

Wen-Biao Gan

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

19,066
citations

46918

47
h-index

53109

85
g-index

90
all docs

90
docs citations

90
times ranked

20713
citing authors

#	ARTICLE	IF	CITATIONS
1	ATP mediates rapid microglial response to local brain injury in vivo. <i>Nature Neuroscience</i> , 2005, 8, 752-758.	7.1	3,272
2	Microglia Promote Learning-Dependent Synapse Formation through Brain-Derived Neurotrophic Factor. <i>Cell</i> , 2013, 155, 1596-1609.	13.5	2,013
3	The P2Y12 receptor regulates microglial activation by extracellular nucleotides. <i>Nature Neuroscience</i> , 2006, 9, 1512-1519.	7.1	1,258
4	Long-term dendritic spine stability in the adult cortex. <i>Nature</i> , 2002, 420, 812-816.	13.7	1,084
5	Stably maintained dendritic spines are associated with lifelong memories. <i>Nature</i> , 2009, 462, 920-924.	13.7	995
6	An optimized fluorescent probe for visualizing glutamate neurotransmission. <i>Nature Methods</i> , 2013, 10, 162-170.	9.0	827
7	Development of Long-Term Dendritic Spine Stability in Diverse Regions of Cerebral Cortex. <i>Neuron</i> , 2005, 46, 181-189.	3.8	606
8	Fibrillar amyloid deposition leads to local synaptic abnormalities and breakage of neuronal branches. <i>Nature Neuroscience</i> , 2004, 7, 1181-1183.	7.1	497
9	Sleep promotes branch-specific formation of dendritic spines after learning. <i>Science</i> , 2014, 344, 1173-1178.	6.0	490
10	Branch-specific dendritic Ca ²⁺ spikes cause persistent synaptic plasticity. <i>Nature</i> , 2015, 520, 180-185.	13.7	411
11	Choice of cranial window type for in vivo imaging affects dendritic spine turnover in the cortex. <i>Nature Neuroscience</i> , 2007, 10, 549-551.	7.1	395
12	Long-term sensory deprivation prevents dendritic spine loss in primary somatosensory cortex. <i>Nature</i> , 2005, 436, 261-265.	13.7	390
13	Thinned-skull cranial window technique for long-term imaging of the cortex in live mice. <i>Nature Protocols</i> , 2010, 5, 201-208.	5.5	386
14	REM sleep selectively prunes and maintains new synapses in development and learning. <i>Nature Neuroscience</i> , 2017, 20, 427-437.	7.1	375
15	Dendritic Spine Dynamics. <i>Annual Review of Physiology</i> , 2009, 71, 261-282.	5.6	340
16	Microglial phagocytosis of living photoreceptors contributes to inherited retinal degeneration. <i>EMBO Molecular Medicine</i> , 2015, 7, 1179-1197.	3.3	340
17	Opposite effects of fear conditioning and extinction on dendritic spine remodelling. <i>Nature</i> , 2012, 483, 87-91.	13.7	339
18	Circadian glucocorticoid oscillations promote learning-dependent synapse formation and maintenance. <i>Nature Neuroscience</i> , 2013, 16, 698-705.	7.1	308

