

Erwin Frey

List of Publications by Year in Descending Order

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

273
papers

11,787
citations

59
h-index

97
g-index

302
ext. papers

13,195
ext. citations

5.9
avg, IF

6.72
L-index

#	Paper	IF	Citations
273	Subdiffusive Activity Spreading in the Diffusive Epidemic Process.. <i>Physical Review Letters</i> , 2022 , 128, 078302	7.4	0
272	Snowdrift game induces pattern formation in systems of self-propelled particles. <i>Physical Review E</i> , 2021 , 104, 044408	2.4	0
271	Surface-tension-induced budding drives alveologenesis in human mammary gland organoids. <i>Nature Physics</i> , 2021 , 17, 1130-1136	16.2	5
270	Diffusive coupling of two well-mixed compartments elucidates elementary principles of protein-based pattern formation. <i>Physical Review Research</i> , 2021 , 3,	3.9	1
269	Wavelength Selection by Interrupted Coarsening in Reaction-Diffusion Systems. <i>Physical Review Letters</i> , 2021 , 126, 104101	7.4	6
268	A diffusiphoretic mechanism for ATP-driven transport without motor proteins. <i>Nature Physics</i> , 2021 , 17, 850-858	16.2	9
267	Dynamics of the Bacillus subtilis Min System. <i>MBio</i> , 2021 , 12,	7.8	6
266	Bulk-surface coupling identifies the mechanistic connection between Min-protein patterns in vivo and in vitro. <i>Nature Communications</i> , 2021 , 12, 3312	17.4	4
265	A hierarchy of protein patterns robustly decodes cell shape information. <i>Nature Physics</i> , 2021 , 17, 578-584	16.2	8
264	Optically transparent vertical silicon nanowire arrays for live-cell imaging. <i>Journal of Nanobiotechnology</i> , 2021 , 19, 51	9.4	6
263	Drag-induced directionality switching of kinesin-5 Cin8 revealed by cluster-motility analysis. <i>Science Advances</i> , 2021 , 7,	14.3	4
262	Theory of Active Intracellular Transport by DNA Relaying. <i>Physical Review Letters</i> , 2021 , 127, 138101	7.4	0
261	Pattern-induced local symmetry breaking in active-matter systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 31623-31630	11.5	9
260	Topological Phase Transition in Coupled Rock-Paper-Scissors Cycles. <i>Physical Review Letters</i> , 2020 , 125, 258301	7.4	8
259	Phase-Space Geometry of Mass-Conserving Reaction-Diffusion Dynamics. <i>Physical Review X</i> , 2020 , 10,	9.1	9
258	Flow Induced Symmetry Breaking in a Conceptual Polarity Model. <i>Cells</i> , 2020 , 9,	7.9	5
257	Molecular underpinnings of cytoskeletal cross-talk. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 3944-3952	11.5	6

256	Pattern localization to a domain edge. <i>Physical Review E</i> , 2020 , 101, 022414	2.4	9
255	Geometric cues stabilise long-axis polarisation of PAR protein patterns in <i>C. elegans</i> . <i>Nature Communications</i> , 2020 , 11, 539	17.4	15
254	Quasi-periodic migration of single cells on short microlanes. <i>PLoS ONE</i> , 2020 , 15, e0230679	3.7	3
253	Stochastic yield catastrophes and robustness in self-assembly. <i>ELife</i> , 2020 , 9,	8.9	2
252	A Mechanistic View of Collective Filament Motion in Active Nematic Networks. <i>Biophysical Journal</i> , 2020 , 118, 313-324	2.9	5
251	Cell-Based Strain Remodeling of a Nonfibrous Matrix as an Organizing Principle for Vasculogenesis. <i>Cell Reports</i> , 2020 , 32, 108015	10.6	9
250	Protein Recruitment through Indirect Mechanochemical Interactions. <i>Physical Review Letters</i> , 2019 , 123, 178101	7.4	6
249	Active matter invasion. <i>Soft Matter</i> , 2019 , 15, 7538-7546	3.6	7
248	Can a Flux-Based Mechanism Explain Protein Cluster Positioning in a Three-Dimensional Cell Geometry?. <i>Biophysical Journal</i> , 2019 , 117, 420-428	2.9	1
247	Reconstitution reveals how myosin-VI self-organises to generate a dynamic mechanism of membrane sculpting. <i>Nature Communications</i> , 2019 , 10, 3305	17.4	5
246	Cooperation in Microbial Populations: Theory and Experimental Model Systems. <i>Journal of Molecular Biology</i> , 2019 , 431, 4599-4644	6.5	12
245	Bridging the gap between single-cell migration and collective dynamics. <i>ELife</i> , 2019 , 8,	8.9	23
244	Design of biochemical pattern forming systems from minimal motifs. <i>ELife</i> , 2019 , 8,	8.9	16
243	Coevolution of nodes and links: Diversity-driven coexistence in cyclic competition of three species. <i>Physical Review E</i> , 2019 , 99, 022309	2.4	4
242	Interactions mediated by a public good transiently increase cooperativity in growing <i>Pseudomonas putida</i> metapopulations. <i>Scientific Reports</i> , 2018 , 8, 4093	4.9	11
241	MinE conformational switching confers robustness on self-organized Min protein patterns. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 4553-4558	11.5	43
240	Limited Resources Induce Bistability in Microtubule Length Regulation. <i>Physical Review Letters</i> , 2018 , 120, 148101	7.4	7
239	Self-organization principles of intracellular pattern formation. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018 , 373,	5.8	73

