

Eric R Weeks

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.

112 papers	9,346 citations	43 h-index	96 g-index
114 ext. papers	10,094 ext. citations	6.1 avg, IF	6.23 L-index

#	Paper	IF	Citations
112	Clogging and avalanches in quasi-two-dimensional emulsion hopper flow.. <i>Physical Review E</i> , 2022 , 105, 014603	2.4	0
111	Supramolecular DNA Photonic Hydrogels for On-Demand Control of Coloration with High Spatial and Temporal Resolution. <i>Nano Letters</i> , 2021 , 21, 9958-9965	11.5	1
110	Direct observation of crystal nucleation and growth in a quasi-two-dimensional nonvibrating granular system. <i>Physical Review E</i> , 2021 , 104, 044904	2.4	0
109	Soft particle clogging in two-dimensional hoppers. <i>Physical Review E</i> , 2021 , 104, 044909	2.4	3
108	Neglecting polydispersity degrades propensity measurements in supercooled liquids. <i>European Physical Journal E</i> , 2021 , 44, 65	1.5	
107	Mechanical properties of 2D aggregates of oil droplets as model mono-crystals. <i>Soft Matter</i> , 2021 , 17, 1194-1201	3.6	0
106	Rheology finds distinct glass and jamming transitions in emulsions. <i>Soft Matter</i> , 2021 , 17, 2587-2595	3.6	1
105	Rearrangement of two dimensional aggregates of droplets under compression: Signatures of the energy landscape from crystal to glass. <i>Physical Review Research</i> , 2020 , 2,	3.9	6
104	Visualizing free-energy landscapes for four hard disks. <i>Physical Review E</i> , 2020 , 102, 062153	2.4	2
103	Embedded 3D Bioprinting of Gelatin Methacryloyl-Based Constructs with Highly Tunable Structural Fidelity. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 44563-44577	9.5	29
102	Brownian motion of ellipsoidal particles on a granular magnetic bath. <i>Physical Review E</i> , 2020 , 102, 022902	2.4	3
101	Random packing of rods in small containers. <i>Granular Matter</i> , 2019 , 21, 1	2.6	6
100	The role of deformability in determining the structural and mechanical properties of bubbles and emulsions. <i>Soft Matter</i> , 2019 , 15, 5854-5865	3.6	17
99	Effect of Topographical Steps on the Surface Motility of the Bacterium. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 6436-6445	5.5	3
98	Model-free 3D localization with precision estimates for brightfield-imaged particles. <i>Optics Express</i> , 2019 , 27, 29875-29895	3.3	5
97	Isomorph invariance of dynamics of sheared glassy systems. <i>Physical Review E</i> , 2019 , 100, 053005	2.4	1
96	Surface Topography Hinders Bacterial Surface Motility. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 9225-9234	9.5	33

