Joe Z Tsien

List of Publications by Year
in descending order

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97

papers

12,566

citations

76196

40

h-index

45213

90

g-index

100

all docs

100

docs citations

100

times ranked

13327

citing authors

#	Article	IF	Citations
1	Genetic enhancement of learning and memory in mice. Nature, 1999, 401, 63-69.	13.7	1,666
2	The Essential Role of Hippocampal CA1 NMDA Receptorâ€“Dependent Synaptic Plasticity in Spatial Memory. Cell, 1996, 87, 1327-1338.	13.5	1,604
3	Subregion- and Cell Typeâ€“Restricted Gene Knockout in Mouse Brain. Cell, 1996, 87, 1317-1326.	13.5	1,207
4	A chemical switch for inhibitor-sensitive alleles of any protein kinase. Nature, 2000, 407, 395-401.	13.7	1,001
5	Enrichment induces structural changes and recovery from nonspatial memory deficits in CA1 NMDAR1-knockout mice. Nature Neuroscience, 2000, 3, 238-244.	7.1	699
6	Impaired Hippocampal Representation of Space in CA1-Specific NMDAR1 Knockout Mice. Cell, 1996, 87, 1339-1349.	13.5	561
7	NMDA Receptor-Dependent Synaptic Reinforcement as a Crucial Process for Memory Consolidation. Science, 2000, 290, 1170-1174.	6.0	495
8	Deficient Neurogenesis in Forebrain-Specific Presenilin-1 Knockout Mice Is Associated with Reduced Clearance of Hippocampal Memory Traces. Neuron, 2001, 32, 911-926.	3.8	443
9	Acquired deficit of forebrain glucocorticoid receptor produces depression-like changes in adrenal axis regulation and behavior. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 473-478.	3.3	330
10	Memory and the NMDA Receptors. New England Journal of Medicine, 2009, 361, 302-303.	13.9	289
11	c-fos regulates neuronal excitability and survival. Nature Genetics, 2002, 30, 416-420.	9.4	263
12	Organizing principles of real-time memory encoding: neural clique assemblies and universal neural codes. Trends in Neurosciences, 2006, 29, 48-57.	4.2	203
13	Molecular and systems mechanisms of memory consolidation and storage. Progress in Neurobiology, 2006, 79, 123-135.	2.8	184
14	Inducible and Reversible NR1 Knockout Reveals Crucial Role of the NMDA Receptor in Preserving Remote Memories in the Brain. Neuron, 2004, 41, 781-793.	3.8	159
15	Maintenance of superior learning and memory function in NR2B transgenic mice during ageing. European Journal of Neuroscience, 2007, 25, 1815-1822.	1.2	158
16	Inducible protein knockout reveals temporal requirement of CaMKII reactivation for memory consolidation in the brain. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4287-4292.	3.3	149
17	Neuronal PPARÎ³ Deficiency Increases Susceptibility to Brain Damage after Cerebral Ischemia. Journal of Neuroscience, 2009, 29, 6186-6195.	1.7	148
18	Remote Measurements of Heart and Respiration Rates for Telemedicine. PLoS ONE, 2013, 8, e71384.	1.1	139

