Charles Reichhardt

List of Publications by Year
in descending order

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281 papers	11,243 citations	38742 50 h-index	38395 95 g-index
284 all docs	284 docs citations	284 times ranked	4865 citing authors

#	Article	IF	Citations
1	Active Particles in Complex and Crowded Environments. Reviews of Modern Physics, 2016, 88, .	45.6	1,875
2	Nonequilibrium Dynamic Phase Diagram for Vortex Lattices. Physical Review Letters, 1998, 81, 3757-3760.	7.8	319
3	Dynamic Phases of Vortices in Superconductors with Periodic Pinning. Physical Review Letters, 1997, 78, 2648-2651.	7.8	252
4	Particle model for skyrmions in metallic chiral magnets: Dynamics, pinning, and creep. Physical Review B, 2013, 87, .	3.2	248
5	Commensurate and incommensurate vortex states in superconductors with periodic pinning arrays. Physical Review B, 1998, 57, 7937-7943.	3.2	246
6	Superconducting Fluxon Pumps and Lenses. Physical Review Letters, 1999, 83, 5106-5109.	7.8	222
7	Depinning and nonequilibrium dynamic phases of particle assemblies driven over random and ordered substrates: a review. Reports on Progress in Physics, 2017, 80, 026501.	20.1	197
8	Rectification of Swimming Bacteria and Self-Driven Particle Systems by Arrays of Asymmetric Barriers. Physical Review Letters, 2008, 101, 018102.	7.8	190
9	Collective Transport Properties of Driven Skyrmions with Random Disorder. Physical Review Letters, 2015, 114, 217202.	7.8	181
10	Ratchet Effects in Active Matter Systems. Annual Review of Condensed Matter Physics, 2017, 8, 51-75.	14.5	174
11	Nonequilibrium dynamic phases and plastic flow of driven vortex lattices in superconductors with periodic arrays of pinning sites. Physical Review B, 1998, 58, 6534-6564.	3.2	171
12	Phase Locking, Devil's Staircases, Farey Trees, and Arnold Tongues in Driven Vortex Lattices with Periodic Pinning. Physical Review Letters, 1999, 82, 414-417.	7.8	169
13	Onset of irreversibility and chaos in amorphous solids under periodic shear. Physical Review E, 2013, 88, 062401.	2.1	138
14	Spatiotemporal dynamics and plastic flow of vortices in superconductors with periodic arrays of pinning sites. Physical Review B, 1996, 54, 16108-16115.	3.2	128
15	Reversibility and criticality in amorphous solids. Nature Communications, 2015, 6, 8805.	12.8	127
16	Collective Interaction-Driven Ratchet for Transporting Flux Quanta. Physical Review Letters, 2001, 87, 177002.	7.8	115
17	ac Current Generation in Chiral Magnetic Insulators and Skyrmion Motion induced by the Spin Seebeck Effect. Physical Review Letters, 2014, 112, 187203.	7.8	110
18	Active matter transport and jamming on disordered landscapes. Physical Review E, 2014, 90, 012701.	2.1	105

