgBT /Ove Butsuri, 2013, 53, S102.	0.0	0
60	Turning up the Green Light. Trends in Cell Biology, 2021, 31, 143-145.	3.6	0
61	Cover Image, Volume 69, Issue 6. Glia, 2021, 69, C1.	2.5	0
62	Knowledge-Based Morphology Quantification of STED Dendritic Spine Images. IFMBE Proceedings, 2011, , 1210-1213.	0.2	0