Hongkui Zeng

List of Publications by Year
in descending order

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140 papers	34,611 citations	12303 69 h-index	10127 140 g-index
214 all docs	214 docs citations	214 times ranked	34035 citing authors

#	Article	IF	Citations
1	A robust and high-throughput Cre reporting and characterization system for the whole mouse brain. Nature Neuroscience, 2010, 13, 133-140.	7.1	5,650
2	A mesoscale connectome of the mouse brain. Nature, 2014, 508, 207-214.	13.7	2,143
3	Adult mouse cortical cell taxonomy revealed by single cell transcriptomics. Nature Neuroscience, 2016, 19, 335-346.	7.1	1,522
4	Shared and distinct transcriptomic cell types across neocortical areas. Nature, 2018, 563, 72-78.	13.7	1,323
5	Conserved cell types with divergent features in human versus mouse cortex. Nature, 2019, 573, 61-68.	13.7	1,198
6	A toolbox of Cre-dependent optogenetic transgenic mice for light-induced activation and silencing. Nature Neuroscience, 2012, 15, 793-802.	7.1	1,153
7	Transgenic Mice for Intersectional Targeting of Neural Sensors and Effectors with High Specificity and Performance. Neuron, 2015, 85, 942-958.	3.8	992
8	Neuronal cell-type classification: challenges, opportunities and the path forward. Nature Reviews Neuroscience, 2017, 18, 530-546.	4.9	664
9	The G protein-coupled receptor repertoires of human and mouse. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4903-4908.	3.3	662
10	The Allen Mouse Brain Common Coordinate Framework: A 3D Reference Atlas. Cell, 2020, 181, 936-953.e20.	13.5	597
11	Differential Control of Learning and Anxiety along the Dorsoventral Axis of the Dentate Gyrus. Neuron, 2013, 77, 955-968.	3.8	582
12	A Suite of Transgenic Driver and Reporter Mouse Lines with Enhanced Brain-Cell-Type Targeting and Functionality. Cell, 2018, 174, 465-480.e22.	13.5	571
13	A taxonomy of transcriptomic cell types across the isocortex and hippocampal formation. Cell, 2021, 184, 3222-3241.e26.	13.5	479
14	Conditional calcineurin knockout mice exhibit multiple abnormal behaviors related to schizophrenia. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 8987-8992.	3.3	459
15	Forebrain-Specific Calcineurin Knockout Selectively Impairs Bidirectional Synaptic Plasticity and Working/Episodic-like Memory. Cell, 2001, 107, 617-629.	13.5	457
16	Differential connectivity and response dynamics of excitatory and inhibitory neurons in visual cortex. Nature Neuroscience, 2011, 14, 1045-1052.	7.1	439
17	A light-entrainment mechanism for the Drosophila circadian clock. Nature, 1996, 380, 129-135.	13.7	432
18	Hierarchical organization of cortical and thalamic connectivity. Nature, 2019, 575, 195-202.	13.7	421

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19	Ca2+ signaling in astrocytes from Ip3r2â^'/â^' mice in brain slices and during startle responses in vivo. Nature Neuroscience, 2015, 18, 708-717.	7.1	411
20	Single-nucleus and single-cell transcriptomes compared in matched cortical cell types. PLoS ONE, 2018, 13, e0209648.	1.1	400
21	Scalable control of mounting and attack by Esr1+ neurons in the ventromedial hypothalamus. Nature, 2014, 509, 627-632.	13.7	399
22	Anatomical characterization of Cre driver mice for neural circuit mapping and manipulation. Frontiers in Neural Circuits, 2014, 8, 76.	1.4	383
23	Comparative cellular analysis of motor cortex in human, marmoset and mouse. Nature, 2021, 598, 111-119.	13.7	361
24	Large-Scale Cellular-Resolution Gene Profiling in Human Neocortex Reveals Species-Specific Molecular Signatures. Cell, 2012, 149, 483-496.	13.5	342
25	A Cre-Dependent GCaMP3 Reporter Mouse for Neuronal ImagingIn Vivo. Journal of Neuroscience, 2012, 32, 3131-3141.	1.7	341
26	Classification of electrophysiological and morphological neuron types in the mouse visual cortex. Nature Neuroscience, 2019, 22, 1182-1195.	7.1	333
27	Distinct descending motor cortex pathways and their roles in movement. Nature, 2018, 563, 79-84.	13.7	320
28	A multimodal cell census and atlas of the mammalian primary motor cortex. Nature, 2021, 598, 86-102.	13.7	316
29	Integrated Morphoelectric and Transcriptomic Classification of Cortical GABAergic Cells. Cell, 2020, 183, 935-953.e19.	13.5	290
30	Survey of spiking in the mouse visual system reveals functional hierarchy. Nature, 2021, 592, 86-92.	13.7	284
31	Genetic Identification of Vagal Sensory Neurons That Control Feeding. Cell, 2019, 179, 1129-1143.e23.	13.5	265
32	Voltage imaging and optogenetics reveal behaviour-dependent changes in hippocampal dynamics. Nature, 2019, 569, 413-417.	13.7	255
33	Identification of preoptic sleep neurons using retrograde labelling and gene profiling. Nature, 2017, 545, 477-481.	13.7	246
34	Generation of a whole-brain atlas for the cholinergic system and mesoscopic projectome analysis of basal forebrain cholinergic neurons. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 415-420.	3.3	241
35	The BRAIN Initiative Cell Census Consortium: Lessons Learned toward Generating a Comprehensive Brain Cell Atlas. Neuron, 2017, 96, 542-557.	3.8	235
36	A large-scale standardized physiological survey reveals functional organization of the mouse visual cortex. Nature Neuroscience, 2020, 23, 138-151.	7.1	232