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19	Multicolor α -Oligostic Labeling of the Nervous System Using Lipophilic Dye Combinations. <i>Neuron</i> , 2000, 27, 219-225.	3.8	303
20	Glucocorticoids are critical regulators of dendritic spine development and plasticity in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 16074-16079.	3.3	291
21	Abnormal mitochondrial transport and morphology are common pathological denominators in SOD1 and TDP43 ALS mouse models. <i>Human Molecular Genetics</i> , 2014, 23, 1413-1424.	1.4	274
22	Axon Branch Removal at Developing Synapses by Axosome Shedding. <i>Neuron</i> , 2004, 44, 651-661.	3.8	258
23	Defective Neuromuscular Synapses in Mice Lacking Amyloid Precursor Protein (APP) and APP-Like Protein 2. <i>Journal of Neuroscience</i> , 2005, 25, 1219-1225.	1.7	255
24	Microglia and monocytes synergistically promote the transition from acute to chronic pain after nerve injury. <i>Nature Communications</i> , 2016, 7, 12029.	5.8	245
25	Imaging Neural Activity Using Thy1-GCaMP Transgenic Mice. <i>Neuron</i> , 2012, 76, 297-308.	3.8	207
26	Requirement for Microglia for the Maintenance of Synaptic Function and Integrity in the Mature Retina. <i>Journal of Neuroscience</i> , 2016, 36, 2827-2842.	1.7	179
27	Dendritic spine instability and insensitivity to modulation by sensory experience in a mouse model of fragile X syndrome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 17768-17773.	3.3	177
28	Asynchronous Synapse Elimination in Neonatal Motor Units. <i>Neuron</i> , 2001, 31, 381-394.	3.8	140
29	Various Dendritic Abnormalities Are Associated with Fibrillar Amyloid Deposits in Alzheimer's Disease. <i>Annals of the New York Academy of Sciences</i> , 2007, 1097, 30-39.	1.8	124
30	Somatostatin-Expressing Interneurons Enable and Maintain Learning-Dependent Sequential Activation of Pyramidal Neurons. <i>Neuron</i> , 2019, 102, 202-216.e7.	3.8	112
31	Activation of cortical somatostatin interneurons prevents the development of neuropathic pain. <i>Nature Neuroscience</i> , 2017, 20, 1122-1132.	7.1	108
32	Sleep contributes to dendritic spine formation and elimination in the developing mouse somatosensory cortex. <i>Developmental Neurobiology</i> , 2012, 72, 1391-1398.	1.5	97
33	The Pattern of Cortical Dysfunction in a Mouse Model of a Schizophrenia-Related Microdeletion. <i>Journal of Neuroscience</i> , 2013, 33, 14825-14839.	1.7	97
34	Microglial NF κ B-TNF α hyperactivation induces obsessive-compulsive behavior in mouse models of progranulin-deficient frontotemporal dementia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 5029-5034.	3.3	96
35	Microglia dynamics and function in the CNS. <i>Current Opinion in Neurobiology</i> , 2010, 20, 595-600.	2.0	89
36	Microglia limit the expansion of β 2-amyloid plaques in a mouse model of Alzheimer's disease. <i>Molecular Neurodegeneration</i> , 2017, 12, 47.	4.4	88