#	Article	IF	Citations
19	Novel Colloidal Crystalline States on Two-Dimensional Periodic Substrates. Physical Review Letters, 2002, 88, 248301.	7.8	102
20	Realizing Colloidal Artificial Ice on Arrays of Optical Traps. Physical Review Letters, 2006, 97, 228302.	7.8	102
21	Multiscaling at PointJ: Jamming is a Critical Phenomenon. Physical Review Letters, 2005, 95, 088001.	7.8	100
22	Casimir effect in active matter systems. Physical Review E, 2014, 90, 013019.	2.1	98
23	Noise fluctuations and drive dependence of the skyrmion Hall effect in disordered systems. New Journal of Physics, 2016, 18, 095005.	2.9	98
24	Critical currents and vortex states at fractional matching fields in superconductors with periodic pinning. Physical Review B, 2001, 63, .	3.2	96
25	Colloidal Dynamics on Disordered Substrates. Physical Review Letters, 2002, 89, 078301.	7.8	96
26	Fractal Networks, Braiding Channels, and Voltage Noise in Intermittently Flowing Rivers of Quantized Magnetic Flux. Physical Review Letters, 1998, 80, 2197-2200.	7.8	94
27	Moving Wigner Glasses and Smectics: Dynamics of Disordered Wigner Crystals. Physical Review Letters, 2001, 86, 4354-4357.	7.8	94
28	Driven Skyrmions and Dynamical Transitions in Chiral Magnets. Physical Review Letters, 2013, 110, 207202.	7.8	92
29	Creating Artificial Ice States Using Vortices in Nanostructured Superconductors. Physical Review Letters, 2009, 102, 237004.	7.8	90
30	Superconducting vortex avalanches, voltage bursts, and vortex plastic flow: Effect of the microscopic pinning landscape on the macroscopic properties. Physical Review B, 1997, 56, 6175-6194.	3.2	88
31	Vortex plastic flow, local flux density, magnetization hysteresis loops, and critical current, deep in the Bose-glass and Mott-insulator regimes. Physical Review B, 1996, 53, R8898-R8901.	3.2	85
32	Complex dynamical flow phases and pinning in superconductors with rectangular pinning arrays. Physical Review B, 2001, 64, .	3.2	85
33	Quantized transport for a skyrmion moving on a two-dimensional periodic substrate. Physical Review B, 2015, 91, .	3.2	81
34	Reversible vortex ratchet effects and ordering in superconductors with simple asymmetric potential arrays. Physical Review B, 2007, 75, .	3.2	80
35	Reversible to Irreversible Flow Transition in Periodically Driven Vortices. Physical Review Letters, 2008, 100, 187002.	7.8	76
36	Dynamical Ordering of Driven Stripe Phases in Quenched Disorder. Physical Review Letters, 2003, 90, 026401.	7.8	72

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37	Strongly Enhanced Pinning of Magnetic Vortices in Type-II Superconductors by Conformal Crystal Arrays. Physical Review Letters, 2013, 110, 267001.	7.8	69
38	Random Organization and Plastic Depinning. Physical Review Letters, 2009, 103, 168301.	7.8	63
39	Vortices Freeze like Window Glass: The Vortex Molasses Scenario. Physical Review Letters, 2000, 84, 1994-1997.	7.8	61
40	Dynamic phases of active matter systems with quenched disorder. Physical Review E, 2017, 95, 032606.	2.1	61
41	Ratchet Cellular Automata. Physical Review Letters, 2003, 90, 247004.	7.8	60
42	Dynamical Ordering and Directional Locking for Particles Moving over Quasicrystalline Substrates. Physical Review Letters, 2011, 106, 060603.	7.8	59
43	Magnus-induced ratchet effects for skyrmions interacting with asymmetric substrates. New Journal of Physics, 2015, 17, 073034.	2.9	59
44	Individual and multiple vortex pinning in systems with periodic pinning arrays. Physical Review B, 2001, 64, .	3.2	57
45	Microscopic derivation of magnetic-flux-density profiles, magnetization hysteresis loops, and critical currents in strongly pinned superconductors. Physical Review B, 1995, 52, 10441-10446.	3.2	56
46	Collective Multivortex States in Periodic Arrays of Traps. Physical Review Letters, 2000, 85, 2372-2375.	7.8	56
47	Fluctuating Topological Defects in 2D Liquids: Heterogeneous Motion and Noise. Physical Review Letters, 2003, 90, 095504.	7.8	55
48	Depinning by Fracture in a Glassy Background. Physical Review Letters, 2003, 90, 098302.	7.8	52
49	Origin of Reversed Vortex Ratchet Motion. Physical Review Letters, 2007, 99, 247002.	7.8	52
50	Commensurate and incommensurate vortex lattice melting in periodic pinning arrays. Physical Review B, 2001, 64, .	3.2	51
51	Aspects of jamming in two-dimensional athermal frictionless systems. Soft Matter, 2014, 10, 2932.	2.7	51
52	Structural transitions, melting, and intermediate phases for stripe- and clump-forming systems. Physical Review E, 2010, 82, 041502.	2.1	50
53	Local Melting and Drag for a Particle Driven through a Colloidal Crystal. Physical Review Letters, 2004, 92, 108301.	7.8	49
54	Charge Transport Transitions and Scaling in Disordered Arrays of Metallic Dots. Physical Review Letters, 2003, 90, 046802.	7.8	48

