

Todd M Squires

List of Publications by Citations

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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.

88

papers

8,314

citations

38

h-index

91

g-index

95

ext. papers

9,306

ext. citations

6.8

avg, IF

6.54

L-index

#	Paper	IF	Citations
88	Microfluidics: Fluid physics at the nanoliter scale. <i>Reviews of Modern Physics</i> , 2005 , 77, 977-1026	40.5	3112
87	Making it stick: convection, reaction and diffusion in surface-based biosensors. <i>Nature Biotechnology</i> , 2008 , 26, 417-26	44.5	680
86	Induced-charge electro-osmosis. <i>Journal of Fluid Mechanics</i> , 2004 , 509, 217-252	3.7	549
85	Fluid Mechanics of Microrheology. <i>Annual Review of Fluid Mechanics</i> , 2010 , 42, 413-438	22	456
84	Breaking symmetries in induced-charge electro-osmosis and electrophoresis. <i>Journal of Fluid Mechanics</i> , 2006 , 560, 65	3.7	244
83	Platelet-like nanoparticles: mimicking shape, flexibility, and surface biology of platelets to target vascular injuries. <i>ACS Nano</i> , 2014 , 8, 11243-53	16.7	228
82	Forces during bacteriophage DNA packaging and ejection. <i>Biophysical Journal</i> , 2005 , 88, 851-66	2.9	228
81	Induced-charge electrokinetic phenomena. <i>Current Opinion in Colloid and Interface Science</i> , 2010 , 15, 203-213	7.6	190
80	Hydrodynamic coupling of two brownian spheres to a planar surface. <i>Physical Review Letters</i> , 2000 , 85, 3317-20	7.4	188
79	Like-charge attraction and hydrodynamic interaction. <i>Physical Review Letters</i> , 2000 , 85, 4976-9	7.4	155
78	Active microrheology and simultaneous visualization of sheared phospholipid monolayers. <i>Nature Communications</i> , 2011 , 2, 312	17.4	108
77	Determination of Surface Potential and Electrical Double-Layer Structure at the Aqueous Electrolyte-Nanoparticle Interface. <i>Physical Review X</i> , 2016 , 6,	9.1	102
76	The influence of hydrodynamic slip on the electrophoretic mobility of a spherical colloidal particle. <i>Physics of Fluids</i> , 2009 , 21, 042001	4.4	95
75	Interfacial microrheology of DPPC monolayers at the air-water interface. <i>Soft Matter</i> , 2011 , 7, 7782	3.6	87
74	A mathematical model for top-shelf vertigo: the role of sedimenting otoconia in BPPV. <i>Journal of Biomechanics</i> , 2004 , 37, 1137-46	2.9	81
73	Isostructural solid-solid phase transition in monolayers of soft core-shell particles at fluid interfaces: structure and mechanics. <i>Soft Matter</i> , 2016 , 12, 3545-57	3.6	76
72	Surface shear inviscidity of soluble surfactants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 3677-82	11.5	72

71	Induced-charge electrokinetics: fundamental challenges and opportunities. <i>Lab on A Chip</i> , 2009 , 9, 2477-83	8.3	70
70	Nonlinear microrheology: bulk stresses versus direct interactions. <i>Langmuir</i> , 2008 , 24, 1147-59	4	70
69	Effect of cholesterol nanodomains on monolayer morphology and dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E3054-60	11.5	68
68	Ion steric effects on electrophoresis of a colloidal particle. <i>Journal of Fluid Mechanics</i> , 2009 , 640, 343-356	7	64
67	Measuring Interfacial Polymerization Kinetics Using Microfluidic Interferometry. <i>Journal of the American Chemical Society</i> , 2018 , 140, 3173-3176	16.4	56
66	Solute-inertial phenomena: Designing long-range, long-lasting, surface-specific interactions in suspensions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 8612-7	11.5	55
65	Synthesis of multifunctional micrometer-sized particles with magnetic, amphiphilic, and anisotropic properties. <i>Advanced Materials</i> , 2011 , 23, 2348-52	24	52
64	Enhanced charging kinetics of porous electrodes: surface conduction as a short-circuit mechanism. <i>Physical Review Letters</i> , 2014 , 113, 097701	7.4	51
63	A hyaluronic acid conjugate engineered to synergistically and sequentially deliver gemcitabine and doxorubicin to treat triple negative breast cancer. <i>Journal of Controlled Release</i> , 2017 , 267, 191-202	11.7	51
62	Suppression of electro-osmotic flow by surface roughness. <i>Physical Review Letters</i> , 2010 , 105, 144503	7.4	51
61	Fundamental aspects of concentration polarization arising from nonuniform electrokinetic transport. <i>Physics of Fluids</i> , 2008 , 20, 087102	4.4	51
60	Electric double-layer structure in primitive model electrolytes: comparing molecular dynamics with local-density approximations. <i>Langmuir</i> , 2015 , 31, 3553-62	4	48
59	Stability of a charged particle in a combined Penning-Ioffe trap. <i>Physical Review Letters</i> , 2001 , 86, 5266-9	7.4	46
58	Small amplitude active oscillatory microrheology of a colloidal suspension. <i>Journal of Rheology</i> , 2009 , 53, 357-381	4.1	45
57	Clinical implications of a mathematical model of benign paroxysmal positional vertigo. <i>Annals of the New York Academy of Sciences</i> , 2005 , 1039, 384-94	6.5	45
56	Direct Measurements of Colloidal Solvophoresis under Imposed Solvent and Solute Gradients. <i>Langmuir</i> , 2015 , 31, 4402-10	4	41
55	Surprising consequences of ion conservation in electro-osmosis over a surface charge discontinuity. <i>Journal of Fluid Mechanics</i> , 2008 , 615, 323-334	3.7	41
54	Effective pseudo-potentials of hydrodynamic origin. <i>Journal of Fluid Mechanics</i> , 2001 , 443, 403-412	3.7	40

