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	Minimizing the risk of reporting false positives in large-scale RNAi screens. Nature Methods, 2006, 3, 777-779.	9.0	417
2	Dynamics of adherens junctions in epithelial establishment, maintenance, and remodeling. Journal of Cell Biology, 2011, 192, 907-917.	2.3	415
3	Moesin Controls Cortical Rigidity, Cell Rounding, and Spindle Morphogenesis during Mitosis. Current Biology, 2008, 18, 91-101.	1.8	381
4	Live-cell delamination counterbalances epithelial growth to limit tissue overcrowding. Nature, 2012, 484, 542-545.	13.7	377
5	Transitions between epithelial and mesenchymal states in development and disease. Seminars in Cell and Developmental Biology, 2008, 19, 294-308.	2.3	360
6	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
7	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
8	Mitotic Rounding Alters Cell Geometry to Ensure Efficient Bipolar Spindle Formation. Developmental Cell, 2013, 25, 270-283.	3.1	265
9	Cdc42, Par6, and aPKC Regulate Arp2/3-Mediated Endocytosis to Control Local Adherens Junction Stability. Current Biology, 2008, 18, 1631-1638.	1.8	259
10	Dynamic Filopodia Transmit Intermittent Delta-Notch Signaling to Drive Pattern Refinement during Lateral Inhibition. Developmental Cell, 2010, 19, 78-89.	3.1	252
11	Myosin II-Dependent Cortical Movement Is Required for Centrosome Separation and Positioning during Mitotic Spindle Assembly. Cell, 2004, 117, 361-372.	13.5	242
12	A Genome-Wide RNAi Screen to Dissect Centriole Duplication and Centrosome Maturation in Drosophila. PLoS Biology, 2008, 6, e224.	2.6	216
13	The actin cytoskeleton in spindle assembly and positioning. Trends in Cell Biology, 2009, 19, 174-179.	3.6	209
14	FMNL2 Drives Actin-Based Protrusion and Migration Downstream of Cdc42. Current Biology, 2012, 22, 1005-1012.	1.8	184
15	Size control in mammalian cells involves modulation of both growth rate and cell cycle duration. Nature Communications, 2018, 9, 3275.	5.8	178
16	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
17	Changes in Ect2 Localization Couple Actomyosin-Dependent Cell Shape Changes to Mitotic Progression. Developmental Cell, 2012, 23, 371-383.	3.1	168
18	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

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19	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
20	Regulation of apicomplexan actin-based motility. Nature Reviews Microbiology, 2006, 4, 621-628.	13.6	151
21	Real-time fluorescence and deformability cytometry. Nature Methods, 2018, 15, 355-358.	9.0	127
22	An inside-out origin for the eukaryotic cell. BMC Biology, 2014, 12, 76.	1.7	126
23	Stress relaxation in epithelial monolayers is controlled by the actomyosin cortex. Nature Physics, 2019, 15, 839-847.	6.5	126
24	An ESCRT-III Polymerization Sequence Drives Membrane Deformation and Fission. Cell, 2020, 182, 1140-1155.e18.	13.5	123
25	Spatial control of the actin cytoskeleton in Drosophila epithelial cells. Nature Cell Biology, 2001, 3, 883-890.	4.6	120
26	NanoJ: a high-performance open-source super-resolution microscopy toolbox. Journal Physics D: Applied Physics, 2019, 52, 163001.	1.3	120
27	Coupling changes in cell shape to chromosome segregation. Nature Reviews Molecular Cell Biology, 2016, 17, 511-521.	16.1	118
28	Kinetochore-localized PP1â€“Sds22 couples chromosome segregation to polar relaxation. Nature, 2015, 524, 489-492.	13.7	114
29	The Role of Mitotic Cell-Substrate Adhesion Re-modeling in Animal Cell Division. Developmental Cell, 2018, 45, 132-145.e3.	3.1	111
30	Myosin II Controls Junction Fluctuations to Guide Epithelial Tissue Ordering. Developmental Cell, 2017, 43, 480-492.e6.	3.1	109
31	Cascade pathway of filopodia formation downstream of SCAR. Journal of Cell Science, 2004, 117, 837-848.	1.2	107
32	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
33	The Mechanics of Mitotic Cell Rounding. Frontiers in Cell and Developmental Biology, 2020, 8, 687.	1.8	98
34	A cyclase-associated protein regulates actin and cell polarity during Drosophila oogenesis and in yeast. Current Biology, 2000, 10, 964-973.	1.8	87
35	PP1-Mediated Moesin Dephosphorylation Couples Polar Relaxation to Mitotic Exit. Current Biology, 2012, 22, 231-236.	1.8	86
36	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

