

# Fritjof Helmchen

## List of Publications by Citations

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152  
papers

18,939  
citations

57  
h-index

137  
g-index

177  
ext. papers

22,582  
ext. citations

9.6  
avg. IF

6.97  
L-index

#	Paper	IF	Citations
152	Resting microglial cells are highly dynamic surveillants of brain parenchyma in vivo. <i>Science</i> , <b>2005</b> , 308, 1314-8	33.3	3750
151	Deep tissue two-photon microscopy. <i>Nature Methods</i> , <b>2005</b> , 2, 932-40	21.6	2943
150	Fluctuations and stimulus-induced changes in blood flow observed in individual capillaries in layers 2 through 4 of rat neocortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1998</b> , 95, 15741-6	11.5	665
149	Sulforhodamine 101 as a specific marker of astroglia in the neocortex in vivo. <i>Nature Methods</i> , <b>2004</b> , 1, 31-7	21.6	639
148	Transgenic mice for intersectional targeting of neural sensors and effectors with high specificity and performance. <i>Neuron</i> , <b>2015</b> , 85, 942-58	13.9	631
147	Ca <sup>2+</sup> buffering and action potential-evoked Ca <sup>2+</sup> signaling in dendrites of pyramidal neurons. <i>Biophysical Journal</i> , <b>1996</b> , 70, 1069-81	2.9	497
146	A miniature head-mounted two-photon microscope. high-resolution brain imaging in freely moving animals. <i>Neuron</i> , <b>2001</b> , 31, 903-12	13.9	470
145	Lentivirus-based genetic manipulations of cortical neurons and their optical and electrophysiological monitoring in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 18206-11	11.5	391
144	Imaging input and output of neocortical networks in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 14063-8	11.5	389
143	High-speed in vivo calcium imaging reveals neuronal network activity with near-millisecond precision. <i>Nature Methods</i> , <b>2010</b> , 7, 399-405	21.6	357
142	Pre- and postsynaptic whole-cell recordings in the medial nucleus of the trapezoid body of the rat. <i>Journal of Physiology</i> , <b>1995</b> , 489 ( Pt 3), 825-40	3.9	353
141	In vivo dendritic calcium dynamics in deep-layer cortical pyramidal neurons. <i>Nature Neuroscience</i> , <b>1999</b> , 2, 989-96	25.5	317
140	Imaging cellular network dynamics in three dimensions using fast 3D laser scanning. <i>Nature Methods</i> , <b>2007</b> , 4, 73-9	21.6	293
139	Calcium dynamics associated with a single action potential in a CNS presynaptic terminal. <i>Biophysical Journal</i> , <b>1997</b> , 72, 1458-71	2.9	251
138	Rapid 3D light-sheet microscopy with a tunable lens. <i>Optics Express</i> , <b>2013</b> , 21, 21010-26	3.3	233
137	Barrel cortex function. <i>Progress in Neurobiology</i> , <b>2013</b> , 103, 3-27	10.9	230
136	Fast two-layer two-photon imaging of neuronal cell populations using an electrically tunable lens. <i>Biomedical Optics Express</i> , <b>2011</b> , 2, 2035-46	3.5	223