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55	Dynamics and separation of circularly moving particles in asymmetrically patterned arrays. Physical Review E, 2013, 88, 042306.	2.1	48
56	Point-defect dynamics in two-dimensional colloidal crystals. Physical Review E, 2007, 75, 011403.	2.1	47
57	Fluctuations and noise signatures of driven magnetic skyrmions. Physical Review B, 2017, 96, .	3.2	46
58	Colloquium : Ice rule and emergent frustration in particle ice and beyond. Reviews of Modern Physics, 2019, 91, .	45.6	46
59	Dynamics, Rectification, and Fractionation for Colloids on Flashing Substrates. Physical Review Letters, 2006, 96, 188301.	7.8	45
60	Manipulation of skyrmions in nanodisks with a current pulse and skyrmion rectifier. Applied Physics Letters, 2013, 102, .	3.3	45
61	Realizing three-dimensional artificial spin ice by stacking planar nano-arrays. Applied Physics Letters, 2014, 104, 013101.	3.3	44
62	Active microrheology in active matter systems: Mobility, intermittency, and avalanches. Physical Review E, 2015, 91, 032313.	2.1	43
63	Rectification and Phase Locking for Particles on Symmetric Two-Dimensional Periodic Substrates. Physical Review Letters, 2002, 89, 024101.	7.8	42
64	Bidirectional sorting of flocking particles in the presence of asymmetric barriers. Physical Review E, 2012, 85, 056102.	2.1	42
65	Vortex molecular crystal and vortex plastic crystal states in honeycomb and kagomÃ© pinning arrays. Physical Review B, 2007, 76, .	3.2	41
66	Absorbing phase transitions and dynamic freezing in running active matter systems. Soft Matter, 2014, 10, 7502-7510.	2.7	41
67	Phase-locking of vortex lattices interacting with periodic pinning. Physical Review B, 2000, 61, R11914-R11917.	3.2	40
68	Directional locking effects and dynamics for particles driven through a colloidal lattice. Physical Review E, 2004, 69, 041405.	2.1	39
69	Active matter ratchets with an external drift. Physical Review E, 2013, 88, 062310.	2.1	39
70	Collective ratchet effects and reversals for active matter particles on quasi-one-dimensional asymmetric substrates. Soft Matter, 2016, 12, 8606-8615.	2.7	39
71	Fluctuations, jamming, and yielding for a driven probe particle in disordered disk assemblies. Physical Review E, 2010, 82, 051306.	2.1	38
72	Structure and melting of two-species charged clusters in a parabolic trap. Physical Review E, 2003, 68, 060401.	2.1	37

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73	Depinning and dynamics of systems with competing interactions in quenched disorder. Europhysics Letters, 2003, 61, 221-227.	2.0	37
74	Fibrillar Templates and Soft Phases in Systems with Short-Range Dipolar and Long-Range Interactions. Physical Review Letters, 2004, 92, 016801.	7.8	37
75	Moving vortex phases, dynamical symmetry breaking, and jamming for vortices in honeycomb pinning arrays. Physical Review B, 2008, 78, .	3.2	37
76	Vortex Plastic Motion in Twinned Superconductors. Physical Review Letters, 1996, 77, 3625-3628.	7.8	36
77	Hysteresis and return-point memory in colloidal artificial spin ice systems. Physical Review E, 2012, 86, 021406.	2.1	36
78	Reversible ratchet effects for vortices in conformal pinning arrays. Physical Review B, 2015, 91, .	3.2	36
79	Shapiro steps for skyrmion motion on a washboard potential with longitudinal and transverse ac drives. Physical Review B, 2015, 92, .	3.2	36
80	Thermal creep and the skyrmion Hall angle in driven skyrmion crystals. Journal of Physics Condensed Matter, 2019, 31, 07LT01.	1.8	36
81	Clogging and depinning of ballistic active matter systems in disordered media. Physical Review E, 2018, 97, 052613.	2.1	35
82	Multi-step ordering in kagome and square artificial spin ice. New Journal of Physics, 2012, 14, 025006.	2.9	34
83	Avalanche dynamics for active matter in heterogeneous media. New Journal of Physics, 2018, 20, 025002.	2.9	34
84	Commensurability effects at nonmatching fields for vortices in diluted periodic pinning arrays. Physical Review B, 2007, 76, .	3.2	33
85	Transport anisotropy as a probe of the interstitial vortex state in superconductors with artificial pinning arrays. Physical Review B, 2009, 79, .	3.2	33
86	Jamming in granular polymers. Physical Review E, 2011, 84, 011303.	2.1	33
87	Crossover from Jamming to Clogging Behaviours in Heterogeneous Environments. Scientific Reports, 2018, 8, 10252.	3.3	33
88	Hysteretic depinning and dynamical melting for magnetically interacting vortices in disordered layered superconductors. Physical Review B, 2001, 64, .	3.2	32
89	Cooperative behavior and pattern formation in mixtures of driven and nondriven colloidal assemblies. Physical Review E, 2006, 74, 011403.	2.1	32
90	Dynamic regimes for driven colloidal particles on a periodic substrate at commensurate and incommensurate fillings. Physical Review E, 2013, 88, 062301.	2.1	32

