

# Charles Reichhardt

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/2487284/charles-reichhardt-publications-by-year.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.

251  
papers

8,680  
citations

45  
h-index

83  
g-index

284  
ext. papers

10,218  
ext. citations

4.2  
avg, IF

6.64  
L-index

#	Paper	IF	Citations
251	Phonon spectra of a two-dimensional solid dusty plasma modified by two-dimensional periodic substrates.. <i>Physical Review E</i> , <b>2022</b> , 105, 015202	2.4	1
250	Reversible to irreversible transitions for cyclically driven particles on periodic obstacle arrays.. <i>Journal of Chemical Physics</i> , <b>2022</b> , 156, 124901	3.9	0
249	Active matter shepherding and clustering in inhomogeneous environments. <i>Physical Review E</i> , <b>2021</b> , 104, 044613	2.4	0
248	Structure and dynamical properties of two-dimensional dusty plasmas on one-dimensional periodic substrates. <i>Physics of Plasmas</i> , <b>2021</b> , 28, 040501	2.1	2
247	Clogging, dynamics, and reentrant fluid for active matter on periodic substrates. <i>Physical Review E</i> , <b>2021</b> , 103, 062603	2.4	2
246	Guided skyrmion motion along pinning array interfaces. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2021</b> , 528, 167710	2.8	1
245	Directional clogging and phase separation for disk flow through periodic and diluted obstacle arrays. <i>Soft Matter</i> , <b>2021</b> , 17, 1548-1557	3.6	3
244	Active matter commensuration and frustration effects on periodic substrates. <i>Physical Review E</i> , <b>2021</b> , 103, 022602	2.4	5
243	Visualizing the strongly reshaped skyrmion Hall effect in multilayer wire devices. <i>Nature Communications</i> , <b>2021</b> , 12, 4252	17.4	1
242	Continuous and discontinuous transitions in the depinning of two-dimensional dusty plasmas on a one-dimensional periodic substrate. <i>Physical Review E</i> , <b>2020</b> , 102, 063203	2.4	4
241	Collective effects and pattern formation for directional locking of disks moving through obstacle arrays. <i>Physical Review E</i> , <b>2020</b> , 102, 022608	2.4	4
240	Colloidal Dynamics on a Choreographic Time Crystal. <i>Physical Review Letters</i> , <b>2020</b> , 124, 208004	7.4	4
239	Dynamics of Magnus-dominated particle clusters, collisions, pinning, and ratchets. <i>Physical Review E</i> , <b>2020</b> , 101, 062602	2.4	3
238	Shear banding, intermittency, jamming, and dynamic phases for skyrmions in inhomogeneous pinning arrays. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	9
237	Skyrmion dynamics and topological sorting on periodic obstacle arrays. <i>New Journal of Physics</i> , <b>2020</b> , 22, 053025	2.9	8
236	Commensurate states and pattern switching via liquid crystal skyrmions trapped in a square lattice. <i>Soft Matter</i> , <b>2020</b> , 16, 3338-3343	3.6	12
235	Detecting depinning and nonequilibrium transitions with unsupervised machine learning. <i>Physical Review E</i> , <b>2020</b> , 101, 042101	2.4	0

234	Oscillation-like diffusion of two-dimensional liquid dusty plasmas on one-dimensional periodic substrates with varied widths. <i>Physics of Plasmas</i> , <b>2020</b> , 27, 033702	2.1	4
233	Vortex guidance and transport in channeled pinning arrays. <i>Low Temperature Physics</i> , <b>2020</b> , 46, 309-315	0.7	0
232	Skyrmion dynamics and transverse mobility: skyrmion Hall angle reversal on 2D periodic substrates with dc and biharmonic ac drives. <i>European Physical Journal B</i> , <b>2020</b> , 93, 1	1.2	3
231	Plastic flow and the skyrmion Hall effect. <i>Nature Communications</i> , <b>2020</b> , 11, 738	17.4	5
230	Reentrant pinning, dynamic row reduction, and skyrmion accumulation for driven skyrmions in inhomogeneous pinning arrays. <i>Europhysics Letters</i> , <b>2020</b> , 129, 21001	1.6	0
229	Braiding Majorana fermions and creating quantum logic gates with vortices on a periodic pinning structure. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	13
228	Quenched dynamics of artificial colloidal spin ice. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	2
227	Skyrmion pinball and directed motion on obstacle arrays. <i>Journal of Physics Communications</i> , <b>2020</b> , 4, 085001	1.2	3
226	Directional locking effects for active matter particles coupled to a periodic substrate. <i>Physical Review E</i> , <b>2020</b> , 102, 042616	2.4	5
225	Jamming, fragility and pinning phenomena in superconducting vortex systems. <i>Scientific Reports</i> , <b>2020</b> , 10, 11625	4.9	0
224	Shapiro steps and nonlinear skyrmion Hall angles for dc and ac driven skyrmions on a two-dimensional periodic substrate. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	3
223	Depinning dynamics of two-dimensional dusty plasmas on a one-dimensional periodic substrate. <i>Physical Review E</i> , <b>2019</b> , 100, 033207	2.4	7
222	Skyrmions in anisotropic magnetic fields: strain and defect driven dynamics. <i>MRS Advances</i> , <b>2019</b> , 4, 643-650	6.7	3
221	Reversibility, pattern formation, and edge transport in active chiral and passive disk mixtures. <i>Journal of Chemical Physics</i> , <b>2019</b> , 150, 064905	3.9	12
220	Nonlinear transport, dynamic ordering, and clustering for driven skyrmions on random pinning. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	12
219	Dynamic phases, stratification, laning, and pattern formation for driven bidisperse disk systems in the presence of quenched disorder. <i>Physical Review E</i> , <b>2019</b> , 99, 042601	2.4	1
218	Reversible to irreversible transitions in periodically driven skyrmion systems. <i>New Journal of Physics</i> , <b>2019</b> , 21, 013001	2.9	13
217	Active microrheology, Hall effect, and jamming in chiral fluids. <i>Physical Review E</i> , <b>2019</b> , 100, 012604	2.4	9

