

# Stephan Grill

## List of Publications by Year in descending order

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Version: 2024-02-01

58  
papers

10,951  
citations

66343

42  
h-index

149698

56  
g-index

72  
all docs

72  
docs citations

72  
times ranked

11751  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sequence-dependent surface condensation of a pioneer transcription factor on DNA. <i>Nature Physics</i> , 2022, 18, 271-276.	16.7	73
2	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
3	HP1 proteins compact DNA into mechanically and positionally stable phase separated domains. <i>ELife</i> , 2021, 10, .	6.0	119
4	Nonlinear machine learning pattern recognition and bacteria-metabolite multilayer network analysis of perturbed gastric microbiome. <i>Nature Communications</i> , 2021, 12, 1926.	12.8	22
5	A hydraulic instability drives the cell death decision in the nematode germline. <i>Nature Physics</i> , 2021, 17, 920-925.	16.7	38
6	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
7	Thermal fluctuations assist mechanical signal propagation in coiled-coil proteins. <i>Physical Review E</i> , 2021, 104, 054403.	2.1	0
8	Cell lineage-dependent chiral actomyosin flows drive cellular rearrangements in early <i>Caenorhabditis elegans</i> development. <i>ELife</i> , 2020, 9, .	6.0	30
9	Attachment of the blastoderm to the vitelline envelope affects gastrulation of insects. <i>Nature</i> , 2019, 568, 395-399.	27.8	95
10	Guiding self-organized pattern formation in cell polarity establishment. <i>Nature Physics</i> , 2019, 15, 293-300.	16.7	96
11	Aurora A depletion reveals centrosome-independent polarization mechanism in <i>Caenorhabditis elegans</i> . <i>ELife</i> , 2019, 8, .	6.0	56
12	Non-invasive perturbations of intracellular flow reveal physical principles of cell organization. <i>Nature Cell Biology</i> , 2018, 20, 344-351.	10.3	130
13	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
14	Phase separation of a yeast prion protein promotes cellular fitness. <i>Science</i> , 2018, 359, .	12.6	534
15	Mechanochemical Pattern Formation in the Actomyosin Cortex. <i>Seibutsu Butsuri</i> , 2018, 58, 027-030.	0.1	0
16	Protein Dynamics in Complex DNA Lesions. <i>Molecular Cell</i> , 2018, 69, 1046-1061.e5.	9.7	128
17	Hydrodynamic theory of active matter. <i>Reports on Progress in Physics</i> , 2018, 81, 076601.	20.1	184
18	Multiplex Decomposition of Non-Markovian Dynamics and the Hidden Layer Reconstruction Problem. <i>Physical Review X</i> , 2018, 8, .	8.9	16

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19	Morphogenetic degeneracies in the actomyosin cortex. <i>ELife</i> , 2018, 7, .	6.0	41
20	How Active Mechanics and Regulatory Biochemistry Combine to Form Patterns in Development. <i>Annual Review of Biophysics</i> , 2017, 46, 337-356.	10.0	70
21	Mammalian Diaphanous 1 Mediates a Pathway for E-cadherin to Stabilize Epithelial Barriers through Junctional Contractility. <i>Cell Reports</i> , 2017, 18, 2854-2867.	6.4	94
22	Highly-Efficient Guiding of Motile Microtubules on Non-Topographical Motor Patterns. <i>Nano Letters</i> , 2017, 17, 5699-5705.	9.1	20
23	Controlling contractile instabilities in the actomyosin cortex. <i>ELife</i> , 2017, 6, .	6.0	81
24	Cortical flow aligns actin filaments to form a furrow. <i>ELife</i> , 2016, 5, .	6.0	144
25	Mechanisms of backtrack recovery by RNA polymerases I and II. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 2946-2951.	7.1	98
26	An endosomal tether undergoes an entropic collapse to bring vesicles together. <i>Nature</i> , 2016, 537, 107-111.	27.8	135
27	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
28	Determining Physical Properties of the Cell Cortex. <i>Biophysical Journal</i> , 2016, 110, 1421-1429.	0.5	68
29	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
30	Temperature Dependence of Cell Division Timing Accounts for a Shift in the Thermal Limits of <i>C.Âlegans</i> and <i>C.Âbriggsae</i> . <i>Cell Reports</i> , 2015, 10, 647-653.	6.4	85
31	A Liquid-to-Solid Phase Transition of the ALS Protein FUS Accelerated by Disease Mutation. <i>Cell</i> , 2015, 162, 1066-1077.	28.9	2,182
32	Parameter-space topology of models for cell polarity. <i>New Journal of Physics</i> , 2014, 16, 065009.	2.9	46
33	Pulsatory Patterns in Active Fluids. <i>Physical Review Letters</i> , 2014, 112, .	7.8	56
34	Tension and Force-Resistant Attachment Are Essential for Myofibrillogenesis in <i>Drosophila</i> Flight Muscle. <i>Current Biology</i> , 2014, 24, 705-716.	3.9	114
35	Forces Generated by Cell Intercalation Tow Epidermal Sheets in Mammalian Tissue Morphogenesis. <i>Developmental Cell</i> , 2014, 28, 617-632.	7.0	81
36	Lattice light-sheet microscopy: Imaging molecules to embryos at high spatiotemporal resolution. <i>Science</i> , 2014, 346, 1257998.	12.6	1,567