95	Spatiotemporal intermittency and localized dynamic fluctuations upon approaching the glass transition. <i>Physical Review E</i> , 2018 , 97, 060601	2.4	5
94	Long-wavelength fluctuations and the glass transition in two dimensions and three dimensions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 1850-1855	11.5	78
93	Multiplexed, Tethered Particle Microscopy for Studies of DNA-Enzyme Dynamics. <i>Methods in Enzymology</i> , 2017 , 582, 415-435	1.7	8
92	Introduction to the Colloidal Glass Transition. <i>ACS Macro Letters</i> , 2017 , 6, 27-34	6.6	26
91	Polyoxometalate-based gelating networks for entrapment and catalytic decontamination. <i>Chemical Communications</i> , 2017 , 53, 11480-11483	5.8	46
90	Cooperative behavior of biased probes in crowded interacting systems. <i>Soft Matter</i> , 2017 , 13, 7617-7624	3.6	12
89	Decoupling of translational and rotational diffusion in quasi-2D colloidal fluids. <i>Journal of Chemical Physics</i> , 2017 , 147, 134502	3.9	14
88	Aging near rough and smooth boundaries in colloidal glasses. <i>Journal of Chemical Physics</i> , 2017 , 147, 224505	3.9	4
87	Clogging of soft particles in two-dimensional hoppers. <i>Physical Review E</i> , 2017 , 96, 062605	2.4	38
86	Predicting the size of droplets produced through Laplace pressure induced snap-off. <i>Soft Matter</i> , 2016 , 12, 7398-404	3.6	16
85	Energy barriers, entropy barriers, and non-Arrhenius behavior in a minimal glassy model. <i>Physical Review E</i> , 2016 , 93, 062613	2.4	6
84	High-speed DNA-based rolling motors powered by RNase H. <i>Nature Nanotechnology</i> , 2016 , 11, 184-90	28.7	124
83	Programmable DNA Hydrogels Assembled from Multidomain DNA Strands. <i>ChemBioChem</i> , 2016 , 17, 1156-62	3.8	30
82	Measurement of Stress Redistribution in Flowing Emulsions. <i>Physical Review Letters</i> , 2015 , 115, 098302	7.4	43
81	Experimental observation of local rearrangements in dense quasi-two-dimensional emulsion flow. <i>Physical Review E</i> , 2015 , 91, 062306	2.4	14
80	Snap-off production of monodisperse droplets. <i>European Physical Journal E</i> , 2015 , 38, 138	1.5	5
79	Affine and nonaffine motions in sheared polydisperse emulsions. <i>Physical Review E</i> , 2015 , 91, 010301	2.4	11
78	Measuring and overcoming limits of the Saffman-Delbrück model for soap film viscosities. <i>PLoS ONE</i> , 2015 , 10, e0121981	3.7	6

77	Influence of particle size distribution on random close packing of spheres. <i>Physical Review E</i> , 2014 , 90, 022204	2.4	145
76	Boundary Mobility Controls Glassiness in Confined Colloidal Liquids. <i>Physical Review Letters</i> , 2014 , 112,	7.4	30
75	In search of colloidal hard spheres. <i>Soft Matter</i> , 2013 , 9, 17-27	3.6	191
74	Experimental study of forces between quasi-two-dimensional emulsion droplets near jamming. <i>Soft Matter</i> , 2013 , 9, 3424	3.6	52
73	Local elastic response measured near the colloidal glass transition. <i>Journal of Chemical Physics</i> , 2013 , 138, 12A520	3.9	12
72	Slow dynamics in cylindrically confined colloidal suspensions 2013 ,		4
71	Topological rearrangements and stress fluctuations in quasi-two-dimensional hopper flow of emulsions. <i>Soft Matter</i> , 2012 , 8, 10486	3.6	26
70	On measuring colloidal volume fractions. <i>Soft Matter</i> , 2012 , 8, 21-30	3.6	164
69	Materials science. Melting colloidal crystals from the inside out. <i>Science</i> , 2012 , 338, 55-6	33.3	2
68	Measuring the size of individual particles from three-dimensional imaging experiments. <i>Nature Communications</i> , 2012 , 3, 1127	17.4	16
67	Influence of confinement on dynamical heterogeneities in dense colloidal samples. <i>Physical Review E</i> , 2012 , 85, 041401	2.4	26
66	The physics of the colloidal glass transition. <i>Reports on Progress in Physics</i> , 2012 , 75, 066501	14.4	389
65	Free-energy landscape for cage breaking of three hard disks. <i>Physical Review E</i> , 2012 , 85, 031504	2.4	10
64	Decoupling of rotational and translational diffusion in supercooled colloidal fluids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 17891-6	11.5	98
63	Tracking rotational diffusion of colloidal clusters. <i>Optics Express</i> , 2011 , 19, 17189-202	3.3	44
62	Glassy dynamics and dynamical heterogeneity in colloids 2011 , 110-151		9
61	Inducing a Curl with a Stretch. <i>Physics Magazine</i> , 2011 , 4,	1.1	4
60	Spatial and temporal dynamical heterogeneities approaching the binary colloidal glass transition. <i>Soft Matter</i> , 2011 , 7, 1472-1482	3.6	42

