Raymond E Goldstein

List of Publications by Year
in descending order

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213 papers	17,366 citations	11639 70 h-index	15716 125 g-index
238 all docs	238 docs citations	238 times ranked	9049 citing authors

#	Article	IF	Citations
1	Self-Concentration and Large-Scale Coherence in Bacterial Dynamics. Physical Review Letters, 2004, 93, 098103.	2.9	862
2	Meso-scale turbulence in living fluids. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14308-14313.	3.3	747
3	Fluid dynamics and noise in bacterial cellâ€“cell and cellâ€“surface scattering. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10940-10945.	3.3	583
4	Concentration Dependence of the Collective Dynamics of Swimming Bacteria. Physical Review Letters, 2007, 98, 158102.	2.9	579
5	Bacterial swimming and oxygen transport near contact lines. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 2277-2282.	3.3	539
6	Fluid Dynamics of Bacterial Turbulence. Physical Review Letters, 2013, 110, 228102.	2.9	407
7	Dynamics of Enhanced Tracer Diffusion in Suspensions of Swimming Eukaryotic Microorganisms. Physical Review Letters, 2009, 103, 198103.	2.9	385
8	Chlamydomonas Swims with Two â€œGearsâ€• in a Eukaryotic Version of Run-and-Tumble Locomotion. Science, 2009, 325, 487-490.	6.0	371
9	Direct Measurement of the Flow Field around Swimming Microorganisms. Physical Review Letters, 2010, 105, 168101.	2.9	339
10	Confinement Stabilizes a Bacterial Suspension into a Spiral Vortex. Physical Review Letters, 2013, 110, 268102.	2.9	333
11	Fluid flows created by swimming bacteria drive self-organization in confined suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9733-9738.	3.3	302
12	DancingVolvox: Hydrodynamic Bound States of Swimming Algae. Physical Review Letters, 2009, 102, 168101.	2.9	291
13	Green Algae as Model Organisms for Biological Fluid Dynamics. Annual Review of Fluid Mechanics, 2015, 47, 343-375.	10.8	261
14	Ciliary contact interactions dominate surface scattering of swimming eukaryotes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1187-1192.	3.3	247
15	Insights into the Evolution of Vitamin B12 Auxotrophy from Sequenced Algal Genomes. Molecular Biology and Evolution, 2011, 28, 2921-2933.	3.5	246
16	Fluid dynamics of self-propelled microorganisms, from individuals to concentrated populations. Experiments in Fluids, 2007, 43, 737-753.	1.1	242
17	Flexive and Propulsive Dynamics of Elastica at Low Reynolds Number. Physical Review Letters, 1998, 80, 3879-3882.	2.9	235
18	The Kortewegâ€“de Vries hierarchy as dynamics of closed curves in the plane. Physical Review Letters, 1991, 67, 3203-3206.	2.9	228

#	Article	IF	Citations
19	From Chemical Gardens to Chemobrionics. Chemical Reviews, 2015, 115, 8652-8703.	23.0	216
20	Flagellar synchronization through direct hydrodynamic interactions. ELife, 2014, 3, e02750.	2.8	208
21	Rheotaxis facilitates upstream navigation of mammalian sperm cells. ELife, 2014, 3, e02403.	2.8	198
22	Noise and Synchronization in Pairs of Beating Eukaryotic Flagella. Physical Review Letters, 2009, 103, 168103.	2.9	191
23	Competing Patterns of Signaling Activity inDictyostelium Discoideum. Physical Review Letters, 1996, 76, 1174-1177.	2.9	187
24	Trapping and Wiggling: Elastohydrodynamics of Driven Microfilaments. Biophysical Journal, 1998, 74, 1043-1060.	0.2	186
25	Fluid-membrane tethers: Minimal surfaces and elastic boundary layers. Physical Review E, 2002, 65, 041901.	0.8	184
26	Directed collective motion of bacteria under channel confinement. New Journal of Physics, 2016, 18, 075002.	1.2	176
27	Enhanced mixing and spatial instability in concentrated bacterial suspensions. Physical Review E, 2009, 80, 031903.	0.8	170
28	Model for dynamical coherence in thin films of self-propelled microorganisms. Physical Review E, 2007, 75, 040901.	0.8	156
29	Dynamics of labyrinthine pattern formation in magnetic fluids. Physical Review A, 1992, 46, 4894-4904.	1.0	148
30	Droplet breakup in a model of the Hele-Shaw cell. Physical Review E, 1993, 47, 4169-4181.	0.8	148
31	Labyrinthine Pattern Formation in Magnetic Fluids. Science, 1993, 261, 1012-1015.	6.0	143
32	Ferromagnetic and antiferromagnetic order in bacterial vortex lattices. Nature Physics, 2016, 12, 341-345.	6.5	142
33	Hydrodynamic Synchronization and Metachronal Waves on the Surface of the Colonial AlgaVolvox carteri. Physical Review Letters, 2012, 109, 268102.	2.9	136
34	Coordinated beating of algal flagella is mediated by basal coupling. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2784-93.	3.3	133
35	Nonlinear Dynamics of Stiff Polymers. Physical Review Letters, 1995, 75, 1094-1097.	2.9	129
36	Flows driven by flagella of multicellular organisms enhance long-range molecular transport. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 8315-8319.	3.3	129