238	Multiple scales in metapopulations of public goods producers. <i>Physical Review E</i> , 2018 , 97, 042307	2.4	11
237	Rethinking pattern formation in reaction-diffusion systems. <i>Nature Physics</i> , 2018 , 14, 507-514	16.2	79
236	Disentangling entanglements in biopolymer solutions. <i>Nature Communications</i> , 2018 , 9, 494	17.4	21
235	Delayed adaptation in stochastic metapopulation models. <i>Europhysics Letters</i> , 2018 , 122, 68002	1.6	5
234	Self-organized system-size oscillation of a stochastic lattice-gas model. <i>Physical Review E</i> , 2018 , 98, 012410	4.1	1
233	CsrA and its regulators control the time-point of ColicinE2 release in <i>Escherichia coli</i> . <i>Scientific Reports</i> , 2018 , 8, 6537	4.9	11
232	Eco-evolutionary dynamics of a population with randomly switching carrying capacity. <i>Journal of the Royal Society Interface</i> , 2018 , 15,	4.1	16
231	Topologically robust zero-sum games and Pfaffian orientation: How network topology determines the long-time dynamics of the antisymmetric Lotka-Volterra equation. <i>Physical Review E</i> , 2018 , 98,	2.4	3
230	Protein Pattern Formation 2018 , 229-260		11
229	Delays in Fitness Adjustment Can Lead to Coexistence of Hierarchically Interacting Species. <i>Physical Review Letters</i> , 2018 , 121, 268101	7.4	4
228	Crowding and Pausing Strongly Affect Dynamics of Kinesin-1 Motors along Microtubules. <i>Biophysical Journal</i> , 2018 , 115, 1068-1081	2.9	13
227	Regulation of Pom cluster dynamics in <i>Myxococcus xanthus</i> . <i>PLoS Computational Biology</i> , 2018 , 14, e1006358	6.3	7
226	Two-Species Active Transport along Cylindrical Biofilaments is Limited by Emergent Topological Hindrance. <i>Physical Review X</i> , 2018 , 8,	9.1	1
225	Emergence of coexisting ordered states in active matter systems. <i>Science</i> , 2018 , 361, 255-258	33.3	65
224	The PomXYZ Proteins Self-Organize on the Bacterial Nucleoid to Stimulate Cell Division. <i>Developmental Cell</i> , 2017 , 41, 299-314.e13	10.2	34
223	Generic Transport Mechanisms for Molecular Traffic in Cellular Protrusions. <i>Physical Review Letters</i> , 2017 , 118, 128101	7.4	17
222	Master equations and the theory of stochastic path integrals. <i>Reports on Progress in Physics</i> , 2017 , 80, 046601	14.4	42
221	Evolution of a Fluctuating Population in a Randomly Switching Environment. <i>Physical Review Letters</i> , 2017 , 119, 158301	7.4	35

220	Exploiting ecology in drug pulse sequences in favour of population reduction. <i>PLoS Computational Biology</i> , 2017 , 13, e1005747	5	5
219	Ecological feedback in quorum-sensing microbial populations can induce heterogeneous production of autoinducers. <i>ELife</i> , 2017 , 6,	8.9	17
218	Active Curved Polymers Form Vortex Patterns on Membranes. <i>Physical Review Letters</i> , 2016 , 116, 178307	7.4	48
217	Binary Mixtures of Particles with Different Diffusivities Demix. <i>Physical Review Letters</i> , 2016 , 116, 058307	7.4	64
216	Geometry-induced protein pattern formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 548-53	11.5	42
215	Magnetic Propulsion of Microswimmers with DNA-Based Flagellar Bundles. <i>Nano Letters</i> , 2016 , 16, 906-10	11.5	94
214	Hierarchical Post-transcriptional Regulation of Colicin E2 Expression in Escherichia coli. <i>PLoS Computational Biology</i> , 2016 , 12, e1005243	5	10
213	Multistability and dynamic transitions of intracellular Min protein patterns. <i>Molecular Systems Biology</i> , 2016 , 12, 873	12.2	44
212	Nonequilibrium Diffusion and Capture Mechanism Ensures Tip Localization of Regulating Proteins on Dynamic Filaments. <i>Physical Review Letters</i> , 2016 , 117, 078102	7.4	8
211	How turbulence regulates biodiversity in systems with cyclic competition. <i>Physical Review E</i> , 2015 , 91, 033009	2.4	28
210	Emergence and Persistence of Collective Cell Migration on Small Circular Micropatterns. <i>Physical Review Letters</i> , 2015 , 114, 228102	7.4	71
209	Evolutionary games of condensates in coupled birth-death processes. <i>Nature Communications</i> , 2015 , 6, 6977	17.4	31
208	Polar Pattern Formation in Driven Filament Systems Require Non-Binary Particle Collisions. <i>Nature Physics</i> , 2015 , 11, 839-843	16.2	40
207	Random bursts determine dynamics of active filaments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 10703-7	11.5	34
206	New class of turbulence in active fluids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 15048-53	11.5	78
205	The emergence of cooperation from a single mutant during microbial life cycles. <i>Journal of the Royal Society Interface</i> , 2015 , 12, 20150171	4.1	12
204	Non-Selective Evolution of Growing Populations. <i>PLoS ONE</i> , 2015 , 10, e0134300	3.7	11
203	Quantifying protein diffusion and capture on filaments. <i>Biophysical Journal</i> , 2015 , 108, 787-790	2.9	4