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37	Aberrant Cortical Activity in Multiple GCaMP6-Expressing Transgenic Mouse Lines. ENeuro, 2017, 4, ENEURO.0207-17.2017.	0.9	221
38	Diverse Central Projection Patterns of Retinal Ganglion Cells. Cell Reports, 2017, 18, 2058-2072.	2.9	215
39	Long-Term Optical Access to an Estimated One Million Neurons in the Live Mouse Cortex. Cell Reports, 2016, 17, 3385-3394.	2.9	209
40	Spatially resolved cell atlas of the mouse primary motor cortex by MERFISH. Nature, 2021, 598, 137-143.	13.7	205
41	Phenotypic variation of transcriptomic cell types in mouse motor cortex. Nature, 2021, 598, 144-150.	13.7	196
42	The Role of Kisspeptinâ€“GPR54 Signaling in the Tonic Regulation and Surge Release of Gonadotropin-Releasing Hormone/Luteinizing Hormone. Journal of Neuroscience, 2007, 27, 12088-12095.	1.7	190
43	Enteroendocrine cells switch hormone expression along the crypt-to-villus BMP signalling gradient. Nature Cell Biology, 2018, 20, 909-916.	4.6	188
44	Olfactory cortical neurons read out a relative time code in the olfactory bulb. Nature Neuroscience, 2013, 16, 949-957.	7.1	186
45	Multimodal Analysis of Cell Types in a Hypothalamic Node Controlling Social Behavior. Cell, 2019, 179, 713-728.e17.	13.5	186
46	Genetic Approaches to Neural Circuits in the Mouse. Annual Review of Neuroscience, 2013, 36, 183-215.	5.0	184
47	A community-based transcriptomics classification and nomenclature of neocortical cell types. Nature Neuroscience, 2020, 23, 1456-1468.	7.1	183
48	Preparation of Acute Brain Slices Using an Optimized N-Methyl-D-glucamine Protective Recovery Method. Journal of Visualized Experiments, 2018, , .	0.2	182
49	Morphological diversity of single neurons in molecularly defined cell types. Nature, 2021, 598, 174-181.	13.7	180
50	Neuroinformatics of the Allen Mouse Brain Connectivity Atlas. Methods, 2015, 73, 4-17.	1.9	176
51	Nontoxic, double-deletion-mutant rabies viral vectors for retrograde targeting of projection neurons. Nature Neuroscience, 2018, 21, 638-646.	7.1	171
52	A transcriptomic and epigenomic cell atlas of the mouse primary motor cortex. Nature, 2021, 598, 103-110.	13.7	166
53	Generalized leaky integrate-and-fire models classify multiple neuron types. Nature Communications, 2018, 9, 709.	5.8	164
54	Organization of the connections between claustrum and cortex in the mouse. Journal of Comparative Neurology, 2017, 525, 1317-1346.	0.9	162

