James W Swan

List of Publications by Year
in descending order

61 papers	1,798 citations	279487 23 h-index	288905 40 g-index
61 all docs	61 docs citations	61 times ranked	2055 citing authors

#	Article	IF	Citations
1	Lipid Exchange Envelope Penetration (LEEP) of Nanoparticles for Plant Engineering: A Universal Localization Mechanism. Nano Letters, 2016, 16, 1161-1172.	4.5	213
2	Simulation of hydrodynamically interacting particles near a no-slip boundary. Physics of Fluids, 2007, 19, .	1.6	154
3	Directed colloidal self-assembly in toggled magnetic fields. Soft Matter, 2014, 10, 1102-1109.	1.2	90
4	Colloidal gel elasticity arises from the packing of locally glassy clusters. Nature Communications, 2019, 10, 2237.	5.8	88
5	Particle motion between parallel walls: Hydrodynamics and simulation. Physics of Fluids, 2010, 22, .	1.6	85
6	Rapid sampling of stochastic displacements in Brownian dynamics simulations. Journal of Chemical Physics, 2017, 146, 124116.	1.2	79
7	Dynamics of Concentrated Hard-Sphere Colloids Near a Wall. Physical Review Letters, 2009, 102, 068302.	2.9	73
8	Modeling hydrodynamic self-propulsion with Stokesian Dynamics. Or teaching Stokesian Dynamics to swim. Physics of Fluids, 2011, 23, .	1.6	66
9	Hydrodynamics control shear-induced pattern formation in attractive suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12193-12198.	3.3	53
10	Multi-scale kinetics of a field-directed colloidal phase transition. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16023-16028.	3.3	50
11	Dynamic, Directed Self-Assembly of Nanoparticles via Toggled Interactions. ACS Nano, 2016, 10, 5260-5271.	7.3	47
12	The hydrodynamics of confined dispersions. Journal of Fluid Mechanics, 2011, 687, 254-299.	1.4	43
13	On the hydrodynamics of â€˜slipâ€“stickâ€™ spheres. Journal of Fluid Mechanics, 2008, 606, 115-132.	1.4	40
14	Fast Stokesian dynamics. Journal of Fluid Mechanics, 2019, 878, 544-597.	1.4	39
15	Structure and Relaxation in Solutions of Monoclonal Antibodies. Journal of Physical Chemistry B, 2018, 122, 2867-2880.	1.2	35
16	Quantification of a PbClx Shell on the Surface of PbS Nanocrystals. , 2019, 1, 209-216.		35
17	Effect of Protein Surface Charge Distribution on Proteinâ€“Polyelectrolyte Complexation. Biomacromolecules, 2020, 21, 3026-3037.	2.6	35
18	Rapid calculation of hydrodynamic and transport properties in concentrated solutions of colloidal particles and macromolecules. Physics of Fluids, 2016, 28, .	1.6	34

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19	Large scale anisotropies in sheared colloidal gels. Journal of Rheology, 2018, 62, 405-418.	1.3	32
20	High-Resolution Nanoparticle Sizing with Maximum <i>A Posteriori</i> Nanoparticle Tracking Analysis. ACS Nano, 2019, 13, 3940-3952.	7.3	30
21	Field-Directed Self-Assembly of Mutually Polarizable Nanoparticles. Langmuir, 2018, 34, 7117-7134.	1.6	28
22	Rapid sampling of stochastic displacements in Brownian dynamics simulations with stresslet constraints. Journal of Chemical Physics, 2018, 148, 044114.	1.2	27
23	Calculation of therapeutic antibody viscosity with coarse-grained models, hydrodynamic calculations and machine learning-based parameters. MAbs, 2021, 13, 1907882.	2.6	26
24	The medium amplitude oscillatory shear of semi-dilute colloidal dispersions. Part I: Linear response and normal stress differences. Journal of Rheology, 2014, 58, 307-337.	1.3	25
25	Surface heterogeneity affects percolation and gelation of colloids: dynamic simulations with random patchy spheres. Soft Matter, 2019, 15, 5094-5108.	1.2	23
26	The Importance of Unbound Ligand in Nanocrystal Superlattice Formation. Journal of the American Chemical Society, 2020, 142, 9675-9685.	6.6	23
27	Characterization of colloidal nanocrystal surface structure using small angle neutron scattering and efficient Bayesian parameter estimation. Journal of Chemical Physics, 2019, 150, 244702.	1.2	22
28	Transmutable Colloidal Crystals and Active Phase Separation via Dynamic, Directed Self-Assembly with Toggled External Fields. ACS Nano, 2019, 13, 764-771.	7.3	21
29	Underscreening and hidden ion structures in large scale simulations of concentrated electrolytes. Journal of Chemical Physics, 2021, 155, 134903.	1.2	20
30	Medium amplitude parallel superposition (MAPS) rheology. Part 1: Mathematical framework and theoretical examples. Journal of Rheology, 2020, 64, 551-579.	1.3	19
31	On the viscosity of adhesive hard sphere dispersions: Critical scaling and the role of rigid contacts. Journal of Rheology, 2019, 63, 229-245.	1.3	18
32	Anisotropic diffusion in confined colloidal dispersions: The evanescent diffusivity. Journal of Chemical Physics, 2011, 135, 014701.	1.2	16
33	Colloidal Gelation through Thermally Triggered Surfactant Displacement. Langmuir, 2019, 35, 9464-9473.	1.6	16
34	Normal modes of weak colloidal gels. Physical Review E, 2018, 97, 012608.	0.8	14
35	Buckling, crumpling, and tumbling of semiflexible sheets in simple shear flow. Soft Matter, 2021, 17, 4707-4718.	1.2	14
36	Phase Separation Kinetics of Dynamically Self-Assembling Nanoparticles with Toggled Interactions. Langmuir, 2018, 34, 1029-1041.	1.6	13

