Zhirong Bao

List of Publications by Year
in descending order

57 papers	3,613 citations	257450 24 h-index	182427 51 g-index
73 all docs	73 docs citations	73 times ranked	3142 citing authors

#	Article	IF	Citations
1	Fast, high-contrast imaging of animal development with scanned light sheetâ€“based structured-illumination microscopy. Nature Methods, 2010, 7, 637-642.	19.0	515
2	Automated cell lineage tracing in Caenorhabditis elegans. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2707-2712.	7.1	344
3	Spatially isotropic four-dimensional imaging with dual-view plane illumination microscopy. Nature Biotechnology, 2013, 31, 1032-1038.	17.5	290
4	Inverted selective plane illumination microscopy (i SPIM) enables coupled cell identity lineaging and neurodevelopmental imaging in Caenorhabditis elegans. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17708-17713.	7.1	264
5	Dual-view plane illumination microscopy for rapid and spatially isotropic imaging. Nature Protocols, 2014, 9, 2555-2573.	12.0	195
6	Automated analysis of embryonic gene expression with cellular resolution in C. elegans. Nature Methods, 2008, 5, 703-709.	19.0	173
7	Multidimensional regulation of gene expression in the C. elegans embryo. Genome Research, 2012, 22, 1282-1294.	5.5	144
8	Chiral Forces Organize Left-Right Patterning in C. elegans by Uncoupling Midline and Anteroposterior Axis. Developmental Cell, 2010, 19, 402-412.	7.0	121
9	Rapid image deconvolution and multiview fusion for optical microscopy. Nature Biotechnology, 2020, 38, 1337-1346.	17.5	105
10	The lineaging of fluorescently-labeled Caenorhabditis elegans embryos with StarryNite and AceTree. Nature Protocols, 2006, 1, 1468-1476.	12.0	101
11	A hybrid blob-slice model for accurate and efficient detection of fluorescence labeled nuclei in 3D. BMC Bioinformatics, 2010, 11, 580.	2.6	98
12	AceTree: a tool for visual analysis of Caenorhabditis elegans embryogenesis. BMC Bioinformatics, 2006, 7, 275.	2.6	93
13	De Novo Inference of Systems-Level Mechanistic Models of Development from Live-Imaging-Based Phenotype Analysis. Cell, 2014, 156, 359-372.	28.9	89
14	Comparative analysis of embryonic cell lineage between Caenorhabditis briggsae and Caenorhabditis elegans. Developmental Biology, 2008, 314, 93-99.	2.0	80
15	Control of cell cycle timing during C. elegans embryogenesis. Developmental Biology, 2008, 318, 65-72.	2.0	75
16	Structural and developmental principles of neuropil assembly in C. elegans. Nature, 2021, 591, 99-104.	27.8	60
17	Systematic quantification of developmental phenotypes at single-cell resolution during embryogenesis. Development (Cambridge), 2013, 140, 3266-3274.	2.5	55
18	The Regulatory Landscape of Lineage Differentiation in a Metazoan Embryo. Developmental Cell, 2015, 34, 592-607.	7.0	53

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19	A semi-local neighborhood-based framework for probabilistic cell lineage tracing. BMC Bioinformatics, 2014, 15, 217.	2.6	52
20	Mounting Caenorhabditis elegans Embryos for Live Imaging of Embryogenesis: Figure 1.. Cold Spring Harbor Protocols, 2011, 2011, pdb.prot065599.	0.3	47
21	Specific roles for the GATA transcription factors end-1 and end-3 during C. elegans E-lineage development. Developmental Biology, 2011, 358, 345-355.	2.0	46
22	Actomyosin-based Self-organization of cell internalization during C. elegans gastrulation. BMC Biology, 2012, 10, 94.	3.8	46
23	WormGUIDES: an interactive single cell developmental atlas and tool for collaborative multidimensional data exploration. BMC Bioinformatics, 2015, 16, 189.	2.6	40
24	PCP and SAX-3/Robo Pathways Cooperate to Regulate Convergent Extension-Based Nerve Cord Assembly in C.Âelegans. Developmental Cell, 2017, 41, 195-203.e3.	7.0	36
25	C. elegansSoxB genes are dispensable for embryonic neurogenesis but required for terminal differentiation of specific neuron types. Development (Cambridge), 2015, 142, 2464-77.	2.5	35
26	Untwisting the Caenorhabditis elegans embryo. ELife, 2015, 4, .	6.0	33
27	A multicellular rosette-mediated collective dendrite extension. ELife, 2019, 8, .	6.0	32
28	Cell cycle features of C. elegans germline stem/progenitor cells vary temporally and spatially. Developmental Biology, 2016, 409, 261-271.	2.0	27
29	E3 ubiquitin ligases promote progression of differentiation during C. elegans embryogenesis. Developmental Biology, 2015, 398, 267-279.	2.0	25
30	Using Stage- and Slit-Scanning to Improve Contrast and Optical Sectioning in Dual-View Inverted Light Sheet Microscopy (diSPIM). Biological Bulletin, 2016, 231, 26-39.	1.8	24
31	AceTree: a major update and case study in the long term maintenance of open-source scientific software. BMC Bioinformatics, 2018, 19, 121.	2.6	23
32	POS-1 Promotes Endo-mesoderm Development by Inhibiting the Cytoplasmic Polyadenylation of neg-1 mRNA. Developmental Cell, 2015, 34, 108-118.	7.0	22
33	Deep reinforcement learning of cell movement in the early stage of C.elegans embryogenesis. Bioinformatics, 2018, 34, 3169-3177.	4.1	22
34	A Myt1 family transcription factor defines neuronal fate by repressing non-neuronal genes. ELife, 2019, 8, .	6.0	21
35	An In Toto Approach to Dissecting Cellular Interactions in Complex Tissues. Developmental Cell, 2017, 43, 530-540.e4.	7.0	20
36	EFF-1 fusogen promotes phagosome sealing during cell process clearance in Caenorhabditis elegans. Nature Cell Biology, 2018, 20, 393-399.	10.3	19

