Vasily Zaburdaev

List of Publications by Year
in descending order

70	2,880	236925 25	189892 50
papers	citations	h-index	g-index

83	83	83	3253
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Unbiased retrieval of frequency-dependent mechanical properties from noisy time-dependent signals. Biophysical Reports, 2022, , 100054.	1.2	0
2	A Pili-Driven Bacterial Turbine. Frontiers in Physics, 2022, 10, .	2.1	1
3	Continuum Theory of Active Phase Separation in Cellular Aggregates. Physical Review Letters, 2021, 126, 018102.	7.8	18
4	Transcription organizes euchromatin via microphase separation. Nature Communications, 2021, 12, 1360.	12.8	83
5	The hierarchical packing of euchromatin domains can be described as multiplicative cascades. PLoS Computational Biology, 2021, 17, e1008974.	3.2	3
6	RNA polymerase II clusters form in line with surface condensation on regulatory chromatin. Molecular Systems Biology, 2021, 17, e10272.	7.2	46
7	Thermal fluctuations assist mechanical signal propagation in coiled-coil proteins. Physical Review E, 2021, 104, 054403.	2.1	0
8	Liquid Phase Separation Controlled by pH. Biophysical Journal, 2020, 119, 1590-1605.	0.5	43
9	High-Precision Protein-Tracking With Interferometric Scattering Microscopy. Frontiers in Cell and Developmental Biology, 2020, 8, 590158.	3.7	7
10	Exogenous ethanol induces a metabolic switch that prolongs the survival of Caenorhabditis elegans dauer larva and enhances its resistance to desiccation. Aging Cell, 2020, 19, e13214.	6.7	11
11	Ultrahigh-Speed Imaging of Rotational Diffusion on a Lipid Bilayer. Nano Letters, 2020, 20, 7213-7219.	9.1	21
12	How bacterial cells and colonies move on solid substrates. Physical Review E, 2019, 99, 042419.	2.1	10
13	Identifying the mechanism for superdiffusivity in mouse fibroblast motility. PLoS Computational Biology, 2019, 15, e1006732.	3.2	14
14	The shape of pinned forced polymer loops. Soft Matter, 2019, 15, 1785-1792.	2.7	10
15	Rectification of Bacterial Diffusion in Microfluidic Labyrinths. Frontiers in Physics, 2019, 7, .	2.1	7
16	Histone H3K27 acetylation precedes active transcription during zebrafish zygotic genome activation as revealed by live-cell analysis. Development (Cambridge), 2019, 146, .	2.5	81
17	Relative distance between tracers as a measure of diffusivity within moving aggregates. European Physical Journal B, 2018, 91, 1.	1.5	4
18	Intracellular Mass Density Increase Is Accompanying but Not Sufficient for Stiffening and Growth Arrest of Yeast Cells. Frontiers in Physics, 2018, 6, .	2.1	23

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19	Pili mediated intercellular forces shape heterogeneous bacterial microcolonies prior to multicellular differentiation. Scientific Reports, 2018, 8, 16567.	3.3	27
20	Biophysical Techniques for the Study of Phase Transitions in Protein Droplets and Cells. Biophysical Journal, 2018, 114, 204a.	0.5	0
21	Exactly solvable dynamics of forced polymer loops. New Journal of Physics, 2018, 20, 113005.	2.9	4
22	Genetic noise mechanism for power-law switching in bacterial flagellar motors. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 265601.	2.1	1
23	Chemotactic drift speed for bacterial motility pattern with two alternating turning events. PLoS ONE, 2018, 13, e0190434.	2.5	7
24	Limit theorems for LÃ©vy walks inddimensions: rare and bulk fluctuations. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 154002.	2.1	7
25	Elasticity-based polymer sorting in active fluids: a Brownian dynamics study. Physical Chemistry Chemical Physics, 2017, 19, 18338-18347.	2.8	29
26	Transcription Locally Disperses Chromatin and Thereby Organizes the Global Architecture of Interphase Nuclei. Biophysical Journal, 2017, 112, 211a.	0.5	0
27	Live cell X-ray imaging of autophagic vacuoles formation and chromatin dynamics in fission yeast. Scientific Reports, 2017, 7, 13775.	3.3	18
28	Multiscale modeling of bacterial colonies: how pili mediate the dynamics of single cells and cellular aggregates. New Journal of Physics, 2017, 19, 015003.	2.9	37
29	Competition between histone and transcription factor binding regulates the onset of transcription in zebrafish embryos. ELife, 2017, 6, .	6.0	117
30	A tunable refractive index matching medium for live imaging cells, tissues and model organisms. ELife, 2017, 6, .	6.0	128
31	Superdiffusive Dispersals Impart the Geometry of Underlying Random Walks. Physical Review Letters, 2016, 117, 270601.	7.8	32
32	Subnuclear Spatial Structuring of Chromatin and Polymerase II during Transcription Activation of the Zebrafish Zygotic Genome. Biophysical Journal, 2016, 110, 232a-233a.	0.5	0
33	Reaction front propagation of actin polymerization in a comb-reaction system. Chaos, Solitons and Fractals, 2016, 92, 115-122.	5.1	24
34	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
35	A pH-driven transition of the cytoplasm from a fluid- to a solid-like state promotes entry into dormancy. ELife, 2016, 5, .	6.0	355
36	Formation and dissolution of bacterial colonies. Physical Review E, 2015, 92, 032704.	2.1	14

