Mei Zhen

List of Publications by Year
in descending order

82 papers	6,324 citations	94433 37 h-index	82547 72 g-index
116 all docs	116 docs citations	116 times ranked	7189 citing authors

#	Article	IF	Citations
1	ALS/FTD Mutation-Induced Phase Transition of FUS Liquid Droplets and Reversible Hydrogels into Irreversible Hydrogels Impairs RNP Granule Function. Neuron, 2015, 88, 678-690.	8.1	716
2	The liprin protein SYD-2 regulates the differentiation of presynaptic termini in C. elegans. Nature, 1999, 401, 371-375.	27.8	324
3	Proprioceptive Coupling within Motor Neurons Drives C.Âelegans Forward Locomotion. Neuron, 2012, 76, 750-761.	8.1	219
4	An Imbalancing Act: Gap Junctions Reduce the Backward Motor Circuit Activity to Bias C.Âelegans for Forward Locomotion. Neuron, 2011, 72, 572-586.	8.1	218
5	Regulation of Presynaptic Terminal Organization by C. elegans RPM-1, a Putative Guanine Nucleotide Exchanger with a RING-H2 Finger Domain. Neuron, 2000, 26, 331-343.	8.1	216
6	Connectomes across development reveal principles of brain maturation. Nature, 2021, 596, 257-261.	27.8	205
7	An SCF-like ubiquitin ligase complex that controls presynaptic differentiation. Nature, 2004, 430, 345-350.	27.8	201
8	Regulation of Vertebrate Nervous System Alternative Splicing and Development by an SR-Related Protein. Cell, 2009, 138, 898-910.	28.9	195
9	Pan-neuronal imaging in roaming Caenorhabditis elegans. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1082-8.	7.1	188
10	Optogenetic analysis of synaptic function. Nature Methods, 2008, 5, 895-902.	19.0	184
11	A 3D culture model of innervated human skeletal muscle enables studies of the adult neuromuscular junction. ELife, 2019, 8, .	6.0	169
12	The SAD-1 Kinase Regulates Presynaptic Vesicle Clustering and Axon Termination. Neuron, 2001, 29, 115-129.	8.1	166
13	Hierarchical assembly of presynaptic components in defined C. elegans synapses. Nature Neuroscience, 2006, 9, 1488-1498.	14.8	166
14	C. elegans locomotion: small circuits, complex functions. Current Opinion in Neurobiology, 2015, 33, 117-126.	4.2	158
15	Title is missing!. Nature, 1999, 401, 371-375.	27.8	151
16	ALS mutations in FUS cause neuronal dysfunction and death in Caenorhabditis elegans by a dominant gain-of-function mechanism. Human Molecular Genetics, 2012, 21, 1-9.	2.9	148
17	Genome-wide analysis of alternative splicing in Caenorhabditis elegans. Genome Research, 2011, 21, 342-348.	5.5	137
18	Action potentials drive body wall muscle contractions in Caenorhabditis elegans. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 2557-2562.	7.1	128

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19	Real-time volumetric reconstruction of biological dynamics with light-field microscopy and deep learning. Nature Methods, 2021, 18, 551-556.	19.0	124
20	A Putative Cation Channel, NCA-1, and a Novel Protein, UNC-80, Transmit Neuronal Activity in C. elegans. PLoS Biology, 2008, 6, e55.	5.6	109
21	The Presynaptic Dense Projection of theCaenorhabiditis elegansCholinergic Neuromuscular Junction Localizes Synaptic Vesicles at the Active Zone through SYD-2/Liprin and UNC-10/RIM-Dependent Interactions. Journal of Neuroscience, 2011, 31, 4388-4396.	3.6	103
22	ACaenorhabditis elegansdevelopmental decision requires insulin signaling-mediated neuron-intestine communication. Development (Cambridge), 2014, 141, 1767-1779.	2.5	92
23	Identification of Genes Involved in Synaptogenesis Using a Fluorescent Active Zone Marker in Caenorhabditis elegans. Journal of Neuroscience, 2005, 25, 3833-3841.	3.6	89
24	CCM-3/STRIPAK promotes seamless tube extension through endocytic recycling. Nature Communications, 2015, 6, 6449.	12.8	85
25	MADD-4/Punctin and Neurexin Organize C.Âelegans GABAergic Postsynapses through Neuroligin. Neuron, 2015, 86, 1420-1432.	8.1	83
26	Excitatory motor neurons are local oscillators for backward locomotion. ELife, 2018, 7, .	6.0	79
27	NLF-1 Delivers a Sodium Leak Channel to Regulate Neuronal Excitability and Modulate Rhythmic Locomotion. Neuron, 2013, 77, 1069-1082.	8.1	78
28	Networking in a global world: Establishing functional connections between neural splicing regulators and their target transcripts. Rna, 2011, 17, 775-791.	3.5	65
29	The NCA sodium leak channel is required for persistent motor circuit activity that sustains locomotion. Nature Communications, 2015, 6, 6323.	12.8	65
30	A Pair of RNA-Binding Proteins Controls Networks of Splicing Events Contributing to Specialization of Neural Cell Types. Molecular Cell, 2014, 54, 946-959.	9.7	62
31	Neuronal polarity is regulated by a direct interaction between a scaffolding protein, Neurabin, and a presynaptic SAD-1 kinase in Caenorhabditis elegans. Development (Cambridge), 2007, 134, 237-249.	2.5	61
32	Descending pathway facilitates undulatory wave propagation in Caenorhabditis elegans through gap junctions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4493-E4502.	7.1	53
33	An Upconversion Nanoparticle Enables Near Infrared-Optogenetic Manipulation of the Caenorhabditis elegans Motor Circuit. ACS Nano, 2019, 13, 3373-3386.	14.6	52
34	An Essential Role for DYF-11/MIP-T3 in Assembling Functional Intraflagellar Transport Complexes. PLoS Genetics, 2008, 4, e1000044.	3.5	48
35	Neuroendocrine modulation sustains the C. elegans forward motor state. ELife, 2016, 5, .	6.0	48
36	Presynaptic terminal differentiation: transport and assembly. Current Opinion in Neurobiology, 2004, 14, 280-287.	4.2	46