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37	Shear driven vorticity aligned flocs in a suspension of attractive rigid rods. Soft Matter, 2021, 17, 1232-1245.	1.2	13
38	Calibration of an optical tweezer microrheometer by sequential impulse response. Rheologica Acta, 2013, 52, 455-465.	1.1	12
39	Modelling a hydrodynamic instability in freely settling colloidal gels. Journal of Fluid Mechanics, 2018, 856, 1014-1044.	1.4	12
40	How Confinement-Induced Structures Alter the Contribution of Hydrodynamic and Short-Ranged Repulsion Forces to the Viscosity of Colloidal Suspensions. Physical Review X, 2017, 7, .	2.8	11
41	Medium amplitude parallel superposition (MAPS) rheology. Part 2: Experimental protocols and data analysis. Journal of Rheology, 2020, 64, 1263-1293.	1.3	11
42	Markov Chain Monte Carlo Sampling for Target Analysis of Transient Absorption Spectra. Journal of Physical Chemistry A, 2019, 123, 3893-3902.	1.1	10
43	Reversible Temperature-Induced Structural Transformations in PbS Nanocrystal Superlattices. Journal of Physical Chemistry C, 2020, 124, 13456-13466.	1.5	9
44	Buckling Instability of Self-Assembled Colloidal Columns. Physical Review Letters, 2014, 113, 138301.	2.9	8
45	Thermal processing of thermogelling nanoemulsions as a route to tune material properties. Soft Matter, 2018, 14, 5604-5614.	1.2	8
46	Bayesian estimations of orientation distribution functions from small-angle scattering enable direct prediction of mechanical stress in anisotropic materials. Physical Review Materials, 2021, 5, .	0.9	8
47	Coarsening mechanics of a colloidal suspension in toggled fields. Journal of Chemical Physics, 2015, 143, 074901.	1.2	7
48	Evolution of structure and dynamics of thermo-reversible nanoparticle gelsâ€"A combined XPCS and rheology study. Journal of Chemical Physics, 2019, 151, 104902.	1.2	6
49	Short and Soft: Multidomain Organization, Tunable Dynamics, and Jamming in Suspensions of Grafted Colloidal Cylinders with a Small Aspect Ratio. Langmuir, 2019, 35, 17103-17113.	1.6	5
50	Spontaneous Electrokinetic Magnus Effect. Physical Review Letters, 2020, 124, 208002.	2.9	5
51	Quantifying the hydrodynamic contribution to electrical transport in non-Brownian suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	5
52	Measuring Thermal Rupture Force Distributions from an Ensemble of Trajectories. Physical Review Letters, 2012, 109, 198302.	2.9	4
53	Repulsive, Densely Packed Ligand-Shells Mediate Interactions between PbS Nanocrystals in Solution. Journal of Physical Chemistry C, 2021, 125, 8014-8020.	1.5	4
54	Unsteady and lineal translation of a sphere through a viscoelastic fluid. Physical Review Fluids, 2022, 7, .	1.0	3

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55	Optical tweezer measurements of asymptotic nonlinearities in complex fluids. Physical Review E, 2021, 104, 064604.	0.8	3
56	In situ measurement of localization error in particle tracking microrheology. Rheologica Acta, 2018, 57, 793-800.	1.1	2
57	Medium amplitude parallel superposition (MAPS) rheology of a wormlike micellar solution. Rheologica Acta, 2021, 60, 729-739.	1.1	2
58	Thermally fluctuating, semiflexible sheets in simple shear flow. Soft Matter, 2022, 18, 768-782.	1.2	2
59	Optimal loading for injection. AICHE Journal, 2020, 66, e17102.	1.8	1
60	Collective mode Brownian dynamics: A method for fast relaxation of statistical ensembles. Journal of Chemical Physics, 2020, 152, 094104.	1.2	1
61	The stress in a dispersion of mutually polarizable spheres. Journal of Chemical Physics, 2021, 155, 014903.	1.2	0