

Thomas Speck

List of Publications by Citations

Source: <https://exaly.com/author-pdf/5438055/thomas-speck-publications-by-citations.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

105
papers

4,481
citations

35
h-index

65
g-index

114
ext. papers

5,075
ext. citations

4
avg, IF

6.29
L-index

#	Paper	IF	Citations
105	Dynamical clustering and phase separation in suspensions of self-propelled colloidal particles. <i>Physical Review Letters</i> , 2013 , 110, 238301	7.4	711
104	Thermodynamics of a colloidal particle in a time-dependent nonharmonic potential. <i>Physical Review Letters</i> , 2006 , 96, 070603	7.4	246
103	Microscopic theory for the phase separation of self-propelled repulsive disks. <i>Europhysics Letters</i> , 2013 , 103, 30008	1.6	185
102	Effective Cahn-Hilliard Equation for the Phase Separation of Active Brownian Particles. <i>Physical Review Letters</i> , 2014 , 112,	7.4	184
101	Restoring a fluctuation-dissipation theorem in a nonequilibrium steady state. <i>Europhysics Letters</i> , 2006 , 74, 391-396	1.6	184
100	Crystallization in a dense suspension of self-propelled particles. <i>Physical Review Letters</i> , 2012 , 108, 168301	7.4	182
99	Fluctuation-dissipation theorem in nonequilibrium steady states. <i>Europhysics Letters</i> , 2010 , 89, 10007	1.6	165
98	Integral fluctuation theorem for the housekeeping heat. <i>Journal of Physics A</i> , 2005 , 38, L581-L588		128
97	Experimental test of the fluctuation theorem for a driven two-level system with time-dependent rates. <i>Physical Review Letters</i> , 2005 , 94, 180602	7.4	119
96	Einstein relation generalized to nonequilibrium. <i>Physical Review Letters</i> , 2007 , 98, 210601	7.4	118
95	The 2020 motile active matter roadmap. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 193001	1.8	115
94	Negative Interfacial Tension in Phase-Separated Active Brownian Particles. <i>Physical Review Letters</i> , 2015 , 115, 098301	7.4	112
93	Active colloidal suspensions: Clustering and phase behavior. <i>Journal of Non-Crystalline Solids</i> , 2015 , 407, 367-375	3.9	105
92	First-order phase transition in a model glass former: coupling of local structure and dynamics. <i>Physical Review Letters</i> , 2012 , 109, 195703	7.4	100
91	Measurement of stochastic entropy production. <i>Physical Review Letters</i> , 2006 , 97, 050602	7.4	89
90	Dynamical mean-field theory and weakly non-linear analysis for the phase separation of active Brownian particles. <i>Journal of Chemical Physics</i> , 2015 , 142, 224109	3.9	79
89	Stochastic thermodynamics for active matter. <i>Europhysics Letters</i> , 2016 , 114, 30006	1.6	77