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37	Parity-breaking transitions of modulated patterns in hydrodynamic systems. Physical Review Letters, 1989, 63, 1954-1957.	2.9	128
38	Spontaneous Circulation of Confined Active Suspensions. Physical Review Letters, 2012, 109, 168105.	2.9	128
39	A physical perspective on cytoplasmic streaming. Interface Focus, 2015, 5, 20150030.	1.5	127
40	Fidelity of adaptive phototaxis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11171-11176.	3.3	123
41	Twirling and Whirling: Viscous Dynamics of Rotating Elastic Filaments. Physical Review Letters, 2000, 84, 1623-1626.	2.9	122
42	Cytoplasmic streaming enables the distribution of molecules and vesicles in large plant cells. Protoplasma, 2010, 240, 99-107.	1.0	120
43	Dynamics of swimming bacteria: Transition to directional order at high concentration. Physical Review E, 2011, 83, 061907.	0.8	116
44	On the theory of lower critical solution points in hydrogenâ€bonded mixtures. Journal of Chemical Physics, 1984, 80, 5340-5341.	1.2	113
45	Hydrodynamics of fingering instabilities in dipolar fluids. Physical Review E, 1994, 50, 298-307.	0.8	112
46	Cytoplasmic streaming in Drosophila oocytes varies with kinesin activity and correlates with the microtubule cytoskeleton architecture. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15109-15114.	3.3	110
47	The Evolution of Silicon Transport in Eukaryotes. Molecular Biology and Evolution, 2016, 33, 3226-3248.	3.5	107
48	Viscous Nonlinear Dynamics of Twist and Writhe. Physical Review Letters, 1998, 80, 5232-5235.	2.9	105
49	Interface proliferation and the growth of labyrinths in a reaction-diffusion system. Physical Review E, 1996, 53, 3933-3957.	0.8	104
50	Metachronal waves in the flagellar beating ofVolvoxand their hydrodynamic origin. Journal of the Royal Society Interface, 2015, 12, 20141358.	1.5	104
51	Microfluidics of cytoplasmic streaming and its implications for intracellular transport. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3663-3667.	3.3	102
52	Theory of multiple phase separations in binary mixtures: Phase diagrams, thermodynamic properties, and comparisons with experiments. Journal of Chemical Physics, 1983, 78, 1492-1512.	1.2	98
53	Tubular precipitation and redox gradients on a bubbling template. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11537-11541.	3.3	98
54	Reversal of bacterial locomotion at an obstacle. Physical Review E, 2006, 73, 030901.	0.8	98