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37	Pulled Polymer Loops as a Model for the Alignment of Meiotic Chromosomes. Physical Review Letters, 2015, 115, 208102.	7.8	16
38	Pili-Induced Clustering of N. gonorrhoeae Bacteria. PLoS ONE, 2015, 10, e0137661.	2.5	32
39	LÃ©vy walks. Reviews of Modern Physics, 2015, 87, 483-530.	45.6	567
40	Random walk patterns of a soil bacterium in open and confined environments. Europhysics Letters, 2015, 109, 28007.	2.0	27
41	Asymptotic densities of ballistic LÃ©vy walks. Physical Review E, 2015, 91, 022131.	2.1	40
42	Uncovering the Mechanism of Trapping and Cell Orientation during Neisseria gonorrhoeae Twitching Motility. Biophysical Journal, 2014, 107, 1523-1531.	0.5	40
43	A Bacterial Swimmer with Two Alternating Speeds of Propagation. Biophysical Journal, 2013, 105, 1915-1924.	0.5	103
44	Liquid transport facilitated by channels in Bacillus subtilis biofilms. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 848-852.	7.1	278
45	Space-Time Velocity Correlation Function for Random Walks. Physical Review Letters, 2013, 110, 170604.	7.8	32
46	How the Motility Pattern of Bacteria Affects Their Dispersal and Chemotaxis. PLoS ONE, 2013, 8, e81936.	2.5	99
47	Collective dynamics of model microorganisms with chemotactic signaling. Physical Review E, 2012, 85, 051901.	2.1	38
48	LÃ©vy walks with velocity fluctuations. Physical Review E, 2012, 85, 031148.	2.1	16
49	Langevin description of superdiffusive LÃ©vy processes. Physical Review E, 2012, 86, 041134.	2.1	23
50	Perturbation Spreading in Many-Particle Systems: A Random Walk Approach. Physical Review Letters, 2011, 106, 180601.	7.8	56
51	Langevin Dynamics Deciphers the Motility Pattern of Swimming Parasites. Physical Review Letters, 2011, 106, 208103.	7.8	24
52	Modeling a self-propelled autochemotactic walker. Physical Review E, 2011, 84, 041924.	2.1	33
53	On moments and scaling regimes in anomalous random walks. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P12020.	2.3	27
54	Microscopic Approach to Random Walks. Journal of Statistical Physics, 2008, 133, 159-167.	1.2	11

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55	Stochastic transport through complex comb structures. Journal of Experimental and Theoretical Physics, 2008, 106, 999-1005.	0.9	6
56	Random walks with random velocities. Physical Review E, 2008, 78, 011119.	2.1	46
57	Chaoticity of the wet granular gas. Physical Review E, 2007, 75, 061301.	2.1	3
58	Dry and wet granular shock waves. Physical Review E, 2007, 75, 031304.	2.1	1
59	Random Walk Model with Waiting Times Depending on the Preceding Jump Length. Journal of Statistical Physics, 2006, 123, 871-881.	1.2	29
60	Free Cooling of the One-Dimensional Wet Granular Gas. Physical Review Letters, 2006, 97, 018001.	7.8	12
61	Theory of heat transport in a magnetized high-temperature plasma. Plasma Physics Reports, 2005, 31, 1071-1077.	0.9	1
62	'Hermite' states in the quantum interaction of vortices. Physics-Uspekhi, 2005, 48, 841-846.	2.2	0
63	Subdiffusion in random compressible flows. Physical Review E, 2005, 71, 061105.	2.1	9
64	Kolmogorov-Sinai Entropy of the Dilute Wet Granular Gas. Physical Review Letters, 2005, 95, 198001.	7.8	4
65	Nonlinear dynamics of electron vortex lattices. Plasma Physics Reports, 2004, 30, 214-217.	0.9	7
66	Memory effects in stochastic transport. JETP Letters, 2003, 77, 551-555.	1.4	14
67	Comment on â€œTowards deterministic equations for LÃ©vy walks: The fractional material derivativeâ€. Physical Review E, 2003, 68, 033101.	2.1	7
68	Enhanced superdiffusion and finite velocity of Levy flights. Journal of Experimental and Theoretical Physics, 2002, 94, 252-259.	0.9	45
69	Skin Effects in a Dusty Plasma. Plasma Physics Reports, 2001, 27, 407-411.	0.9	2
70	Theory of nondiffusive penetration of a magnetic field into a conducting medium. Plasma Physics Reports, 2000, 26, 462-464.	0.9	3