135	Neuronal repair. Asynchronous therapy restores motor control by rewiring of the rat corticospinal tract after stroke. <i>Science</i> , <b>2014</b> , 344, 1250-5	33.3	219
134	Ultra-compact fiber-optic two-photon microscope for functional fluorescence imaging in vivo. <i>Optics Express</i> , <b>2008</b> , 16, 5556-64	3.3	213
133	Behaviour-dependent recruitment of long-range projection neurons in somatosensory cortex. <i>Nature</i> , <b>2013</b> , 499, 336-40	50.4	206
132	Spatial organization of neuronal population responses in layer 2/3 of rat barrel cortex. <i>Journal of Neuroscience</i> , <b>2007</b> , 27, 13316-28	6.6	198
131	Spread of dendritic excitation in layer 2/3 pyramidal neurons in rat barrel cortex in vivo. <i>Nature Neuroscience</i> , <b>1999</b> , 2, 65-73	25.5	195
130	Scanning fiber endoscopy with highly flexible, 1 mm catheterscopes for wide-field, full-color imaging. <i>Journal of Biophotonics</i> , <b>2010</b> , 3, 385-407	3.1	189
129	Supralinear Ca <sup>2+</sup> influx into dendritic tufts of layer 2/3 neocortical pyramidal neurons in vitro and in vivo. <i>Journal of Neuroscience</i> , <b>2003</b> , 23, 8558-67	6.6	185
128	Miniaturized two-photon microscope based on a flexible coherent fiber bundle and a gradient-index lens objective. <i>Optics Letters</i> , <b>2004</b> , 29, 2521-3	3	185
127	Spatial profile of dendritic calcium transients evoked by action potentials in rat neocortical pyramidal neurones. <i>Journal of Physiology</i> , <b>1995</b> , 487 ( Pt 3), 583-600	3.9	181
126	Simultaneous BOLD fMRI and fiber-optic calcium recording in rat neocortex. <i>Nature Methods</i> , <b>2012</b> , 9, 597-602	21.6	167
125	Dendritic spikes in apical dendrites of neocortical layer 2/3 pyramidal neurons. <i>Journal of Neuroscience</i> , <b>2007</b> , 27, 8999-9008	6.6	162
124	Live imaging of neurogenesis in the adult mouse hippocampus. <i>Science</i> , <b>2018</b> , 359, 658-662	33.3	159
123	Reorganization of cortical population activity imaged throughout long-term sensory deprivation. <i>Nature Neuroscience</i> , <b>2012</b> , 15, 1539-46	25.5	145
122	Background synaptic activity is sparse in neocortex. <i>Journal of Neuroscience</i> , <b>2006</b> , 26, 8267-77	6.6	145
121	In vivo calcium imaging of neural network function. <i>Physiology</i> , <b>2007</b> , 22, 358-65	9.8	143
120	New developments in multiphoton microscopy. <i>Current Opinion in Neurobiology</i> , <b>2002</b> , 12, 593-601	7.6	135
119	Radially expanding transglial calcium waves in the intact cerebellum. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 3496-501	11.5	130
118	Optical recording of neuronal activity with a genetically-encoded calcium indicator in anesthetized and freely moving mice. <i>Frontiers in Neural Circuits</i> , <b>2010</b> , 4, 9	3.5	123

117	Optical probing of neuronal ensemble activity. <i>Current Opinion in Neurobiology</i> , <b>2009</b> , 19, 520-9	7.6	110
116	Calcium indicator loading of neurons using single-cell electroporation. <i>Pflugers Archiv European Journal of Physiology</i> , <b>2007</b> , 454, 675-88	4.6	109
115	In vivo calcium imaging of circuit activity in cerebellar cortex. <i>Journal of Neurophysiology</i> , <b>2005</b> , 94, 1636-44	3.4	106
114	Pathway-specific reorganization of projection neurons in somatosensory cortex during learning. <i>Nature Neuroscience</i> , <b>2015</b> , 18, 1101-8	25.5	89
113	Boosting of action potential backpropagation by neocortical network activity in vivo. <i>Journal of Neuroscience</i> , <b>2004</b> , 24, 11127-36	6.6	87
112	The mesoSPIM initiative: open-source light-sheet microscopes for imaging cleared tissue. <i>Nature Methods</i> , <b>2019</b> , 16, 1105-1108	21.6	83
111	Distortion-free delivery of nanojoule femtosecond pulses from a Ti:sapphire laser through a hollow-core photonic crystal fiber. <i>Optics Letters</i> , <b>2004</b> , 29, 1285-7	3	81
110	Specific Early and Late Oddball-Evoked Responses in Excitatory and Inhibitory Neurons of Mouse Auditory Cortex. <i>Journal of Neuroscience</i> , <b>2015</b> , 35, 12560-73	6.6	79
109	Steady or changing? Long-term monitoring of neuronal population activity. <i>Trends in Neurosciences</i> , <b>2013</b> , 36, 375-84	13.3	73
108	Long-range population dynamics of anatomically defined neocortical networks. <i>ELife</i> , <b>2016</b> , 5,	8.9	73
107	Spatially segregated feedforward and feedback neurons support differential odor processing in the lateral entorhinal cortex. <i>Nature Neuroscience</i> , <b>2016</b> , 19, 935-44	25.5	72
106	High-density multi-fiber photometry for studying large-scale brain circuit dynamics. <i>Nature Methods</i> , <b>2019</b> , 16, 553-560	21.6	70
105	New angles on neuronal dendrites in vivo. <i>Journal of Neurophysiology</i> , <b>2007</b> , 98, 3770-9	3.2	69
104	Distinct functional properties of primary and posteromedial visual area of mouse neocortex. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 9716-26	6.6	66
103	Sindbis vector SINrep(nsP2S726): a tool for rapid heterologous expression with attenuated cytotoxicity in neurons. <i>Journal of Neuroscience Methods</i> , <b>2004</b> , 133, 81-90	3	65
102	Miniaturization of fluorescence microscopes using fibre optics. <i>Experimental Physiology</i> , <b>2002</b> , 87, 737-45	4.4	64
101	Competitive calcium binding: implications for dendritic calcium signaling. <i>Journal of Computational Neuroscience</i> , <b>1998</b> , 5, 331-48	1.4	63
100	The challenge of connecting the dots in the B.R.A.I.N. <i>Neuron</i> , <b>2013</b> , 80, 270-4	13.9	60