202	Amount of colicin release in <i>Escherichia coli</i> is regulated by lysis gene expression of the colicin E2 operon. <i>PLoS ONE</i> , 2015 , 10, e0119124	3.7	19
201	Flow and diffusion in channel-guided cell migration. <i>Biophysical Journal</i> , 2014 , 107, 1054-1064	2.9	41
200	Effective 2D model does not account for geometry sensing by self-organized proteins patterns. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E1817	11.5	14
199	Defect-mediated phase transitions in active soft matter. <i>Physical Review Letters</i> , 2014 , 112, 168301	7.4	31
198	Colloids on Patterned Substrates 2014 , 87-158		0
197	Periodic versus intermittent adaptive cycles in quasispecies coevolution. <i>Physical Review Letters</i> , 2014 , 113, 128101	7.4	2
196	Dynamics of a semiflexible polymer or polymer ring in shear flow. <i>Physical Review E</i> , 2014 , 89, 022606	2.4	30
195	Specialization and bet hedging in heterogeneous populations. <i>Physical Review Letters</i> , 2014 , 113, 108102	7.4	9
194	Range expansion of heterogeneous populations. <i>Physical Review Letters</i> , 2014 , 112, 148103	7.4	19
193	Molecular mechanisms for microtubule length regulation by kinesin-8 and XMAP215 proteins. <i>Interface Focus</i> , 2014 , 4, 20140031	3.9	16
192	Mobility-dependent selection of competing strategy associations. <i>Physical Review E</i> , 2014 , 89, 012721	2.4	21
191	Numerical Treatment of the Boltzmann Equation for Self-Propelled Particle Systems. <i>Physical Review X</i> , 2014 , 4,	9.1	15
190	Chemical warfare and survival strategies in bacterial range expansions. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140172	4.1	66
189	Global attractors and extinction dynamics of cyclically competing species. <i>Physical Review E</i> , 2013 , 87, 052710	2.4	26
188	Stability of localized wave fronts in bistable systems. <i>Physical Review Letters</i> , 2013 , 110, 038102	7.4	14
187	Coexistence and survival in conservative Lotka-Volterra networks. <i>Physical Review Letters</i> , 2013 , 110, 168106	7.4	63
186	Long-range and many-body effects in coagulation processes. <i>Physical Review E</i> , 2013 , 87, 022136	2.4	5
185	Long-range ordering of vibrated polar disks. <i>Physical Review Letters</i> , 2013 , 110, 208001	7.4	93

184	Establishment of a robust single axis of cell polarity by coupling multiple positive feedback loops. <i>Nature Communications</i> , 2013 , 4, 1807	17.4	81
183	GDI-mediated cell polarization in yeast provides precise spatial and temporal control of Cdc42 signaling. <i>PLoS Computational Biology</i> , 2013 , 9, e1003396	5	59
182	High variation of fluorescence protein maturation times in closely related Escherichia coli strains. <i>PLoS ONE</i> , 2013 , 8, e75991	3.7	57
181	Role of particle conservation in self-propelled particle systems. <i>New Journal of Physics</i> , 2013 , 15, 045014	2.9	16
180	Cooperative effects enhance the transport properties of molecular spider teams. <i>Physical Review E</i> , 2013 , 87,	2.4	12
179	Critical assessment of the Boltzmann approach to active systems. <i>Physical Review Letters</i> , 2013 , 111, 190601	7.4	26
178	Fluctuation effects in the pair-annihilation process with Lévy dynamics. <i>Physical Review E</i> , 2013 , 88, 012111	2.4	1
177	Mobility, fitness collection, and the breakdown of cooperation. <i>Physical Review E</i> , 2013 , 87, 042711	2.4	18
176	Understanding collective dynamics of soft active colloids by binary scattering. <i>Physical Review E</i> , 2013 , 88, 052309	2.4	39
175	Language change in a multiple group society. <i>Physical Review E</i> , 2013 , 88, 022814	2.4	4
174	Highly canalized MinD transfer and MinE sequestration explain the origin of robust MinCDE-protein dynamics. <i>Cell Reports</i> , 2012 , 1, 741-52	10.6	94
173	Microtubule length regulation by molecular motors. <i>Physical Review Letters</i> , 2012 , 108, 258104	7.4	59
172	Validity of the law of mass action in three-dimensional coagulation processes. <i>Physical Review Letters</i> , 2012 , 108, 108301	7.4	15
171	Nucleation-induced transition to collective motion in active systems. <i>Physical Review E</i> , 2012 , 86, 030901	2.4	9
170	Extinction in neutrally stable stochastic Lotka-Volterra models. <i>Physical Review E</i> , 2012 , 85, 051903	2.4	58
169	Growth dynamics and the evolution of cooperation in microbial populations. <i>Scientific Reports</i> , 2012 , 2, 281	4.9	64
168	Crowding of molecular motors determines microtubule depolymerization. <i>Biophysical Journal</i> , 2011 , 101, 2190-200	2.9	44
167	Threefold way to extinction in populations of cyclically competing species. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011 , 2011, L01003	1.9	18

