Buzz Baum

List of Publications by Year
in descending order

118 papers	9,470 citations	41323 49 h-index	45285 90 g-index
139 all docs	139 docs citations	139 times ranked	11102 citing authors

#	Article	IF	Citations
1	Physical mechanisms of ESCRT-IIIâ€“driven cell division. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	25
2	Spindle reorientation in response to mechanical stress is an emergent property of the spindle positioning mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	7
3	Asgard archaea shed light on the evolutionary origins of the eukaryotic ubiquitin-ESCRT machinery. Nature Communications, 2022, 13, .	5.8	27
4	Comparative CRISPR type III-based knockdown of essential genes in hyperthermophilic Sulfolobales and the evasion of lethal gene silencing. RNA Biology, 2021, 18, 421-434.	1.5	10
5	An asymmetric junctional mechanoresponse coordinates mitotic rounding with epithelial integrity. Journal of Cell Biology, 2021, 220, .	2.3	22
6	Nuclear envelope remodelling during mitosis. Current Opinion in Cell Biology, 2021, 70, 67-74.	2.6	29
7	Bacterial Vipp1 and PspA are members of the ancient ESCRT-III membrane-remodeling superfamily. Cell, 2021, 184, 3660-3673.e18.	13.5	58
8	Aurora Bâ€dependent polarization of the cortical actomyosin network during mitotic exit. EMBO Reports, 2021, 22, e52387.	2.0	11
9	Asymmetric nuclear division in neural stem cells generates sibling nuclei that differ in size, envelope composition, and chromatin organization. Current Biology, 2021, 31, 3973-3983.e4.	1.8	19
10	Oncogenic RAS instructs morphological transformation of human epithelia via differential tissue mechanics. Science Advances, 2021, 7, eabg6467.	4.7	18
11	Actomyosin controls planarity and folding of epithelia in response to compression. Nature Materials, 2020, 19, 109-117.	13.3	60
12	An ESCRT-III Polymerization Sequence Drives Membrane Deformation and Fission. Cell, 2020, 182, 1140-1155.e18.	13.5	123
13	Exploring the Design Rules for Efficient Membrane-Reshaping Nanostructures. Physical Review Letters, 2020, 125, 228101.	2.9	11
14	Mechanochemical Crosstalk Produces Cell-Intrinsic Patterning of the Cortex to Orient the Mitotic Spindle. Current Biology, 2020, 30, 3687-3696.e4.	1.8	24
15	The proteasome controls ESCRT-IIIâ€“mediated cell division in an archaeon. Science, 2020, 369, .	6.0	63
16	Closed mitosis requires local disassembly of the nuclear envelope. Nature, 2020, 585, 119-123.	13.7	49
17	The Mechanics of Mitotic Cell Rounding. Frontiers in Cell and Developmental Biology, 2020, 8, 687.	1.8	98
18	Isotropic myosin-generated tissue tension is required for the dynamic orientation of the mitotic spindle. Molecular Biology of the Cell, 2020, 31, 1370-1379.	0.9	15

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19	Live Imaging of a Hyperthermophilic Archaeon Reveals Distinct Roles for Two ESCRT-III Homologs in Ensuring a Robust and Symmetric Division. Current Biology, 2020, 30, 2852-2859.e4.	1.8	45
20	The merger that made us. BMC Biology, 2020, 18, 72.	1.7	9
21	Oncogenic Signaling Alters Cell Shape and Mechanics to Facilitate Cell Division under Confinement. Developmental Cell, 2020, 52, 563-573.e3.	3.1	65
22	Developing cells remember where they came from, thanks to keratin filaments. Nature, 2020, 585, 352-353.	13.7	0
23	Moving simply: Naegleria crawls and feeds using an ancient Arp2/3-dependent mechanism. Journal of Cell Biology, 2020, 219, .	2.3	0
24	Changes in ESCRT-III filament geometry drive membrane remodelling and fission in silico. BMC Biology, 2019, 17, 82.	1.7	38
25	Polarization of Myosin II Refines Tissue Material Properties to Buffer Mechanical Stress. Developmental Cell, 2019, 48, 245-260.e7.	3.1	68
26	NanoJ: a high-performance open-source super-resolution microscopy toolbox. Journal Physics D: Applied Physics, 2019, 52, 163001.	1.3	120
27	Evolution or revolution? Changing the way science is published and communicated. PLoS Biology, 2019, 17, e3000272.	2.6	4
28	Stress relaxation in epithelial monolayers is controlled by the actomyosin cortex. Nature Physics, 2019, 15, 839-847.	6.5	126
29	Local actin nucleation tunes centrosomal microtubule nucleation during passage throughÂmitosis. EMBO Journal, 2019, 38, .	3.5	48
30	Automating multimodal microscopy with NanoJ-Fluidics. Nature Communications, 2019, 10, 1223.	5.8	84
31	A role for actomyosin contractility in Notch signaling. BMC Biology, 2019, 17, 12.	1.7	35
32	Reviewing papers as you would like your papers to be reviewed. Molecular Biology of the Cell, 2019, 30, 3013-3014.	0.9	1
33	The Role of Mitotic Cell-Substrate Adhesion Re-modeling in Animal Cell Division. Developmental Cell, 2018, 45, 132-145.e3.	3.1	111
34	Real-time fluorescence and deformability cytometry. Nature Methods, 2018, 15, 355-358.	9.0	127
35	Two-step interphase microtubule disassembly aids spindle morphogenesis. BMC Biology, 2018, 16, 14.	1.7	34
36	Size control in mammalian cells involves modulation of both growth rate and cell cycle duration. Nature Communications, 2018, 9, 3275.	5.8	178