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55	Human neocortical expansion involves glutamatergic neuron diversification. Nature, 2021, 598, 151-158.	13.7	160
56	Volumetric Ca2+ Imaging in the Mouse Brain Using Hybrid Multiplexed Sculpted Light Microscopy. Cell, 2019, 177, 1050-1066.e14.	13.5	148
57	Fundamental bounds on the fidelity of sensory cortical coding. Nature, 2020, 580, 100-105.	13.7	146
58	Sparse recurrent excitatory connectivity in the microcircuit of the adult mouse and human cortex. ELife, 2018, 7, .	2.8	142
59	Correlated Gene Expression and Target Specificity Demonstrate Excitatory Projection Neuron Diversity. Cerebral Cortex, 2015, 25, 433-449.	1.6	125
60	Local connectivity and synaptic dynamics in mouse and human neocortex. Science, 2022, 375, eabj5861.	6.0	124
61	Systematic generation of biophysically detailed models for diverse cortical neuron types. Nature Communications, 2018, 9, 710.	5.8	123
62	Cellular anatomy of the mouse primary motor cortex. Nature, 2021, 598, 159-166.	13.7	117
63	Cerebellar Purkinje cell activity drives motor learning. Nature Neuroscience, 2013, 16, 1734-1736.	7.1	116
64	Relationship between simultaneously recorded spiking activity and fluorescence signal in GCaMP6 transgenic mice. ELife, 2021, 10, .	2.8	114
65	Connectional architecture of a mouse hypothalamic circuit node controlling social behavior. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 7503-7512.	3.3	113
66	Virtual finger boosts three-dimensional imaging and microsurgery as well as terabyte volume image visualization and analysis. Nature Communications, 2014, 5, 4342.	5.8	109
67	The timSL Mutant of the Drosophila Rhythm Gene timeless Manifests Allele-Specific Interactions with period Gene Mutants. Neuron, 1996, 17, 921-929.	3.8	108
68	Transcriptional Regulation of Enhancers Active in Protodomains of the Developing Cerebral Cortex. Neuron, 2014, 82, 989-1003.	3.8	99
69	A gut-to-brain signal of fluid osmolarity controls thirst satiation. Nature, 2019, 568, 98-102.	13.7	98
70	Single-cell transcriptomic evidence for dense intracortical neuropeptide networks. ELife, 2019, 8, .	2.8	98
71	Regional, Layer, and Cell-Type-Specific Connectivity of the Mouse Default Mode Network. Neuron, 2021, 109, 545-559.e8.	3.8	94
72	Enhancer viruses for combinatorial cell-subclass-specific labeling. Neuron, 2021, 109, 1449-1464.e13.	3.8	93

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73	Resolution of High-Frequency Mesoscale Intracortical Maps Using the Genetically Encoded Glutamate Sensor iGluSnFR. Journal of Neuroscience, 2016, 36, 1261-1272.	1.7	88
74	Functional enhancer elements drive subclass-selective expression from mouse to primate neocortex. Cell Reports, 2021, 34, 108754.	2.9	88
75	An Inducible and Reversible Mouse Genetic Rescue System. PLoS Genetics, 2008, 4, e1000069.	1.5	82
76	Inferring cortical function in the mouse visual system through large-scale systems neuroscience. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7337-7344.	3.3	82
77	Phenotypic Analysis of Mice Deficient in the Type 2 Galanin Receptor (GALR2). Molecular and Cellular Biology, 2005, 25, 4804-4811.	1.1	76
78	Genetically Targeted All-Optical Electrophysiology with a Transgenic Cre-Dependent Optopatch Mouse. Journal of Neuroscience, 2016, 36, 11059-11073.	1.7	76
79	Mouse transgenic approaches in optogenetics. Progress in Brain Research, 2012, 196, 193-213.	0.9	74
80	Medial Habenula Output Circuit Mediated by Î±5 Nicotinic Receptor-Expressing GABAergic Neurons in the Interpeduncular Nucleus. Journal of Neuroscience, 2013, 33, 18022-18035.	1.7	74
81	Kilohertz two-photon brain imaging in awake mice. Nature Methods, 2019, 16, 1119-1122.	9.0	74
82	Lineage Tracing Using Cux2-Cre and Cux2-CreERT2 Mice. Neuron, 2015, 86, 1091-1099.	3.8	73
83	Layer-specific chromatin accessibility landscapes reveal regulatory networks in adult mouse visual cortex. ELife, 2017, 6, .	2.8	73
84	High-resolution data-driven model of the mouse connectome. Network Neuroscience, 2019, 3, 217-236.	1.4	69
85	Alternating sources of perisomatic inhibition during behavior. Neuron, 2021, 109, 997-1012.e9.	3.8	67
86	Adenoâ€Associated Viral Vectors for Anterograde Axonal Tracing with Fluorescent Proteins in Nontransgenic and Cre Driver Mice. Current Protocols in Neuroscience, 2012, 59, Unit 1.20.1-18.	2.6	65
87	Spatially resolved transcriptomics in neuroscience. Nature Methods, 2021, 18, 23-25.	9.0	65
88	Thyrotropin-Releasing Hormone Receptor 1-Deficient Mice Display Increased Depression and Anxiety-Like Behavior. Molecular Endocrinology, 2007, 21, 2795-2804.	3.7	64
89	TeraVR empowers precise reconstruction of complete 3-D neuronal morphology in the whole brain. Nature Communications, 2019, 10, 3474.	5.8	64
90	Neuromedin U Receptor 2-Deficient Mice Display Differential Responses in Sensory Perception, Stress, and Feeding. Molecular and Cellular Biology, 2006, 26, 9352-9363.	1.1	63