216	Noise spectra in the reversible↔irreversible transition in amorphous solids under oscillatory driving. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2019</b> , 27, 084004	2	3
215	Chiral edge currents for ac-driven skyrmions in confined pinning geometries. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	5
214	Colloquium: Ice rule and emergent frustration in particle ice and beyond. <i>Reviews of Modern Physics</i> , <b>2019</b> , 91,	40.5	27
213	Vortex shear banding transitions in superconductors with inhomogeneous pinning arrays. <i>Journal of Physics Communications</i> , <b>2019</b> , 3, 125009	1.2	1
212	Disordering, clustering, and laning transitions in particle systems with dispersion in the Magnus term. <i>Physical Review E</i> , <b>2019</b> , 99, 012606	2.4	5
211	Thermal creep and the skyrmion Hall angle in driven skyrmion crystals. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 07LT01	1.8	17
210	Negative differential mobility and trapping in active matter systems. <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 015404	1.8	20
209	Inner Phases of Colloidal Hexagonal Spin Ice. <i>Physical Review Letters</i> , <b>2018</b> , 120, 027204	7.4	15
208	Avalanches and Criticality in Driven Magnetic Skyrmions. <i>Physical Review Letters</i> , <b>2018</b> , 120, 117203	7.4	13
207	Controlled Fluidization, Mobility, and Clogging in Obstacle Arrays Using Periodic Perturbations. <i>Physical Review Letters</i> , <b>2018</b> , 121, 068001	7.4	12
206	Crossover from Jamming to Clogging Behaviours in Heterogeneous Environments. <i>Scientific Reports</i> , <b>2018</b> , 8, 10252	4.9	23
205	Clogging and transport of driven particles in asymmetric funnel arrays. <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 244005	1.8	3
204	Structural transitions in vortex systems with anisotropic interactions. <i>New Journal of Physics</i> , <b>2018</b> , 20, 023005	2.9	5
203	Laning and clustering transitions in driven binary active matter systems. <i>Physical Review E</i> , <b>2018</b> , 98, 022603	2.4	13
202	Velocity force curves, laning, and jamming for oppositely driven disk systems. <i>Soft Matter</i> , <b>2018</b> , 14, 4903-498	3.4	16
201	Phonon spectra of two-dimensional liquid dusty plasmas on a one-dimensional periodic substrate. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	11
200	Structures and diffusion of two-dimensional dusty plasmas on one-dimensional periodic substrates. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	8
199	Nonequilibrium phases and segregation for skyrmions on periodic pinning arrays. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	15