99	Miniaturization of two-photon microscopy for imaging in freely moving animals. <i>Cold Spring Harbor Protocols</i> , <b>2013</b> , 2013, 904-13	1.2	60
98	Ca <sup>2+</sup> imaging in the mammalian brain in vivo. <i>European Journal of Pharmacology</i> , <b>2002</b> , 447, 119-29	5.3	60
97	Functional Imaging of Dentate Granule Cells in the Adult Mouse Hippocampus. <i>Journal of Neuroscience</i> , <b>2016</b> , 36, 7407-14	6.6	58
96	Inference of neuronal network spike dynamics and topology from calcium imaging data. <i>Frontiers in Neural Circuits</i> , <b>2013</b> , 7, 201	3.5	57
95	Behavioral Strategy Determines Frontal or Posterior Location of Short-Term Memory in Neocortex. <i>Neuron</i> , <b>2018</b> , 99, 814-828.e7	13.9	56
94	In vivo Ca <sup>2+</sup> imaging of dorsal horn neuronal populations in mouse spinal cord. <i>Journal of Physiology</i> , <b>2010</b> , 588, 3397-402	3.9	55
93	Nonlinear anisotropic diffusion filtering of three-dimensional image data from two-photon microscopy. <i>Journal of Biomedical Optics</i> , <b>2004</b> , 9, 1253-64	3.5	51
92	Dendritic NMDA spikes are necessary for timing-dependent associative LTP in CA3 pyramidal cells. <i>Nature Communications</i> , <b>2016</b> , 7, 13480	17.4	49
91	Tactile frequency discrimination is enhanced by circumventing neocortical adaptation. <i>Nature Neuroscience</i> , <b>2014</b> , 17, 1567-73	25.5	48
90	HelioScan: a software framework for controlling in vivo microscopy setups with high hardware flexibility, functional diversity and extendibility. <i>Journal of Neuroscience Methods</i> , <b>2013</b> , 215, 38-52	3	45
89	Postsynaptic Ca <sup>2+</sup> influx mediated by three different pathways during synaptic transmission at a calyx-type synapse. <i>Journal of Neuroscience</i> , <b>1998</b> , 18, 10409-19	6.6	43
88	Representation of visual scenes by local neuronal populations in layer 2/3 of mouse visual cortex. <i>Frontiers in Neural Circuits</i> , <b>2011</b> , 5, 18	3.5	40
87	Fiber-optic implant for simultaneous fluorescence-based calcium recordings and BOLD fMRI in mice. <i>Nature Protocols</i> , <b>2018</b> , 13, 840-855	18.8	39
86	Layer-specific integration of locomotion and sensory information in mouse barrel cortex. <i>Nature Communications</i> , <b>2019</b> , 10, 2585	17.4	38
85	Enhanced two-photon excitation through optical fiber by single-mode propagation in a large core. <i>Applied Optics</i> , <b>2002</b> , 41, 2930-4	1.7	38
84	Value-guided remapping of sensory cortex by lateral orbitofrontal cortex. <i>Nature</i> , <b>2020</b> , 585, 245-250	50.4	38
83	Enhanced fluorescence signal in nonlinear microscopy through supplementary fiber-optic light collection. <i>Optics Express</i> , <b>2009</b> , 17, 6421-35	3.3	37
82	Online correction of licking-induced brain motion during two-photon imaging with a tunable lens. <i>Journal of Physiology</i> , <b>2013</b> , 591, 4689-98	3.9	36