53	Dark-field differential dynamic microscopy. <i>Soft Matter</i> , 2016 , 12, 2440-52	3.6	39
52	Diffusiophoretic Focusing of Suspended Colloids. <i>Physical Review Letters</i> , 2016 , 117, 258001	7.4	39
51	Surfactant dynamics: hidden variables controlling fluid flows. <i>Journal of Fluid Mechanics</i> , 2020 , 892,	3.7	38
50	Active microrheology: a proposed technique to measure normal stress coefficients of complex fluids. <i>Physical Review Letters</i> , 2010 , 105, 156001	7.4	36
49	Surface viscosity and Marangoni stresses at surfactant laden interfaces. <i>Journal of Fluid Mechanics</i> , 2016 , 792, 712-739	3.7	36
48	Induced charge electroosmosis micropumps using arrays of Janus micropillars. <i>Lab on A Chip</i> , 2014 , 14, 3300-12	7.2	29
47	Colloidal binary mixtures at fluid-fluid interfaces under steady shear: structural, dynamical and mechanical response. <i>Soft Matter</i> , 2015 , 11, 8313-21	3.6	25
46	Interfacial Rheology and Heterogeneity of Aging Asphaltene Layers at the Water-Oil Interface. <i>Langmuir</i> , 2018 , 34, 5409-5415	4	25
45	Diffusiophoresis in Ionic Surfactant Gradients. <i>Langmuir</i> , 2017 , 33, 9694-9702	4	25
44	Adsorption energies of poly(ethylene oxide)-based surfactants and nanoparticles on an air-water surface. <i>Langmuir</i> , 2014 , 30, 110-9	4	23
43	Steady advection-diffusion around finite absorbers in two-dimensional potential flows. <i>Journal of Fluid Mechanics</i> , 2005 , 536, 155-184	3.7	23
42	Probe microrheology without particle tracking by differential dynamic microscopy. <i>Rheologica Acta</i> , 2017 , 56, 863-869	2.3	22
41	Electrokinetics at liquid/liquid interfaces. <i>Journal of Fluid Mechanics</i> , 2011 , 684, 163-191	3.7	22
40	Influence of molecular coherence on surface viscosity. <i>Langmuir</i> , 2014 , 30, 8829-38	4	21
39	A discourse analysis of the Japanese particle sa. <i>Pragmatics</i> , 1994 , 4, 1-29	2	19
38	Linear and nonlinear microrheometry of small samples and interfaces using microfabricated probes. <i>Journal of Rheology</i> , 2016 , 60, 141-159	4.1	19
37	Tensorial generalized Stokes-Einstein relation for anisotropic probe microrheology. <i>Rheologica Acta</i> , 2010 , 49, 1165-1177	2.3	15
36	Interfacial rheology of coexisting solid and fluid monolayers. <i>Soft Matter</i> , 2017 , 13, 1481-1492	3.6	14