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91	Reversible vector ratchets for skyrmion systems. Physical Review B, 2017, 95, .	3.2	32
92	Nonequilibrium phases and segregation for skyrmions on periodic pinning arrays. Physical Review B, 2018, 98, .	3.2	32
93	Rectification and flux reversals for vortices interacting with triangular traps. Physica C: Superconductivity and Its Applications, 2005, 432, 125-132.	1.2	31
94	Transverse depinning in strongly driven vortex lattices with disorder. Physical Review B, 2000, 61, R3811-R3814.	3.2	30
95	Absolute transverse mobility and ratchet effect on periodic two-dimensional symmetric substrates. Physical Review E, 2003, 68, 046102.	2.1	30
96	Enhanced pinning for vortices in hyperuniform pinning arrays and emergent hyperuniform vortex configurations with quenched disorder. Physical Review B, 2017, 96, .	3.2	30
97	Plastic flow, voltage noise and vortex avalanches in superconductors. Physica C: Superconductivity and Its Applications, 1997, 290, 89-97.	1.2	29
98	Emergent geometric frustration of artificial magnetic skyrmion crystals. Physical Review B, 2016, 94, .	3.2	29
99	Ratchet-induced segregation and transport of nonspherical grains. Physical Review E, 2002, 65, 031308.	2.1	28
100	Commensurability, jamming, and dynamics for vortices in funnel geometries. Physical Review B, 2010, 81, .	3.2	28
101	Jamming in systems with quenched disorder. Physical Review E, 2012, 86, 061301.	2.1	28
102	Magnus-induced dynamics of driven skyrmions on a quasi-one-dimensional periodic substrate. Physical Review B, 2016, 94, .	3.2	28
103	Clogging and jamming transitions in periodic obstacle arrays. Physical Review E, 2017, 95, 030902.	2.1	28
104	Braiding Majorana fermions and creating quantum logic gates with vortices on a periodic pinning structure. Physical Review B, 2020, 101, .	3.2	27
105	Metastability and transient effects in vortex matter near a decoupling transition. Physical Review B, 2003, 67, .	3.2	26
106	Noise at the Crossover from Wigner Liquid to Wigner Glass. Physical Review Letters, 2004, 93, 176405.	7.8	26
107	Pinning and dynamics of colloids on one-dimensional periodic potentials. Physical Review E, 2005, 72, 032401.	2.1	26
108	Effect of grain anisotropy on ordering, stability and dynamics in granular systems. Europhysics Letters, 2002, 57, 904-910.	2.0	25