198	Skyrmion Lattice Topological Hall Effect near Room Temperature. <i>Scientific Reports</i> , <b>2018</b> , 8, 15510	4.9	17
197	Ice rule fragility via topological charge transfer in artificial colloidal ice. <i>Nature Communications</i> , <b>2018</b> , 9, 4146	17.4	16
196	Clogging and depinning of ballistic active matter systems in disordered media. <i>Physical Review E</i> , <b>2018</b> , 97, 052613	2.4	30
195	Avalanche dynamics for active matter in heterogeneous media. <i>New Journal of Physics</i> , <b>2018</b> , 20, 025002	2.9	20
194	Manipulation of individual superconducting vortices and stick-slip motion in periodic pinning arrays. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	7
193	Reversible vector ratchets for skyrmion systems. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	20
192	Dewetting and spreading transitions for active matter on random pinning substrates. <i>Journal of Chemical Physics</i> , <b>2017</b> , 146, 204903	3.9	11
191	Dynamic phases of active matter systems with quenched disorder. <i>Physical Review E</i> , <b>2017</b> , 95, 032606	2.4	41
190	Ratchet Effects in Active Matter Systems. <i>Annual Review of Condensed Matter Physics</i> , <b>2017</b> , 8, 51-75	19.7	102
189	Depinning and nonequilibrium dynamic phases of particle assemblies driven over random and ordered substrates: a review. <i>Reports on Progress in Physics</i> , <b>2017</b> , 80, 026501	14.4	125
188	Enhanced pinning for vortices in hyperuniform pinning arrays and emergent hyperuniform vortex configurations with quenched disorder. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	22
187	Collective transport for active matter run-and-tumble disk systems on a traveling-wave substrate. <i>Physical Review E</i> , <b>2017</b> , 95, 012607	2.4	18
186	Dynamic Control of Topological Defects in Artificial Colloidal Ice. <i>Scientific Reports</i> , <b>2017</b> , 7, 651	4.9	8
185	Shapiro spikes and negative mobility for skyrmion motion on quasi-one-dimensional periodic substrates. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	9
184	Fluctuations and noise signatures of driven magnetic skyrmions. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	33
183	Clogging and jamming transitions in periodic obstacle arrays. <i>Physical Review E</i> , <b>2017</b> , 95, 030902	2.4	24
182	Dynamic phases, clustering, and chain formation for driven disk systems in the presence of quenched disorder. <i>Physical Review E</i> , <b>2017</b> , 95, 042902	2.4	10
181	Pinning, flux diodes and ratchets for vortices interacting with conformal pinning arrays. <i>Physica C: Superconductivity and Its Applications</i> , <b>2017</b> , 533, 148-153	1.3	9

180	Active particles in complex and crowded environments. <i>Reviews of Modern Physics</i> , <b>2016</b> , 88,	40.5	1228
179	Magnus-induced dynamics of driven skyrmions on a quasi-one-dimensional periodic substrate. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	18
178	Orientational ordering, buckling, and dynamic transitions for vortices interacting with a periodic quasi-one-dimensional substrate. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	10
177	Avalanches, plasticity, and ordering in colloidal crystals under compression. <i>Physical Review E</i> , <b>2016</b> , 93, 062607	2.4	7
176	Transverse ac-driven and geometric ratchet effects for vortices in conformal crystal pinning arrays. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	17
175	Collective ratchet effects and reversals for active matter particles on quasi-one-dimensional asymmetric substrates. <i>Soft Matter</i> , <b>2016</b> , 12, 8606-8615	3.6	18
174	Structural transitions and hysteresis in clump- and stripe-forming systems under dynamic compression. <i>Soft Matter</i> , <b>2016</b> , 12, 9549-9560	3.6	2
173	Noise fluctuations and drive dependence of the skyrmion Hall effect in disordered systems. <i>New Journal of Physics</i> , <b>2016</b> , 18, 095005	2.9	63
172	Emergent geometric frustration of artificial magnetic skyrmion crystals. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	23
171	Active microrheology in active matter systems: Mobility, intermittency, and avalanches. <i>Physical Review E</i> , <b>2015</b> , 91, 032313	2.4	31
170	Collective transport properties of driven Skyrmions with random disorder. <i>Physical Review Letters</i> , <b>2015</b> , 114, 217202	7.4	123
169	Quantized transport for a skyrmion moving on a two-dimensional periodic substrate. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	56
168	Disordered artificial spin ices: Avalanches and criticality (invited). <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 172612	2.5	4
167	Magnus-induced ratchet effects for skyrmions interacting with asymmetric substrates. <i>New Journal of Physics</i> , <b>2015</b> , 17, 073034	2.9	35
166	Reversible ratchet effects for vortices in conformal pinning arrays. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	27
165	Shapiro steps for skyrmion motion on a washboard potential with longitudinal and transverse ac drives. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	28
164	Reversibility and criticality in amorphous solids. <i>Nature Communications</i> , <b>2015</b> , 6, 8805	17.4	105
163	Doped colloidal artificial spin ice. <i>New Journal of Physics</i> , <b>2015</b> , 17, 103010	2.9	13