166	Social dynamics with peer support on heterogeneous networks. <i>European Physical Journal B</i> , 2011 , 83, 507-518	1.2	5
165	Polar pattern formation: hydrodynamic coupling of driven filaments. <i>Soft Matter</i> , 2011 , 7, 3213	3.6	55
164	Range expansion with mutation and selection: dynamical phase transition in a two-species Eden model. <i>New Journal of Physics</i> , 2011 , 13, 113013	2.9	26
163	Current reversal and exclusion processes with history-dependent random walks. <i>Europhysics Letters</i> , 2011 , 95, 30004	1.6	6
162	Evolutionary and population dynamics: a coupled approach. <i>Physical Review E</i> , 2011 , 84, 051921	2.4	31
161	Longitudinal response of confined semiflexible polymers. <i>Physical Review E</i> , 2011 , 83, 021802	2.4	13
160	Driven transport on parallel lanes with particle exclusion and obstruction. <i>Physical Review E</i> , 2011 , 83, 031923	2.4	19
159	Hinsch, Reese, and Frey Reply:. <i>Physical Review Letters</i> , 2011 , 106,	7.4	2
158	Frozen steady states in active systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 19183-8	11.5	78
157	Bacterial Games. <i>The Frontiers Collection</i> , 2011 , 297-329	0.3	7
156	Polar patterns of driven filaments. <i>Nature</i> , 2010 , 467, 73-7	50.4	536
155	Evolutionary game theory in growing populations. <i>Physical Review Letters</i> , 2010 , 105, 178101	7.4	70
154	Buckling of stiff polymer rings in weak spherical confinement. <i>Physical Review E</i> , 2010 , 81, 061802	2.4	32
153	Molecular self-organization: Predicting the pattern diversity and lowest energy state of competing ordering motifs. <i>Physical Review B</i> , 2010 , 82,	3.3	15
152	Molecular jigsaw: pattern diversity encoded by elementary geometrical features. <i>Nano Letters</i> , 2010 , 10, 833-7	11.5	15
151	Excluded volume effects on semiflexible ring polymers. <i>Nano Letters</i> , 2010 , 10, 1445-9	11.5	26
150	Coexistence in a one-dimensional cyclic dominance process. <i>Physical Review E</i> , 2010 , 81, 060901	2.4	18
149	Entropy production of cyclic population dynamics. <i>Physical Review Letters</i> , 2010 , 104, 218102	7.4	42

148	Confinement induces conformational transition of semiflexible polymer rings to figure eight form. <i>Soft Matter</i> , 2010 , 6, 3467	3.6	16
147	The effect of internal and global modes on the radial distribution function of confined semiflexible polymers. <i>Europhysics Letters</i> , 2010 , 91, 38004	1.6	9
146	Quantitative predictions on auxin-induced polar distribution of PIN proteins during vein formation in leaves. <i>European Physical Journal E</i> , 2010 , 33, 165-73	1.5	12
145	The localization transition of the two-dimensional Lorentz model. <i>European Physical Journal: Special Topics</i> , 2010 , 189, 103-118	2.3	51
144	Statics and dynamics of the wormlike bundle model. <i>Physical Review E</i> , 2010 , 81, 021904	2.4	37
143	Unconventional salt trend from soft to stiff in single neurofilament biopolymers. <i>Langmuir</i> , 2010 , 26, 18595-9	4	35
142	Predictive modeling of non-viral gene transfer. <i>Biotechnology and Bioengineering</i> , 2010 , 105, 805-13	4.9	34
141	Error thresholds for self- and cross-specific enzymatic replication. <i>Journal of Theoretical Biology</i> , 2010 , 267, 653-62	2.3	9
140	Evolutionary game theory: Theoretical concepts and applications to microbial communities. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010 , 389, 4265-4298	3.3	167
139	Persistent memory for a Brownian walker in a random array of obstacles. <i>Chemical Physics</i> , 2010 , 375, 540-547	2.3	28
138	Tension dynamics and viscoelasticity of extensible wormlike chains. <i>Physical Review E</i> , 2009 , 80, 040801	2.4	17
137	Freely relaxing polymers remember how they were straightened. <i>Physical Review E</i> , 2009 , 79, 021804	2.4	13
136	Escalation of error catastrophe for enzymatic self-replicators. <i>Europhysics Letters</i> , 2009 , 88, 48006	1.6	6
135	The edge of neutral evolution in social dilemmas. <i>New Journal of Physics</i> , 2009 , 11, 093029	2.9	36
134	Conformations of entangled semiflexible polymers: entropic trapping and transient non-equilibrium distributions. <i>ChemPhysChem</i> , 2009 , 10, 2891-9	3.2	7
133	Zero-one survival behavior of cyclically competing species. <i>Physical Review Letters</i> , 2009 , 102, 048102	7.4	90
132	Kinetics of genetic switching into the state of bacterial competence. <i>Biophysical Journal</i> , 2009 , 96, 1178-88	2.9	32
131	Scaling and universality in coupled driven diffusive models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009 , 2009, P08013	1.9	7