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37	Automating multimodal microscopy with NanoJ-Fluidics. Nature Communications, 2019, 10, 1223.	5.8	84
38	Dynamic cofilin phosphorylation in the control of lamellipodial actin homeostasis. Journal of Cell Science, 2007, 120, 1888-1897.	1.2	82
39	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
40	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
41	Myo19 Ensures Symmetric Partitioning of Mitochondria and Coupling of Mitochondrial Segregation to Cell Division. Current Biology, 2014, 24, 2598-2605.	1.8	76
42	A Polarised Population of Dynamic Microtubules Mediates Homeostatic Length Control in Animal Cells. PLoS Biology, 2010, 8, e1000542.	2.6	71
43	Polarization of Myosin II Refines Tissue Material Properties to Buffer Mechanical Stress. Developmental Cell, 2019, 48, 245-260.e7.	3.1	68
44	Polarity proteins and Rho GTPases cooperate to spatially organise epithelial actin-based protrusions. Journal of Cell Science, 2010, 123, 1089-1098.	1.2	67
45	Oncogenic Signaling Alters Cell Shape and Mechanics to Facilitate Cell Division under Confinement. Developmental Cell, 2020, 52, 563-573.e3.	3.1	65
46	Tug of warâ€"The influence of opposing physical forces on epithelial cell morphology. Developmental Biology, 2015, 401, 92-102.	0.9	64
47	The proteasome controls ESCRT-IIIâ€“mediated cell division in an archaeon. Science, 2020, 369, .	6.0	63
48	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
49	A question of time: tissue adaptation to mechanical forces. Current Opinion in Cell Biology, 2016, 38, 68-73.	2.6	61
50	Actomyosin controls planarity and folding of epithelia in response to compression. Nature Materials, 2020, 19, 109-117.	13.3	60
51	Bacterial Vipp1 and PspA are members of the ancient ESCRT-III membrane-remodeling superfamily. Cell, 2021, 184, 3660-3673.e18.	13.5	58
52	Comparative RNAi screening identifies a conserved core metazoan actinome by phenotype. Journal of Cell Biology, 2011, 194, 789-805.	2.3	57
53	Generating suspended cell monolayers for mechanobiological studies. Nature Protocols, 2013, 8, 2516-2530.	5.5	50
54	A Biomechanical Analysis of Ventral Furrow Formation in the Drosophila Melanogaster Embryo. PLoS ONE, 2012, 7, e34473.	1.1	50

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55	SCAR/WAVE is activated at mitosis and drives myosin-independent cytokinesis. Journal of Cell Science, 2010, 123, 2246-2255.	1.2	49
56	Closed mitosis requires local disassembly of the nuclear envelope. Nature, 2020, 585, 119-123.	13.7	49
57	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
58	Local actin nucleation tunes centrosomal microtubule nucleation during passage throughÂmitosis. EMBO Journal, 2019, 38, .	3.5	48
59	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
60	Robust mechanisms of ventral furrow invagination require the combination of cellular shape changes. Physical Biology, 2009, 6, 016010.	0.8	45
61	PDGF/VEGF signaling controls cell size in Drosophila. Genome Biology, 2009, 10, R20.	13.9	45
62	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
63	Tao-1 is a negative regulator of microtubule plus-end growth. Journal of Cell Science, 2010, 123, 2708-2716.	1.2	43
64	Drosophila Cell Lines as Model Systems and as an Experimental Tool. Methods in Molecular Biology, 2008, 420, 391-424.	0.4	39
65	Changes in ESCRT-III filament geometry drive membrane remodelling and fission in silico. BMC Biology, 2019, 17, 82.	1.7	38
66	The Evolution of Robust Development and Homeostasis in Artificial Organisms. PLoS Computational Biology, 2008, 4, e1000030.	1.5	37
67	Actin in development. Mechanisms of Development, 2003, 120, 1337-1349.	1.7	36
68	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
69	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
70	A role for actomyosin contractility in Notch signaling. BMC Biology, 2019, 17, 12.	1.7	35
71	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
72	Clathrin is required for Scar/Wave-mediated lamellipodium formation. Journal of Cell Science, 2011, 124, 3414-3427.	1.2	34