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55	Topology transitions and singularities in viscous flows. Physical Review Letters, 1993, 70, 3043-3046.	2.9	93
56	Squirmers with swirl: a model forVolvoxswimming. Journal of Fluid Mechanics, 2016, 798, 165-186.	1.4	92
57	Multicellularity and the functional interdependence of motility and molecular transport. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1353-1358.	3.3	91
58	Fluctuations, Dynamics, and the Stretch-Coil Transition of Single Actin Filaments in Extensional Flows. Physical Review Letters, 2012, 108, 038103.	2.9	90
59	Bistable Helices. Physical Review Letters, 2000, 84, 1631-1634.	2.9	88
60	Cytoplasmic streaming in plant cells emerges naturally by microfilament self-organization. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14132-14137.	3.3	88
61	Model for phase equilibria in micellar solutions of nonionic surfactants. Journal of Chemical Physics, 1986, 84, 3367-3378.	1.2	84
62	Origin of the Singular Diameter in the Coexistence Curve of a Metal. Physical Review Letters, 1985, 55, 2164-2167.	2.9	83
63	Minimal continuum theories of structure formation in dense active fluids. New Journal of Physics, 2013, 15, 045016.	1.2	81
64	Selection for spiral waves in the social amoebae Dictyostelium. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 13719-13723.	3.3	79
65	Membrane Viscosity Determined from Shear-Driven Flow in Giant Vesicles. Physical Review Letters, 2013, 111, 038103.	2.9	79
66	A ratchet trap for Leidenfrost drops. Journal of Fluid Mechanics, 2012, 696, 215-227.	1.4	76
67	Model for Lamellar Phases of Interacting Lipid Membranes. Physical Review Letters, 1988, 61, 2213-2216.	2.9	75
68	Lag, lock, sync, slip: the many â€˜phasesâ€™ of coupled flagella. Journal of the Royal Society Interface, 2014, 11, 20131160.	1.5	75
69	Hydrodynamic and interfacial patterns with broken space-time symmetry. Physical Review A, 1991, 43, 6700-6721.	1.0	74
70	Stalactite Growth as a Free-Boundary Problem: A Geometric Law and Its Platonic Ideal. Physical Review Letters, 2005, 94, 018501.	2.9	73
71	Nonlocal contour dynamics model for chemical front motion. Physical Review Letters, 1994, 72, 1120-1123.	2.9	71
72	The Flagellar Cytoskeleton of the Spirochetes. Journal of Molecular Microbiology and Biotechnology, 2006, 11, 221-227.	1.0	69

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73	Swimming like algae: biomimetic soft artificial cilia. Journal of the Royal Society Interface, 2013, 10, 20120666.	1.5	68
74	Geometrical and topological aspects of electric double layers near curved surfaces. Physical Review Letters, 1990, 65, 508-511.	2.9	67
75	Traces of surfactants can severely limit the drag reduction of superhydrophobic surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 7254-7259.	3.3	67
76	Finite-time singularity formation in Hele-Shaw systems. Physical Review E, 1993, 47, 4182-4196.	0.8	66
77	Hydrodynamics of monolayer domains at the airâ€“water interface. Physics of Fluids, 1996, 8, 843-854.	1.6	66
78	Dance of the microswimmers. Physics Today, 2012, 65, 30-35.	0.3	66
79	Scattering of biflagellate microswimmers from surfaces. Physical Review E, 2017, 96, 023102.	0.8	65
80	Pearling and Pinching: Propagation of Rayleigh Instabilities. Physical Review Letters, 1997, 78, 2555-2558.	2.9	64
81	Controlling active self-assembly through broken particle-shape symmetry. Physical Review E, 2014, 89, 010302.	0.8	64
82	Spontaneous oscillations of elastic filaments induced by molecular motors. Journal of the Royal Society Interface, 2017, 14, 20170491.	1.5	64
83	Three-body interactions, scaling variables, and singular diameters in the coexistence curves of fluids. Physical Review B, 1987, 36, 599-614.	1.1	62
84	The Elastic Basis for the Shape of Borrelia burgdorferi. Biophysical Journal, 2009, 96, 4409-4417.	0.2	62
85	Dynamics of aVolvoxEmbryo Turning Itself Inside Out. Physical Review Letters, 2015, 114, 178101.	2.9	61
86	Beyond the Pair-Potential Model of Fluids at the Liquid-Vapor Critical Point. Physical Review Letters, 1987, 58, 41-44.	2.9	59
87	Emergence of Synchronized Beating during the Regrowth of Eukaryotic Flagella. Physical Review Letters, 2011, 107, 148103.	2.9	59
88	Propagation of a topological transition: The Rayleigh instability. Physics of Fluids, 1998, 10, 1052-1057.	1.6	58
89	Antiphase Synchronization in a Flagellar-Dominance Mutant ofChlamydomonas. Physical Review Letters, 2013, 111, 158101.	2.9	57
90	Rhythmicity, Recurrence, and Recovery of Flagellar Beating. Physical Review Letters, 2014, 113, 238103.	2.9	57