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37	Active torque generation by the actomyosin cell cortex drives left-right symmetry breaking. <i>ELife</i> , 2014, 3, e04165.	6.0	197
38	Cell polarity: mechanochemical patterning. <i>Trends in Cell Biology</i> , 2013, 23, 72-80.	7.9	139
39	MECHANOCHEMICAL PATTERN FORMATION IN THE POLARIZATION OF THE ONE-CELL C. ELEGANS EMBRYO. <i>World Scientific Lecture Notes in Complex Systems</i> , 2013, , 201-212.	0.1	0
40	Systematic genetic interaction screens uncover cell polarity regulators and functional redundancy. <i>Nature Cell Biology</i> , 2013, 15, 103-112.	10.3	84
41	Forces Driving Epithelial Spreading in Zebrafish Gastrulation. <i>Science</i> , 2012, 338, 257-260.	12.6	368
42	Pattern Formation in Active Fluids. <i>Physical Review Letters</i> , 2011, 106, 028103.	7.8	191
43	Polarization of PAR Proteins by Advective Triggering of a Pattern-Forming System. <i>Science</i> , 2011, 334, 1137-1141.	12.6	290
44	Growing up is stressful: biophysical laws of morphogenesis. <i>Current Opinion in Genetics and Development</i> , 2011, 21, 647-652.	3.3	30
45	Turing's next steps: the mechanochemical basis of morphogenesis. <i>Nature Reviews Molecular Cell Biology</i> , 2011, 12, 392-398.	37.0	236
46	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
47	PAR proteins diffuse freely across the anterior-posterior boundary in polarized <i>C. elegans</i> embryos. <i>Journal of Cell Biology</i> , 2011, 193, 583-594.	5.2	106
48	Anisotropies in cortical tension reveal the physical basis of polarizing cortical flows. <i>Nature</i> , 2010, 467, 617-621.	27.8	434
49	Forced to Be Unequal. <i>Science</i> , 2010, 330, 597-598.	12.6	4
50	FRAP Analysis of Membrane-Associated Proteins: Lateral Diffusion and Membrane-Cytoplasmic Exchange. <i>Biophysical Journal</i> , 2010, 99, 2443-2452.	0.5	63
51	Backtracking determines the force sensitivity of RNAP in a factor-dependent manner. <i>Nature</i> , 2007, 446, 820-823.	27.8	249
52	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
53	Theory of Mitotic Spindle Oscillations. <i>Physical Review Letters</i> , 2005, 94, 108104.	7.8	144
54	Spindle Positioning by Cortical Pulling Forces. <i>Developmental Cell</i> , 2005, 8, 461-465.	7.0	216

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55	Ultraviolet diffraction limited nanosurgery of live biological tissues. Review of Scientific Instruments, 2004, 75, 472-478.	1.3	70
56	The Distribution of Active Force Generators Controls Mitotic Spindle Position. Science, 2003, 301, 518-521.	12.6	351
57	Translation of Polarity Cues into Asymmetric Spindle Positioning in Caenorhabditis elegans Embryos. Science, 2003, 300, 1957-1961.	12.6	277
58	Polarity controls forces governing asymmetric spindle positioning in the Caenorhabditis elegans embryo. Nature, 2001, 409, 630-633.	27.8	484