130	Quantification of Leaf Vein Patterning. <i>Biophysical Journal</i> , 2009 , 96, 631a	2.9	2
129	Effective Perrin theory for the anisotropic diffusion of a strongly hindered rod. <i>Europhysics Letters</i> , 2009 , 85, 30003	1.6	24
128	Direct observation of the tube model in F-actin solutions: Tube dimensions and curvatures. <i>Europhysics Letters</i> , 2009 , 86, 26003	1.6	16
127	Cytoskeletal bundle mechanics. <i>Biophysical Journal</i> , 2008 , 94, 2955-64	2.9	122
126	Microtubule dynamics depart from the wormlike chain model. <i>Physical Review Letters</i> , 2008 , 100, 028102	7.4	67
125	Stochastic switching to competence. <i>Current Opinion in Microbiology</i> , 2008 , 11, 553-9	7.9	49
124	Velocity oscillations in actin-based motility. <i>New Journal of Physics</i> , 2008 , 10, 033022	2.9	29
123	Critical dynamics of ballistic and Brownian particles in a heterogeneous environment. <i>Journal of Chemical Physics</i> , 2008 , 128, 164517	3.9	60
122	Enhanced diffusion of a needle in a planar array of point obstacles. <i>Physical Review Letters</i> , 2008 , 101, 120605	7.4	26
121	Instability of spatial patterns and its ambiguous impact on species diversity. <i>Physical Review Letters</i> , 2008 , 101, 058102	7.4	83
120	Entangled dynamics of a stiff polymer. <i>Physical Review E</i> , 2008 , 77, 060904	2.4	24
119	Self-organization of mobile populations in cyclic competition. <i>Journal of Theoretical Biology</i> , 2008 , 254, 368-83	2.3	116
118	Anomalous finite-size effects in the Battle of the Sexes. <i>European Physical Journal B</i> , 2008 , 63, 373-380	1.2	23
117	Domain wall delocalization, dynamics and fluctuations in an exclusion process with two internal states. <i>European Physical Journal E</i> , 2008 , 27, 47-56	1.5	15
116	Spontaneous unknotting of a polymer confined in a nanochannel. <i>Nano Letters</i> , 2008 , 8, 4518-22	11.5	29
115	Mobility promotes and jeopardizes biodiversity in rock-paper-scissors games. <i>Nature</i> , 2007 , 448, 1046-9	50.4	508
114	Stretching dynamics of semiflexible polymers. <i>European Physical Journal E</i> , 2007 , 23, 375-88	1.5	19
113	Quantitative tube model for semiflexible polymer solutions. <i>European Physical Journal E</i> , 2007 , 24, 35-46	1.5	32