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19	An emerging molecular and cellular framework for memory processing by the hippocampus. Trends in Neurosciences, 2002, 25, 501-505.	4.2	130
20	Forebrain degeneration and ventricle enlargement caused by double knockout of Alzheimer's presenilin-1 and presenilin-2. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8162-8167.	3.3	116
21	Identification of network-level coding units for real-time representation of episodic experiences in the hippocampus. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6125-6130.	3.3	114
22	Genetic Enhancement of Memory and Long-Term Potentiation but Not CA1 Long-Term Depression in NR2B Transgenic Rats. PLoS ONE, 2009, 4, e7486.	1.1	111
23	Forebrain NR2B Overexpression Facilitating the Prefrontal Cortex Long-Term Potentiation and Enhancing Working Memory Function in Mice. PLoS ONE, 2011, 6, e20312.	1.1	108
24	Calorie restriction ameliorates neurodegenerative phenotypes in forebrain-specific presenilin-1 and presenilin-2 double knockout mice. Neurobiology of Aging, 2008, 29, 1502-1511.	1.5	103
25	<i>In Vivo</i>Evidence for NMDA Receptor-Mediated Excitotoxicity in a Murine Genetic Model of Huntington Disease. Journal of Neuroscience, 2009, 29, 3200-3205.	1.7	100
26	NMDA Receptors in Dopaminergic Neurons Are Crucial for Habit Learning. Neuron, 2011, 72, 1055-1066.	3.8	99
27	Synaptic reentry reinforcement based network model for long-term memory consolidation. Hippocampus, 2002, 12, 637-647.	0.9	96
28	Large-scale neural ensemble recording in the brains of freely behaving mice. Journal of Neuroscience Methods, 2006, 155, 28-38.	1.3	94
29	Increased NR2A:NR2B ratio compresses long-term depression range and constrains long-term memory. Scientific Reports, 2013, 3, 1036.	1.6	89
30	Convergent Processing of Both Positive and Negative Motivational Signals by the VTA Dopamine Neuronal Populations. PLoS ONE, 2011, 6, e17047.	1.1	84
31	Genetic analysis of learning behavior-induced structural plasticity. Hippocampus, 2000, 10, 605-609.	0.9	77
32	Neural encoding of the concept of nest in the mouse brain. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6066-6071.	3.3	72
33	Building a Brainier Mouse. Scientific American, 2000, 282, 62-68.	1.0	70
34	Effect of transgenic overexpression of NR2B on NMDA receptor function and synaptic plasticity in visual cortex. Neuropharmacology, 2001, 41, 762-770.	2.0	70
35	Inducible and Selective Erasure of Memories in the Mouse Brain via Chemical-Genetic Manipulation. Neuron, 2008, 60, 353-366.	3.8	61
36	Requirement of NMDA receptor reactivation for consolidation and storage of nondeclarative taste memory revealed by inducible NR1 knockout. European Journal of Neuroscience, 2005, 22, 755-763.	1.2	57

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37	Cre-Lox Neurogenetics: 20 Years of Versatile Applications in Brain Research and Countingâ€¦. Frontiers in Genetics, 2016, 7, 19.	1.1	53
38	Environment enrichment rescues the neurodegenerative phenotypes in presenilinsâ€deficient mice. European Journal of Neuroscience, 2007, 26, 101-112.	1.2	52
39	Neural Population-Level Memory Traces in the Mouse Hippocampus. PLoS ONE, 2009, 4, e8256.	1.1	52
40	The Memory Code. Scientific American, 2007, 297, 52-59.	1.0	49
41	Targeting the NMDA receptor subunit NR2B for treating or preventing age-related memory decline. Expert Opinion on Therapeutic Targets, 2014, 18, 1121-1130.	1.5	47
42	Conjunctive Processing of Locomotor Signals by the Ventral Tegmental Area Neuronal Population. PLoS ONE, 2011, 6, e16528.	1.1	43
43	Optimization of large-scale mouse brain connectome via joint evaluation of DTI and neuron tracing data. NeuroImage, 2015, 115, 202-213.	2.1	43
44	Cognition Enhancement Strategies: Figure 1.. Journal of Neuroscience, 2010, 30, 14987-14992.	1.7	42
45	CaMKII Activation State Underlies Synaptic Labile Phase of LTP and Short-Term Memory Formation. Current Biology, 2008, 18, 1546-1554.	1.8	37
46	Mild Blast Events Alter Anxiety, Memory, and Neural Activity Patterns in the Anterior Cingulate Cortex. PLoS ONE, 2013, 8, e64907.	1.1	37
47	Genetic Overexpression of NR2B Subunit Enhances Social Recognition Memory for Different Strains and Species. PLoS ONE, 2012, 7, e36387.	1.1	35
48	Dopamine Rebound-Excitation Theory: Putting Brakes on PTSD. Frontiers in Psychiatry, 2016, 7, 163.	1.3	32
49	Heart Rate and Heart Rate Variability Assessment Identifies Individual Differences in Fear Response Magnitudes to Earthquake, Free Fall, and Air Puff in Mice. PLoS ONE, 2014, 9, e93270.	1.1	31
50	Changes in Heart Rate Variability Are Associated with Expression of Short-Term and Long-Term Contextual and Cued Fear Memories. PLoS ONE, 2013, 8, e63590.	1.1	29
51	Conditional Knockout of NMDA Receptors in Dopamine Neurons Prevents Nicotine-Conditioned Place Preference. PLoS ONE, 2010, 5, e8616.	1.1	28
52	Histone Deacetylase Inhibitor Alleviates the Neurodegenerative Phenotypes and Histone Dysregulation in Presenilins-Deficient Mice. Frontiers in Aging Neuroscience, 2018, 10, 137.	1.7	28
53	Brain Computation Is Organized via Power-of-Two-Based Permutation Logic. Frontiers in Systems Neuroscience, 2016, 10, 95.	1.2	27
54	Dentate gyrus-specific manipulation of Î²-Ca ²⁺ /calmodulin-dependent kinase II disrupts memory consolidation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 16317-16322.	3.3	26