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37	A single-cell analysis of the molecular lineage of chordate embryogenesis. Science Advances, 2020, 6, .	10.3	18
38	Isotropic Light-Sheet Microscopy and Automated Cell Lineage Analyses to Catalogue Caenorhabditis elegans Embryogenesis with Subcellular Resolution. Journal of Visualized Experiments, 2019, , .	0.3	17
39	Digital development: a database of cell lineage differentiation inC. eleganswith lineage phenotypes, cell-specific gene functions and a multiscale model. Nucleic Acids Research, 2016, 44, D781-D785.	14.5	16
40	Lineage context switches the function of a C. elegans Pax6 homolog in determining a neuronal fate. Development (Cambridge), 2019, 146, .	2.5	13
41	Differential adhesion regulates neurite placement via a retrograde zippering mechanism. ELife, 2021, 10, .	6.0	13
42	Automated Lineage and Expression Profiling in Live Caenorhabditis elegans Embryos. Cold Spring Harbor Protocols, 2012, 2012, pdb.prot070615.	0.3	11
43	Cellular Structure Image Classification With Small Targeted Training Samples. IEEE Access, 2019, 7, 148967-148974.	4.2	10
44	An Observation-Driven Agent-Based Modeling and Analysis Framework for C. elegans Embryogenesis. PLoS ONE, 2016, 11, e0166551.	2.5	9
45	Cadherin preserves cohesion across involuting tissues during C. elegans neurulation. ELife, 2020, 9, .	6.0	7
46	Hierarchical deep reinforcement learning reveals a modular mechanism of cell movement. Nature Machine Intelligence, 2022, 4, 73-83.	16.0	7
47	Cell Neighbor Determination in the Metazoan Embryo System. , 2017, , .		5
48	The Caenorhabditis elegans gene ham-1 regulates daughter cell size asymmetry primarily in divisions that produce a small anterior daughter cell. PLoS ONE, 2018, 13, e0195855.	2.5	5
49	Irises. Worm, 2014, 3, e29041.	1.0	4
50	Small RNAs couple embryonic developmental programs to gut microbes. Science Advances, 2022, 8, eabl7663.	10.3	4
51	Cross-modality synthesis of EM time series and live fluorescence imaging. ELife, 0, 11, .	6.0	3
52	An imaging and analysis toolset for the study ofCaenorhabditiselegansneurodevelopment. Proceedings of SPIE, 2015, , .	0.8	2
53	Using High Performance Computing to Model Cellular Embryogenesis. , 2016, , .		1
54	An Observation Data Driven Simulation and Analysis Framework for Early Stage <i>C. elegans</i> Embryogenesis. Journal of Biomedical Science and Engineering, 2018, 11, 225-234.	0.4	1

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55	Visualizing and quantifying molecular and cellular processes in Caenorhabditis elegans using light microscopy. Genetics, 0, , .	2.9	1
56	A genetic screen for temperature-sensitive morphogenesis-defective Caenorhabditis elegans mutants. G3: Genes, Genomes, Genetics, 2021, 11, .	1.8	0
57	Kathryn Anderson (1952â€“2020). Cell, 2021, 184, 1123-1126.	28.9	0