

Eric Betzig

List of Publications by Year in descending order

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82
papers

25,000
citations

28190

55
h-index

58464

82
g-index

98
all docs

98
docs citations

98
times ranked

25644
citing authors

#	ARTICLE	IF	CITATIONS
1	Superresolution microscopy reveals actomyosin dynamics in medioapical arrays. <i>Molecular Biology of the Cell</i> , 2022, 33, mbcE21110537.	0.9	2
2	Cellular bases of olfactory circuit assembly revealed by systematic time-lapse imaging. <i>Cell</i> , 2021, 184, 5107-5121.e14.	13.5	25
3	De novo endocytic clathrin coats develop curvature at early stages of their formation. <i>Developmental Cell</i> , 2021, 56, 3146-3159.e5.	3.1	28
4	3D ATAC-PALM: super-resolution imaging of the accessible genome. <i>Nature Methods</i> , 2020, 17, 430-436.	9.0	62
5	Correlative three-dimensional super-resolution and block-face electron microscopy of whole vitreously frozen cells. <i>Science</i> , 2020, 367, .	6.0	255
6	High-resolution imaging reveals how the spindle midzone impacts chromosome movement. <i>Journal of Cell Biology</i> , 2019, 218, 2529-2544.	2.3	55
7	Software for lattice light-sheet imaging of FRET biosensors, illustrated with a new Rap1 biosensor. <i>Journal of Cell Biology</i> , 2019, 218, 3153-3160.	2.3	32
8	Augmin accumulation on long-lived microtubules drives amplification and kinetochore-directed growth. <i>Journal of Cell Biology</i> , 2019, 218, 2150-2168.	2.3	75
9	Dynamic super-resolution structured illumination imaging in the living brain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 9586-9591.	3.3	103
10	Cytoskeletal Control of Antigen-Dependent T Cell Activation. <i>Cell Reports</i> , 2019, 26, 3369-3379.e5.	2.9	68
11	Cytoskeletal actin patterns shape mast cell activation. <i>Communications Biology</i> , 2019, 2, 93.	2.0	35
12	3D Deep Convolutional Neural Networks in Lattice Light-Sheet Data Puncta Segmentation. , 2019, , .		4
13	Cortical column and whole-brain imaging with molecular contrast and nanoscale resolution. <i>Science</i> , 2019, 363, .	6.0	277
14	Observing the cell in its native state: Imaging subcellular dynamics in multicellular organisms. <i>Science</i> , 2018, 360, .	6.0	420
15	Visualizing Intracellular Organelle and Cytoskeletal Interactions at Nanoscale Resolution on Millisecond Timescales. <i>Cell</i> , 2018, 175, 1430-1442.e17.	13.5	427
16	4D cell biology: big data image analytics and lattice light-sheet imaging reveal dynamics of clathrin-mediated endocytosis in stem cell-derived intestinal organoids. <i>Molecular Biology of the Cell</i> , 2018, 29, 2959-2968.	0.9	42
17	Lamellar projections in the endolymphatic sac act as a relief valve to regulate inner ear pressure. <i>ELife</i> , 2018, 7, .	2.8	23
18	Actin dynamics and competition for myosin monomer govern the sequential amplification of myosin filaments. <i>Nature Cell Biology</i> , 2017, 19, 85-93.	4.6	96