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37	A Gain-of-Function Mutation inNALCNin a Child with Intellectual Disability, Ataxia, and Arthrogryposis. Human Mutation, 2015, 36, 753-757.	2.5	46
38	ITSNâ€1 Controls Vesicle Recycling at the Neuromuscular Junction and Functions in Parallel with DABâ€1. Traffic, 2008, 9, 742-754.	2.7	43
39	Filling the gap: adding super-resolution to array tomography for correlated ultrastructural and molecular identification of electrical synapses at theC. elegansconnectome. Neurophotonics, 2016, 3, 041802.	3.3	41
40	The SCFFSN-1 ubiquitin ligase controls germline apoptosis through CEP-1/p53 in C. elegans. Cell Death and Differentiation, 2008, 15, 1054-1062.	11.2	39
41	UNC-18 and Tomosyn Antagonistically Control Synaptic Vesicle Priming Downstream of UNC-13 in Caenorhabditis elegans. Journal of Neuroscience, 2017, 37, 8797-8815.	3.6	39
42	Natural sensory context drives diverse brain-wide activity during C.Âelegans mating. Cell, 2021, 184, 5122-5137.e17.	28.9	39
43	Caenorhabditis elegansFlamingo Cadherinfmi-1Regulates GABAergic Neuronal Development. Journal of Neuroscience, 2012, 32, 4196-4211.	3.6	37
44	PHRs: bridging axon guidance, outgrowth and synapse development. Current Opinion in Neurobiology, 2010, 20, 100-107.	4.2	36
45	C. elegans STRADÎ± and SAD cooperatively regulate neuronal polarity and synaptic organization. Development (Cambridge), 2010, 137, 93-102.	2.5	36
46	A Pipeline for Volume Electron Microscopy of the Caenorhabditis elegans Nervous System. Frontiers in Neural Circuits, 2018, 12, 94.	2.8	33
47	Caenorhabditis elegans excitatory ventral cord motor neurons derive rhythm for body undulation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170370.	4.0	33
48	Toward a living soft microrobot through optogenetic locomotion control of Caenorhabditis elegans. Science Robotics, 2021, 6, .	17.6	33
49	Flexible motor sequence generation during stereotyped escape responses. ELife, 2020, 9, .	6.0	33
50	A chemical-genetic strategy reveals distinct temporal requirements for SAD-1 kinase in neuronal polarization and synapse formation. Neural Development, 2008, 3, 23.	2.4	32
51	Ciliary dysfunction and obesity. Clinical Genetics, 2010, 77, 18-27.	2.0	29
52	Caenorhabditis elegansInnexins Regulate Active Zone Differentiation. Journal of Neuroscience, 2009, 29, 5207-5217.	3.6	28
53	A Co-operative Regulation of Neuronal Excitability by UNC-7 Innexin and NCA/NALCN Leak Channel. Molecular Brain, 2011, 4, 16.	2.6	28
54	Myrf ER-Bound Transcription Factors Drive C.Âelegans Synaptic Plasticity via Cleavage-Dependent Nuclear Translocation. Developmental Cell, 2017, 41, 180-194.e7.	7.0	27