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55	Efficient reproduction of cynomolgus monkey using pronuclear embryo transfer technique. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12956-12960.	3.3	26
56	A Postulate on the Brain's Basic Wiring Logic. Trends in Neurosciences, 2015, 38, 669-671.	4.2	25
57	Theory of Connectivity: Nature and Nurture of Cell Assemblies and Cognitive Computation. Frontiers in Neural Circuits, 2016, 10, 34.	1.4	25
58	Forebrain Overexpression of CaMKII abolishes Cingulate Long Term Depression and Reduces Mechanical Allodynia and Thermal Hyperalgesia. Molecular Pain, 2006, 2, 1744-8069-2-21.	1.0	23
59	Temporal Dynamics of Distinct CA1 Cell Populations during Unconscious State Induced by Ketamine. PLoS ONE, 2010, 5, e15209.	1.1	23
60	Technology platforms for remote monitoring of vital signs in the new era of telemedicine. Expert Review of Medical Devices, 2015, 12, 411-429.	1.4	23
61	512-Channel and 13-Region Simultaneous Recordings Coupled with Optogenetic Manipulation in Freely Behaving Mice. Frontiers in Systems Neuroscience, 2016, 10, 48.	1.2	23
62	Adult forebrain NMDA receptors gate social motivation and social memory. Neurobiology of Learning and Memory, 2017, 138, 164-172.	1.0	23
63	On initial Brain Activity Mapping of episodic and semantic memory code in the hippocampus. Neurobiology of Learning and Memory, 2013, 105, 200-210.	1.0	22
64	Balanced Dopamine Is Critical for Pattern Completion during Associative Memory Recall. PLoS ONE, 2010, 5, e15401.	1.1	20
65	Neural Codeâ€”Neural Self-information Theory on How Cell-Assembly Code Rises from Spike Time and Neuronal Variability. Frontiers in Cellular Neuroscience, 2017, 11, 236.	1.8	20
66	Mapping and Deciphering Neural Codes of NMDA Receptor-Dependent Fear Memory Engrams in the Hippocampus. PLoS ONE, 2013, 8, e79454.	1.1	20
67	Importance of the GluN2B carboxy-terminal domain for enhancement of social memories. Learning and Memory, 2015, 22, 401-410.	0.5	19
68	Functional disturbances in the striatum by region-specific ablation of NMDA receptors. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12961-12966.	3.3	18
69	Camera-Based, Non-Contact, Vital-Signs Monitoring Technology May Provide a Way for the Early Prevention of SIDS in Infants. Frontiers in Neurology, 2016, 7, 236.	1.1	18
70	Principles of Intelligence: On Evolutionary Logic of the Brain. Frontiers in Systems Neuroscience, 2015, 9, 186.	1.2	18
71	Molecular and Genetic Determinants of the NMDA Receptor for Superior Learning and Memory Functions. PLoS ONE, 2014, 9, e111865.	1.1	17
72	Differential Consolidation and Pattern Reverberations within Episodic Cell Assemblies in the Mouse Hippocampus. PLoS ONE, 2011, 6, e16507.	1.1	16