59	Incompressibility of polydisperse random-close-packed colloidal particles. <i>Physical Review E</i> , 2011 , 84, 030401	2.4	49
58	Tracking the Brownian diffusion of a colloidal tetrahedral cluster. <i>Chaos</i> , 2011 , 21, 041103	3.3	7
57	Experimental verification of rapid, sporadic particle motions by direct imaging of glassy colloidal systems. <i>Physical Review Letters</i> , 2011 , 107, 065704	7.4	27
56	Microscopic structural relaxation in a sheared supercooled colloidal liquid. <i>Physical Review E</i> , 2010 , 81, 011403	2.4	36
55	Complex dynamics of three interacting spheres in a rotating drum. <i>Physics of Fluids</i> , 2010 , 22, 033305	4.4	3
54	Experimental study of random-close-packed colloidal particles. <i>Physical Review E</i> , 2010 , 82, 011403	2.4	58
53	Glass transition of two-dimensional binary soft-disk mixtures with large size ratios. <i>Physical Review E</i> , 2010 , 82, 041402	2.4	25
52	Local influence of boundary conditions on a confined supercooled colloidal liquid. <i>European Physical Journal: Special Topics</i> , 2010 , 189, 83-93	2.3	12
51	Flow fields in soap films: Relating viscosity and film thickness. <i>Physical Review E</i> , 2009 , 80, 026309	2.4	15
50	Two-dimensional to three-dimensional transition in soap films demonstrated by microrheology. <i>Physical Review Letters</i> , 2009 , 102, 178302	7.4	45
49	Quantitative imaging of colloidal flows. <i>Advances in Colloid and Interface Science</i> , 2009 , 146, 1-17	14.3	99
48	The equilibrium intrinsic crystal-liquid interface of colloids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 15198-202	11.5	63
47	Random close packing of disks and spheres in confined geometries. <i>Physical Review E</i> , 2009 , 80, 051305	2.4	105
46	Immersion of charged nanoparticles in a salt solution/air interface. <i>Journal of Physical Chemistry B</i> , 2008 , 112, 9565-7	3.4	20
45	From particles to spins: Eulerian formulation of supercooled liquids and glasses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 15263-8	11.5	3
44	Shear-induced particle migration in binary colloidal suspensions. <i>Physics of Fluids</i> , 2008 , 20, 043306	4.4	56
43	Structure and dynamics of biphasic colloidal mixtures. <i>Physical Review E</i> , 2008 , 77, 060403	2.4	22
42	Dynamics and structure of an aging binary colloidal glass. <i>Physical Review E</i> , 2008 , 78, 031410	2.4	54

41	Confocal Microscopy 2008 , 705-714		2
40	Three-dimensional imaging of colloidal glasses under steady shear. <i>Physical Review Letters</i> , 2007 , 99, 028301	7.4	196
39	Confocal microscopy of colloids. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 113102	1.8	179
38	Development of particle migration in pressure-driven flow of a Brownian suspension. <i>Journal of Fluid Mechanics</i> , 2007 , 581, 437-451	3.7	76
37	Semagenesis and the parasitic angiosperm <i>Striga asiatica</i> . <i>Plant Journal</i> , 2007 , 51, 707-16	6.9	29
36	Short- and long-range correlated motion observed in colloidal glasses and liquids. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 205131	1.8	64
35	Colloidal glass transition observed in confinement. <i>Physical Review Letters</i> , 2007 , 99, 025702	7.4	123
34	Squishy Materials. <i>Physics Teacher</i> , 2006 , 44, 276-279	0.4	2
33	Invariance of Structure in an Aging Colloidal Glass. <i>AIP Conference Proceedings</i> , 2006 ,	0	6
32	Contribution of slow clusters to the bulk elasticity near the colloidal glass transition. <i>Physical Review Letters</i> , 2006 , 97, 265701	7.4	42
31	Two-particle microrheology of quasi-2D viscous systems. <i>Physical Review Letters</i> , 2006 , 97, 176001	7.4	86
30	A genetic toolbox for creating reversible Ca ²⁺ -sensitive materials. <i>Journal of the American Chemical Society</i> , 2006 , 128, 13994-5	16.4	36
29	Experimental studies of the flow of concentrated hard sphere suspensions into a constriction. <i>Journal of Physics: Conference Series</i> , 2006 , 40, 124-132	0.3	23
28	Correlations of structure and dynamics in an aging colloidal glass. <i>Solid State Communications</i> , 2006 , 139, 599-604	1.6	35
27	Interparticle interactions and direct imaging of colloidal phases assembled from microsphere-nanoparticle mixtures. <i>Langmuir</i> , 2005 , 21, 9978-89	4	41
26	Conformations of laulimalide in DMSO-d ₆ . <i>Journal of the American Chemical Society</i> , 2005 , 127, 12838-46	16.4	35
25	Phase behavior and 3D structure of strongly attractive microsphere-nanoparticle mixtures. <i>Langmuir</i> , 2005 , 21, 11040-7	4	31
24	Forced motion of a probe particle near the colloidal glass transition. <i>Europhysics Letters</i> , 2004 , 67, 477-483	36	148

