

Benno Liebchen

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6055330/publications.pdf>

Version: 2024-02-01

58
papers

1,528
citations

361045

20
h-index

329751

37
g-index

63
all docs

63
docs citations

63
times ranked

1117
citing authors

#	ARTICLE	IF	CITATIONS
1	Interactions in active colloids. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 083002.	0.7	21
2	Mutation induced infection waves in diseases like COVID-19. <i>Scientific Reports</i> , 2022, 12, .	1.6	10
3	Reinforcement learning of optimal active particle navigation. <i>New Journal of Physics</i> , 2022, 24, 073042.	1.2	16
4	MD simulations of charged binary mixtures reveal a generic relation between high- and low-temperature behavior. <i>Journal of Chemical Physics</i> , 2021, 154, 024501.	1.2	2
5	Hydrodynamics can determine the optimal route for microswimmer navigation. <i>Communications Physics</i> , 2021, 4, .	2.0	36
6	Shaping the gradients driving phoretic micro-swimmers: influence of swimming speed, budget of carbonic acid and environment. <i>European Physical Journal E</i> , 2021, 44, 41.	0.7	11
7	Non-monotonic speed-dependence of microswimmers on wall distance. <i>Soft Matter</i> , 2021, 17, 9428-9433.	1.2	6
8	Active droplets. <i>Nature Communications</i> , 2021, 12, 6005.	5.8	15
9	Collective self-optimization of communicating active particles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	9
10	Actomyosin Contraction Induces In-Bulk Motility of Cells and Droplets. <i>Biophysical Journal</i> , 2020, 119, 1025-1032.	0.2	4
11	Realization of a motility-trap for active particles. <i>Communications Physics</i> , 2020, 3, .	2.0	15
12	Active Assembly of Spheroidal Photocatalytic BiVO ₄ Microswimmers. <i>Langmuir</i> , 2020, 36, 12473-12480.	1.6	23
13	Strategic spatiotemporal vaccine distribution increases the survival rate in an infectious disease like Covid-19. <i>Scientific Reports</i> , 2020, 10, 21594.	1.6	59
14	Clustering-induced velocity-reversals of active colloids mixed with passive particles. <i>Journal of Chemical Physics</i> , 2020, 152, 014903.	1.2	14
15	Swarm Hunting and Cluster Ejections in Chemically Communicating Active Mixtures. <i>Scientific Reports</i> , 2020, 10, 5594.	1.6	9
16	Response to "Comment on "Which interactions dominate in active colloids?" [J. Chem. Phys. 151, 067101 (2019)]. <i>Journal of Chemical Physics</i> , 2019, 151, 067102.	1.2	4
17	Simultaneous phase separation and pattern formation in chiral active mixtures. <i>Physical Review E</i> , 2019, 100, 012406.	0.8	30
18	Competing Timescales Lead to Oscillations in Shear-Thickening Suspensions. <i>Physical Review Letters</i> , 2019, 123, 038004.	2.9	17

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19	Optimal navigation strategies for active particles. <i>Europhysics Letters</i> , 2019, 127, 34003.	0.7	38
20	Theory of active particle penetration through a planar elastic membrane. <i>New Journal of Physics</i> , 2019, 21, 083014.	1.2	9
21	Propagating density spikes in light-powered motility-ratchets. <i>Soft Matter</i> , 2019, 15, 5185-5192.	1.2	13
22	Light-controlled assembly of active colloidal molecules. <i>Journal of Chemical Physics</i> , 2019, 150, 094905.	1.2	83
23	Taming polar active matter with moving substrates: directed transport and counterpropagating macrobands. <i>New Journal of Physics</i> , 2019, 21, 013023.	1.2	5
24	Which interactions dominate in active colloids?. <i>Journal of Chemical Physics</i> , 2019, 150, 061102.	1.2	47
25	Membrane penetration and trapping of an active particle. <i>Journal of Chemical Physics</i> , 2019, 150, 064906.	1.2	22
26	Motility-Induced Temperature Difference in Coexisting Phases. <i>Physical Review Letters</i> , 2019, 123, 228001.	2.9	96
27	Activity induced synchronization: Mutual flocking and chiral self-sorting. <i>Physical Review Research</i> , 2019, 1, .	1.3	62
28	Modeling Chemotaxis of Microswimmers: From Individual to Collective Behavior. , 2019, , 493-516.		7
29	Micro-flock patterns and macro-clusters in chiral active Brownian disks. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 084001.	0.7	24
30	Unraveling modular microswimmers: From self-assembly to ion-exchange-driven motors. <i>Physical Review E</i> , 2018, 98, .	0.8	14
31	Synthetic Chemotaxis and Collective Behavior in Active Matter. <i>Accounts of Chemical Research</i> , 2018, 51, 2982-2990.	7.6	93
32	<i>Viscotaxis</i> : Microswimmer Navigation in Viscosity Gradients. <i>Physical Review Letters</i> , 2018, 120, 208002.	2.9	68
33	Simultaneous Control of Multispecies Particle Transport and Segregation in Driven Lattices. <i>Physical Review Letters</i> , 2018, 120, 218002.	2.9	16
34	Dimensional coupling-induced current reversal in two-dimensional driven lattices. <i>Physical Review E</i> , 2018, 97, 050202.	0.8	9
35	Ephemeral Protein Binding to DNA Shapes Stable Nuclear Bodies and Chromatin Domains. <i>Biophysical Journal</i> , 2017, 112, 1085-1093.	0.2	77
36	Collective Behavior of Chiral Active Matter: Pattern Formation and Enhanced Flocking. <i>Physical Review Letters</i> , 2017, 119, 058002.	2.9	126