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37	Reduced synaptic vesicle density and active zone size in mice lacking amyloid precursor protein (APP) and APP-like protein 2. <i>Neuroscience Letters</i> , 2005, 384, 66-71.	1.0	86
38	Peripheral elevation of TNF- α leads to early synaptic abnormalities in the mouse somatosensory cortex in experimental autoimmune encephalomyelitis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 10306-10311.	3.3	81
39	Synaptic dynamism measured over minutes to months: age-dependent decline in an autonomic ganglion. <i>Nature Neuroscience</i> , 2003, 6, 956-960.	7.1	73
40	Neuropathic Pain Causes Pyramidal Neuronal Hyperactivity in the Anterior Cingulate Cortex. <i>Frontiers in Cellular Neuroscience</i> , 2018, 12, 107.	1.8	73
41	REM sleep promotes experience-dependent dendritic spine elimination in the mouse cortex. <i>Nature Communications</i> , 2020, 11, 4819.	5.8	72
42	Two-photon imaging of dendritic spine development in the mouse cortex. <i>Developmental Neurobiology</i> , 2008, 68, 771-778.	1.5	70
43	Experience-dependent plasticity of dendritic spines of layer 2/3 pyramidal neurons in the mouse cortex. <i>Developmental Neurobiology</i> , 2016, 76, 277-286.	1.5	66
44	Antipsychotics Activate mTORC1-Dependent Translation to Enhance Neuronal Morphological Complexity. <i>Science Signaling</i> , 2014, 7, ra4.	1.6	62
45	Fear extinction reverses dendritic spine formation induced by fear conditioning in the mouse auditory cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9306-9311.	3.3	61
46	Imaging calcium dynamics in the nervous system by means of ballistic delivery of indicators. <i>Journal of Neuroscience Methods</i> , 2002, 119, 37-43.	1.3	53
47	Ankyrin Repeat-rich Membrane Spanning/Kidins220 protein regulates dendritic branching and spine stability <i>in vivo</i> . <i>Developmental Neurobiology</i> , 2009, 69, 547-557.	1.5	49
48	In Vivo Two-Photon Imaging of Axonal Dieback, Blood Flow and Calcium Influx with Methylprednisolone Therapy after Spinal Cord Injury. <i>Scientific Reports</i> , 2015, 5, 9691.	1.6	48
49	Specific depletion of resident microglia in the early stage of stroke reduces cerebral ischemic damage. <i>Journal of Neuroinflammation</i> , 2021, 18, 81.	3.1	48
50	Rapid labeling of neuronal populations by ballistic delivery of fluorescent dyes. <i>Methods</i> , 2003, 30, 79-85.	1.9	46
51	Long-term imaging of dorsal root ganglia in awake behaving mice. <i>Nature Communications</i> , 2019, 10, 3087.	5.8	45
52	BDNF produced by cerebral microglia promotes cortical plasticity and pain hypersensitivity after peripheral nerve injury. <i>PLoS Biology</i> , 2021, 19, e3001337.	2.6	43
53	Lis1 controls dynamics of neuronal filopodia and spines to impact synaptogenesis and social behaviour. <i>EMBO Molecular Medicine</i> , 2013, 5, 591-607.	3.3	42
54	Vital imaging and ultrastructural analysis of individual axon terminals labeled by iontophoretic application of lipophilic dye. <i>Journal of Neuroscience Methods</i> , 1999, 93, 13-20.	1.3	41

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55	A Model of Mini-Embolic Stroke Offers Measurements of the Neurovascular Unit Response in the Living Mouse. <i>Stroke</i> , 2005, 36, 2701-2704.	1.0	40
56	Long-term stability of axonal boutons in the mouse barrel cortex. <i>Developmental Neurobiology</i> , 2016, 76, 252-261.	1.5	39
57	Abnormal dendritic calcium activity and synaptic depotentiation occur early in a mouse model of Alzheimer's disease. <i>Molecular Neurodegeneration</i> , 2017, 12, 86.	4.4	37
58	Targeting Prion Amyloid Deposits In Vivo. <i>Journal of Neuropathology and Experimental Neurology</i> , 2004, 63, 775-784.	0.9	32
59	Two-photon imaging of synaptic plasticity and pathology in the living mouse brain. <i>NeuroRx</i> , 2006, 3, 489-496.	6.0	32
60	Brain activity regulates loose coupling between mitochondrial and cytosolic Ca ²⁺ transients. <i>Nature Communications</i> , 2019, 10, 5277.	5.8	29
61	Monocular deprivation induces dendritic spine elimination in the developing mouse visual cortex. <i>Scientific Reports</i> , 2017, 7, 4977.	1.6	28
62	Transcranial Two-Photon Imaging of Synaptic Structures in the Cortex of Awake Head-Restrained Mice. <i>Methods in Molecular Biology</i> , 2013, 1010, 35-43.	0.4	27
63	Fear conditioning and extinction induce opposing changes in dendritic spine remodeling and somatic activity of layer 5 pyramidal neurons in the mouse motor cortex. <i>Scientific Reports</i> , 2019, 9, 4619.	1.6	21
64	Imaging neuronal activity in the central and peripheral nervous systems using new Thy1.2-GCaMP6 transgenic mouse lines. <i>Journal of Neuroscience Methods</i> , 2020, 334, 108535.	1.3	21
65	Competition among the Axonal Projections of an Identified Neuron Contributes to the Retraction of Some of Those Projections. <i>Journal of Neuroscience</i> , 1997, 17, 4293-4301.	1.7	18
66	Age-associated synapse elimination in mouse parasympathetic ganglia. <i>Journal of Neurobiology</i> , 2004, 60, 214-226.	3.7	18
67	Ballistic Delivery of Dyes for Structural and Functional Studies of the Nervous System: Figure 1.. <i>Cold Spring Harbor Protocols</i> , 2009, 2009, pdb.prot5202.	0.2	13
68	High resolution ultrasonic neural modulation observed via in vivo two-photon calcium imaging. <i>Brain Stimulation</i> , 2022, 15, 190-196.	0.7	13
69	Imaging of Mitochondrial Dynamics in Motor and Sensory Axons of Living Mice. <i>Methods in Enzymology</i> , 2014, 547, 97-110.	0.4	12
70	Efficient Position Decoding Methods Based on Fluorescence Calcium Imaging in the Mouse Hippocampus. <i>Neural Computation</i> , 2020, 32, 1144-1167.	1.3	12
71	Chitooligosaccharide Inhibits Scar Formation and Enhances Functional Recovery in a Mouse Model of Sciatic Nerve Injury. <i>Molecular Neurobiology</i> , 2016, 53, 2249-2257.	1.9	11
72	Large-scale femtosecond holography for near simultaneous optogenetic neural modulation. <i>Optics Express</i> , 2019, 27, 32228.	1.7	11