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109	Negative differential mobility and trapping in active matter systems. Journal of Physics Condensed Matter, 2018, 30, 015404.	1.8	25
110	Skyrmion Lattice Topological Hall Effect near Room Temperature. Scientific Reports, 2018, 8, 15510.	3.3	25
111	Ice rule fragility via topological charge transfer in artificial colloidal ice. Nature Communications, 2018, 9, 4146.	12.8	25
112	Laning and clustering transitions in driven binary active matter systems. Physical Review E, 2018, 98, 022603.	2.1	25
113	Pinning, ordering, and dynamics of vortices in conformal crystal and gradient pinning arrays. Physical Review B, 2014, 90, .	3.2	24
114	Active microrheology, Hall effect, and jamming in chiral fluids. Physical Review E, 2019, 100, 012604.	2.1	24
115	Dynamic vortex phases and pinning in superconductors with twin boundaries. Physical Review B, 2000, 61, 3665-3671.	3.2	23
116	Melting of moving vortex lattices in systems with periodic pinning. Physical Review B, 2000, 61, 14354-14357.	3.2	23
117	Dynamic regimes and spontaneous symmetry breaking for driven colloids on triangular substrates. Europhysics Letters, 2004, 68, 303-309.	2.0	23
118	Structural transitions and dynamical regimes for directional locking of vortices and colloids driven over periodic substrates. Journal of Physics Condensed Matter, 2012, 24, 225702.	1.8	23
119	Statics and dynamics of Yukawa cluster crystals on ordered substrates. Physical Review E, 2012, 85, 051401.	2.1	23
120	Collective transport for active matter run-and-tumble disk systems on a traveling-wave substrate. Physical Review E, 2017, 95, 012607.	2.1	23
121	Velocity force curves, laning, and jamming for oppositely driven disk systems. Soft Matter, 2018, 14, 490-498.	2.7	23
122	Anisotropic sliding dynamics, peak effect, and metastability in stripe systems. Physical Review E, 2011, 83, 041501.	2.1	22
123	Inner Phases of Colloidal Hexagonal Spin Ice. Physical Review Letters, 2018, 120, 027204.	7.8	22
124	Avalanches and Criticality in Driven Magnetic Skyrmions. Physical Review Letters, 2018, 120, 117203.	7.8	22
125	Reversibility, pattern formation, and edge transport in active chiral and passive disk mixtures. Journal of Chemical Physics, 2019, 150, 064905.	3.0	22
126	Ordering and melting in colloidal molecular crystal mixtures. Physical Review E, 2005, 71, 062403.	2.1	21

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127	Vortex configurations and dynamics in elliptical pinning sites for high matching fields. Physical Review B, 2006, 73, .	3.2	21
128	Spontaneous Transverse Response and Amplified Switching in Superconductors with Honeycomb Pinning Arrays. Physical Review Letters, 2008, 100, 167002.	7.8	21
129	Commensurate states and pattern switching via liquid crystal skyrmions trapped in a square lattice. Soft Matter, 2020, 16, 3338-3343.	2.7	21
130	Visualizing the strongly reshaped skyrmion Hall effect in multilayer wire devices. Nature Communications, 2021, 12, 4252.	12.8	21
131	Stabilizing fractional vortices in multiband superconductors with periodic pinning arrays. Physical Review B, 2013, 87, .	3.2	20
132	Dynamic Phases, Pinning and Pattern Formation for Driven Dislocation Assemblies. Scientific Reports, 2015, 5, 8000.	3.3	20
133	Skyrmion ratchet in funnel geometries. Physical Review B, 2021, 104, .	3.2	20
134	Phase-locking of driven vortex lattices with transverse ac force and periodic pinning. Physical Review B, 2001, 64, .	3.2	19
135	Crossover from Intermittent to Continuum Dynamics for Locally Driven Colloids. Physical Review Letters, 2006, 96, 028301.	7.8	19
136	Avalanches and disorder-induced criticality in artificial spin ices. New Journal of Physics, 2014, 16, 063051.	2.9	19
137	Transverse ac-driven and geometric ratchet effects for vortices in conformal crystal pinning arrays. Physical Review B, 2016, 93, .	3.2	19
138	Phonon spectra of two-dimensional liquid dusty plasmas on a one-dimensional periodic substrate. Physical Review E, 2018, 98, .	2.1	19
139	Directional locking effects for active matter particles coupled to a periodic substrate. Physical Review E, 2020, 102, 042616.	2.1	19
140	Topological Invariants in Microscopic Transport on Rough Landscapes: Morphology, Hierarchical Structure, and Horton Analysis of Riverlike Networks of Vortices. Physical Review Letters, 1999, 82, 3641-3644.	7.8	18
141	Critical depinning force and vortex lattice order in disordered superconductors. Physical Review B, 2001, 64, .	3.2	18
142	Dynamics and melting of stripes, crystals, and bubbles with quenched disorder. Physica D: Nonlinear Phenomena, 2004, 193, 303-309.	2.8	18
143	Vortices wiggled and dragged. Nature Physics, 2009, 5, 15-16.	16.7	18
144	Depinning dynamics of two-dimensional dusty plasmas on a one-dimensional periodic substrate. Physical Review E, 2019, 100, 033207.	2.1	18