88	Distribution of work in isothermal nonequilibrium processes. <i>Physical Review E</i> , 2004 , 70, 066112	2.4	69
87	Self-organization of active particles by quorum sensing rules. <i>Nature Communications</i> , 2018 , 9, 3232	17.4	62
86	Ideal bulk pressure of active Brownian particles. <i>Physical Review E</i> , 2016 , 93, 062605	2.4	60
85	Distribution of entropy production for a colloidal particle in a nonequilibrium steady state. <i>Europhysics Letters</i> , 2007 , 79, 30002	1.6	60
84	The Jarzynski relation, fluctuation theorems, and stochastic thermodynamics for non-Markovian processes. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007 , 2007, L09002-L09002	1.9	58
83	Constrained dynamics of localized excitations causes a non-equilibrium phase transition in an atomistic model of glass formers. <i>Journal of Chemical Physics</i> , 2012 , 136, 184509	3.9	55
82	Large deviation function for entropy production in driven one-dimensional systems. <i>Physical Review E</i> , 2008 , 78, 011123	2.4	53
81	Critical behavior of active Brownian particles. <i>Physical Review E</i> , 2018 , 98,	2.4	52
80	Self-Assembly of Colloidal Molecules due to Self-Generated Flow. <i>Physical Review Letters</i> , 2017 , 119, 028001	7.4	50
79	Dissipated work in driven harmonic diffusive systems: General solution and application to stretching Rouse polymers. <i>European Physical Journal B</i> , 2005 , 43, 521-527	1.2	46
78	Entropy Production for Mechanically or Chemically Driven Biomolecules. <i>Journal of Statistical Physics</i> , 2007 , 128, 77-93	1.5	45
77	Extended fluctuation-dissipation theorem for soft matter in stationary flow. <i>Physical Review E</i> , 2009 , 79, 040102	2.4	44
76	Phase behavior of active Brownian disks, spheres, and dimers. <i>Soft Matter</i> , 2017 , 13, 1020-1026	3.6	40
75	Role of external flow and frame invariance in stochastic thermodynamics. <i>Physical Review Letters</i> , 2008 , 100, 178302	7.4	40
74	Characterizing potentials by a generalized Boltzmann factor. <i>Physical Review E</i> , 2007 , 75, 060101	2.4	40
73	Collective behavior of active Brownian particles: From microscopic clustering to macroscopic phase separation. <i>European Physical Journal: Special Topics</i> , 2016 , 225, 2287-2299	2.3	38
72	Applicability of effective pair potentials for active Brownian particles. <i>European Physical Journal E</i> , 2016 , 39, 84	1.5	35
71	Experimental Evidence for a Structural-Dynamical Transition in Trajectory Space. <i>Physical Review Letters</i> , 2017 , 119, 028004	7.4	35

70	The role of shear in crystallization kinetics: From suppression to enhancement. <i>Scientific Reports</i> , 2015 , 5, 14610	4.9	35
69	The large deviation function for entropy production: the optimal trajectory and the role of fluctuations. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012 , 2012, P12001	1.9	33
68	Work distribution for the driven harmonic oscillator with time-dependent strength: exact solution and slow driving. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011 , 44, 305001	2	28
67	Nonequilibrium Phase Transition in an Atomistic Glassformer: The Connection to Thermodynamics. <i>Physical Review X</i> , 2017 , 7,	9.1	26
66	Crystallization of hard spheres revisited. II. Thermodynamic modeling, nucleation work, and the surface of tension. <i>Journal of Chemical Physics</i> , 2018 , 148, 224102	3.9	24
65	Crystallization in a sheared colloidal suspension. <i>Journal of Chemical Physics</i> , 2013 , 138, 224907	3.9	24
64	Specific adhesion of membranes: Mapping to an effective bond lattice gas. <i>Physical Review E</i> , 2010 , 82, 021923	2.4	24
63	Dynamics of Binary Active Clusters Driven by Ion-Exchange Particles. <i>ACS Nano</i> , 2018 , 12, 10932-10938	16.7	23
62	Transmission of torque at the nanoscale. <i>Nature Physics</i> , 2016 , 12, 98-103	16.2	22
61	Collective forces in scalar active matter. <i>Soft Matter</i> , 2020 , 16, 2652-2663	3.6	22
60	Nucleation pathway and kinetics of phase-separating active Brownian particles. <i>Soft Matter</i> , 2016 , 12, 5257-64	3.6	21
59	Space-time phase transitions in driven kinetically constrained lattice models. <i>European Physical Journal B</i> , 2011 , 79, 1-6	1.2	20
58	Active Brownian particles driven by constant affinity. <i>Europhysics Letters</i> , 2018 , 123, 20007	1.6	18
57	Random pinning limits the size of membrane adhesion domains. <i>Physical Review E</i> , 2012 , 86, 031923	2.4	18
56	Gold Nanorods as Plasmonic Sensors for Particle Diffusion. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 4951-4955	6.4	17
55	Crystallization of hard spheres revisited. I. Extracting kinetics and free energy landscape from forward flux sampling. <i>Journal of Chemical Physics</i> , 2018 , 148, 124110	3.9	16
54	Cycle representatives for the coarse-graining of systems driven into a non-equilibrium steady state. <i>New Journal of Physics</i> , 2015 , 17, 115004	2.9	16
53	Finite-size scaling of charge carrier mobility in disordered organic semiconductors. <i>Physical Review B</i> , 2016 , 94,	3.3	16