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91	Stretched-exponential relaxation of electric birefringence in polymer solutions. Physical Review Letters, 1990, 64, 1043-1046.	2.9	56
92	Front Progagation in the Pearling Instability of Tubular Vesicles. Journal De Physique II, 1996, 6, 767-796.	0.9	55
93	Traveling-Wave Chemotaxis. Physical Review Letters, 1996, 77, 775-778.	2.9	52
94	Shapes of flux domains in the intermediate state of type-I superconductors. Physical Review B, 1998, 57, 3058-3072.	1.1	50
95	Solitons, Eulerâ€™s equation, and vortex patch dynamics. Physical Review Letters, 1992, 69, 555-558.	2.9	48
96	Electric double layers near modulated surfaces. Physical Review A, 1990, 41, 5504-5515.	1.0	47
97	Collective chemotactic dynamics in the presence of self-generated fluid flows. Physical Review E, 2012, 86, 040902.	0.8	47
98	Cortical microtubule nucleation can organise the cytoskeleton of Drosophila oocytes to define the anteroposterior axis. ELife, 2015, 4, .	2.8	47
99	Instabilities and singularities in Heleâ€“Shaw flow. Physics of Fluids, 1998, 10, 2701-2723.	1.6	46
100	Structural phase transitions of interacting membranes. Physical Review A, 1989, 40, 1025-1035.	1.0	44
101	Domain Shape Relaxation and the Spectrum of Thermal Fluctuations in Langmuir Monolayers. The Journal of Physical Chemistry, 1994, 98, 9626-9636.	2.9	43
102	Soap-film MÃ¶bius strip changes topology with a twist singularity. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 21979-21984.	3.3	43
103	Time Irreversibility and Criticality in the Motility of a Flagellate Microorganism. Physical Review Letters, 2018, 121, 058103.	2.9	42
104	Optimal Design of Multilayer Fog Collectors. ACS Applied Materials & Interfaces, 2020, 12, 7736-7743.	4.0	42
105	Stretched-exponential relaxation of birefringence in a critical binary mixture. Physical Review B, 1988, 38, 7223-7226.	1.1	41
106	Current-Loop Model for the Intermediate State of Type-I Superconductors. Physical Review Letters, 1996, 76, 3818-3821.	2.9	40
107	How to track protists in three dimensions. Review of Scientific Instruments, 2009, 80, 014301.	0.6	40
108	Substituent effects on intermolecular hydrogen bonding from a lattice gas theory for lower critical solution points: Comparison with experiments on aqueous solutions of alkylpyridines. Journal of Chemical Physics, 1983, 79, 4439-4447.	1.2	39