162	Dynamic phases, pinning, and pattern formation for driven dislocation assemblies. <i>Scientific Reports</i> , <b>2015</b> , 5, 8000	4.9	17
161	Dynamics of skyrmions in chiral magnets: Dynamic phase transitions and equation of motion. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 17D109	2.5	7
160	ac current generation in chiral magnetic insulators and Skyrmion motion induced by the spin Seebeck effect. <i>Physical Review Letters</i> , <b>2014</b> , 112, 187203	7.4	92
159	Realizing three-dimensional artificial spin ice by stacking planar nano-arrays. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 013101	3.4	40
158	Absorbing phase transitions and dynamic freezing in running active matter systems. <i>Soft Matter</i> , <b>2014</b> , 10, 7502-10	3.6	35
157	Stripe systems with competing interactions on quasi-one dimensional periodic substrates. <i>Soft Matter</i> , <b>2014</b> , 10, 6332-8	3.6	5
156	Aspects of jamming in two-dimensional athermal frictionless systems. <i>Soft Matter</i> , <b>2014</b> , 10, 2932-44	3.6	39
155	Active matter transport and jamming on disordered landscapes. <i>Physical Review E</i> , <b>2014</b> , 90, 012701	2.4	78
154	Comparing the dynamics of skyrmions and superconducting vortices. <i>Physica C: Superconductivity and Its Applications</i> , <b>2014</b> , 503, 52-57	1.3	4
153	Random organization in periodically driven gliding dislocations. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2014</b> , 378, 1675-1678	2.3	12
152	Vortex states in Archimedean tiling pinning arrays. <i>Superconductor Science and Technology</i> , <b>2014</b> , 27, 075006	3.1	3
151	Avalanches and disorder-induced criticality in artificial spin ices. <i>New Journal of Physics</i> , <b>2014</b> , 16, 063051	2.9	16
150	Casimir effect in active matter systems. <i>Physical Review E</i> , <b>2014</b> , 90, 013019	2.4	80
149	Pinning, ordering, and dynamics of vortices in conformal crystal and gradient pinning arrays. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	22
148	Vortex transport and pinning in conformal pinning arrays. <i>Physica C: Superconductivity and Its Applications</i> , <b>2014</b> , 503, 123-127	1.3	6
147	Statics and Dynamics of Vortex Matter with Competing Repulsive and Attractive Interactions. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2013</b> , 26, 2041-2044	1.5	1
146	Domain and stripe formation between hexagonal and square ordered fillings of colloidal particles on periodic pinning substrates. <i>Soft Matter</i> , <b>2013</b> , 9, 4607	3.6	9
145	Dynamics and separation of circularly moving particles in asymmetrically patterned arrays. <i>Physical Review E</i> , <b>2013</b> , 88, 042306	2.4	40

144	Dynamic regimes for driven colloidal particles on a periodic substrate at commensurate and incommensurate fillings. <i>Physical Review E</i> , <b>2013</b> , 88, 062301	2.4	23
143	Plastic response of dislocation glide in solid helium under dc strain-rate loading. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	8
142	Particle model for skyrmions in metallic chiral magnets: Dynamics, pinning, and creep. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	176
141	Colloidal lattice shearing and rupturing with a driven line of particles. <i>Physical Review E</i> , <b>2013</b> , 87, 022308.	2.4	5
140	Vortex Clogging, Commensuration, and Diodes in Asymmetric Constriction Arrays. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2013</b> , 26, 2005-2008	1.5	1
139	Rheology and shear band suppression in particle and chain mixtures. <i>Physical Review E</i> , <b>2013</b> , 87, 020201.	2.4	3
138	Manipulation of skyrmions in nanodisks with a current pulse and skyrmion rectifier. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 222405	3.4	40
137	Strongly enhanced pinning of magnetic vortices in type-II superconductors by conformal crystal arrays. <i>Physical Review Letters</i> , <b>2013</b> , 110, 267001	7.4	62
136	Driven Skyrmions and dynamical transitions in chiral magnets. <i>Physical Review Letters</i> , <b>2013</b> , 110, 207202.	7.4	75
135	Static and dynamic phases for magnetic vortex matter with attractive and repulsive interactions. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 345703	1.8	11
134	Frustrated colloidal ordering and fully packed loops in arrays of optical traps. <i>Physical Review E</i> , <b>2013</b> , 87, 062305	2.4	8
133	Active matter ratchets with an external drift. <i>Physical Review E</i> , <b>2013</b> , 88, 062310	2.4	34
132	Onset of irreversibility and chaos in amorphous solids under periodic shear. <i>Physical Review E</i> , <b>2013</b> , 88, 062401	2.4	112
131	Comment on "Giant plasticity of a quantum crystal". <i>Physical Review Letters</i> , <b>2013</b> , 111, 119601	7.4	4
130	Stabilizing fractional vortices in multiband superconductors with periodic pinning arrays. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	16
129	Statics and dynamics of wetting-dewetting transitions for particles with attractive interactions on periodic substrates <b>2012</b> ,		1
128	Dynamics of self-driven and flocking particles on periodic arrays <b>2012</b> ,		2
127	Vortex dynamics and symmetry locking on quasiperiodic and periodic substrates. <i>Physica C: Superconductivity and Its Applications</i> , <b>2012</b> , 479, 45-48	1.3	3