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37	Evolution of polymer formation within the actin superfamily. Molecular Biology of the Cell, 2017, 28, 2461-2469.	0.9	22
38	Myosin II Controls Junction Fluctuations to Guide Epithelial Tissue Ordering. Developmental Cell, 2017, 43, 480-492.e6.	3.1	109
39	Coordinated control of Notch-Delta signalling and cell cycle progression drives lateral inhibition mediated tissue patterning. Development (Cambridge), 2016, 143, 2305-10.	1.2	48
40	A new mechanism for spatial pattern formation via lateral and protrusion-mediated lateral signalling. Journal of the Royal Society Interface, 2016, 13, 20160484.	1.5	46
41	Oriented Division: Using T-Junctions to Determine Direction. Current Biology, 2016, 26, R371-R373.	1.8	2
42	On the Archaeal Origins of Eukaryotes and the Challenges of Inferring Phenotype from Genotype. Trends in Cell Biology, 2016, 26, 476-485.	3.6	36
43	Coupling changes in cell shape to chromosome segregation. Nature Reviews Molecular Cell Biology, 2016, 17, 511-521.	16.1	118
44	A question of time: tissue adaptation to mechanical forces. Current Opinion in Cell Biology, 2016, 38, 68-73.	2.6	61
45	Precise Biopatterning with Plasma: The Plasma Micro-contact Patterning (PÎ¼CP) Technique. , 2016, , 3361-3373.		0
46	Tug of warâ€"The influence of opposing physical forces on epithelial cell morphology. Developmental Biology, 2015, 401, 92-102.	0.9	64
47	Ect2/Pbl Acts via Rho and Polarity Proteins to Direct the Assembly of an Isotropic Actomyosin Cortex upon Mitotic Entry. Developmental Cell, 2015, 32, 604-616.	3.1	85
48	Kinetochore-localized PP1â€“Sds22 couples chromosome segregation to polar relaxation. Nature, 2015, 524, 489-492.	13.7	114
49	Emergence of homeostatic epithelial packing and stress dissipation through divisions oriented along the long cell axis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5726-5731.	3.3	176
50	Precise Biopatterning with Plasma: The Plasma Micro-contact Patterning (PÎ¼CP) Technique. , 2015, , 1-14.		0
51	Buzz Baum: The art of cell shape. Journal of Cell Biology, 2014, 206, 332-333.	2.3	0
52	An inside-out origin for the eukaryotic cell. BMC Biology, 2014, 12, 76.	1.7	126
53	Myo19 Ensures Symmetric Partitioning of Mitochondria and Coupling of Mitochondrial Segregation to Cell Division. Current Biology, 2014, 24, 2598-2605.	1.8	76
54	Shaping up to divide: Coordinating actin and microtubule cytoskeletal remodelling during mitosis. Seminars in Cell and Developmental Biology, 2014, 34, 109-115.	2.3	101