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73	Clear optically matched panoramic access channel technique (COMPACT) for large-volume deep brain imaging. <i>Nature Methods</i> , 2021, 18, 959-964.	9.0	9
74	Remodeling the Dendritic Spines in the Hindlimb Representation of the Sensory Cortex after Spinal Cord Hemisection in Mice. <i>PLoS ONE</i> , 2015, 10, e0132077.	1.1	9
75	Two-Photon-Excited Fluorescence Microscopy as a Tool to Investigate the Efficacy of Methylprednisolone in a Mouse Spinal Cord Injury Model. <i>Spine</i> , 2014, 39, E493-E499.	1.0	8
76	Increased neuronal activity in motor cortex reveals prominent calcium dyshomeostasis in tauopathy mice. <i>Neurobiology of Disease</i> , 2021, 147, 105165.	2.1	7
77	Jitter suppression for resonant galvo based high-throughput laser scanning systems. <i>Optics Express</i> , 2020, 28, 26414.	1.7	7
78	Glutamate-Dependent Stabilization of Presynaptic Terminals. <i>Neuron</i> , 2003, 38, 677-678.	3.8	5
79	Two-photon microscopy as a tool to investigate the therapeutic time window of methylprednisolone in a mouse spinal cord injury model. <i>Restorative Neurology and Neuroscience</i> , 2015, 33, 291-300.	0.4	5
80	Long-range remote focusing by image-plane aberration correction. <i>Optics Express</i> , 2020, 28, 34008.	1.7	5
81	Sleep promotes the formation of dendritic filopodia and spines near learning-inactive existing spines. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	5
82	The Phosphodiesterase 9 Inhibitor PF-04449613 Promotes Dendritic Spine Formation and Performance Improvement after Motor Learning. <i>Developmental Neurobiology</i> , 2018, 78, 859-872.	1.5	3
83	Line scanning mechanical streak camera for phosphorescence lifetime imaging. <i>Optics Express</i> , 2020, 28, 26717.	1.7	3
84	Pupil plane actuated remote focusing for rapid focal depth control. <i>Optics Express</i> , 2020, 28, 26407.	1.7	3
85	Contrast gain through simple illumination control for wide-field fluorescence imaging of scattering samples. <i>Optics Express</i> , 2020, 28, 2326.	1.7	1
86	S1g1-4 Experience-dependent modification of dendritic spine dynamics(S1-g1: "Molecular Mechanisms of) Tj ETQq0 0 0 rgBT /Overlock Seibutsu Butsuri, 2006, 46, S112.	0.0	0
87	Activity and TREM2-dependent phagocytic cup formation by microglia in the mouse cortex. <i>Alzheimer's and Dementia</i> , 2020, 16, e045504.	0.4	0
88	Basic science under threat: Lessons from the Skirball Institute. <i>Cell</i> , 2022, 185, 755-758.	13.5	0