126	The effect of pinning on vortex states with attractive and repulsive interactions. <i>Physica C: Superconductivity and Its Applications</i> , <b>2012</b> , 479, 15-18	1.3	4
125	Defect dynamics: breaking up in a curved plane. <i>Nature Materials</i> , <b>2012</b> , 11, 912-3	27	
124	Structural transitions and dynamical regimes for directional locking of vortices and colloids driven over periodic substrates. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 225702	1.8	14
123	Multi-step ordering in kagome and square artificial spin ice. <i>New Journal of Physics</i> , <b>2012</b> , 14, 025006	2.9	28
122	Bidirectional sorting of flocking particles in the presence of asymmetric barriers. <i>Physical Review E</i> , <b>2012</b> , 85, 056102	2.4	34
121	Jamming in systems with quenched disorder. <i>Physical Review E</i> , <b>2012</b> , 86, 061301	2.4	22
120	Hysteresis and return-point memory in colloidal artificial spin ice systems. <i>Physical Review E</i> , <b>2012</b> , 86, 021406	2.4	26
119	Statics and dynamics of Yukawa cluster crystals on ordered substrates. <i>Physical Review E</i> , <b>2012</b> , 85, 051404	1.4	17
118	Dislocation-induced anomalous softening of solid helium. <i>Philosophical Magazine Letters</i> , <b>2012</b> , 92, 608-616	6	12
117	Positive and negative drag, dynamic phases, and commensurability in coupled one-dimensional channels of particles with Yukawa interactions. <i>Physical Review E</i> , <b>2011</b> , 83, 061404	2.4	9
116	Jamming in granular polymers. <i>Physical Review E</i> , <b>2011</b> , 84, 011303	2.4	31
115	The effect of pinning on drag in coupled one-dimensional channels of particles. <i>Europhysics Letters</i> , <b>2011</b> , 94, 18001	1.6	5
114	Characterizing plastic depinning dynamics with the fluctuation theorem. <i>European Physical Journal E</i> , <b>2011</b> , 34, 117	1.5	8
113	Dynamically induced locking and unlocking transitions in driven layered systems with quenched disorder. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	5
112	Dynamical ordering and directional locking for particles moving over quasicrystalline substrates. <i>Physical Review Letters</i> , <b>2011</b> , 106, 060603	7.4	44
111	Anisotropic sliding dynamics, peak effect, and metastability in stripe systems. <i>Physical Review E</i> , <b>2011</b> , 83, 041501	2.4	18
110	Dynamical freezing of active matter. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 19099-100	11.5	15
109	Active matter on asymmetric substrates <b>2011</b> ,		1

108	Dynamics and directional locking of colloids on quasicrystalline substrates <b>2011</b> ,		1
107	Commensurability, jamming, and dynamics for vortices in funnel geometries. <i>Physical Review B</i> , <b>2010</b> , 81,	3-3	20
106	Switching and jamming transistor effect for vortex matter in honeycomb pinning arrays with ac drives. <i>Physical Review B</i> , <b>2010</b> , 81,	3-3	10
105	Shear banding and spatiotemporal oscillations in vortex matter in nanostructured superconductors. <i>Physical Review B</i> , <b>2010</b> , 81,	3-3	2
104	Structural transitions, melting, and intermediate phases for stripe- and clump-forming systems. <i>Physical Review E</i> , <b>2010</b> , 82, 041502	2-4	40
103	Fluctuations, jamming, and yielding for a driven probe particle in disordered disk assemblies. <i>Physical Review E</i> , <b>2010</b> , 82, 051306	2-4	32
102	Jamming and diode effects for vortices in nanostructured superconductors. <i>Physica C: Superconductivity and Its Applications</i> , <b>2010</b> , 470, 722-725	1-3	5
101	Driving an individual vortex in the presence of a periodic pinning array. <i>Physica C: Superconductivity and Its Applications</i> , <b>2010</b> , 470, 779-781	1-3	4
100	Creating artificial ice states using vortices in nanostructured superconductors. <i>Physical Review Letters</i> , <b>2009</b> , 102, 237004	7-4	75
99	Nonequilibrium phases for driven particle systems with effective orientational degrees of freedom. <i>Physical Review E</i> , <b>2009</b> , 79, 061403	2-4	13
98	Pattern switching and polarizability for colloids in optical-trap arrays. <i>Physical Review E</i> , <b>2009</b> , 80, 022401	1-4	8
97	Random organization and plastic depinning. <i>Physical Review Letters</i> , <b>2009</b> , 103, 168301	7-4	57
96	Statics and dynamics of colloidal particles on optical trap arrays <b>2009</b> ,		2
95	Coherent and incoherent vortex flow states in crossed channels. <i>Europhysics Letters</i> , <b>2009</b> , 88, 47004	1-6	1
94	Transport anisotropy as a probe of the interstitial vortex state in superconductors with artificial pinning arrays. <i>Physical Review B</i> , <b>2009</b> , 79,	3-3	31
93	Transverse commensurability effect for vortices in periodic pinning arrays. <i>Physical Review B</i> , <b>2008</b> , 78,	3-3	8
92	Rectification of swimming bacteria and self-driven particle systems by arrays of asymmetric barriers. <i>Physical Review Letters</i> , <b>2008</b> , 101, 018102	7-4	160
91	Enhancing mixing and diffusion with plastic flow. <i>Physical Review E</i> , <b>2008</b> , 78, 031401	2-4	2