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55	Plasma Microcontact Patterning (PÎ¼CP). Methods in Cell Biology, 2014, 119, 73-90.	0.5	6
56	A kinetic mechanism for cell sorting based on local variations in cell motility. Interface Focus, 2014, 4, 20140013.	1.5	22
57	An absolute interval scale of order for point patterns. Journal of the Royal Society Interface, 2014, 11, 20140342.	1.5	9
58	Mitotic Rounding Alters Cell Geometry to Ensure Efficient Bipolar Spindle Formation. Developmental Cell, 2013, 25, 270-283.	3.1	265
59	Cooperation and competition in the dynamics of tissue architecture during homeostasis and tumorigenesis. Seminars in Cancer Biology, 2013, 23, 293-298.	4.3	20
60	Generating suspended cell monolayers for mechanobiological studies. Nature Protocols, 2013, 8, 2516-2530.	5.5	50
61	The Role of Chromosome Missegregation in Cancer Development: A Theoretical Approach Using Agent-Based Modelling. PLoS ONE, 2013, 8, e72206.	1.1	13
62	Characterizing the mechanics of cultured cell monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16449-16454.	3.3	295
63	The metastatic cancer cell cortex: An adaptation to enhance robust cell division in novel environments?. BioEssays, 2012, 34, 1017-1020.	1.2	17
64	Changes in Ect2 Localization Couple Actomyosin-Dependent Cell Shape Changes to Mitotic Progression. Developmental Cell, 2012, 23, 371-383.	3.1	168
65	Live-cell delamination counterbalances epithelial growth to limit tissue overcrowding. Nature, 2012, 484, 542-545.	13.7	377
66	Making waves: the rise and fall and rise of quantitative developmental biology. Development (Cambridge), 2012, 139, 3065-3069.	1.2	5
67	PP1-Mediated Moesin Dephosphorylation Couples Polar Relaxation to Mitotic Exit. Current Biology, 2012, 22, 231-236.	1.8	86
68	FMNL2 Drives Actin-Based Protrusion and Migration Downstream of Cdc42. Current Biology, 2012, 22, 1005-1012.	1.8	184
69	A Biomechanical Analysis of Ventral Furrow Formation in the Drosophila Melanogaster Embryo. PLoS ONE, 2012, 7, e34473.	1.1	50
70	Dynamics of adherens junctions in epithelial establishment, maintenance, and remodeling. Journal of Cell Biology, 2011, 192, 907-917.	2.3	415
71	Might makes right: Using force to align the mitotic spindle. Nature Cell Biology, 2011, 13, 736-738.	4.6	7
72	Finding gold in yellowing papers. Nature Reviews Molecular Cell Biology, 2011, 12, 205-205.	16.1	2

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73	Identification and characterization of a set of conserved and new regulators of cytoskeletal organization, cell morphology and migration. BMC Biology, 2011, 9, 54.	1.7	155
74	The importance of structured noise in the generation of self-organizing tissue patterns through contact-mediated cellâ€“cell signalling. Journal of the Royal Society Interface, 2011, 8, 787-798.	1.5	35
75	Comparative RNAi screening identifies a conserved core metazoan actinome by phenotype. Journal of Cell Biology, 2011, 194, 789-805.	2.3	57
76	Clathrin is required for Scar/Wave-mediated lamellipodium formation. Journal of Cell Science, 2011, 124, 3414-3427.	1.2	34
77	Clathrin is required for Scar/Wave-mediated lamellipodium formation. Development (Cambridge), 2011, 138, e2107-e2107.	1.2	0
78	SCAR/WAVE is activated at mitosis and drives myosin-independent cytokinesis. Journal of Cell Science, 2010, 123, 2246-2255.	1.2	49
79	A Role for p38 Stress-Activated Protein Kinase in Regulation of Cell Growth via TORC1. Molecular and Cellular Biology, 2010, 30, 481-495.	1.1	79
80	Polarity proteins and Rho GTPases cooperate to spatially organise epithelial actin-based protrusions. Journal of Cell Science, 2010, 123, 1089-1098.	1.2	67
81	Video force microscopy reveals the mechanics of ventral furrow invagination in Drosophila. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 22111-22116.	3.3	155
82	Tao-1 is a negative regulator of microtubule plus-end growth. Journal of Cell Science, 2010, 123, 2708-2716.	1.2	43
83	A Polarised Population of Dynamic Microtubules Mediates Homeostatic Length Control in Animal Cells. PLoS Biology, 2010, 8, e1000542.	2.6	71
84	Actin and cellular architecture at a glance. Journal of Cell Science, 2010, 123, 155-158.	1.2	9
85	The FLIGHT Drosophila RNAi database. Fly, 2010, 4, 344-348.	0.9	4
86	Dynamic Filopodia Transmit Intermittent Delta-Notch Signaling to Drive Pattern Refinement during Lateral Inhibition. Developmental Cell, 2010, 19, 78-89.	3.1	252
87	Polarity proteins and Rho GTPases cooperate to spatially organise epithelial actin-based protrusions. Development (Cambridge), 2010, 137, e808-e808.	1.2	1
88	Patch-based within-object classification. , 2009, , .		24
89	Robust mechanisms of ventral furrow invagination require the combination of cellular shape changes. Physical Biology, 2009, 6, 016010.	0.8	45
90	The actin cytoskeleton in spindle assembly and positioning. Trends in Cell Biology, 2009, 19, 174-179.	3.6	209