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91	Two-Photon Holographic Stimulation of ReaChR. Frontiers in Cellular Neuroscience, 2016, 10, 234.	1.8	63
92	Subpallial Enhancer Transgenic Lines: a Data and Tool Resource to Study Transcriptional Regulation of GABAergic Cell Fate. Neuron, 2016, 92, 59-74.	3.8	62
93	Mesoscale connectomics. Current Opinion in Neurobiology, 2018, 50, 154-162.	2.0	59
94	Common cell type nomenclature for the mammalian brain. ELife, 2020, 9, .	2.8	56
95	Visual Tuning Properties of Genetically Identified Layer 2/3 Neuronal Types in the Primary Visual Cortex of Cre-Transgenic Mice. Frontiers in Systems Neuroscience, 2011, 4, 162.	1.2	55
96	Signature morpho-electric, transcriptomic, and dendritic properties of human layer 5 neocortical pyramidal neurons. Neuron, 2021, 109, 2914-2927.e5.	3.8	54
97	Visual Cortex Gains Independence from Peripheral Drive before Eye Opening. Neuron, 2019, 104, 711-723.e3.	3.8	53
98	In vivo sub-millisecond two-photon optogenetics with temporally focused patterned light. Journal of Neuroscience, 2019, 39, 1785-18.	1.7	53
99	Systematic comparison of adenoâ€associated virus and biotinylated dextran amine reveals equivalent sensitivity between tracers and novel projection targets in the mouse brain. Journal of Comparative Neurology, 2014, 522, 1989-2012.	0.9	52
100	Specific connections of the interpeduncular subnuclei reveal distinct components of the habenulopeduncular pathway. Journal of Comparative Neurology, 2017, 525, 2632-2656.	0.9	52
101	Isoform cell-type specificity in the mouse primary motor cortex. Nature, 2021, 598, 195-199.	13.7	52
102	Distinct Transcriptomic Cell Types and Neural Circuits of the Subiculum and Prosubiculum along the Dorsal-Ventral Axis. Cell Reports, 2020, 31, 107648.	2.9	49
103	Vasoactive Intestinal Polypeptide (VIP)-Expressing Neurons in the Suprachiasmatic Nucleus Provide Sparse GABAergic Outputs to Local Neurons with Circadian Regulation Occurring Distal to the Opening of Postsynaptic GABA_AIonotropic Receptors. Journal of Neuroscience, 2015, 35, 1905-1920.	1.7	48
104	An R-CaMP1.07 reporter mouse for cell-type-specific expression of a sensitive red fluorescent calcium indicator. PLoS ONE, 2017, 12, e0179460.	1.1	47
105	Single-cell and single-nucleus RNA-seq uncovers shared and distinct axes of variation in dorsal LGN neurons in mice, non-human primates, and humans. ELife, 2021, 10, .	2.8	41
106	The Mouse Claustrum Is Required for Optimal Behavioral Performance Under High Cognitive Demand. Biological Psychiatry, 2020, 88, 719-726.	0.7	40
107	Adaptive Image Enhancement for Tracing 3D Morphologies of Neurons and Brain Vasculatures. Neuroinformatics, 2015, 13, 153-166.	1.5	39
108	Integration of autopatching with automated pipette and cell detection in vitro. Journal of Neurophysiology, 2016, 116, 1564-1578.	0.9	39

