Stephan W Grill

List of Publications by Year
in descending order

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	Sequence-dependent surface condensation of a pioneer transcription factor on DNA. Nature Physics, 2022, 18, 271-276.	16.7	73
2	Co-condensation of proteins with single- and double-stranded DNA. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2107871119.	7.1	28
3	HP1 proteins compact DNA into mechanically and positionally stable phase separated domains. ELife, 2021, 10, .	6.0	119
4	A hydraulic instability drives the cell death decision in the nematode germline. Nature Physics, 2021, 17, 920-925.	16.7	38
5	CYK-1/Formin activation in cortical RhoA signaling centers promotes organismal leftâ€"right symmetry breaking. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	15
6	Thermal fluctuations assist mechanical signal propagation in coiled-coil proteins. Physical Review E, 2021, 104, 054403.	2.1	0
7	Regionalized tissue fluidization is required for epithelial gap closure during insect gastrulation. Nature Communications, 2020, 11, 5604.	12.8	53
8	Cell lineage-dependent chiral actomyosin flows drive cellular rearrangements in early Caenorhabditis elegans development. ELife, 2020, 9, .	6.0	30
9	Attachment of the blastoderm to the vitelline envelope affects gastrulation of insects. Nature, 2019, 568, 395-399.	27.8	95
10	Guiding self-organized pattern formation in cell polarity establishment. Nature Physics, 2019, 15, 293-300.	16.7	96
11	Aurora A depletion reveals centrosome-independent polarization mechanism in Caenorhabditis elegans. ELife, 2019, 8, .	6.0	56
12	Non-invasive perturbations of intracellular flow reveal physical principles of cell organization. Nature Cell Biology, 2018, 20, 344-351.	10.3	130
13	Impaired DNA damage response signaling by FUS-NLS mutations leads to neurodegeneration and FUS aggregate formation. Nature Communications, 2018, 9, 335.	12.8	217
14	Phase separation of a yeast prion protein promotes cellular fitness. Science, 2018, 359, .	12.6	534
15	Mechanochemical Pattern Formation in the Actomyosin Cortex. Seibutsu Butsuri, 2018, 58, 027-030.	0.1	0
16	Protein Dynamics in Complex DNA Lesions. Molecular Cell, 2018, 69, 1046-1061.e5.	9.7	128
17	Hydrodynamic theory of active matter. Reports on Progress in Physics, 2018, 81, 076601.	20.1	184
18	Multiplex Decomposition of Non-Markovian Dynamics and the Hidden Layer Reconstruction Problem. Physical Review X, 2018, 8, .	8.9	16

#	ARTICLE	IF	CITATIONS
19	Morphogenetic degeneracies in the actomyosin cortex. ELife, 2018, 7, .	6.0	41
20	Optical tweezers studies of transcription by eukaryotic RNA polymerases. Biomolecular Concepts, 2017, 8, 1-11.	2.2	15
21	How Active Mechanics and Regulatory Biochemistry Combine to Form Patterns in Development. Annual Review of Biophysics, 2017, 46, 337-356.	10.0	70
22	The mechanics of positioning skin follicles. Science, 2017, 357, 750-751.	12.6	1
23	Highly-Efficient Guiding of Motile Microtubules on Non-Topographical Motor Patterns. Nano Letters, 2017, 17, 5699-5705.	9.1	20
24	Controlling contractile instabilities in the actomyosin cortex. ELife, 2017, 6, .	6.0	81
25	Cortical flow aligns actin filaments to form a furrow. ELife, 2016, 5, .	6.0	144
26	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
27	An endosomal tether undergoes an entropic collapse to bring vesicles together. Nature, 2016, 537, 107-111.	27.8	135
28	Stochastic resetting in backtrack recovery by RNA polymerases. Physical Review E, 2016, 93, 062411.	2.1	120
29	Nucleosomal arrangement affects single-molecule transcription dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12733-12738.	7.1	13
30	Determining Physical Properties of the Cell Cortex. Biophysical Journal, 2016, 110, 1421-1429.	0.5	68
31	Actomyosin-driven left-right asymmetry: from molecular torques to chiral self organization. Current Opinion in Cell Biology, 2016, 38, 24-30.	5.4	61
32	Temperature Dependence of Cell Division Timing Accounts for a Shift in the Thermal Limits of C.Âelegans and C.Âbriggsae. Cell Reports, 2015, 10, 647-653.	6.4	85
33	Parameter-space topology of models for cell polarity. New Journal of Physics, 2014, 16, 065009.	2.9	46
34	Pulsatory Patterns in Active Fluids. Physical Review Letters, 2014, 112, .	7.8	56
35	Forces Generated by Cell Intercalation Tow Epidermal Sheets in Mammalian Tissue Morphogenesis. Developmental Cell, 2014, 28, 617-632.	7.0	81
36	Lattice light-sheet microscopy: Imaging molecules to embryos at high spatiotemporal resolution. Science, 2014, 346, 1257998.	12.6	1,567

