

Stephan W Grill

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11533706/publications.pdf>

Version: 2024-02-01

64
papers

9,033
citations

61984

43
h-index

118850

62
g-index

71
all docs

71
docs citations

71
times ranked

9284
citing authors

#	ARTICLE	IF	CITATIONS
1	Lattice light-sheet microscopy: Imaging molecules to embryos at high spatiotemporal resolution. <i>Science</i> , 2014, 346, 1257998.	12.6	1,567
2	Phase separation of a yeast prion protein promotes cellular fitness. <i>Science</i> , 2018, 359, .	12.6	534
3	Polarity controls forces governing asymmetric spindle positioning in the <i>Caenorhabditis elegans</i> embryo. <i>Nature</i> , 2001, 409, 630-633.	27.8	484
4	Anisotropies in cortical tension reveal the physical basis of polarizing cortical flows. <i>Nature</i> , 2010, 467, 617-621.	27.8	434
5	Forces Driving Epithelial Spreading in Zebrafish Gastrulation. <i>Science</i> , 2012, 338, 257-260.	12.6	368
6	The Distribution of Active Force Generators Controls Mitotic Spindle Position. <i>Science</i> , 2003, 301, 518-521.	12.6	351
7	Polarization of PAR Proteins by Advective Triggering of a Pattern-Forming System. <i>Science</i> , 2011, 334, 1137-1141.	12.6	290
8	Translation of Polarity Cues into Asymmetric Spindle Positioning in <i>Caenorhabditis elegans</i> Embryos. <i>Science</i> , 2003, 300, 1957-1961.	12.6	277
9	Backtracking determines the force sensitivity of RNAP in a factor-dependent manner. <i>Nature</i> , 2007, 446, 820-823.	27.8	249
10	Turing's next steps: the mechanochemical basis of morphogenesis. <i>Nature Reviews Molecular Cell Biology</i> , 2011, 12, 392-398.	37.0	236
11	Impaired DNA damage response signaling by FUS-NLS mutations leads to neurodegeneration and FUS aggregate formation. <i>Nature Communications</i> , 2018, 9, 335.	12.8	217
12	Spindle Positioning by Cortical Pulling Forces. <i>Developmental Cell</i> , 2005, 8, 461-465.	7.0	216
13	Active torque generation by the actomyosin cell cortex drives left-right symmetry breaking. <i>ELife</i> , 2014, 3, e04165.	6.0	197
14	Pattern Formation in Active Fluids. <i>Physical Review Letters</i> , 2011, 106, 028103.	7.8	191
15	Hydrodynamic theory of active matter. <i>Reports on Progress in Physics</i> , 2018, 81, 076601.	20.1	184
16	Spindle Oscillations during Asymmetric Cell Division Require a Threshold Number of Active Cortical Force Generators. <i>Current Biology</i> , 2006, 16, 2111-2122.	3.9	177
17	Theory of Mitotic Spindle Oscillations. <i>Physical Review Letters</i> , 2005, 94, 108104.	7.8	144
18	Cortical flow aligns actin filaments to form a furrow. <i>ELife</i> , 2016, 5, .	6.0	144

#	ARTICLE	IF	CITATIONS
19	Cell polarity: mechanochemical patterning. Trends in Cell Biology, 2013, 23, 72-80.	7.9	139
20	An endosomal tether undergoes an entropic collapse to bring vesicles together. Nature, 2016, 537, 107-111.	27.8	135
21	Non-invasive perturbations of intracellular flow reveal physical principles of cell organization. Nature Cell Biology, 2018, 20, 344-351.	10.3	130
22	Protein Dynamics in Complex DNA Lesions. Molecular Cell, 2018, 69, 1046-1061.e5.	9.7	128
23	Stochastic resetting in backtrack recovery by RNA polymerases. Physical Review E, 2016, 93, 062411.	2.1	120
24	HP1 proteins compact DNA into mechanically and positionally stable phase separated domains. ELife, 2021, 10, .	6.0	119
25	RGS-7 Completes a Receptor-Independent Heterotrimeric G Protein Cycle to Asymmetrically Regulate Mitotic Spindle Positioning in <i>C. elegans</i> . Cell, 2004, 119, 209-218.	28.9	111
26	PAR proteins diffuse freely across the anterior–posterior boundary in polarized <i>C. elegans</i> embryos. Journal of Cell Biology, 2011, 193, 583-594.	5.2	106
27	Mechanisms of backtrack recovery by RNA polymerases I and II. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2946-2951.	7.1	98
28	Guiding self-organized pattern formation in cell polarity establishment. Nature Physics, 2019, 15, 293-300.	16.7	96
29	Attachment of the blastoderm to the vitelline envelope affects gastrulation of insects. Nature, 2019, 568, 395-399.	27.8	95
30	The Origin of Short Transcriptional Pauses. Biophysical Journal, 2009, 96, 2189-2193.	0.5	94
31	Temperature Dependence of Cell Division Timing Accounts for a Shift in the Thermal Limits of <i>C. elegans</i> and <i>C. briggsae</i> . Cell Reports, 2015, 10, 647-653.	6.4	85
32	Forces Generated by Cell Intercalation Tow Epidermal Sheets in Mammalian Tissue Morphogenesis. Developmental Cell, 2014, 28, 617-632.	7.0	81
33	Controlling contractile instabilities in the actomyosin cortex. ELife, 2017, 6, .	6.0	81
34	Sequence-dependent surface condensation of a pioneer transcription factor on DNA. Nature Physics, 2022, 18, 271-276.	16.7	73
35	Ultraviolet diffraction limited nanosurgery of live biological tissues. Review of Scientific Instruments, 2004, 75, 472-478.	1.3	70
36	How Active Mechanics and Regulatory Biochemistry Combine to Form Patterns in Development. Annual Review of Biophysics, 2017, 46, 337-356.	10.0	70