23	Foam drainage on the microscale II. Imaging flow through single Plateau borders. <i>Journal of Colloid and Interface Science</i> , 2004 , 276, 439-49	9.3	64
22	Anomalous diffusion probes microstructure dynamics of entangled F-actin networks. <i>Physical Review Letters</i> , 2004 , 92, 178101	7.4	445
21	Direct visualization of ageing in colloidal glasses. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, S359-S365	6.5	93
20	Particle migration in pressure-driven flow of a Brownian suspension. <i>Journal of Fluid Mechanics</i> , 2003 , 493, 363-378	3.7	144
19	Rheological microscopy: local mechanical properties from microrheology. <i>Physical Review Letters</i> , 2003 , 90, 108301	7.4	161
18	Video microscopy of colloidal suspensions and colloidal crystals. <i>Current Opinion in Colloid and Interface Science</i> , 2002 , 7, 196-203	7.6	57
17	Subdiffusion and the cage effect studied near the colloidal glass transition. <i>Chemical Physics</i> , 2002 , 284, 361-367	2.3	180
16	Drainage of single Plateau borders: direct observation of rigid and mobile interfaces. <i>Physical Review E</i> , 2002 , 66, 040601	2.4	91
15	Properties of cage rearrangements observed near the colloidal glass transition. <i>Physical Review Letters</i> , 2002 , 89, 095704	7.4	343
14	Experimental and numerical studies of an eastward jet over topography. <i>Journal of Fluid Mechanics</i> , 2001 , 438, 129-157	3.7	27
13	Three-dimensional confocal microscopy of colloids. <i>Applied Optics</i> , 2001 , 40, 4152-9	1.7	206
12	Real-space imaging of nucleation and growth in colloidal crystallization. <i>Science</i> , 2001 , 292, 258-62	33.3	831
11	Three-dimensional direct imaging of structural relaxation near the colloidal glass transition. <i>Science</i> , 2000 , 287, 627-31	33.3	1470
10	Two-point microrheology of inhomogeneous soft materials. <i>Physical Review Letters</i> , 2000 , 85, 888-91	7.4	507
9	Anomalous diffusion resulting from strongly asymmetric random walks. <i>Physical Review E</i> , 1998 , 57, 4915-4920	5.4	2083
8	Evolving artificial neural networks to control chaotic systems. <i>Physical Review E</i> , 1997 , 56, 1531-1540	2.4	20
7	Transitions between blocked and zonal flows in a rotating annulus with topography. <i>Science</i> , 1997 , 278, 1598-601	33.3	69
6	Electric field line diagrams don't work. <i>American Journal of Physics</i> , 1996 , 64, 714-724	0.7	15

5	Anomalous diffusion in asymmetric random walks with a quasi-geostrophic flow example. <i>Physica D: Nonlinear Phenomena</i> , 1996 , 97, 291-310	3.3	101
4	Observation of anomalous diffusion and Lévy flights 1995 , 51-71		17
3	Chaotic advection in a two-dimensional flow: Lévy flights and anomalous diffusion. <i>Physica D: Nonlinear Phenomena</i> , 1994 , 76, 70-84	3.3	125
2	Observation of anomalous diffusion and Lévy flights in a two-dimensional rotating flow. <i>Physical Review Letters</i> , 1993 , 71, 3975-3978	7.4	579
1	Microscopy of soft materials1-24		2