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109	Intersectional monosynaptic tracing for dissecting subtype-specific organization of GABAergic interneuron inputs. Nature Neuroscience, 2019, 22, 492-502.	7.1	39
110	Cell-nonautonomous local and systemic responses to cell arrest enable long-bone catch-up growth in developing mice. PLoS Biology, 2018, 16, e2005086.	2.6	38
111	Brainwide Genetic Sparse Cell Labeling to Illuminate the Morphology of Neurons and Glia with Cre-Dependent MORF Mice. Neuron, 2020, 108, 111-127.e6.	3.8	37
112	RecV recombinase system for in vivo targeted optogenomic modifications of single cells or cell populations. Nature Methods, 2020, 17, 422-429.	9.0	36
113	Dense functional and molecular readout of a circuit hub in sensory cortex. Science, 2022, 375, eabl5981.	6.0	36
114	Cross-modal coherent registration of whole mouse brains. Nature Methods, 2022, 19, 111-118.	9.0	36
115	Synaptic connectivity to L2/3 of primary visual cortex measured by two-photon optogenetic stimulation. ELife, 2022, 11, .	2.8	35
116	Scaled, high fidelity electrophysiological, morphological, and transcriptomic cell characterization. ELife, 2021, 10, .	2.8	33
117	Neuronal cell-subtype specificity of neural synchronization in mouse primary visual cortex. Nature Communications, 2019, 10, 2533.	5.8	30
118	Consistent cross-modal identification of cortical neurons with coupled autoencoders. Nature Computational Science, 2021, 1, 120-127.	3.8	29
119	3D Image-Guided Automatic Pipette Positioning for Single Cell Experiments in vivo. Scientific Reports, 2015, 5, 18426.	1.6	26
120	Autonomous patch-clamp robot for functional characterization of neurons in vivo: development and application to mouse visual cortex. Journal of Neurophysiology, 2019, 121, 2341-2357.	0.9	26
121	Transcriptional network orchestrating regional patterning of cortical progenitors. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	25
122	Neocortical Chandelier Cells Developmentally Shape Axonal Arbors through Reorganization but Establish Subcellular Synapse Specificity without Refinement. ENeuro, 2017, 4, ENEURO.0057-17.2017.	0.9	24
123	Local processing in neurites of VGluT3-expressing amacrine cells differentially organizes visual information. ELife, 2017, 6, .	2.8	23
124	Single-cell transcriptomic classification of rabies-infected cortical neurons. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	19
125	Large-scale, saturating insertional mutagenesis of the mouse genome. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14406-14411.	3.3	16
126	Validation of optical voltage reporting by the genetically encoded voltage indicator VSFP-Butterfly from cortical layer 2/3 pyramidal neurons in mouse brain slices. Physiological Reports, 2015, 3, e12468.	0.7	15

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127	Control of impulsivity by Gi-protein signalling in layer-5 pyramidal neurons of the anterior cingulate cortex. Communications Biology, 2021, 4, 662.	2.0	15
128	Single cell enhancer activity distinguishes GABAergic and cholinergic lineages in embryonic mouse basal ganglia. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2108760119.	3.3	15
129	Petabyte-Scale Multi-Morphometry of Single Neurons for Whole Brains. Neuroinformatics, 2022, 20, 525-536.	1.5	14
130	Flexible Learning-Free Segmentation and Reconstruction of Neural Volumes. Scientific Reports, 2018, 8, 14247.	1.6	12
131	A collection of genetic mouse lines and related tools for inducible and reversible intersectional misexpression. Development (Cambridge), 2020, 147, .	1.2	10
132	Projection-specific Activity of Layer 2/3 Neurons Imaged in Mouse Primary Somatosensory Barrel Cortex During a Whisker Detection Task. Function, 2020, 1, zqaa008.	1.1	10
133	Intersectional mapping of multi-transmitter neurons and other cell types in the brain. Cell Reports, 2022, 40, 111036.	2.9	9
134	Voltage imaging in the olfactory bulb using transgenic mouse lines expressing the genetically encoded voltage indicator ArcLight. Scientific Reports, 2022, 12, 1875.	1.6	8
135	Laminar distribution and arbor density of two functional classes of thalamic inputs to primary visual cortex. Cell Reports, 2021, 37, 109826.	2.9	6
136	Electron Microscopy at Scale. Cell, 2015, 162, 474-475.	13.5	4
137	A Suite of Transgenic Driver and Reporter Mouse Lines with Enhanced Brain Cell Type Targeting and Functionality. SSRN Electronic Journal, 0, , .	0.4	2
138	Organization of the connections between claustrum and cortex in the mouse. Journal of Comparative Neurology, 2017, 525, spc1-spc1.	0.9	1
139	A gene-expression axis defines neuron behaviour. Nature, 2022, 607, 243-244.	13.7	1
140	Neuronal Cell-Subtype Specificity of Neural Synchronization in Mouse Primary Visual Cortex. SSRN Electronic Journal, 0, , .	0.4	0