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109	Natureâ€™s Microfluidic Transporter: Rotational Cytoplasmic Streaming at High PÃ©clet Numbers. Physical Review Letters, 2008, 101, 178102.	2.9	39
110	Chiral Self-Propulsion of Growing Bacterial Macrofibers on a Solid Surface. Physical Review Letters, 2000, 84, 1627-1630.	2.9	38
111	Quantum suppression of the Rayleigh instability in nanowires. Nonlinearity, 2001, 14, 167-177.	0.6	38
112	Periodic Chirality Transformations Propagating On Bacterial Flagella. Physical Review Letters, 2002, 89, 118102.	2.9	38
113	Precipitative Growth Templated by a Fluid Jet. Langmuir, 2005, 21, 10916-10919.	1.6	38
114	Measurement of cytoplasmic streaming in single plant cells by magnetic resonance velocimetry. Journal of Fluid Mechanics, 2010, 642, 5-14.	1.4	36
115	Elastohydrodynamic synchronization of adjacent beating flagella. Physical Review Fluids, 2016, 1, .	1.0	36
116	Stalactite growth as a free-boundary problem. Physics of Fluids, 2005, 17, 083101.	1.6	35
117	Dynamic buckling of morphoelastic filaments. Physical Review E, 2006, 74, 010901.	0.8	35
118	A free-boundary theory for the shape of the ideal dripping icicle. Physics of Fluids, 2006, 18, 083101.	1.6	33
119	A General Allometric and Life-History Model for Cellular Differentiation in the Transition to Multicellularity. American Naturalist, 2013, 181, 369-380.	1.0	33
120	Motility of Colonial Choanoflagellates and the Statistics of Aggregate Random Walkers. Physical Review Letters, 2016, 116, 038102.	2.9	33
121	Phenomenological theory of multiply reentrant solubility. Journal of Chemical Physics, 1985, 83, 1246-1254.	1.2	32
122	Broken particleâ€“hole symmetry in critical fluids. Journal of Chemical Physics, 1988, 88, 7059-7065.	1.2	31
123	Fluid Velocity Fluctuations in a Suspension of Swimming Protists. Physical Review Letters, 2010, 105, 188101.	2.9	31
124	Shear-driven circulation patterns in lipid membrane vesicles. Journal of Fluid Mechanics, 2012, 705, 165-175.	1.4	31
125	Attracting Manifold for a Viscous Topology Transition. Physical Review Letters, 1995, 75, 3665-3668.	2.9	29
126	Aerotaxis in the closest relatives of animals. ELife, 2016, 5, .	2.8	29

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127	Theory of Shape-Shifting Droplets. Physical Review Letters, 2017, 118, 088001.	2.9	29
128	Swimming eukaryotic microorganisms exhibit a universal speed distribution. ELife, 2019, 8, .	2.8	28
129	Quantum Necking in Stressed Metallic Nanowires. Physical Review Letters, 2003, 91, 254501.	2.9	27
130	Dynamic supercoiling bifurcations of growing elastic filaments. Physica D: Nonlinear Phenomena, 2004, 190, 266-289.	1.3	27
131	Filter-feeding, near-field flows, and the morphologies of colonial choanoflagellates. Physical Review E, 2016, 94, 052401.	0.8	27
132	Coupling of Active Motion and Advection Shapes Intracellular Cargo Transport. Physical Review Letters, 2012, 109, 028104.	2.9	26
133	Coffee stains, cell receptors, and time crystals: Lessons from the old literature. Physics Today, 2018, 71, 32-38.	0.3	26
134	A theory for the slip and drag of superhydrophobic surfaces with surfactant. Journal of Fluid Mechanics, 2020, 883, .	1.4	26
135	Turingâ€™s Diffusive Threshold in Random Reaction-Diffusion Systems. Physical Review Letters, 2021, 126, 238101.	2.9	26
136	Fluctuating pseudoatoms in metallic fluids. Journal of Chemical Physics, 1989, 91, 1843-1854.	1.2	25
137	Long-range interactions, wobbles, and phase defects in chains of model cilia. Physical Review Fluids, 2016, 1, 081201.	1.0	25
138	Motility and phototaxis of Gonium , the simplest differentiated colonial alga. Physical Review E, 2020, 101, 022416.	0.8	24
139	Swirling Instability of the Microtubule Cytoskeleton. Physical Review Letters, 2021, 126, 028103.	2.9	24
140	Batchelor Prize Lecture Fluid dynamics at the scale of the cell. Journal of Fluid Mechanics, 2016, 807, 1-39.	1.4	23
141	VOLVOX BARBERI, THE FASTEST SWIMMER OF THE VOLVOCALES (CHLOROPHYCEAE)¹. Journal of Phycology, 2008, 44, 1395-1398.	1.0	22
142	The noisy basis of morphogenesis: Mechanisms and mechanics of cell sheet folding inferred from developmental variability. PLoS Biology, 2018, 16, e2005536.	2.6	22
143	Resetting Wave Forms inDictyosteliumTerritories. Physical Review Letters, 2001, 87, 068101.	2.9	20
144	Coiling, Entrainment, and Hydrodynamic Coupling of Decelerated Fluid Jets. Physical Review Letters, 2005, 95, 184501.	2.9	20