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19	Zyxin regulates endothelial von Willebrand factor secretion by reorganizing actin filaments around exocytic granules. <i>Nature Communications</i> , 2017, 8, 14639.	5.8	37
20	Visualizing dynamic microvillar search and stabilization during ligand detection by T cells. <i>Science</i> , 2017, 356, .	6.0	225
21	Cytoskeletal actin dynamics shape a ramifying actin network underpinning immunological synapse formation. <i>Science Advances</i> , 2017, 3, e1603032.	4.7	143
22	Applying systems-level spectral imaging and analysis to reveal the organelle interactome. <i>Nature</i> , 2017, 546, 162-167.	13.7	828
23	Imaging Cellular Structure and Dynamics from Molecules to Organisms. <i>Microscopy and Microanalysis</i> , 2017, 23, 2-3.	0.2	1
24	Contractile actomyosin arcs promote the activation of primary mouse T cells in a ligand-dependent manner. <i>PLoS ONE</i> , 2017, 12, e0183174.	1.1	43
25	Actin-based protrusions of migrating neutrophils are intrinsically lamellar and facilitate direction changes. <i>ELife</i> , 2017, 6, .	2.8	107
26	A plasma membrane template for macropinocytic cups. <i>ELife</i> , 2016, 5, .	2.8	140
27	Response to Comment on "Extended-resolution structured illumination imaging of endocytic and cytoskeletal dynamics". <i>Science</i> , 2016, 352, 527-527.	6.0	33
28	Highly photostable, reversibly photoswitchable fluorescent protein with high contrast ratio for live-cell superresolution microscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10364-10369.	3.3	69
29	Membrane dynamics of dividing cells imaged by lattice light-sheet microscopy. <i>Molecular Biology of the Cell</i> , 2016, 27, 3418-3435.	0.9	121
30	V-1 regulates capping protein activity in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E6610-E6619.	3.3	26
31	Engulfed cadherin fingers are polarized junctional structures between collectively migrating endothelial cells. <i>Nature Cell Biology</i> , 2016, 18, 1311-1323.	4.6	230
32	Increased spatiotemporal resolution reveals highly dynamic dense tubular matrices in the peripheral ER. <i>Science</i> , 2016, 354, .	6.0	361
33	Formin-generated actomyosin arcs propel T cell receptor microcluster movement at the immune synapse. <i>Journal of Cell Biology</i> , 2016, 215, 383-399.	2.3	181
34	High-density three-dimensional localization microscopy across large volumes. <i>Nature Methods</i> , 2016, 13, 359-365.	9.0	262
35	Flagellar membrane fusion and protein exchange in trypanosomes; a new form of cell-cell communication?. <i>F1000Research</i> , 2016, 5, 682.	0.8	25
36	Real-time imaging of Huntingtin aggregates diverting target search and gene transcription. <i>ELife</i> , 2016, 5, .	2.8	74

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37	Nobel Lecture: Single molecules, cells, and super-resolution optics. <i>Reviews of Modern Physics</i> , 2015, 87, 1153-1168.	16.4	36
38	Einzelne Moleküle, Zellen und superhochauflösende Optik (Nobelaufsatz). <i>Angewandte Chemie</i> , 2015, 127, 8146-8166.	1.6	9
39	Single Molecules, Cells, and Super-Resolution Optics (Nobel Lecture). <i>Angewandte Chemie - International Edition</i> , 2015, 54, 8034-8053.	7.2	165
40	Imaging Live-Cell Dynamics and Structure at the Single-Molecule Level. <i>Molecular Cell</i> , 2015, 58, 644-659.	4.5	419
41	Actin Depletion Initiates Events Leading to Granule Secretion at the Immunological Synapse. <i>Immunity</i> , 2015, 42, 864-876.	6.6	271
42	Asymmetric formation of coated pits on dorsal and ventral surfaces at the leading edges of motile cells and on protrusions of immobile cells. <i>Molecular Biology of the Cell</i> , 2015, 26, 2044-2053.	0.9	34
43	Three-dimensional tracking of plus-tips by lattice light-sheet microscopy permits the quantification of microtubule growth trajectories within the mitotic apparatus. <i>Journal of Biomedical Optics</i> , 2015, 20, 1.	1.4	49
44	Vinculin is required for cell polarization, migration, and extracellular matrix remodeling in 3D collagen. <i>FASEB Journal</i> , 2015, 29, 4555-4567.	0.2	90
45	Direct wavefront sensing for high-resolution in vivo imaging in scattering tissue. <i>Nature Communications</i> , 2015, 6, 7276.	5.8	208
46	Myosin 18A Coassembles with Nonmuscle Myosin 2 to Form Mixed Bipolar Filaments. <i>Current Biology</i> , 2015, 25, 942-948.	1.8	83
47	Histone H3 Threonine Phosphorylation Regulates Asymmetric Histone Inheritance in the <i>Drosophila</i> Male Germline. <i>Cell</i> , 2015, 163, 920-933.	13.5	110
48	Extended-resolution structured illumination imaging of endocytic and cytoskeletal dynamics. <i>Science</i> , 2015, 349, aab3500.	6.0	585
49	Regulation of RNA granule dynamics by phosphorylation of serine-rich, intrinsically disordered proteins in <i>C. elegans</i> . <i>ELife</i> , 2014, 3, e04591.	2.8	323
50	Nonmuscle Myosin II Isoforms Coassemble in Living Cells. <i>Current Biology</i> , 2014, 24, 1160-1166.	1.8	174
51	Single-Molecule Dynamics of Enhanceosome Assembly in Embryonic Stem Cells. <i>Cell</i> , 2014, 156, 1274-1285.	13.5	532
52	A contractile and counterbalancing adhesion system controls the 3D shape of crawling cells. <i>Journal of Cell Biology</i> , 2014, 205, 83-96.	2.3	170
53	3D live fluorescence imaging of cellular dynamics using Bessel beam plane illumination microscopy. <i>Nature Protocols</i> , 2014, 9, 1083-1101.	5.5	290
54	Lattice light-sheet microscopy: Imaging molecules to embryos at high spatiotemporal resolution. <i>Science</i> , 2014, 346, 1257998.	6.0	1,567