90	Reversible to irreversible flow transition in periodically driven vortices. <i>Physical Review Letters</i> , <b>2008</b> , 100, 187002	7.4	73
89	Spontaneous transverse response and amplified switching in superconductors with honeycomb pinning arrays. <i>Physical Review Letters</i> , <b>2008</b> , 100, 167002	7.4	18
88	Moving vortex phases, dynamical symmetry breaking, and jamming for vortices in honeycomb pinning arrays. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	32
87	Viscous decoupling transitions for individually dragged particles in systems with quenched disorder. <i>Physical Review E</i> , <b>2008</b> , 78, 011402	2.4	12
86	Disordering transitions and peak effect in polydisperse particle systems. <i>Physical Review E</i> , <b>2008</b> , 77, 041401	2.4	6
85	Probing vortex systems with individual vortex manipulation. <i>Physica C: Superconductivity and Its Applications</i> , <b>2007</b> , 460-462, 1284-1285	1.3	
84	Commensurate and incommensurate checkerboard charge ordered states. <i>Physica C: Superconductivity and Its Applications</i> , <b>2007</b> , 460-462, 1178-1179	1.3	5
83	Structure and fragmentation in colloidal artificial molecules and nuclei. <i>European Physical Journal E</i> , <b>2007</b> , 22, 11-5	1.5	5
82	Vortex molecular crystal and vortex plastic crystal states in honeycomb and kagom� pinning arrays. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	38
81	Point-defect dynamics in two-dimensional colloidal crystals. <i>Physical Review E</i> , <b>2007</b> , 75, 011403	2.4	43
80	Stripes, clusters, and nonequilibrium ordering for bidisperse colloids with repulsive interactions. <i>Physical Review E</i> , <b>2007</b> , 75, 040402	2.4	7
79	Origin of reversed vortex ratchet motion. <i>Physical Review Letters</i> , <b>2007</b> , 99, 247002	7.4	41
78	Defect fluctuations and lifetimes in disordered Yukawa systems. <i>Physical Review E</i> , <b>2007</b> , 75, 051407	2.4	6
77	Commensurability effects at nonmatching fields for vortices in diluted periodic pinning arrays. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	30
76	Reversible vortex ratchet effects and ordering in superconductors with simple asymmetric potential arrays. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	68
75	Devil's staircase and disordering transitions in sliding vortices and Wigner crystals on random substrates with transverse driving. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	9
74	Ratchet cellular automata for colloids in dynamic traps. <i>Europhysics Letters</i> , <b>2006</b> , 74, 792-798	1.6	1
73	Statics and dynamics of two-dimensional vortex liquid crystals. <i>Europhysics Letters</i> , <b>2006</b> , 75, 489-495	1.6	1

72	Electrophoresis of DNA on a disordered two-dimensional substrate. <i>Physical Review E</i> , <b>2006</b> , 74, 051908	2.4	7
71	Realizing colloidal artificial ice on arrays of optical traps. <i>Physical Review Letters</i> , <b>2006</b> , 97, 228302	7.4	84
70	Vortex configurations and dynamics in elliptical pinning sites for high matching fields. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	20
69	Dynamics, rectification, and fractionation for colloids on flashing substrates. <i>Physical Review Letters</i> , <b>2006</b> , 96, 188301	7.4	35
68	Heterogeneities and topological defects in two-dimensional pinned liquids. <i>Physical Review E</i> , <b>2006</b> , 73, 061401	2.4	6
67	Ratchet effect and nonlinear transport for particles on random substrates with crossed ac drives. <i>Physical Review E</i> , <b>2006</b> , 73, 011102	2.4	9
66	Coarsening of topological defects in oscillating systems with quenched disorder. <i>Physical Review E</i> , <b>2006</b> , 73, 046122	2.4	8
65	Crossover from intermittent to continuum dynamics for locally driven colloids. <i>Physical Review Letters</i> , <b>2006</b> , 96, 028301	7.4	19
64	Cooperative behavior and pattern formation in mixtures of driven and nondriven colloidal assemblies. <i>Physical Review E</i> , <b>2006</b> , 74, 011403	2.4	28
63	Multiscaling at Point J: jamming is a critical phenomenon. <i>Physical Review Letters</i> , <b>2005</b> , 95, 088001	7.4	85
62	Glassy ratchets for collectively interacting particles. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2005</b> , 342, 162-167	2.3	3
61	Rectification and flux reversals for vortices interacting with triangular traps. <i>Physica C: Superconductivity and Its Applications</i> , <b>2005</b> , 432, 125-132	1.3	29
60	Hysteresis and noise in stripe- and clump-forming systems. <i>Europhysics Letters</i> , <b>2005</b> , 72, 444-450	1.6	15
59	Pinning and dynamics of colloids on one-dimensional periodic potentials. <i>Physical Review E</i> , <b>2005</b> , 72, 032401	2.4	18
58	Ordering and melting in colloidal molecular crystal mixtures. <i>Physical Review E</i> , <b>2005</b> , 71, 062403	2.4	17
57	Dynamic regimes and spontaneous symmetry breaking for driven colloids on triangular substrates. <i>Europhysics Letters</i> , <b>2004</b> , 68, 303-309	1.6	23
56	Re-entrant disordering of colloidal molecular crystals on two-dimensional periodic substrates. <i>Journal of Physics Condensed Matter</i> , <b>2004</b> , 16, 7909-7916	1.8	10
55	Nonlinear dynamics, rectification, and phase locking for particles on symmetrical two-dimensional periodic substrates with dc and circular ac drives. <i>Physical Review E</i> , <b>2004</b> , 69, 056115	2.4	13