112	Force distributions and force chains in random stiff fiber networks. <i>European Physical Journal E</i> , 2007 , 24, 47-53	1.5	46
111	Fluctuating semiflexible polymer ribbon constrained to a ring. <i>European Physical Journal E</i> , 2007 , 24, 185-91	1.5	15
110	Cytoskeletal Bundle Mechanics 2007 , 265		
109	Traffic jams induced by rare switching events in two-lane transport. <i>New Journal of Physics</i> , 2007 , 9, 159-159	5.9	52
108	Noise and correlations in a spatial population model with cyclic competition. <i>Physical Review Letters</i> , 2007 , 99, 238105	7.4	132
107	Optimal flexibility for conformational transitions in macromolecules. <i>Physical Review Letters</i> , 2007 , 99, 178101	7.4	1
106	Role of architecture in the elastic response of semiflexible polymer and fiber networks. <i>Physical Review E</i> , 2007 , 75, 011917	2.4	46
105	Statistical mechanics of semiflexible bundles of wormlike polymer chains. <i>Physical Review Letters</i> , 2007 , 99, 048101	7.4	97
104	Conformations of confined biopolymers. <i>Physical Review E</i> , 2007 , 75, 050902	2.4	44
103	Mechanics of bundled semiflexible polymer networks. <i>Physical Review Letters</i> , 2007 , 99, 088102	7.4	112
102	Nonaffine rubber elasticity for stiff polymer networks. <i>Physical Review E</i> , 2007 , 76, 031906	2.4	96
101	Spin models for orientational ordering of colloidal molecular crystals. <i>Physical Review E</i> , 2007 , 75, 021402	2.4	28
100	Tension dynamics in semiflexible polymers. I. Coarse-grained equations of motion. <i>Physical Review E</i> , 2007 , 75, 031905	2.4	41
99	Tension dynamics in semiflexible polymers. II. Scaling solutions and applications. <i>Physical Review E</i> , 2007 , 75, 031906	2.4	26
98	Shapes of semiflexible polymer rings. <i>Physical Review Letters</i> , 2007 , 99, 198102	7.4	60
97	From Intracellular Traffic to a Novel Class of Driven Lattice Gas Models 2007 , 205-222		1
96	Floppy modes and nonaffine deformations in random fiber networks. <i>Physical Review Letters</i> , 2006 , 97, 105501	7.4	108
95	Driven lattice gas of dimers coupled to a bulk reservoir. <i>Physical Review E</i> , 2006 , 74, 031920	2.4	20

94	Coexistence versus extinction in the stochastic cyclic Lotka-Volterra model. <i>Physical Review E</i> , 2006 , 74, 051907	2.4	177
93	Exclusion processes with internal states. <i>Physical Review Letters</i> , 2006 , 97, 050603	7.4	68
92	Stiff polymers, foams, and fiber networks. <i>Physical Review Letters</i> , 2006 , 96, 017802	7.4	83
91	Bottleneck-induced transitions in a minimal model for intracellular transport. <i>Physical Review E</i> , 2006 , 74, 031906	2.4	64
90	Microrheology probes length scale dependent rheology. <i>Physical Review Letters</i> , 2006 , 96, 118104	7.4	163
89	Localization transition of the three-dimensional lorentz model and continuum percolation. <i>Physical Review Letters</i> , 2006 , 96, 165901	7.4	137
88	Dynamics of semiflexible polymers in a flow field. <i>Physical Review E</i> , 2006 , 74, 041911	2.4	32
87	Bulk-driven nonequilibrium phase transitions in a mesoscopic ring. <i>Physical Review Letters</i> , 2006 , 97, 095701	7.4	26
86	Thermal fluctuations of grafted microtubules provide evidence of a length-dependent persistence length. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 10248-10253	11.5	280
85	Entropic forces generated by grafted semiflexible polymers. <i>Physical Review E</i> , 2006 , 74, 041803	2.4	39
84	Actin-binding proteins sensitively mediate F-actin bundle stiffness. <i>Nature Materials</i> , 2006 , 5, 748-53	27	199
83	Propagation and relaxation of tension in stiff polymers. <i>Physical Review Letters</i> , 2005 , 94, 077804	7.4	41
82	Statics and dynamics of single DNA molecules confined in nanochannels. <i>Physical Review Letters</i> , 2005 , 94, 196101	7.4	451
81	Brownian motion: a paradigm of soft matter and biological physics. <i>Annalen Der Physik</i> , 2005 , 14, 20-50	2.6	161
80	Oscillations in molecular motor assemblies. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S3901-11	1.8	20
79	Bimodality in the transverse fluctuations of a grafted semiflexible polymer and the diffusion-convection analogue: an effective-medium approach. <i>Physical Review E</i> , 2005 , 72, 030801	2.4	10
78	Melting of colloidal molecular crystals on triangular lattices. <i>Physical Review Letters</i> , 2005 , 95, 088302	7.4	26
77	Dynamic correlation functions and Boltzmann-Langevin approach for driven one-dimensional lattice gas. <i>Physical Review E</i> , 2005 , 72, 036123	2.4	34