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73	Computational Classification Approach to Profile Neuron Subtypes from Brain Activity Mapping Data. Scientific Reports, 2015, 5, 12474.	1.6	16
74	Neural Coding of Appetitive Food Experiences in the Amygdala. Neurobiology of Learning and Memory, 2018, 155, 261-275.	1.0	14
75	Subspace Projection Approaches to Classification and Visualization of Neural Network-Level Encoding Patterns. PLoS ONE, 2007, 2, e404.	1.1	13
76	Emergence of Visual Saliency from Natural Scenes via Context-Mediated Probability Distributions Coding. PLoS ONE, 2010, 5, e15796.	1.1	12
77	NMDA Receptors Are Not Required for Pattern Completion During Associative Memory Recall. PLoS ONE, 2011, 6, e19326.	1.1	11
78	Real-time neural coding of memory. Progress in Brain Research, 2007, 165, 105-122.	0.9	10
79	Do 'smart' mice feel more pain, or are they just better learners?. Nature Neuroscience, 2001, 4, 453-453.	7.1	9
80	Transcriptome Architecture of Adult Mouse Brain Revealed by Sparse Coding of Genome-Wide In Situ Hybridization Images. Neuroinformatics, 2017, 15, 285-295.	1.5	8
81	A Hierarchical Probabilistic Model for Rapid Object Categorization in Natural Scenes. PLoS ONE, 2011, 6, e20002.	1.1	8
82	Discover mouse gene coexpression landscapes using dictionary learning and sparse coding. Brain Structure and Function, 2017, 222, 4253-4270.	1.2	7
83	Distinct retrosplenial cortex cell populations and their spike dynamics during ketamine-induced unconscious state. PLoS ONE, 2017, 12, e0187198.	1.1	5
84	A novel behavioral paradigm for assessing the concept of nests in mice. Journal of Neuroscience Methods, 2010, 189, 169-175.	1.3	4
85	On brain activity mapping: insights and lessons from Brain Decoding Project to map memory patterns in the hippocampus. Science China Life Sciences, 2013, 56, 767-779.	2.3	4
86	Robust Action Recognition Using Multi-Scale Spatial-Temporal Concatenations of Local Features as Natural Action Structures. PLoS ONE, 2012, 7, e46686.	1.1	4
87	Large-Scale Neural Ensembles in Mice: Methods for Recording and Data Analysis. Neuromethods, 2011, , 103-126.	0.2	3
88	Learning and Memory. , 2012, , 963-981.		3
89	Neural Coding of Cell Assemblies via Spike-Timing Self-Information. Cerebral Cortex, 2018, 28, 2563-2576.	1.6	3
90	Towards transgenic primates: What can we learn from mouse genetics?. Science in China Series C: Life Sciences, 2009, 52, 506-514.	1.3	2

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91	Detecting cell assembly interaction patterns via Bayesian based change-point detection and graph inference model. , 2014, , .		2
92	Chapter 3.1.3 Brain region-specific and temporally restricted gene knockout using the Cre recombinase system. Handbook of Behavioral Neuroscience, 1999, 13, 282-290.	0.0	1
93	Chapter 4.1 Neural coding of episodic memory. Handbook of Behavioral Neuroscience, 2008, , 399-625.	0.7	1
94	An Emerging Molecular and Cellular Framework for Memory Processing by the Hippocampus. ChemInform, 2003, 34, no.	0.1	0
95	The Emerging Wearable Solutions in mHealth. , 2016, , .		0
96	Cre-lox Neurogenetics. , 2018, , 479-490.		0
97	The Organizing Principles of Real-Time Memory Encoding: Neural Clique Assemblies and Universal Neural Codes. Research and Perspectives in Neurosciences, 2007, , 99-112.	0.4	0