81	Chronic imaging of cortical sensory map dynamics using a genetically encoded calcium indicator. <i>Journal of Physiology</i> , <b>2012</b> , 590, 99-107	3.9	36
80	Novel approaches to monitor and manipulate single neurons in vivo. <i>Journal of Neuroscience</i> , <b>2004</b> , 24, 9223-7	6.6	36
79	Miniaturized selective plane illumination microscopy for high-contrast in vivo fluorescence imaging. <i>Optics Letters</i> , <b>2010</b> , 35, 1413-5	3	35
78	Layer-Specific Refinement of Sensory Coding in Developing Mouse Barrel Cortex. <i>Cerebral Cortex</i> , <b>2017</b> , 27, 4835-4850	5.1	33
77	In vivo labeling of cortical astrocytes with sulforhodamine 101 (SR101). <i>Cold Spring Harbor Protocols</i> , <b>2012</b> , 2012, 326-34	1.2	33
76	Chapter 10. In vivo measurements of blood flow and glial cell function with two-photon laser-scanning microscopy. <i>Methods in Enzymology</i> , <b>2008</b> , 444, 231-54	1.7	33
75	Ossified blood vessels in primary familial brain calcification elicit a neurotoxic astrocyte response. <i>Brain</i> , <b>2019</b> , 142, 885-902	11.2	32
74	Optogenetically stimulating intact rat corticospinal tract post-stroke restores motor control through regionalized functional circuit formation. <i>Nature Communications</i> , <b>2017</b> , 8, 1187	17.4	32
73	Long-term self-renewing stem cells in the adult mouse hippocampus identified by intravital imaging. <i>Nature Neuroscience</i> , <b>2021</b> , 24, 225-233	25.5	31
72	Neuron to astrocyte communication via cannabinoid receptors is necessary for sustained epileptiform activity in rat hippocampus. <i>PLoS ONE</i> , <b>2012</b> , 7, e37320	3.7	30
71	An R-CaMP1.07 reporter mouse for cell-type-specific expression of a sensitive red fluorescent calcium indicator. <i>PLoS ONE</i> , <b>2017</b> , 12, e0179460	3.7	29
70	Multiphoton in vivo imaging with a femtosecond semiconductor disk laser. <i>Biomedical Optics Express</i> , <b>2017</b> , 8, 3213-3231	3.5	29
69	Stimulus relevance modulates contrast adaptation in visual cortex. <i>ELife</i> , <b>2017</b> , 6,	8.9	27
68	Two-photon imaging of spinal cord cellular networks. <i>Experimental Neurology</i> , <b>2013</b> , 242, 18-26	5.7	25
67	Microcircuit dynamics of map plasticity in barrel cortex. <i>Current Opinion in Neurobiology</i> , <b>2014</b> , 24, 76-81	7.6	22
66	Enhancement of CA3 hippocampal network activity by activation of group II metabotropic glutamate receptors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 9993-7	11.5	21
65	Post hoc immunostaining of GABAergic neuronal subtypes following in vivo two-photon calcium imaging in mouse neocortex. <i>Pflügers Archiv European Journal of Physiology</i> , <b>2012</b> , 463, 339-54	4.6	19
64	Model-based analysis of pattern motion processing in mouse primary visual cortex. <i>Frontiers in Neural Circuits</i> , <b>2015</b> , 9, 38	3.5	19