52	Stochastic thermodynamics of fluctuating density fields: non-equilibrium free energy differences under coarse-graining. <i>Journal of Chemical Physics</i> , 2013 , 139, 204109	3.9	15
51	Quorum-sensing active particles with discontinuous motility. <i>Physical Review E</i> , 2020 , 101, 012601	2.4	14
50	Three-body correlations and conditional forces in suspensions of active hard disks. <i>Physical Review E</i> , 2018 , 97, 012606	2.4	14
49	Coupling between criticality and gelation in "sticky" spheres: a structural analysis. <i>Soft Matter</i> , 2018 , 14, 5554-5564	3.6	14
48	Driven Brownian particle as a paradigm for a nonequilibrium heat bath: Effective temperature and cyclic work extraction. <i>Physical Review E</i> , 2017 , 95, 050103	2.4	13
47	Collective Behavior of Quorum-Sensing Run-and-Tumble Particles under Confinement. <i>Physical Review Letters</i> , 2016 , 116, 058102	7.4	12
46	From scalar to polar active matter: Connecting simulations with mean-field theory. <i>Physical Review E</i> , 2020 , 101, 022602	2.4	11
45	Effective confinement as origin of the equivalence of kinetic temperature and fluctuation-dissipation ratio in a dense shear-driven suspension. <i>Physical Review E</i> , 2012 , 85, 021103	2.4	11
44	Mobility and diffusion of a tagged particle in a driven colloidal suspension. <i>Europhysics Letters</i> , 2010 , 92, 58001	1.6	11
43	Structural-dynamical transition in the Wahnström mixture. <i>European Physical Journal E</i> , 2018 , 41, 54	1.5	10
42	Estimation of the critical behavior in an active colloidal system with Vicsek-like interactions. <i>Journal of Chemical Physics</i> , 2017 , 146, 074901	3.9	10
41	Driven Soft Matter: Entropy Production and the Fluctuation-Dissipation Theorem. <i>Progress of Theoretical Physics Supplement</i> , 2010 , 184, 248-261		10
40	Highly controlled optical transport of cold atoms into a hollow-core fiber. <i>New Journal of Physics</i> , 2018 , 20, 083038	2.9	10
39	Dynamical coexistence in moderately polydisperse hard-sphere glasses. <i>Journal of Chemical Physics</i> , 2020 , 152, 014501	3.9	9
38	Modeling Supramolecular Polymerization: The Role of Steric Effects and Hydrophobic Interactions. <i>Macromolecules</i> , 2019 , 52, 7661-7667	5.5	8
37	Nonequilibrium depletion interactions in active microrheology. <i>Soft Matter</i> , 2017 , 13, 9093-9102	3.6	7
36	Thermodynamic approach to the self-diffusiophoresis of colloidal Janus particles. <i>Physical Review E</i> , 2019 , 99, 060602	2.4	7
35	Dynamic facilitation theory: a statistical mechanics approach to dynamic arrest. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019 , 2019, 084015	1.9	7