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37	Active torque generation by the actomyosin cell cortex drives leftâ€"right symmetry breaking. ELife, 2014, 3, e04165.	6.0	197
38	Cell polarity: mechanochemical patterning. Trends in Cell Biology, 2013, 23, 72-80.	7.9	139
39	Intermittent Transcription Dynamics for the Rapid Production of Long Transcripts of High Fidelity. Cell Reports, 2013, 5, 521-530.	6.4	23
40	Forces Driving Epithelial Spreading in Zebrafish Gastrulation. Science, 2012, 338, 257-260.	12.6	368
41	Pattern Formation in Active Fluids. Physical Review Letters, 2011, 106, 028103.	7.8	191
42	Polarization of PAR Proteins by Advective Triggering of a Pattern-Forming System. Science, 2011, 334, 1137-1141.	12.6	290
43	Measuring the complete force field of an optical trap. Optics Letters, 2011, 36, 1260.	3.3	69
44	Growing up is stressful: biophysical laws of morphogenesis. Current Opinion in Genetics and Development, 2011, 21, 647-652.	3.3	30
45	Turing's next steps: the mechanochemical basis of morphogenesis. Nature Reviews Molecular Cell Biology, 2011, 12, 392-398.	37.0	236
46	PAR-4/LKB1 Mobilizes Nonmuscle Myosin through Anillin to Regulate C.Âelegans Embryonic Polarization and Cytokinesis. Current Biology, 2011, 21, 259-269.	3.9	38
47	RNA polymerase pushing. Biophysical Chemistry, 2011, 157, 43-47.	2.8	15
48	aPKC phosphorylates NuMA-related LIN-5 to position the mitotic spindle during asymmetric division. Nature Cell Biology, 2011, 13, 1132-1138.	10.3	66
49	PAR proteins diffuse freely across the anteriorâ€"posterior boundary in polarized <i>C. elegans</i> embryos. Journal of Cell Biology, 2011, 193, 583-594.	5.2	106
50	Anisotropies in cortical tension reveal the physical basis of polarizing cortical flows. Nature, 2010, 467, 617-621.	27.8	434
51	Forced to Be Unequal. Science, 2010, 330, 597-598.	12.6	4
52	FRAP Analysis of Membrane-Associated Proteins: Lateral Diffusion and Membrane-Cytoplasmic Exchange. Biophysical Journal, 2010, 99, 2443-2452.	0.5	63
53	Single molecule transcription elongation. Methods, 2009, 48, 323-332.	3.8	47
54	The Origin of Short Transcriptional Pauses. Biophysical Journal, 2009, 96, 2189-2193.	0.5	94

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55	Backtracking determines the force sensitivity of RNAPâ€‰II in a factor-dependent manner. Nature, 2007, 446, 820-823.	27.8	249
56	Spindle Oscillations during Asymmetric Cell Division Require a Threshold Number of Active Cortical Force Generators. Current Biology, 2006, 16, 2111-2122.	3.9	177
57	Theory of Mitotic Spindle Oscillations. Physical Review Letters, 2005, 94, 108104.	7.8	144
58	Spindle Positioning by Cortical Pulling Forces. Developmental Cell, 2005, 8, 461-465.	7.0	216
59	Ultraviolet diffraction limited nanosurgery of live biological tissues. Review of Scientific Instruments, 2004, 75, 472-478.	1.3	70
60	RGS-7 Completes a Receptor-Independent Heterotrimeric G Protein Cycle to Asymmetrically Regulate Mitotic Spindle Positioning in C. elegans. Cell, 2004, 119, 209-218.	28.9	111
61	The Distribution of Active Force Generators Controls Mitotic Spindle Position. Science, 2003, 301, 518-521.	12.6	351
62	Translation of Polarity Cues into Asymmetric Spindle Positioning in Caenorhabditis elegans Embryos. Science, 2003, 300, 1957-1961.	12.6	277
63	Polarity controls forces governing asymmetric spindle positioning in the Caenorhabditis elegans embryo. Nature, 2001, 409, 630-633.	27.8	484
64	How to apply FLUCS in single cells and living embryos. Protocol Exchange, 0, , .	0.3	2