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55	Rapid adaptive optical recovery of optimal resolution over large volumes. <i>Nature Methods</i> , 2014, 11, 625-628.	9.0	253
56	3D imaging of Sox2 enhancer clusters in embryonic stem cells. <i>ELife</i> , 2014, 3, e04236.	2.8	204
57	A Localized Wnt Signal Orients Asymmetric Stem Cell Division in Vitro. <i>Science</i> , 2013, 339, 1445-1448.	6.0	296
58	Carbofluoresceins and Carborhodamines as Scaffolds for High-Contrast Fluorogenic Probes. <i>ACS Chemical Biology</i> , 2013, 8, 1303-1310.	1.6	189
59	Fast structural responses of gap junction membrane domains to AB5 toxins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E4125-33.	3.3	11
60	Multidimensional traction force microscopy reveals out-of-plane rotational moments about focal adhesions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 881-886.	3.3	239
61	Characterization and adaptive optical correction of aberrations during in vivo imaging in the mouse cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 22-27.	3.3	184
62	Noninvasive Imaging beyond the Diffraction Limit of 3D Dynamics in Thickly Fluorescent Specimens. <i>Cell</i> , 2012, 151, 1370-1385.	13.5	301
63	Triggering a Cell Shape Change by Exploiting Preexisting Actomyosin Contractions. <i>Science</i> , 2012, 335, 1232-1235.	6.0	251
64	Pupil-segmentation-based adaptive optical microscopy with full-pupil illumination. <i>Optics Letters</i> , 2011, 36, 4206.	1.7	58
65	Rapid three-dimensional isotropic imaging of living cells using Bessel beam plane illumination. <i>Nature Methods</i> , 2011, 8, 417-423.	9.0	1,006
66	Facile and General Synthesis of Photoactivatable Xanthene Dyes. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 11206-11209.	7.2	116
67	Subnuclear segregation of genes and core promoter factors in myogenesis. <i>Genes and Development</i> , 2011, 25, 569-580.	2.7	83
68	Adaptive optics via pupil segmentation for high-resolution imaging in biological tissues. <i>Nature Methods</i> , 2010, 7, 141-147.	9.0	546
69	Single-Molecule Discrimination of Discrete Perisynaptic and Distributed Sites of Actin Filament Assembly within Dendritic Spines. <i>Neuron</i> , 2010, 67, 86-99.	3.8	248
70	Self-Organization of the Escherichia coli Chemotaxis Network Imaged with Super-Resolution Light Microscopy. <i>PLoS Biology</i> , 2009, 7, e1000137.	2.6	310
71	High-speed, low-photodamage nonlinear imaging using passive pulse splitters. <i>Nature Methods</i> , 2008, 5, 197-202.	9.0	207
72	High-density mapping of single-molecule trajectories with photoactivated localization microscopy. <i>Nature Methods</i> , 2008, 5, 155-157.	9.0	1,104

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73	Live-cell photoactivated localization microscopy of nanoscale adhesion dynamics. Nature Methods, 2008, 5, 417-423.	9.0	796
74	Advances in the speed and resolution of light microscopy. Current Opinion in Neurobiology, 2008, 18, 605-616.	2.0	117
75	Dual-color superresolution imaging using genetically expressed probes. , 2008, , .		0
76	DEVELOPING PHOTOACTIVATED LOCALIZATION MICROSCOPY (PALM). , 2007, , .		3
77	Dual-color superresolution imaging of genetically expressed probes within individual adhesion complexes. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20308-20313.	3.3	478
78	Imaging Intracellular Fluorescent Proteins at Nanometer Resolution. Science, 2006, 313, 1642-1645.	6.0	7,580
79	Excitation strategies for optical lattice microscopy. Optics Express, 2005, 13, 3021.	1.7	55
80	Design and implementation of a low temperature near-field scanning optical microscope. Review of Scientific Instruments, 1994, 65, 626-631.	0.6	108
81	Optical spectroscopy of a GaAs/AlGaAs quantum wire structure using near-field scanning optical microscopy. Applied Physics Letters, 1994, 64, 1421-1423.	1.5	152
82	Top tips on scanning probes. Physics World, 1994, 7, 24-24.	0.0	2