63	Cortical Excitation:Inhibition Imbalance Causes Abnormal Brain Network Dynamics as Observed in Neurodevelopmental Disorders. <i>Cerebral Cortex</i> , <b>2020</b> , 30, 4922-4937	5.1	19
62	A single-compartment model of calcium dynamics in nerve terminals and dendrites. <i>Cold Spring Harbor Protocols</i> , <b>2015</b> , 2015, 155-67	1.2	18
61	Activity in a premotor cortical nucleus of zebra finches is locally organized and exhibits auditory selectivity in neurons but not in glia. <i>PLoS ONE</i> , <b>2013</b> , 8, e81177	3.7	18
60	Two-photon imaging and analysis of neural network dynamics. <i>Reports on Progress in Physics</i> , <b>2011</b> , 74, 086602	14.4	18
59	Spatiotemporal refinement of signal flow through association cortex during learning. <i>Nature Communications</i> , <b>2020</b> , 11, 1744	17.4	17
58	Selective regulation of NR2B by protein phosphatase-1 for the control of the NMDA receptor in neuroprotection. <i>PLoS ONE</i> , <b>2012</b> , 7, e34047	3.7	17
57	Calcium influx during an action potential. <i>Methods in Enzymology</i> , <b>1998</b> , 293, 352-71	1.7	17
56	Opto-E-Dura: A Soft, Stretchable ECoG Array for Multimodal, Multiscale Neuroscience. <i>Advanced Healthcare Materials</i> , <b>2020</b> , 9, e2000814	10.1	17
55	Sparse, reliable, and long-term stable representation of periodic whisker deflections in the mouse barrel cortex. <i>NeuroImage</i> , <b>2015</b> , 115, 52-63	7.9	15
54	Calibration of fluorescent calcium indicators. <i>Cold Spring Harbor Protocols</i> , <b>2011</b> , 2011, 923-30	1.2	15
53	Representation of thermal information in the antennal lobe of leaf-cutting ants. <i>Frontiers in Behavioral Neuroscience</i> , <b>2010</b> , 4, 174	3.5	15
52	Raising the speed limit--fast Ca(2+) handling in dendritic spines. <i>Trends in Neurosciences</i> , <b>2002</b> , 25, 438-41; discussion 441	13.3	15
51	Tissue Clearing and Light Sheet Microscopy: Imaging the Unsectioned Adult Zebra Finch Brain at Cellular Resolution. <i>Frontiers in Neuroanatomy</i> , <b>2019</b> , 13, 13	3.6	15
50	Brain mapping across 16 autism mouse models reveals a spectrum of functional connectivity subtypes. <i>Molecular Psychiatry</i> , <b>2021</b> ,	15.1	13
49	Context-dependent limb movement encoding in neuronal populations of motor cortex. <i>Nature Communications</i> , <b>2019</b> , 10, 4812	17.4	12
48	iDISCO+ for the Study of Neuroimmune Architecture of the Rat Auditory Brainstem. <i>Frontiers in Neuroanatomy</i> , <b>2019</b> , 13, 15	3.6	11
47	Neocortical dynamics during whisker-based sensory discrimination in head-restrained mice. <i>Neuroscience</i> , <b>2018</b> , 368, 57-69	3.9	11
46	A database and deep learning toolbox for noise-optimized, generalized spike inference from calcium imaging. <i>Nature Neuroscience</i> , <b>2021</b> , 24, 1324-1337	25.5	10

45	Sensory representation of an auditory cued tactile stimulus in the posterior parietal cortex of the mouse. <i>Scientific Reports</i> , <b>2018</b> , 8, 7739	4.9	9
44	Functional Architecture and Encoding of Tactile Sensorimotor Behavior in Rat Posterior Parietal Cortex. <i>Journal of Neuroscience</i> , <b>2019</b> , 39, 7332-7343	6.6	8
43	Two-Photon Functional Imaging of Neuronal Activity. <i>Frontiers in Neuroscience</i> , <b>2009</b> , 37-58		8
42	Whole brain optoacoustic tomography reveals strain-specific regional beta-amyloid densities in Alzheimer's disease amyloidosis models		8
41	Database and deep learning toolbox for noise-optimized, generalized spike inference from calcium imaging		8
40	Temporal refinement of sensory-evoked activity across layers in developing mouse barrel cortex. <i>European Journal of Neuroscience</i> , <b>2019</b> , 50, 2955-2969	3.5	6
39	High-speed two-photon calcium imaging of neuronal population activity using acousto-optic deflectors. <i>Cold Spring Harbor Protocols</i> , <b>2014</b> , 2014, 618-29	1.2	6
38	Calibration protocols for fluorescent calcium indicators. <i>Cold Spring Harbor Protocols</i> , <b>2011</b> , 2011, 980-4	1.2	6
37	Sensory and Behavioral Components of Neocortical Signal Flow in Discrimination Tasks with Short-Term Memory. <i>Neuron</i> , <b>2021</b> , 109, 135-148.e6	13.9	6
36	Prion pathogenesis is unaltered in a mouse strain with a permeable blood-brain barrier. <i>PLoS Pathogens</i> , <b>2018</b> , 14, e1007424	7.6	6
35	A modular two-photon microscope for simultaneous imaging of distant cortical areas in vivo <b>2015</b> ,		5
34	Chronic Two-Photon Imaging of Neural Activity in the Anesthetized and Awake Behaving Rodent. <i>Neuromethods</i> , <b>2014</b> , 151-173	0.4	5
33	Developmental divergence of sensory stimulus representation in cortical interneurons. <i>Nature Communications</i> , <b>2020</b> , 11, 5729	17.4	5
32	Conservation laws by virtue of scale symmetries in neural systems. <i>PLoS Computational Biology</i> , <b>2020</b> , 16, e1007865	5	4
31	Measuring neuronal population activity using 3D laser scanning. <i>Cold Spring Harbor Protocols</i> , <b>2011</b> , 2011, 1340-9	1.2	4
30	The mesoSPIM initiative: open-source light-sheet mesoscopes for imaging in cleared tissue		4
29	Specific excitatory connectivity for feature integration in mouse primary visual cortex. <i>PLoS Computational Biology</i> , <b>2017</b> , 13, e1005888	5	3
28	Brain mapping across 16 autism mouse models reveals a spectrum of functional connectivity subtypes		3