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73	Two-step interphase microtubule disassembly aids spindle morphogenesis. BMC Biology, 2018, 16, 14.	1.7	34
74	Prostate-derived Sterile 20-like Kinase 1-Î± Induces Apoptosis. Journal of Biological Chemistry, 2007, 282, 6484-6493.	1.6	32
75	Actin Nucleation: Spire â€" Actin Nucleator in a Class of Its Own. Current Biology, 2005, 15, R305-R308.	1.8	31
76	Nuclear envelope remodelling during mitosis. Current Opinion in Cell Biology, 2021, 70, 67-74.	2.6	29
77	Asgard archaea shed light on the evolutionary origins of the eukaryotic ubiquitin-ESCRT machinery. Nature Communications, 2022, 13, .	5.8	27
78	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
79	Patch-based within-object classification. , 2009, , .		24
80	Mechanochemical Crosstalk Produces Cell-Intrinsic Patterning of the Cortex to Orient the Mitotic Spindle. Current Biology, 2020, 30, 3687-3696.e4.	1.8	24
81	A kinetic mechanism for cell sorting based on local variations in cell motility. Interface Focus, 2014, 4, 20140013.	1.5	22
82	Evolution of polymer formation within the actin superfamily. Molecular Biology of the Cell, 2017, 28, 2461-2469.	0.9	22
83	An asymmetric junctional mechanoresponse coordinates mitotic rounding with epithelial integrity. Journal of Cell Biology, 2021, 220, .	2.3	22
84	Cooperation and competition in the dynamics of tissue architecture during homeostasis and tumorigenesis. Seminars in Cancer Biology, 2013, 23, 293-298.	4.3	20
85	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
86	Oncogenic RAS instructs morphological transformation of human epithelia via differential tissue mechanics. Science Advances, 2021, 7, eabg6467.	4.7	18
87	The metastatic cancer cell cortex: An adaptation to enhance robust cell division in novel environments?. BioEssays, 2012, 34, 1017-1020.	1.2	17
88	RNAi in a postmodern, postgenomic era. Oncogene, 2004, 23, 8336-8339.	2.6	15
89	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
90	The Role of Chromosome Missegregation in Cancer Development: A Theoretical Approach Using Agent-Based Modelling. PLoS ONE, 2013, 8, e72206.	1.1	13

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91	Exploring the Design Rules for Efficient Membrane-Reshaping Nanostructures. Physical Review Letters, 2020, 125, 228101.	2.9	11
92	Aurora Bâ€dependent polarization of the cortical actomyosin network during mitotic exit. EMBO Reports, 2021, 22, e52387.	2.0	11
93	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
94	Actin and cellular architecture at a glance. Journal of Cell Science, 2010, 123, 155-158.	1.2	9
95	An absolute interval scale of order for point patterns. Journal of the Royal Society Interface, 2014, 11, 20140342.	1.5	9
96	The merger that made us. BMC Biology, 2020, 18, 72.	1.7	9
97	Leftâ€“Right Asymmetry: Actinâ€“Myosin through the Looking Glass. Current Biology, 2006, 16, R502-R504.	1.8	8
98	Animal Development: Crowd Control. Current Biology, 2004, 14, R716-R718.	1.8	7
99	Might makes right: Using force to align the mitotic spindle. Nature Cell Biology, 2011, 13, 736-738.	4.6	7
100	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
101	Plasma Microcontact Patterning (PÎ¼CP). Methods in Cell Biology, 2014, 119, 73-90.	0.5	6
102	Winging Itâ€”Actin on the Fly. Developmental Cell, 2002, 2, 125-126.	3.1	5
103	Cell shape and tissue morphogenesis. Seminars in Cell and Developmental Biology, 2008, 19, 213-214.	2.3	5
104	Making waves: the rise and fall and rise of quantitative developmental biology. Development (Cambridge), 2012, 139, 3065-3069.	1.2	5
105	Drosophila Oogenesis: Generating an Axis of Polarity. Current Biology, 2002, 12, R835-R837.	1.8	4
106	Cell Shape: Taking the Heat. Current Biology, 2008, 18, R470-R472.	1.8	4
107	The FLIGHT Drosophila RNAi database. Fly, 2010, 4, 344-348.	0.9	4
108	Evolution or revolution? Changing the way science is published and communicated. PLoS Biology, 2019, 17, e3000272.	2.6	4

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109	Finding gold in yellowing papers. Nature Reviews Molecular Cell Biology, 2011, 12, 205-205.	16.1	2
110	Oriented Division: Using T-Junctions to Determine Direction. Current Biology, 2016, 26, R371-R373.	1.8	2
111	Reviewing papers as you would like your papers to be reviewed. Molecular Biology of the Cell, 2019, 30, 3013-3014.	0.9	1
112	Polarity proteins and Rho GTPases cooperate to spatially organise epithelial actin-based protrusions. Development (Cambridge), 2010, 137, e808-e808.	1.2	1
113	Buzz Baum: The art of cell shape. Journal of Cell Biology, 2014, 206, 332-333.	2.3	0
114	Clathrin is required for Scar/Wave-mediated lamellipodium formation. Development (Cambridge), 2011, 138, e2107-e2107.	1.2	0
115	Precise Biopatterning with Plasma: The Plasma Micro-contact Patterning (PÎ¼CP) Technique. , 2015, , 1-14.		0
116	Precise Biopatterning with Plasma: The Plasma Micro-contact Patterning (PÎ¼CP) Technique. , 2016, , 3361-3373.		0
117	Developing cells remember where they came from, thanks to keratin filaments. Nature, 2020, 585, 352-353.	13.7	0
118	Moving simply: Naegleria crawls and feeds using an ancient Arp2/3-dependent mechanism. Journal of Cell Biology, 2020, 219, .	2.3	0