34	Nonequilibrium Markov state modeling of the globule-stretch transition. <i>Physical Review E</i> , 2017 , 95, 012503	2.4	6
33	Modeling of epitaxial film growth of C60 revisited. <i>Physical Review B</i> , 2020 , 101,	3.3	6
32	Thermodynamic formalism and linear response theory for nonequilibrium steady states. <i>Physical Review E</i> , 2016 , 94, 022131	2.4	6
31	Classical nucleation theory for the crystallization kinetics in sheared liquids. <i>Physical Review E</i> , 2019 , 99, 062801	2.4	6
30	Effective free energy for pinned membranes. <i>Physical Review E</i> , 2011 , 83, 050901	2.4	6
29	Critical behavior in active lattice models of motility-induced phase separation. <i>European Physical Journal E</i> , 2021 , 44, 53	1.5	6
28	Aggregation and sedimentation of active Brownian particles at constant affinity. <i>Journal of Chemical Physics</i> , 2019 , 150, 064910	3.9	6
27	Non-equilibrium Markov state modeling of periodically driven biomolecules. <i>Journal of Chemical Physics</i> , 2019 , 150, 054103	3.9	6
26	Discontinuous thinning in active microrheology of soft complex matter. <i>Physical Review E</i> , 2016 , 94, 062610	2.4	5
25	Thermodynamic formalism for transport coefficients with an application to the shear modulus and shear viscosity. <i>Journal of Chemical Physics</i> , 2017 , 146, 124130	3.9	4
24	Dynamic coarse-graining fills the gap between atomistic simulations and experimental investigations of mechanical unfolding. <i>Journal of Chemical Physics</i> , 2018 , 148, 044109	3.9	4
23	Dynamical phase transitions and their relation to structural and thermodynamic aspects of glass physics. <i>Journal of Chemical Physics</i> , 2020 , 153, 090901	3.9	4
22	Coexistence of active Brownian disks: van der Waals theory and analytical results. <i>Physical Review E</i> , 2021 , 103, 012607	2.4	4
21	Communication: Is directed percolation in colloid-polymer mixtures linked to dynamic arrest?. <i>Journal of Chemical Physics</i> , 2018 , 148, 241101	3.9	3
20	Meta-work and the analogous Jarzynski relation in ensembles of dynamical trajectories. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014 , 2014, P09017	1.9	3
19	Vorticity Determines the Force on Bodies Immersed in Active Fluids. <i>Physical Review Letters</i> , 2021 , 126, 138002	7.4	3
18	Multiscale modeling of structure formation of C on insulating CaF substrates. <i>Journal of Chemical Physics</i> , 2021 , 154, 234701	3.9	3
17	Devitrification of the Kob-Andersen glass former: Competition with the locally favored structure. <i>Journal of Physics: Conference Series</i> , 2019 , 1252, 012012	0.3	2

16	Spontaneous spatiotemporal ordering of shape oscillations enhances cell migration. <i>Soft Matter</i> , 2019 , 15, 4939-4946	3.6	2
15	Application of classical nucleation theory to the formation of adhesion domains. <i>Soft Matter</i> , 2013 , 9, 11197	3.6	2
14	Gaussian field theory for the Brownian motion of a solvated particle. <i>Physical Review E</i> , 2013 , 88, 014103	3.4	2
13	Mobilization upon Cooling. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 19117-19122	16.4	2
12	Polydisperse hard spheres: crystallization kinetics in small systems and role of local structure. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2016 , 2016, 084007	1.9	2
11	Unfolding dynamics of small peptides biased by constant mechanical forces. <i>Molecular Systems Design and Engineering</i> , 2018 , 3, 204-213	4.6	2
10	Modeling of biomolecular machines in non-equilibrium steady states.. <i>Journal of Chemical Physics</i> , 2021 , 155, 230901	3.9	1
9	Focus on Active Colloids and Nanoparticles. <i>New Journal of Physics</i> , 2020 , 22, 060201	2.9	1
8	High-order simulation scheme for active particles driven by stress boundary conditions. <i>Journal of Physics Condensed Matter</i> , 2021 , 33,	1.8	1
7	Modeling non-linear dielectric susceptibilities of supercooled molecular liquids. <i>Journal of Chemical Physics</i> , 2021 , 155, 014506	3.9	1
6	Efficiency of isothermal active matter engines: Strong driving beats weak driving.. <i>Physical Review E</i> , 2022 , 105, L012601	2.4	0
5	Predicting the Supramolecular Assembly of Amphiphilic Peptides from Comprehensive Coarse-Grained Simulations. <i>ACS Applied Polymer Materials</i> , 2022 , 4, 822-831	4.3	0
4	Hunting active Brownian particles: Learning optimal behavior.. <i>Physical Review E</i> , 2021 , 104, 054614	2.4	0
3	Preface: Special Issue on Structure in Glassy and Jammed Systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2016 , 2016, 054045	1.9	
2	Rücktitelbild: Von geordneten zu mobilen Molekülen durch Käfen (Angew. Chem. 35/2021). <i>Angewandte Chemie</i> , 2021 , 133, 19644-19644	3.6	
1	Von geordneten zu mobilen Molekülen durch Käfen. <i>Angewandte Chemie</i> , 2021 , 133, 19265-19270	3.6	