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145	Nonlinear transport, dynamic ordering, and clustering for driven skyrmions on random pinning. Physical Review B, 2019, 99, .	3.2	18
146	Viscous decoupling transitions for individually dragged particles in systems with quenched disorder. Physical Review E, 2008, 78, 011402.	2.1	17
147	Nonequilibrium phases for driven particle systems with effective orientational degrees of freedom. Physical Review E, 2009, 79, 061403.	2.1	17
148	Dewetting and spreading transitions for active matter on random pinning substrates. Journal of Chemical Physics, 2017, 146, 204903.	3.0	17
149	Reversible to irreversible transitions in periodically driven skyrmion systems. New Journal of Physics, 2019, 21, 013001.	2.9	17
150	Guided skyrmion motion along pinning array interfaces. Journal of Magnetism and Magnetic Materials, 2021, 528, 167710.	2.3	17
151	Nonlinear dynamics, rectification, and phase locking for particles on symmetrical two-dimensional periodic substrates with dc and circular ac drives. Physical Review E, 2004, 69, 056115.	2.1	16
152	Dynamical freezing of active matter. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19099-19100.	7.1	16
153	Structures and diffusion of two-dimensional dusty plasmas on one-dimensional periodic substrates. Physical Review E, 2018, 98, .	2.1	16
154	Skyrmion dynamics and topological sorting on periodic obstacle arrays. New Journal of Physics, 2020, 22, 053025.	2.9	16
155	Hysteresis and noise in stripe- and clump-forming systems. Europhysics Letters, 2005, 72, 444-450.	2.0	15
156	Domain and stripe formation between hexagonal and square ordered fillings of colloidal particles on periodic pinning substrates. Soft Matter, 2013, 9, 4607.	2.7	15
157	Doped colloidal artificial spin ice. New Journal of Physics, 2015, 17, 103010.	2.9	15
158	Orientational ordering, buckling, and dynamic transitions for vortices interacting with a periodic quasi-one-dimensional substrate. Physical Review B, 2016, 93, .	3.2	15
159	Disorder in the wild. Nature Physics, 2017, 13, 10-11.	16.7	15
160	Active matter commensuration and frustration effects on periodic substrates. Physical Review E, 2021, 103, 022602.	2.1	15
161	Re-entrant disordering of colloidal molecular crystals on two-dimensional periodic substrates. Journal of Physics Condensed Matter, 2004, 16, 7909-7916.	1.8	14
162	Shear banding, intermittency, jamming, and dynamic phases for skyrmions in inhomogeneous pinning arrays. Physical Review B, 2020, 101, .	3.2	14

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163	Static and dynamic phases for magnetic vortex matter with attractive and repulsive interactions. Journal of Physics Condensed Matter, 2013, 25, 345703.	1.8	13
164	Pinning, flux diodes and ratchets for vortices interacting with conformal pinning arrays. Physica C: Superconductivity and Its Applications, 2017, 533, 148-153.	1.2	13
165	Controlled Fluidization, Mobility, and Clogging in Obstacle Arrays Using Periodic Perturbations. Physical Review Letters, 2018, 121, 068001.	7.8	13
166	Dynamics of Magnus-dominated particle clusters, collisions, pinning, and ratchets. Physical Review E, 2020, 101, 062602.	2.1	13
167	Pattern switching and polarizability for colloids in optical-trap arrays. Physical Review E, 2009, 80, 022401.	2.1	12
168	Dislocation-induced anomalous softening of solid helium. Philosophical Magazine Letters, 2012, 92, 608-616.	1.2	12
169	Random organization in periodically driven gliding dislocations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 1675-1678.	2.1	12
170	Dynamic Control of Topological Defects in Artificial Colloidal Ice. Scientific Reports, 2017, 7, 651.	3.3	12
171	Shapiro spikes and negative mobility for skyrmion motion on quasi-one-dimensional periodic substrates. Physical Review B, 2017, 95, .	3.2	12
172	Dynamic phases, clustering, and chain formation for driven disk systems in the presence of quenched disorder. Physical Review E, 2017, 95, 042902.	2.1	12
173	Manipulation of individual superconducting vortices and stick-slip motion in periodic pinning arrays. Physical Review B, 2018, 97, .	3.2	12
174	Structural transitions in vortex systems with anisotropic interactions. New Journal of Physics, 2018, 20, 023005.	2.9	12
175	Plastic flow and the skyrmion Hall effect. Nature Communications, 2020, 11, 738.	12.8	12
176	Comment on â€œPeak Effect and the Transition from Elastic to Plastic Depinningâ€• Physical Review Letters, 1999, 83, 2282-2282.	7.8	11
177	Frustrated colloidal ordering and fully packed loops in arrays of optical traps. Physical Review E, 2013, 87, 062305.	2.1	11
178	Continuous and discontinuous transitions in the depinning of two-dimensional dusty plasmas on a one-dimensional periodic substrate. Physical Review E, 2020, 102, 063203.	2.1	11
179	Active rheology in odd-viscosity systems. Europhysics Letters, 2022, 137, 66004.	2.0	11
180	Frustration and melting of colloidal molecular crystals. Journal of Physics A, 2003, 36, 5841-5845.	1.6	10

