James E Sprittles

List of Publications by Year
in descending order

50 papers	1,353 citations	393982 19 h-index	344852 36 g-index
51 all docs	51 docs citations	51 times ranked	1288 citing authors

#	Article	IF	Citations
1	How Coalescing Droplets Jump. ACS Nano, 2014, 8, 10352-10362.	7.3	304
2	Coalescence of liquid drops: Different models versus experiment. Physics of Fluids, 2012, 24, .	1.6	101
3	Capillary breakup of a liquid bridge: identifying regimes and transitions. Journal of Fluid Mechanics, 2016, 797, 29-59.	1.4	68
4	Droplet Coalescence is Initiated by Thermal Motion. Physical Review Letters, 2019, 122, 104501.	2.9	61
5	Finite element framework for describing dynamic wetting phenomena. International Journal for Numerical Methods in Fluids, 2012, 68, 1257-1298.	0.9	47
6	The dynamics of liquid drops and their interaction with solids of varying wettabilities. Physics of Fluids, 2012, 24, .	1.6	44
7	Finite element simulation of dynamic wetting flows as an interface formation process. Journal of Computational Physics, 2013, 233, 34-65.	1.9	44
8	The formation of a bubble from a submerged orifice. European Journal of Mechanics, B/Fluids, 2015, 53, 24-36.	1.2	43
9	Drop spreading and penetration into pre-wetted powders. Powder Technology, 2013, 239, 128-136.	2.1	41
10	Revisiting the Rayleighâ€“Plateau instability for the nanoscale. Journal of Fluid Mechanics, 2019, 861, .	1.4	40
11	Kinetic Effects in Dynamic Wetting. Physical Review Letters, 2017, 118, 114502.	2.9	37
12	Bouncing off the Walls: The Influence of Gas-Kinetic and van der Waals Effects in Drop Impact. Physical Review Letters, 2020, 124, 084501.	2.9	37
13	Mean-field kinetic theory approach to evaporation of a binary liquid into vacuum. Physical Review Fluids, 2018, 3, .	1.0	35
14	Dynamic measurements and simulations of airborne picolitre-droplet coalescence in holographic optical tweezers. Journal of Chemical Physics, 2016, 145, 054502.	1.2	32
15	Air entrainment in dynamic wetting: Knudsen effects and the influence of ambient air pressure. Journal of Fluid Mechanics, 2015, 769, 444-481.	1.4	28
16	Molecular simulation of thin liquid films: Thermal fluctuations and instability. Physical Review E, 2019, 100, 023108.	0.8	24
17	Lifetime of a Nanodroplet: Kinetic Effects and Regime Transitions. Physical Review Letters, 2019, 123, 154501.	2.9	23
18	A parametric study of the coalescence of liquid drops in a viscous gas. Journal of Fluid Mechanics, 2014, 753, 279-306.	1.4	22

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19	Dynamics of liquid nanothreads: Fluctuation-driven instability and rupture. Physical Review Fluids, 2020, 5, .	1.0	19
20	Dynamics of liquid drops coalescing in the inertial regime. Physical Review E, 2014, 89, 063008.	0.8	18
21	Viscous flow in domains with corners: Numerical artifacts, their origin and removal. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 1087-1099.	3.4	17
22	Nanoscale thin-film flows with thermal fluctuations and slip. Physical Review E, 2020, 102, 053105.	0.8	17
23	Velocity distribution function of spontaneously evaporating atoms. Physical Review Fluids, 2020, 5, .	1.0	16
24	Coxâ€"Voinov theory with slip. Journal of Fluid Mechanics, 2020, 900, .	1.4	15
25	Numerical investigation of nanoporous evaporation using direct simulation Monte Carlo. Physical Review Fluids, 2019, 4, .	1.0	15
26	Fundamental solutions to the regularised 13-moment equations: efficient computation of three-dimensional kinetic effects. Journal of Fluid Mechanics, 2017, 833, .	1.4	14
27	Molecular physics of jumping nanodroplets. Nanoscale, 2020, 12, 20631-20637.	2.8	14
28	Computational modelling of Leidenfrost drops. Journal of Fluid Mechanics, 2022, 936, .	1.4	14
29	Viscous flow over a chemically patterned surface. Physical Review E, 2007, 76, 021602.	0.8	13
30	Evaporation-driven vapour microflows: analytical solutions from moment methods. Journal of Fluid Mechanics, 2018, 841, 962-988.	1.4	13
31	Thermophoresis of a spherical particle: modelling through moment-based, macroscopic transport equations. Journal of Fluid Mechanics, 2019, 862, 312-347.	1.4	13
32	Wetting front dynamics in an isotropic porous medium. Journal of Fluid Mechanics, 2012, 694, 399-407.	1.4	12
33	The coalescence of liquid drops in a viscous fluid: interface formation model. Journal of Fluid Mechanics, 2014, 751, 480-499.	1.4	12
34	Dynamic drying transition via free-surface cusps. Journal of Fluid Mechanics, 2019, 858, 760-786.	1.4	12
35	Viscous flows in corner regions: Singularities and hidden eigensolutions. International Journal for Numerical Methods in Fluids, 2011, 65, 372-382.	0.9	11
36	Dynamic contact angle of a liquid spreading on an unsaturated wettable porous substrate. Journal of Fluid Mechanics, 2013, 715, 273-282.	1.4	10

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37	Efficient simulation of non-classical liquidâ€“vapour phase-transition flows: a method of fundamental solutions. Journal of Fluid Mechanics, 2021, 919, .	1.4	10
38	Anomalous dynamics of capillary rise in porous media. Physical Review E, 2012, 86, 016306.	0.8	8
39	Evaporation from arbitrary nanoporous membrane configurations: An effective evaporation coefficient approach. Physics of Fluids, 2021, 33, .	1.6	7
40	Efficient moment method for modeling nanoporous evaporation. Physical Review Fluids, 2022, 7, .	1.0	7
41	-theorem and boundary conditions for the linear R26 equations: application to flow past an evaporating droplet. Journal of Fluid Mechanics, 2021, 924, .	1.4	6
42	Fluctuation-driven dynamics in nanoscale thin-film flows: Physical insights from numerical investigations. Physical Review Fluids, 2022, 7, .	1.0	6
43	A continuum model for the flow of thin liquid films over intermittently chemically patterned surfaces. European Physical Journal: Special Topics, 2009, 166, 159-163.	1.2	5
44	Relaxation of Thermal Capillary Waves for Nanoscale Liquid Films on Anisotropic-Slip Substrates. Langmuir, 2021, 37, 8667-8676.	1.6	5
45	Stability of similarity solutions of viscous thread pinch-off. Physical Review Fluids, 2021, 6, .	1.0	3
46	Comment on â€œApplying a second-kind boundary integral equation for surface tractions in Stokes flowâ€. Journal of Computational Physics, 2020, 401, 109007.	1.9	2
47	Deformed liquid marble formation: Experiments and computational modeling. Physical Review Fluids, 2021, 6, .	1.0	2
48	Efficient simulation of rarefied gas flow past a particle: A boundary element method for the linearized G13 equations. Physics of Fluids, 2022, 34, .	1.6	2
49	A computational study of fluctuating viscoelastic forces on trapped interfaces in porous media. European Journal of Mechanics, B/Fluids, 2020, 84, 496-506.	1.2	1
50	Application of microfluidic systems in modelling impacts of environmental structure on stress-sensing by individual microbial cells. Computational and Structural Biotechnology Journal, 2022, 20, 128-138.	1.9	0