#	ARTICLE	IF	CITATIONS
37	Measuring the complete force field of an optical trap. <i>Optics Letters</i> , 2011, 36, 1260.	3.3	69
38	Determining Physical Properties of the Cell Cortex. <i>Biophysical Journal</i> , 2016, 110, 1421-1429.	0.5	68
39	aPKC phosphorylates NuMA-related LIN-5 to position the mitotic spindle during asymmetric division. <i>Nature Cell Biology</i> , 2011, 13, 1132-1138.	10.3	66
40	FRAP Analysis of Membrane-Associated Proteins: Lateral Diffusion and Membrane-Cytoplasmic Exchange. <i>Biophysical Journal</i> , 2010, 99, 2443-2452.	0.5	63
41	Actomyosin-driven left-right asymmetry: from molecular torques to chiral self organization. <i>Current Opinion in Cell Biology</i> , 2016, 38, 24-30.	5.4	61
42	Pulsatory Patterns in Active Fluids. <i>Physical Review Letters</i> , 2014, 112, .	7.8	56
43	Aurora A depletion reveals centrosome-independent polarization mechanism in <i>Caenorhabditis elegans</i> . <i>ELife</i> , 2019, 8, .	6.0	56
44	Regionalized tissue fluidization is required for epithelial gap closure during insect gastrulation. <i>Nature Communications</i> , 2020, 11, 5604.	12.8	53
45	Single molecule transcription elongation. <i>Methods</i> , 2009, 48, 323-332.	3.8	47
46	Parameter-space topology of models for cell polarity. <i>New Journal of Physics</i> , 2014, 16, 065009.	2.9	46
47	Morphogenetic degeneracies in the actomyosin cortex. <i>ELife</i> , 2018, 7, .	6.0	41
48	PAR-4/LKB1 Mobilizes Nonmuscle Myosin through Anillin to Regulate <i>C.Âelegans</i> Embryonic Polarization and Cytokinesis. <i>Current Biology</i> , 2011, 21, 259-269.	3.9	38
49	A hydraulic instability drives the cell death decision in the nematode germline. <i>Nature Physics</i> , 2021, 17, 920-925.	16.7	38
50	Growing up is stressful: biophysical laws of morphogenesis. <i>Current Opinion in Genetics and Development</i> , 2011, 21, 647-652.	3.3	30
51	Cell lineage-dependent chiral actomyosin flows drive cellular rearrangements in early <i>Caenorhabditis elegans</i> development. <i>ELife</i> , 2020, 9, .	6.0	30
52	Co-condensation of proteins with single- and double-stranded DNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2107871119.	7.1	28
53	Intermittent Transcription Dynamics for the Rapid Production of Long Transcripts of High Fidelity. <i>Cell Reports</i> , 2013, 5, 521-530.	6.4	23
54	Highly-Efficient Guiding of Motile Microtubules on Non-Topographical Motor Patterns. <i>Nano Letters</i> , 2017, 17, 5699-5705.	9.1	20

#	ARTICLE	IF	CITATIONS
55	Multiplex Decomposition of Non-Markovian Dynamics and the Hidden Layer Reconstruction Problem. <i>Physical Review X</i> , 2018, 8, .	8.9	16
56	RNA polymerase pushing. <i>Biophysical Chemistry</i> , 2011, 157, 43-47.	2.8	15
57	Optical tweezers studies of transcription by eukaryotic RNA polymerases. <i>Biomolecular Concepts</i> , 2017, 8, 1-11.	2.2	15
58	CYK-1/Formin activation in cortical RhoA signaling centers promotes organismal left-right symmetry breaking. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	15
59	Nucleosomal arrangement affects single-molecule transcription dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 12733-12738.	7.1	13
60	Forced to Be Unequal. <i>Science</i> , 2010, 330, 597-598.	12.6	4
61	How to apply FLUCS in single cells and living embryos. <i>Protocol Exchange</i> , 0, , .	0.3	2
62	The mechanics of positioning skin follicles. <i>Science</i> , 2017, 357, 750-751.	12.6	1
63	Mechanochemical Pattern Formation in the Actomyosin Cortex. <i>Seibutsu Butsuri</i> , 2018, 58, 027-030.	0.1	0
64	Thermal fluctuations assist mechanical signal propagation in coiled-coil proteins. <i>Physical Review E</i> , 2021, 104, 054403.	2.1	0