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55	Gain-of-function mutations in the UNC-2/CaV2Î± channel lead to excitation-dominant synaptic transmission in Caenorhabditis elegans. ELife, 2019, 8, .	6.0	27
56	Hyperactivation of B-Type Motor Neurons Results in Aberrant Synchrony of theCaenorhabditis elegansMotor Circuit. Journal of Neuroscience, 2013, 33, 5319-5325.	3.6	25
57	Attenuation of insulin signalling contributes to FSN-1-mediated regulation of synapse development. EMBO Journal, 2013, 32, 1745-1760.	7.8	24
58	The HECT Family Ubiquitin Ligase EEL-1 Regulates Neuronal Function and Development. Cell Reports, 2017, 19, 822-835.	6.4	24
59	C. elegans neurons have functional dendritic spines. ELife, 2019, 8, .	6.0	24
60	The Dystrophin-associated Protein Complex Maintains Muscle Excitability by Regulating Ca2+-dependent K+ (BK) Channel Localization. Journal of Biological Chemistry, 2011, 286, 33501-33510.	3.4	21
61	Overexpression of an ALS-associated FUS mutation in C. elegans disrupts NMJ morphology and leads to defective neuromuscular transmission. Biology Open, 2020, 9, .	1.2	20
62	Mutations in a Guanylate Cyclase GCY-35/GCY-36 Modify Bardet-Biedl Syndromeâ€“Associated Phenotypes in Caenorhabditis elegans. PLoS Genetics, 2011, 7, e1002335.	3.5	19
63	Open syntaxin overcomes exocytosis defects of diverse mutants in C. elegans. Nature Communications, 2020, 11, 5516.	12.8	18
64	Corollary discharge promotes a sustained motor state in a neural circuit for navigation. ELife, 2021, 10, .	6.0	16
65	The C2H2 zinc-finger protein SYD-9 is a putative posttranscriptional regulator for synaptic transmission. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10450-10455.	7.1	15
66	A hybrid microfluidic device for on-demand orientation and multidirectional imaging of C. elegans organs and neurons. Biomicrofluidics, 2016, 10, 064111.	2.4	15
67	Conformational states of syntaxin-1 govern the necessity of N-peptide binding in exocytosis of PC12 cells and Caenorhabditis elegans. Molecular Biology of the Cell, 2016, 27, 669-685.	2.1	13
68	The C. elegans COE transcription factor UNC-3 activates lineage-specific apoptosis and affects neurite growth in the RID lineage. Development (Cambridge), 2015, 142, 1447-57.	2.5	12
69	Structural Analysis of the Caenorhabditis elegans Dauer Larval Anterior Sensilla by Focused Ion Beam-Scanning Electron Microscopy. Frontiers in Neuroanatomy, 2021, 15, 732520.	1.7	12
70	An essential ubiquitin-conjugating enzyme with tissue and developmental specificity in th nematode Caenorhabditis elegans. EMBO Journal, 1996, 15, 3229-37.	7.8	11
71	Escape steering by cholecystokinin peptidergic signaling. Cell Reports, 2022, 38, 110330.	6.4	11
72	Efficient and costâ€effective 3D cellular imaging by subâ€voxelâ€resolving lightâ€sheet addâ€on microscopy. Journal of Biophotonics, 2020, 13, e201960243.	2.3	9

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73	Releasing the Inner Inhibition for Axon Regeneration. Neuron, 2012, 73, 207-209.	8.1	8
74	Automated classification of synaptic vesicles in electron tomograms of C. elegans using machine learning. PLoS ONE, 2018, 13, e0205348.	2.5	8
75	Lack of association of NALCN genetic variants with schizophrenia. Psychiatry Research, 2011, 185, 450-452.	3.3	6
76	Optogenetic Manipulation of Postsynaptic cAMP Using a Novel Transgenic Mouse Line Enables Synaptic Plasticity and Enhances Depolarization Following Tetanic Stimulation in the Hippocampal Dentate Gyrus. Frontiers in Neural Circuits, 2020, 14, 24.	2.8	6
77	The long and the short of SAD-1 kinase. Communicative and Integrative Biology, 2010, 3, 251-255.	1.4	5
78	The UBR-1 ubiquitin ligase regulates glutamate metabolism to generate coordinated motor pattern in Caenorhabditis elegans. PLoS Genetics, 2018, 14, e1007303.	3.5	5
79	Signal requirement for cortical potential of transplantable human neuroepithelial stem cells. Nature Communications, 2022, 13, .	12.8	5
80	Protons as Intercellular Messengers. Cell, 2008, 132, 21-22.	28.9	3
81	Presynaptic Terminal Differentiation. , 2007, , 75-94.		0
82	Absolute Threshold. , 2008, , 3-3.		0