27	Cortical excitation:inhibition imbalance causes abnormal brain network dynamics as observed in neurodevelopmental disorders		3
26	In-vivo imaging of neural activity with dynamic vision sensors <b>2017</b> ,		2
25	Deep learning is widely applicable to phenotyping embryonic development and disease. <i>Development (Cambridge)</i> , <b>2021</b> , 148,	6.6	2
24	Layer-specific integration of locomotion and concurrent wall touching in mouse barrel cortex		2
23	Two-Photon Imaging of Neuronal Network Dynamics in Neocortex. <i>Neuromethods</i> , <b>2014</b> , 133-150	0.4	2
22	In-Depth Characterization of Layer 5 Output Neurons of the Primary Somatosensory Cortex Innervating the Mouse Dorsal Spinal Cord. <i>Cerebral Cortex Communications</i> , <b>2020</b> , 1, tgaa052	1.9	2
21	Unsupervised behaviour analysis and magnification (uBAM) using deep learning. <i>Nature Machine Intelligence</i> , <b>2021</b> , 3, 495-506	22.5	2
20	3D Reconstruction of the Clarified Rat Hindbrain Choroid Plexus. <i>Frontiers in Cell and Developmental Biology</i> , <b>2021</b> , 9, 692617	5.7	2
19	In vivo calcium imaging of CA3 pyramidal neuron populations in adult mouse hippocampus		2
18	Dendritic integration of sensory and reward information facilitates learning		2
17	Neuronale Netzwerke im Rampenlicht: Mit leuchtenden Proteinen zelluläre Aktivitätsmuster entschlüsseln. <i>E-Neuroforum</i> , <b>2013</b> , 19, 47-55		1
16	Calcium imaging362-409		1
15	Little strokes fill big oaks: a simple in vivo stain of brain cells. <i>Neuron</i> , <b>2007</b> , 53, 771-3	13.9	1
14	Nonlinear anisotropic diffusion filtering of three-dimensional image data from two-photon microscopy <b>2005</b> , 5672, 44		1
13	Dendritic Branch-constrained N-Methyl-d-Aspartate Receptor-mediated Spikes Drive Synaptic Plasticity in Hippocampal CA3 Pyramidal Cells. <i>Neuroscience</i> , <b>2021</b> ,	3.9	1
12	High-density multi-fiber photometry for studying large-scale brain circuit dynamics		1
11	Spatiotemporal refinement of signal flow through association cortex during learning		1
10	Sensory and Behavioral Components of Neocortical Signal Flow in Discrimination Tasks with Short-term Memory		1

9	Value-guided remapping of sensory circuits by lateral orbitofrontal cortex in reversal learning		1
8	Neural Systems Under Change of Scale. <i>Frontiers in Computational Neuroscience</i> , <b>2021</b> , 15, 643148	3.5	1
7	Calcium Imaging of CA3 Pyramidal Neuron Populations in Adult Mouse Hippocampus. <i>ENeuro</i> , <b>2021</b> , 8,	3.9	1
6	Action Potentials in Dendrites and Spike-Timing-Dependent Plasticity <b>2008</b> , 803-828		
5	Optische Messung neuronaler Netzwerkdynamik in 3D. <i>E-Neuroforum</i> , <b>2008</b> , 14, 184-189		
4	Imaging the Cortical Representation of Active Sensing in the Vibrissa System <b>2015</b> , 109-128		
3	In Vivo Imaging of Cellular Network Signaling <b>2010</b> , 2753-2757		
2	Neocortex in the Spotlight: Concepts, Questions, and Methods. <i>NeuroMethods</i> , <b>2014</b> , 3-18	0.4	
1	Estimating anisotropy directly via neural timeseries.. <i>Journal of Computational Neuroscience</i> , <b>2022</b> , 1	1.4	