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181	Devilâ€™s staircase and disordering transitions in sliding vortices and Wigner crystals on random substrates with transverse driving. Physical Review B, 2007, 76, .	3.2	10
182	Jamming and diode effects for vortices in nanostructured superconductors. Physica C: Superconductivity and Its Applications, 2010, 470, 722-725.	1.2	10
183	Switching and jamming transistor effect for vortex matter in honeycomb pinning arrays with ac drives. Physical Review B, 2010, 81, .	3.2	10
184	Avalanches, plasticity, and ordering in colloidal crystals under compression. Physical Review E, 2016, 93, 062607.	2.1	10
185	Shapiro steps and nonlinear skyrmion Hall angles for dc and ac driven skyrmions on a two-dimensional periodic substrate. Physical Review B, 2020, 102, .	3.2	10
186	Ratchet effect and nonlinear transport for particles on random substrates with crossed ac drives. Physical Review E, 2006, 73, 011102.	2.1	9
187	Coarsening of topological defects in oscillating systems with quenched disorder. Physical Review E, 2006, 73, 046122.	2.1	9
188	Transverse commensurability effect for vortices in periodic pinning arrays. Physical Review B, 2008, 78, .	3.2	9
189	Positive and negative drag, dynamic phases, and commensurability in coupled one-dimensional channels of particles with Yukawa interactions. Physical Review E, 2011, 83, 061404.	2.1	9
190	Characterizing plastic depinning dynamics with the fluctuation theorem. European Physical Journal E, 2011, 34, 117.	1.6	9
191	Plastic response of dislocation glide in solid helium under dc strain-rate loading. Physical Review B, 2013, 88, .	3.2	9
192	Comparing the dynamics of skyrmions and superconducting vortices. Physica C: Superconductivity and Its Applications, 2014, 503, 52-57.	1.2	9
193	Colloidal Dynamics on a Choreographic Time Crystal. Physical Review Letters, 2020, 124, 208004.	7.8	9
194	Oscillation-like diffusion of two-dimensional liquid dusty plasmas on one-dimensional periodic substrates with varied widths. Physics of Plasmas, 2020, 27, 033702.	1.9	9
195	Soliton motion in skyrmion chains: Stabilization and guidance by nanoengineered pinning. Physical Review B, 2022, 105, .	3.2	9
196	Dynamics of skyrmions in chiral magnets: Dynamic phase transitions and equation of motion. Journal of Applied Physics, 2014, 115, 17D109.	2.5	8
197	Stripe systems with competing interactions on quasi-one dimensional periodic substrates. Soft Matter, 2014, 10, 6332.	2.7	8
198	Skyrmion dynamics and transverse mobility: skyrmion Hall angle reversal on 2D periodic substrates with dc and biharmonic ac drives. European Physical Journal B, 2020, 93, 1.	1.5	8

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199	Clogging, dynamics, and reentrant fluid for active matter on periodic substrates. Physical Review E, 2021, 103, 062603.	2.1	8
200	Skyrmion pinball and directed motion on obstacle arrays. Journal of Physics Communications, 2020, 4, 085001.	1.2	8
201	Quenched dynamics of artificial colloidal spin ice. Physical Review Research, 2020, 2, .	3.6	8
202	Electrophoresis of DNA on a disordered two-dimensional substrate. Physical Review E, 2006, 74, 051908.	2.1	7
203	Stripes, clusters, and nonequilibrium ordering for bidisperse colloids with repulsive interactions. Physical Review E, 2007, 75, 040402.	2.1	7
204	Dynamically induced locking and unlocking transitions in driven layered systems with quenched disorder. Physical Review B, 2011, 84, .	3.2	7
205	Disordering, clustering, and laning transitions in particle systems with dispersion in the Magnus term. Physical Review E, 2019, 99, 012606.	2.1	7
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