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145	Are theoretical results â€˜Resultsâ€™?. ELife, 2018, 7, .	2.8	20
146	Cellular organization in lab-evolved and extant multicellular species obeys a maximum entropy law. ELife, 2022, 11, .	2.8	20
147	Boundary singularities produced by the motion of soap films. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8339-8344.	3.3	19
148	Elasticity and glocality: initiation of embryonic inversion in Volvox. Journal of the Royal Society Interface, 2015, 12, 20150671.	1.5	19
149	Motility, mixing, and multicellularity. Genetic Programming and Evolvable Machines, 2007, 8, 115-129.	1.5	18
150	Nonlinear concentration patterns and bands in autochemotactic suspensions. Physical Review E, 2018, 98, .	0.8	18
151	Stability of dancingVolvox. Journal of Fluid Mechanics, 2020, 903, .	1.4	18
152	Defects and traveling-wave states in nonequilibrium patterns with broken parity. Physical Review A, 1990, 41, 5731-5734.	1.0	17
153	Why Clothes Donâ€™t Fall Apart: Tension Transmission in Staple Yarns. Physical Review Letters, 2018, 120, 158001.	2.9	17
154	An â€œocclusive thrombosis-on-a-chipâ€•microfluidic device for investigating the effect of anti-thrombotic drugs. Lab on A Chip, 2021, 21, 4104-4117.	3.1	17
155	On the mechanisms of icicle evolution. Journal of Fluid Mechanics, 2010, 647, 287-308.	1.4	16
156	Shape of a Ponytail and the Statistical Physics of Hair Fiber Bundles. Physical Review Letters, 2012, 108, 078101.	2.9	16
157	Do Dissolving Objects Converge to a Universal Shape?. Langmuir, 2015, 31, 4145-4150.	1.6	16
158	Instabilities and Solitons in Minimal Strips. Physical Review Letters, 2016, 117, 017801.	2.9	16
159	CCDC61/VFL3 Is a Paralog of SAS6 and Promotes Ciliary Functions. Structure, 2020, 28, 674-689.e11.	1.6	16
160	Inertially driven buckling and overturning of jets in a Hele-Shaw cell. Physical Review E, 2003, 68, 056305.	0.8	15
161	THE FLAGELLAR PHOTORESPONSE IN VOLVOX SPECIES (VOLVOCACEAE, CHLOROPHYCEAE)1. Journal of Phycology, 2011, 47, 580-583.	1.0	15
162	Shape-shifting polyhedral droplets. Physical Review Research, 2019, 1, .	1.3	15

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163	Nuclear crowding and nonlinear diffusion during interkinetic nuclear migration in the zebrafish retina. ELife, 2020, 9, .	2.8	15
164	Thermodynamics of rough colloidal surfaces. Physical Review Letters, 1991, 66, 1551-1554.	2.9	14
165	Internal dynamics of DNA probed by transient electric birefringence. Physical Review Letters, 1992, 68, 1430-1433.	2.9	14
166	Localised dynactin protects growing microtubules to deliver oskar mRNA to the posterior cortex of the Drosophila oocyte. ELife, 2017, 6, .	2.8	14
167	Liquid-vapor asymmetry at the critical point. Accounts of Chemical Research, 1989, 22, 77-82.	7.6	13
168	Flagellar phenotypic plasticity in volvocalean algae correlates with PÃ©clet number. Journal of the Royal Society Interface, 2011, 8, 1409-1417.	1.5	13
169	Microbial mutualism at a distance: The role of geometry in diffusive exchanges. Physical Review E, 2018, 97, 022411.	0.8	13
170	Evaporation-driven convective flows in suspensions of nonmotile bacteria. Physical Review Fluids, 2018, 3, .	1.0	13
171	Instability of a MÃ¶bius Strip Minimal Surface and a Link with Systolic Geometry. Physical Review Letters, 2015, 114, 127801.	2.9	12
172	Stress-Induced Dinoflagellate Bioluminescence at the Single Cell Level. Physical Review Letters, 2020, 125, 028102.	2.9	11
173	Potts model for solvent effects on polymer conformation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 104, 285-289.	0.9	10
174	Thermodynamic functions and critical properties from a cluster-decimation approximation. Journal of Physics A, 1985, 18, 1275-1287.	1.6	10
175	Revised scaling variables in systems with many-body interactions. Physical Review A, 1987, 35, 4770-4780.	1.0	10
176	Domain of convergence of perturbative solutions for Hele-Shaw flow near interface collapse. Physics of Fluids, 1999, 11, 2809-2811.	1.6	10
177	Topological constraints and their breakdown in dynamical evolution. Nonlinearity, 2012, 25, R85-R98.	0.6	10
178	A model for the effects of germanium on silica biomineralization in choanoflagellates. Journal of the Royal Society Interface, 2016, 13, 20160485.	1.5	10
179	Nonlinear and nonlocal elasticity in coarse-grained differential-tension models of epithelia. Physical Review E, 2019, 99, 022411.	0.8	10
180	Subpopulations and stability in microbial communities. Physical Review Research, 2020, 2, .	1.3	10