76	Renewal processes and fluctuation analysis of molecular motor stepping. <i>Physical Biology</i> , 2005 , 2, 207-222		8
75	Linear response of a grafted semiflexible polymer to a uniform force field. <i>Physical Review E</i> , 2004 , 70, 051806	2.4	16
74	Overdamped stress relaxation in buckled rods. <i>Physical Review E</i> , 2004 , 70, 031802	2.4	10
73	Transverse fluctuations of grafted polymers. <i>Physical Review E</i> , 2004 , 69, 021801	2.4	20
72	Totally asymmetric simple exclusion process with Langmuir kinetics. <i>Physical Review E</i> , 2004 , 70, 046101	2.4	181
71	Internal motility in stiffening actin-myosin networks. <i>Physical Review Letters</i> , 2004 , 93, 268101	7.4	35
70	Novel universality classes of coupled driven diffusive systems. <i>Physical Review E</i> , 2004 , 69, 015101	2.4	9
69	Collective phenomena in intracellular processes. <i>Genome Informatics</i> , 2004 , 15, 46-55		14
68	Phase coexistence in driven one-dimensional transport. <i>Physical Review Letters</i> , 2003 , 90, 086601	7.4	366
67	Depinning of semiflexible polymers. <i>Physical Review E</i> , 2003 , 67, 051108	2.4	36
66	Elasticity of stiff polymer networks. <i>Physical Review Letters</i> , 2003 , 91, 108103	7.4	292
65	Physics in cell biology: on the physics of biopolymers and molecular motors. <i>ChemPhysChem</i> , 2002 , 3, 270-5	3.2	18
64	Anomalous relaxation kinetics of biological lattice ligand binding models. <i>Chemical Physics</i> , 2002 , 284, 287-310	2.3	26
63	Domain wall roughening in dipolar films in the presence of disorder. <i>Physical Review E</i> , 2002 , 65, 031608	2.4	
62	Universality classes in the anisotropic Kardar-Parisi-Zhang model. <i>Europhysics Letters</i> , 2002 , 59, 655-661	1.6	18
61	Tracer studies on f-actin fluctuations. <i>Physical Review Letters</i> , 2002 , 89, 258101	7.4	130
60	Novel phases and reentrant melting of two-dimensional colloidal crystals. <i>Physical Review E</i> , 2001 , 63, 031503	2.4	54
59	Phase behaviour of colloids in confining geometry. <i>Journal of Physics Condensed Matter</i> , 2001 , 13, R321-R336		23

58	Dipolar interactions in superconductor-ferromagnet heterostructures. <i>Physical Review B</i> , 2001 , 63,	3.3	11
57	Physics in Cell Biology: Actin as a Model System for Polymer Physics 2001 , 345-356		6
56	Dynamics and cooperativity of microtubule decoration by the motor protein kinesin. <i>Journal of Molecular Biology</i> , 2001 , 312, 1011-26	6.5	68
55	Physikalische Fragestellungen aus der Zellbiologie: Physiker untersuchen steife Biopolymere und modellieren molekulare Motoren. <i>Physik Journal</i> , 2001 , 57, 63-68		1
54	Relaxation kinetics of biological dimer adsorption models. <i>Europhysics Letters</i> , 2001 , 56, 420-426	1.6	10
53	Rheology of F-actin solutions determined from thermally driven tracer motion. <i>Journal of Rheology</i> , 2000 , 44, 917-928	4.1	69
52	Scaling regimes and critical dimensions in the Kardar-Parisi-Zhang problem. <i>Europhysics Letters</i> , 1999 , 47, 14-20	1.6	31
51	Force-velocity relations of a two-state crossbridge model for molecular motors. <i>Europhysics Letters</i> , 1999 , 45, 283-289	1.6	32
50	Viscoelasticity of biopolymer networks and statistical mechanics of semiflexible polymers. <i>Advances in Structural Biology</i> , 1999 , 135-168		11
49	Exact results for the Kardar-Parisi-Zhang equation with spatially correlated noise. <i>European Physical Journal B</i> , 1999 , 9, 491-511	1.2	40
48	Light-Induced Melting of Colloidal Crystals in Two Dimensions. <i>Physical Review Letters</i> , 1999 , 83, 2977-2980	1.2	75
47	Critical dynamics of a uniaxial and dipolar ferromagnet. <i>Physical Review B</i> , 1999 , 60, 9630-9649	3.3	13
46	Elastically coupled molecular motors. <i>European Physical Journal B</i> , 1998 , 3, 535-546	1.2	29
45	Screened and Unscreened Phases in Sedimenting Suspensions. <i>Physical Review Letters</i> , 1998 , 81, 5944-5947	7.4	64
44	Entanglement, Elasticity, and Viscous Relaxation of Actin Solutions. <i>Physical Review Letters</i> , 1998 , 81, 2614-2617	7.4	179
43	Phase diagrams, critical, and multicritical behavior of hard-core Bose-Hubbard models. <i>Physical Review B</i> , 1998 , 57, 13712-13728	3.3	18
42	Statistical Mechanics of Semiflexible Polymers: Theory and Experiment 1998 , 103-119		0
41	Critical behavior of the supersolid transition in Bose-Hubbard models. <i>Physical Review B</i> , 1997 , 55, 1050-1067	3.3	43