54	Local melting and drag for a particle driven through a colloidal crystal. <i>Physical Review Letters</i> , <b>2004</b> , 92, 108301	7.4	43
53	Fibrillar templates and soft phases in systems with short-range dipolar and long-range interactions. <i>Physical Review Letters</i> , <b>2004</b> , 92, 016801	7.4	34
52	Noise at the crossover from Wigner liquid to Wigner glass. <i>Physical Review Letters</i> , <b>2004</b> , 93, 176405	7.4	19
51	Directional locking effects and dynamics for particles driven through a colloidal lattice. <i>Physical Review E</i> , <b>2004</b> , 69, 041405	2.4	31
50	Ratchet superconducting vortex cellular automata. <i>Physica C: Superconductivity and Its Applications</i> , <b>2004</b> , 404, 266-272	1.3	5
49	Dynamics and melting of stripes, crystals, and bubbles with quenched disorder. <i>Physica D: Nonlinear Phenomena</i> , <b>2004</b> , 193, 303-309	3.3	14
48	Depinning and dynamics of systems with competing interactions in quenched disorder. <i>Europhysics Letters</i> , <b>2003</b> , 61, 221-227	1.6	32
47	Frustration and melting of colloidal molecular crystals. <i>Journal of Physics A</i> , <b>2003</b> , 36, 5841-5845		8
46	Fluctuating topological defects in 2D liquids: heterogeneous motion and noise. <i>Physical Review Letters</i> , <b>2003</b> , 90, 095504	7.4	49
45	Depinning by fracture in a glassy background. <i>Physical Review Letters</i> , <b>2003</b> , 90, 098302	7.4	48
44	Metastability and transient effects in vortex matter near a decoupling transition. <i>Physical Review B</i> , <b>2003</b> , 67,	3.3	25
43	Charge transport transitions and scaling in disordered arrays of metallic dots. <i>Physical Review Letters</i> , <b>2003</b> , 90, 046802	7.4	44
42	Dynamical ordering of driven stripe phases in quenched disorder. <i>Physical Review Letters</i> , <b>2003</b> , 90, 026401	7.4	59
41	Ratchet cellular automata. <i>Physical Review Letters</i> , <b>2003</b> , 90, 247004	7.4	51
40	Absolute transverse mobility and ratchet effect on periodic two-dimensional symmetric substrates. <i>Physical Review E</i> , <b>2003</b> , 68, 046102	2.4	28
39	Effect of field-effect transistor geometry on charge ordering of transition-metal oxides. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	1
38	Structure and melting of two-species charged clusters in a parabolic trap. <i>Physical Review E</i> , <b>2003</b> , 68, 060401	2.4	34
37	Colloidal dynamics on disordered substrates. <i>Physical Review Letters</i> , <b>2002</b> , 89, 078301	7.4	80