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181	Continuum theory of critical phenomena in polymer solutions: Formalism and mean field approximation. Journal of Chemical Physics, 1989, 90, 7448-7460.	1.2	9
182	Mapping of the classical kinetic balance equations onto the SchrÃ¶dinger equation. Nonlinearity, 2005, 18, 211-226.	0.6	9
183	cAMP waves inDictyosteliumterritories. Nonlinearity, 2002, 15, C1-C5.	0.6	8
184	Teaching Biological Physics. Physics Today, 2005, 58, 46-51.	0.3	8
185	Boundary layer model for vortex fingers in type-II superconductors. Physical Review B, 2005, 72, .	1.1	8
186	Growth and instability of a laminar plume in a strongly stratified environment. Journal of Fluid Mechanics, 2011, 671, 184-206.	1.4	8
187	Topological Transitions in Hele-Shaw Flow. , 1993, , 167-188.		8
188	Biofilm Growth under Elastic Confinement. Physical Review Letters, 2022, 128, 178102.	2.9	8
189	Direct measurement of unsteady microscale Stokes flow using optically driven microspheres. Physical Review Fluids, 2021, 6, .	1.0	7
190	Dynamics of pattern formation in magnetic fluids. Journal of Magnetism and Magnetic Materials, 1993, 122, 267-270.	1.0	6
191	Mapping of the classical kinetic balance equations onto the Pauli equation. Nonlinearity, 2005, 18, 227-235.	0.6	6
192	Embryonic inversion inVolvox carteri: The flipping and peeling of elastic lips. Physical Review E, 2018, 98, .	0.8	6
193	The fluid dynamics of collective vortex structures of plant-animal worms. Journal of Fluid Mechanics, 2021, 914, .	1.4	6
194	Fluid Mechanics of Mosaic Ciliated Tissues. Physical Review Letters, 2021, 127, 198102.	2.9	6
195	Mapping of the relativistic kinetic balance equations onto the Kleinâ€“Gordon and second-order Dirac equations. Nonlinearity, 2005, 18, 1295-1304.	0.6	5
196	Feeding ducks, bacterial chemotaxis, and the Gini index. Physical Review E, 2015, 92, 022701.	0.8	5
197	The role of tumbling frequency and persistence in optimal run-and-tumble chemotaxis. IMA Journal of Applied Mathematics, 2018, 83, 700-719.	0.8	5
198	Morphoelasticity of large bending deformations of cell sheets during development. Physical Review E, 2021, 103, 022411.	0.8	5

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199	Comment on â€œFaceting and Flattening of Emulsion Droplets: A Mechanical Modelâ€• Physical Review Letters, 2021, 126, 259801.	2.9	5
200	Instability of a gravity current within a soapÂfilm. Journal of Fluid Mechanics, 2014, 753, .	1.4	4
201	Soap-film dynamics and topological transitions under continuous deformation. Physical Review Fluids, 2016, 1, .	1.0	4
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