40	Determination of the Universality Class of Gadolinium. <i>Physical Review Letters</i> , 1997 , 79, 5142-5145	7.4	16
39	Dynamic scattering from solutions of semiflexible polymers. <i>Physical Review E</i> , 1997 , 55, 3092-3101	2.4	64
38	Gliding Mechanism in the Late Permian Reptile Coelurosauravus. <i>Science</i> , 1997 , 275, 1450-1452	33.3	38
37	NR investigations of gadolinium in the paramagnetic regime near the ferromagnetic transition 1997 , 104, 301-306		4
36	Dynamic Light Scattering from Semidilute Actin Solutions: A Study of Hydrodynamic Screening, Filament Bending Stiffness, and the Effect of Tropomyosin/Troponin-Binding. <i>Macromolecules</i> , 1996 , 29, 30-36	5.5	77
35	Radial Distribution Function of Semiflexible Polymers. <i>Physical Review Letters</i> , 1996 , 77, 2581-2584	7.4	254
34	Force-Extension Relation and Plateau Modulus for Wormlike Chains. <i>Physical Review Letters</i> , 1996 , 77, 306-309	7.4	173
33	Mode-coupling and renormalization group results for the noisy Burgers equation. <i>Physical Review E</i> , 1996 , 53, 4424-4438	2.4	69
32	Crossover scaling functions and an extended minimal subtraction scheme. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1995 , 221, 52-67	3.3	4
31	Reply to "Comment on Two-loop renormalization-group analysis of the Burgers-Kardar-Parisi-Zhang equation". <i>Physical Review E</i> , 1995 , 51, 6319-6322	2.4	13
30	Critical dynamics of magnets. <i>Advances in Physics</i> , 1994 , 43, 577-683	18.4	54
29	Crossover from Self-Similar to Self-Affine Structures in Percolation. <i>Europhysics Letters</i> , 1994 , 26, 413-418	6	10
28	Crossover from isotropic to directed percolation. <i>Physical Review E</i> , 1994 , 49, 5058-5072	2.4	22
27	Interstitials, vacancies, and supersolid order in vortex crystals. <i>Physical Review B</i> , 1994 , 49, 9723-9745	3.3	104
26	Wave-vector region probed by zero-field muon-spin-relaxation measurements in paramagnets near the Curie temperature. <i>Physical Review B</i> , 1994 , 50, 3033-3036	3.3	21
25	Two-loop renormalization-group analysis of the Burgers-Kardar-Parisi-Zhang equation. <i>Physical Review E</i> , 1994 , 50, 1024-1045	2.4	134
24	Zero-field muon-spin-relaxation depolarization rate of paramagnets near the Curie temperature. <i>Physical Review B</i> , 1993 , 47, 796-809	3.3	42
23	Kinetic theory of flux-line hydrodynamics: Liquid phase with disorder. <i>Physical Review B</i> , 1993 , 48, 10357-10381	19	19

22	Anisotropic electron coupling as a phenomenological model for high-Tc superconductors. <i>Physical Review B</i> , 1993 , 48, 4176-4179	3.3	4
21	Probing Longitudinal and Transverse Spin Dynamics of Paramagnets Near T C by Zero-Field BR Measurements. <i>Europhysics Letters</i> , 1993 , 21, 93-98	1.6	14
20	Critical dynamics of dipolar antiferromagnets. <i>Journal of Magnetism and Magnetic Materials</i> , 1992 , 104-107, 201-203	2.8	2
19	Static crossover in uniaxial dipolar ferromagnets. <i>Journal of Magnetism and Magnetic Materials</i> , 1992 , 104-107, 204-206	2.8	3
18	Renormalized field theory for the static crossover in isotropic dipolar ferromagnets. <i>Physical Review B</i> , 1991 , 43, 833-841	3.3	43
17	Critical dynamics of planar ferromagnets. <i>Physical Review B</i> , 1991 , 43, 5831-5845	3.3	7
16	Exact scaling function of interface growth dynamics. <i>Physical Review A</i> , 1991 , 44, R7873-R7876	2.6	70
15	Dynamics of flat membranes and flickering in red blood cells. <i>Journal De Physique, I</i> , 1991 , 1, 1715-1757		27
14	Critical dynamics of isotropic dipolar antiferromagnets. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1990 , 146, 457-462	2.3	6
13	Renormalized field theory for the static crossover in uniaxial dipolar ferromagnets. <i>Physical Review B</i> , 1990 , 42, 8261-8273	3.3	48
12	Shape functions of dipolar ferromagnets at and above the Curie point. <i>Physical Review B</i> , 1989 , 40, 7199-7213	3.3	23
11	Mode coupling theory for the critical dynamics of dipolar ferromagnets. <i>Hyperfine Interactions</i> , 1989 , 50, 765-774	0.8	5
10	Shape functions of dipolar ferromagnets at the Curie point. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988 , 129, 343-349	2.3	21
9	On the critical dynamics of ferromagnets. <i>European Physical Journal B</i> , 1988 , 71, 355-368	1.2	61
8	Critical dynamics of dipolar ferromagnets. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987 , 123, 49-53	2.3	36
7	Stochastic effects on biodiversity in cyclic coevolutionary dynamics		5
6	Generic principles of active transport		8
5	Geometric cues stabilise long-axis polarisation of PAR protein patterns in <i>C. elegans</i>		2

- 4 Bulk-surface coupling reconciles Min-protein pattern formation in vitro and in vivo 5
- 3 ATP driven diffusiophoresis: active cargo transport without motor proteins 2
- 2 Adaptability and evolution of the cell polarization machinery in budding yeast 3
- 1 Control of protein-based pattern formation via guiding cues. *Nature Reviews Physics*, 23.6 0