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91	Parallel RNAi screens across different cell lines identify generic and cell type-specific regulators of actin organization and cell morphology. Genome Biology, 2009, 10, R26.	13.9	61
92	PDGF/VEGF signaling controls cell size in Drosophila. Genome Biology, 2009, 10, R20.	13.9	45
93	Moesin Controls Cortical Rigidity, Cell Rounding, and Spindle Morphogenesis during Mitosis. Current Biology, 2008, 18, 91-101.	1.8	381
94	Cell Shape: Taking the Heat. Current Biology, 2008, 18, R470-R472.	1.8	4
95	Cdc42, Par6, and aPKC Regulate Arp2/3-Mediated Endocytosis to Control Local Adherens Junction Stability. Current Biology, 2008, 18, 1631-1638.	1.8	259
96	Drosophila Cell Lines as Model Systems and as an Experimental Tool. Methods in Molecular Biology, 2008, 420, 391-424.	0.4	39
97	Transitions between epithelial and mesenchymal states in development and disease. Seminars in Cell and Developmental Biology, 2008, 19, 294-308.	2.3	360
98	Cell shape and tissue morphogenesis. Seminars in Cell and Developmental Biology, 2008, 19, 213-214.	2.3	5
99	A Genome-Wide RNAi Screen to Dissect Centriole Duplication and Centrosome Maturation in Drosophila. PLoS Biology, 2008, 6, e224.	2.6	216
100	The Evolution of Robust Development and Homeostasis in Artificial Organisms. PLoS Computational Biology, 2008, 4, e1000030.	1.5	37
101	Prostate-derived Sterile 20-like Kinase 1-Î± Induces Apoptosis. Journal of Biological Chemistry, 2007, 282, 6484-6493.	1.6	32
102	Dynamic cofilin phosphorylation in the control of lamellipodial actin homeostasis. Journal of Cell Science, 2007, 120, 1888-1897.	1.2	82
103	Minimizing the risk of reporting false positives in large-scale RNAi screens. Nature Methods, 2006, 3, 777-779.	9.0	417
104	Regulation of apicomplexan actin-based motility. Nature Reviews Microbiology, 2006, 4, 621-628.	13.6	151
105	Leftâ€“Right Asymmetry: Actinâ€“Myosin through the Looking Glass. Current Biology, 2006, 16, R502-R504.	1.8	8
106	FLIGHT: database and tools for the integration and cross-correlation of large-scale RNAi phenotypic datasets. Nucleic Acids Research, 2006, 34, D479-D483.	6.5	34
107	Actin Nucleation: Spire â€” Actin Nucleator in a Class of Its Own. Current Biology, 2005, 15, R305-R308.	1.8	31
108	Cascade pathway of filopodia formation downstream of SCAR. Journal of Cell Science, 2004, 117, 837-848.	1.2	107

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109	RNAi in a postmodern, postgenomic era. Oncogene, 2004, 23, 8336-8339.	2.6	15
110	Animal Development: Crowd Control. Current Biology, 2004, 14, R716-R718.	1.8	7
111	Myosin II-Dependent Cortical Movement Is Required for Centrosome Separation and Positioning during Mitotic Spindle Assembly. Cell, 2004, 117, 361-372.	13.5	242
112	Abi, Sra1, and Kette Control the Stability and Localization of SCAR/WAVE to Regulate the Formation of Actin-Based Protrusions. Current Biology, 2003, 13, 1867-1875.	1.8	326
113	Actin in development. Mechanisms of Development, 2003, 120, 1337-1349.	1.7	36
114	A Drosophila Homolog of Cyclase-Associated Proteins Collaborates with the Abl Tyrosine Kinase to Control Midline Axon Pathfinding. Neuron, 2002, 36, 611-622.	3.8	81
115	Winging Itâ€"Actin on the Fly. Developmental Cell, 2002, 2, 125-126.	3.1	5
116	Drosophila Oogenesis: Generating an Axis of Polarity. Current Biology, 2002, 12, R835-R837.	1.8	4
117	Spatial control of the actin cytoskeleton in Drosophila epithelial cells. Nature Cell Biology, 2001, 3, 883-890.	4.6	120
118	A cyclase-associated protein regulates actin and cell polarity during Drosophila oogenesis and in yeast. Current Biology, 2000, 10, 964-973.	1.8	87