36	Dynamical behaviors of quasi-one-dimensional vortex states: Possible applications to the vortex chain state. <i>Physical Review B</i> , <b>2002</b> , 66,	3-3	4
35	Transverse phase locking for vortex motion in square and triangular pinning arrays. <i>Physical Review B</i> , <b>2002</b> , 65,	3-3	6
34	Ratchet-induced segregation and transport of nonspherical grains. <i>Physical Review E</i> , <b>2002</b> , 65, 031308	2-4	26
33	Effect of grain anisotropy on ordering, stability and dynamics in granular systems. <i>Europhysics Letters</i> , <b>2002</b> , 57, 904-910	1-6	23
32	Novel colloidal crystalline states on two-dimensional periodic substrates. <i>Physical Review Letters</i> , <b>2002</b> , 88, 248301	7-4	86
31	Rectification and phase locking for particles on symmetric two-dimensional periodic substrates. <i>Physical Review Letters</i> , <b>2002</b> , 89, 024101	7-4	36
30	Commensurate and incommensurate vortex lattice melting in periodic pinning arrays. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	42
29	Hysteretic depinning and dynamical melting for magnetically interacting vortices in disordered layered superconductors. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	29
28	Critical depinning force and vortex lattice order in disordered superconductors. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	15
27	Complex dynamical flow phases and pinning in superconductors with rectangular pinning arrays. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	80
26	Phase-locking of driven vortex lattices with transverse ac force and periodic pinning. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	18
25	Critical currents and vortex states at fractional matching fields in superconductors with periodic pinning. <i>Physical Review B</i> , <b>2001</b> , 63,	3-3	91
24	Collective interaction-driven ratchet for transporting flux quanta. <i>Physical Review Letters</i> , <b>2001</b> , 87, 177002	7-4	109
23	Moving Wigner glasses and smectics: dynamics of disordered Wigner crystals. <i>Physical Review Letters</i> , <b>2001</b> , 86, 4354-7	7-4	71
22	Individual and multiple vortex pinning in systems with periodic pinning arrays. <i>Physical Review B</i> , <b>2001</b> , 64,	3-3	52
21	Dynamic vortex phases and pinning in superconductors with twin boundaries. <i>Physical Review B</i> , <b>2000</b> , 61, 3665-3671	3-3	23
20	Transverse depinning in strongly driven vortex lattices with disorder. <i>Physical Review B</i> , <b>2000</b> , 61, R3811-R3814	3-3	29
19	Vortices freeze like window glass: the vortex molasses scenario. <i>Physical Review Letters</i> , <b>2000</b> , 84, 1994-7	7-4	55

18	Phase-locking of vortex lattices interacting with periodic pinning. <i>Physical Review B</i> , <b>2000</b> , 61, R11914-R11917	3.3	36
17	Collective multivortex states in periodic arrays of traps. <i>Physical Review Letters</i> , <b>2000</b> , 85, 2372-5	7.4	46
16	Melting of moving vortex lattices in systems with periodic pinning. <i>Physical Review B</i> , <b>2000</b> , 61, 14354-14357	3.3	20
15	Phase Locking, Devil's Staircases, Farey Trees, and Arnold Tongues in Driven Vortex Lattices with Periodic Pinning. <i>Physical Review Letters</i> , <b>1999</b> , 82, 414-417	7.4	147
14	Comment on Peak Effect and the Transition from Elastic to Plastic Depinning. <i>Physical Review Letters</i> , <b>1999</b> , 83, 2282-2282	7.4	9
13	Topological Invariants in Microscopic Transport on Rough Landscapes: Morphology, Hierarchical Structure, and Horton Analysis of Riverlike Networks of Vortices. <i>Physical Review Letters</i> , <b>1999</b> , 82, 3641-3644	7.4	18
12	Superconducting Fluxon Pumps and Lenses. <i>Physical Review Letters</i> , <b>1999</b> , 83, 5106-5109	7.4	208
11	Commensurate and incommensurate vortex states in superconductors with periodic pinning arrays. <i>Physical Review B</i> , <b>1998</b> , 57, 7937-7943	3.3	223
10	Fractal Networks, Braiding Channels, and Voltage Noise in Intermittently Flowing Rivers of Quantized Magnetic Flux. <i>Physical Review Letters</i> , <b>1998</b> , 80, 2197-2200	7.4	91
9	Nonequilibrium dynamic phases and plastic flow of driven vortex lattices in superconductors with periodic arrays of pinning sites. <i>Physical Review B</i> , <b>1998</b> , 58, 6534-6564	3.3	157
8	Nonequilibrium Dynamic Phase Diagram for Vortex Lattices. <i>Physical Review Letters</i> , <b>1998</b> , 81, 3757-3760	7.4	293
7	Superconducting vortex avalanches, voltage bursts, and vortex plastic flow: Effect of the microscopic pinning landscape on the macroscopic properties. <i>Physical Review B</i> , <b>1997</b> , 56, 6175-6194	3.3	81
6	Dynamic Phases of Vortices in Superconductors with Periodic Pinning. <i>Physical Review Letters</i> , <b>1997</b> , 78, 2648-2651	7.4	232
5	Plastic flow, voltage noise and vortex avalanches in superconductors. <i>Physica C: Superconductivity and Its Applications</i> , <b>1997</b> , 290, 89-97	1.3	27
4	Vortex Plastic Motion in Twinned Superconductors. <i>Physical Review Letters</i> , <b>1996</b> , 77, 3625-3628	7.4	36
3	Spatiotemporal dynamics and plastic flow of vortices in superconductors with periodic arrays of pinning sites. <i>Physical Review B</i> , <b>1996</b> , 54, 16108-16115	3.3	120
2	Vortex plastic flow, local flux density, magnetization hysteresis loops, and critical current, deep in the Bose-glass and Mott-insulator regimes. <i>Physical Review B</i> , <b>1996</b> , 53, R8898-R8901	3.3	80
1	Microscopic derivation of magnetic-flux-density profiles, magnetization hysteresis loops, and critical currents in strongly pinned superconductors. <i>Physical Review B</i> , <b>1995</b> , 52, 10441-10446	3.3	53