35	Increasing the detection speed of an all-electronic real-time biosensor. <i>Lab on A Chip</i> , 2012 , 12, 954-9	7.2	14
34	Optimizing the vertebrate vestibular semicircular canal: could we balance any better?. <i>Physical Review Letters</i> , 2004 , 93, 198106	7.4	14
33	A theoretical bridge between linear and nonlinear microrheology. <i>Physics of Fluids</i> , 2011 , 23, 063102	4.4	13
32	Nonlinear chiral rheology of phospholipid monolayers. <i>Soft Matter</i> , 2018 , 14, 2476-2483	3.6	12
31	Microfabricated deflection tensiometers for insoluble surfactants. <i>Applied Physics Letters</i> , 2010 , 97, 133505	5.0	12
30	Measuring concentration fields in microfluidic channels in situ with a Fabry-Perot interferometer. <i>Lab on A Chip</i> , 2015 , 15, 1689-96	7.2	11
29	Pressure-dependent surface viscosity and its surprising consequences in interfacial lubrication flows. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	11
28	Long-range, selective, on-demand suspension interactions: Combining and triggering soluto-inertial beacons. <i>Science Advances</i> , 2019 , 5, eaax1893	14.3	10
27	An automated, high-throughput experimental system for induced charge electrokinetics. <i>Lab on A Chip</i> , 2010 , 10, 2350-7	7.2	10
26	Symmetry unbreaking in the shapes of perfect projectiles. <i>Physics of Fluids</i> , 2008 , 20, 093606	4.4	10
25	Heterogeneity, suspension, and yielding in sparse microfibrillar cellulose gels 1. Bubble rheometer studies. <i>Rheologica Acta</i> , 2019 , 58, 217-229	2.3	9
24	Evolution and mechanics of mixed phospholipid fibrinogen monolayers. <i>Journal of the Royal Society Interface</i> , 2018 , 15,	4.1	9
23	Local, real-time measurement of drying films of aqueous polymer solutions using active microrheology. <i>Langmuir</i> , 2014 , 30, 5230-7	4	9
22	Micro-macro-discrepancies in nonlinear microrheology: I. Quantifying mechanisms in a suspension of Brownian ellipsoids. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 464106	1.8	9
21	Microfluidic Microdialysis: Spatiotemporal Control over Solution Microenvironments Using Integrated Hydrogel Membrane Microwindows. <i>Physical Review X</i> , 2013 , 3,	9.1	9
20	Interfacial rheology and direct imaging reveal domain-templated network formation in phospholipid monolayers penetrated by fibrinogen. <i>Soft Matter</i> , 2019 , 15, 9076-9084	3.6	9
19	Drops on soft surfaces learn the hard way. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 12505-6	11.5	7
18	Micro-macro discrepancies in nonlinear microrheology: II. Effect of probe shape. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 464107	1.8	7

17	Effect of Ethylcellulose on the Rheology and Mechanical Heterogeneity of Asphaltene Films at the Oil-Water Interface. <i>Langmuir</i> , 2019 , 35, 9374-9381	4	6
16	Heterogeneity, suspension, and yielding in sparse microfibrillar cellulose gels 2: strain rate-dependent two-fluid behavior. <i>Rheologica Acta</i> , 2019 , 58, 231-239	2.3	5
15	Collective Rayleigh-Plateau Instability: A Mimic of Droplet Breakup in High Internal Phase Emulsion. <i>Langmuir</i> , 2016 , 32, 2549-55	4	5
14	Micro-plumes for nano-velocimetry. <i>Journal of Fluid Mechanics</i> , 2017 , 832, 1-4	3.7	4
13	Anomalous Solute Diffusivity in Ionic Liquids: Label-Free Visualization and Physical Origins. <i>Physical Review X</i> , 2019 , 9,	9.1	4
12	Shape morphology of dipolar domains in planar and spherical monolayers. <i>Journal of Chemical Physics</i> , 2020 , 152, 234701	3.9	4
11	Irreversible particle motion in surfactant-laden interfaces due to pressure-dependent surface viscosity. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017 , 473, 20170346	2.4	3
10	A furtive stare at an intra-cellular flow. <i>Journal of Fluid Mechanics</i> , 2010 , 642, 1-4	3.7	3
9	Room-level ventilation in schools and universities.. <i>Atmospheric Environment: X</i> , 2022 , 13, 100152	2.8	3
8	Report of the Symposium on Interactions for Dispersed Systems in Newtonian and Viscoelastic Fluids, Guanajuato, Mexico, 2006a). <i>Physics of Fluids</i> , 2006 , 18, 121501	4.4	2
7	Drop-in additives for suspension manipulation: Colloidal motion induced by sedimenting soluto-inertial beacons. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	2
6	Hydrogen Bonding Strength Determines Water Diffusivity in Polymer Ionogels. <i>Journal of Physical Chemistry B</i> , 2021 , 125, 5408-5419	3.4	2
5	Capillary force on an SnertScolloid: a physical analogy to dielectrophoresis. <i>Soft Matter</i> , 2021 , 17, 3417-3462	3.6	2
4	Design strategies for engineering soluto-inertial suspension interactions. <i>Physical Review E</i> , 2019 , 100, 052603	2.4	1
3	Zone sculpting using partitioned electrokinetic injections. <i>Applied Physics Letters</i> , 2007 , 91, 203511	3.4	1
2	Curvature-Mediated Forces on Elastic Inclusions in Fluid Interfaces.. <i>Langmuir</i> , 2022 ,	4	1
1	Cross-stream migration vs. anisotropic relaxation: Non-Boltzmann distributions in dissipative systems. <i>AIChE Journal</i> , 2014 , 60, 1434-1450	3.6	