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37	Motility of active nematic films driven by "active anchoring". Soft Matter, 2017, 13, 6137-6144.	1.2	18
38	Phoretic Interactions Generically Induce Dynamic Clusters and Wave Patterns in Active Colloids. Physical Review Letters, 2017, 118, 268001.	2.9	81
39	Pattern Formation in Polymerizing Actin Flocks: Spirals, Spots, and Waves without Nonlinear Chemistry. Physical Review Letters, 2016, 117, 238002.	2.9	13
40	Pattern formation in chemically interacting active rotors with self-propulsion. Soft Matter, 2016, 12, 7259-7264.	1.2	58
41	Freezing, accelerating, and slowing directed currents in real time with superimposed driven lattices. Physical Review E, 2016, 93, 052219.	0.8	7
42	Quench dynamics of two coupled zig-zag ion chains. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 2644-2649.	0.9	1
43	Clustering and Pattern Formation in Chemorepulsive Active Colloids. Physical Review Letters, 2015, 115, 258301.	2.9	111
44	Site-selective particle deposition in periodically driven quantum lattices. Physical Review A, 2015, 91, .	1.0	3
45	Interaction induced directed transport in ac-driven periodic potentials. New Journal of Physics, 2015, 17, 083011.	1.2	12
46	Excitation dynamics of interacting Rydberg atoms in small lattices. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 143-148.	0.9	0
47	Symmetries and transport in site-dependent driven quantum lattices. Physical Review E, 2014, 90, 042913.	0.8	4
48	Teilchendynamik fern vom Gleichgewicht. Physik in Unserer Zeit, 2014, 45, 191-197.	0.0	0
49	Spatiotemporal Oscillation Patterns in the Collective Relaxation Dynamics of Interacting Particles in Periodic Potentials. Physical Review Letters, 2014, 112, 134102.	2.9	3
50	Disorder Induced Regular Dynamics in Oscillating Lattices. Physical Review Letters, 2014, 112, 034101.	2.9	11
51	Neutral particle focusing in composite driven dissipative billiards. Nonlinear Dynamics, 2013, 74, 319-325.	2.7	0
52	Analysis of resonant population transfer in time-dependent elliptical quantum billiards. Physical Review E, 2013, 87, 012912.	0.8	6
53	Interaction-induced current-reversals in driven lattices. New Journal of Physics, 2012, 14, 103032.	1.2	21
54	Analysis of interface conversion processes of ballistic and diffusive motion in driven superlattices. Physical Review E, 2012, 86, 016201.	0.8	14

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55	Formation of density waves via interface conversion of ballistic and diffusive motion. Europhysics Letters, 2011, 95, 30005.	0.7	13
56	Resonant population transfer in the time-dependent quantum elliptical billiard. New Journal of Physics, 2011, 13, 103019.	1.2	10
57	Patterned deposition of particles in spatio-temporally driven lattices. Europhysics Letters, 2011, 94, 40001.	0.7	9
58	Phase space interpretation of exponential Fermi acceleration. New Journal of Physics, 2011, 13, 093039.	1.2	20