

Paul H Steen

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,294
citations

393982

19
h-index

360668

35
g-index

51
all docs

51
docs citations

51
times ranked

1037
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamics of inviscid capillary breakup: collapse and pinchoff of a film bridge. <i>Journal of Fluid Mechanics</i> , 1997, 341, 245-267.	1.4	183
2	Capillarity-based switchable adhesion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 3377-3381.	3.3	141
3	Capillary oscillations of a constrained liquid drop. <i>Physics of Fluids</i> , 2009, 21, .	1.6	88
4	Condensation on Surface Energy Gradient Shifts Drop Size Distribution toward Small Drops. <i>Langmuir</i> , 2014, 30, 1788-1798.	1.6	70
5	Dynamics of sessile drops. Part 1. Inviscid theory. <i>Journal of Fluid Mechanics</i> , 2014, 760, 5-38.	1.4	69
6	Substrate constraint modifies the Rayleigh spectrum of vibrating sessile drops. <i>Physical Review E</i> , 2013, 88, 023015.	0.8	56
7	Plume formation and resonant bifurcations in porous-media convection. <i>Journal of Fluid Mechanics</i> , 1994, 272, 67-90.	1.4	55
8	Mass production of shaped particles through vortex ring freezing. <i>Nature Communications</i> , 2016, 7, 12401.	5.8	55
9	Dynamics of sessile drops. Part 2. Experiment. <i>Journal of Fluid Mechanics</i> , 2015, 768, 442-467.	1.4	51
10	The electroosmotic droplet switch: Countering capillarity with electrokinetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 11974-11979.	3.3	42
11	Capillary dynamics of coupled spherical-cap droplets. <i>Journal of Fluid Mechanics</i> , 2007, 580, 495-505.	1.4	41
12	Low-dissipation capillary switches at small scales. <i>Applied Physics Letters</i> , 2005, 86, 014106.	1.5	32
13	Stability of constrained cylindrical interfaces and the torus lift of Plateau's Rayleigh. <i>Journal of Fluid Mechanics</i> , 2010, 647, 201-219.	1.4	28
14	Capillary puddle vibrations linked to casting-defect formation in planar-flow melt spinning. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2006, 37, 445-456.	1.0	27
15	Droplet motions fill a periodic table. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 4849-4854.	3.3	27
16	Coupled oscillations of deformable spherical-cap droplets. Part 1. Inviscid motions. <i>Journal of Fluid Mechanics</i> , 2013, 714, 312-335.	1.4	24
17	Moving contact-line mobility measured. <i>Journal of Fluid Mechanics</i> , 2018, 841, 767-783.	1.4	23
18	Static rivulet instabilities: varicose and sinuous modes. <i>Journal of Fluid Mechanics</i> , 2018, 837, 819-838.	1.4	23

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19	Coupled oscillations of deformable spherical-cap droplets. Part 2. Viscous motions. <i>Journal of Fluid Mechanics</i> , 2013, 714, 336-360.	1.4	21
20	Switchable Wettability for Condensation Heat Transfer. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 22115-22119.	4.0	18
21	Response of driven sessile drops with contact-line dissipation. <i>Soft Matter</i> , 2016, 12, 8919-8926.	1.2	16
22	A drip-crosslinked tough hydrogel. <i>Polymer</i> , 2018, 135, 327-330.	1.8	16
23	OpenFOAM Simulations of Late Stage Container Draining in Microgravity. <i>Fluids</i> , 2020, 5, 207.	0.8	15
24	Beetle-inspired adhesion by capillary-bridge arrays: pull-off detachment. <i>Journal of Adhesion Science and Technology</i> , 2014, 28, 273-289.	1.4	14
25	Nonaxisymmetric Effects in Drop-On-Demand Piezoacoustic Inkjet Printing. <i>Physical Review Applied</i> , 2020, 13, .	1.5	13
26	Energy dissipation and the contact-line region of a spreading bridge. <i>Journal of Fluid Mechanics</i> , 2012, 703, 111-141.	1.4	12
27	Chaotic motions of a forced droplet-droplet oscillator. <i>Physics of Fluids</i> , 2008, 20, .	1.6	10
28	Dynamics and stability of volume-scavenging drop arrays: Coarsening by capillarity. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 531-539.	1.3	10
29	Is contact-line mobility a material parameter?. <i>Npj Microgravity</i> , 2022, 8, 6.	1.9	10
30	Liquid-bridge shape stability by energy bounding. <i>IMA Journal of Applied Mathematics</i> , 2015, 80, 1759-1775.	0.8	8
31	Dissipation of oscillatory contact lines using resonant mode scanning. <i>Npj Microgravity</i> , 2020, 6, 3.	1.9	8
32	The draining of capillary liquids from containers with interior corners aboard the ISS. <i>Npj Microgravity</i> , 2021, 7, 45.	1.9	8
33	Contacting and forming singularities: Distinguishing examples. <i>Chaos</i> , 1999, 9, 164-172.	1.0	7
34	A dynamic model of the electroosmotic droplet switch. <i>Physics of Fluids</i> , 2013, 25, .	1.6	7
35	Adaptive adhesion by a beetle: Manipulation of liquid bridges and their breaking limits. <i>Biointerphases</i> , 2014, 9, 011001.	0.6	7
36	Drop impact on solids: contact-angle hysteresis filters impact energy into modal vibrations. <i>Journal of Fluid Mechanics</i> , 2021, 923, .	1.4	7

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37	Suppression of the capillary instability in the Rayleigh-Taylor slot problem. <i>Physics of Fluids</i> , 1996, 8, 97-102.	1.6	6
38	Liquid-bridge mediated droplet switch: A tristable capillary system. <i>Physics of Fluids</i> , 2005, 17, 127107.	1.6	6
39	Sweeping by sessile drop coalescence. <i>European Physical Journal: Special Topics</i> , 2020, 229, 1739-1756.	1.2	6
40	Saph and Schoder and the Friction Law of Blasius. <i>Annual Review of Fluid Mechanics</i> , 2017, 49, 575-582.	10.8	5
41	Vorticity transport in solidification boundary layers. <i>Journal of Fluid Mechanics</i> , 2001, 426, 397-406.	1.4	4
42	Footprint geometry and sessile drop resonance. <i>Physical Review E</i> , 2017, 95, 033109.	0.8	4
43	Volume scavenging of networked droplets. <i>Physica D: Nonlinear Phenomena</i> , 2019, 394, 1-15.	1.3	4
44	Resonant mode scanning to compute the spectrum of capillary surfaces with dynamic wetting effects. <i>Journal of Engineering Mathematics</i> , 2021, 129, 1.	0.6	4
45	Substrate Heating in the Planar-Flow Melt Spinning of Metals. <i>Journal of Thermal Science and Engineering Applications</i> , 2014, 6, .	0.8	3
46	Steiner triangular drop dynamics. <i>Chaos</i> , 2020, 30, 023118.	1.0	3
47	Capillary Flow Experiments Conducted Aboard the International Space Station: Experiments and Simulations. <i>Microgravity Science and Technology</i> , 2022, 34, .	0.7	3
48	Bifurcation and Stability of n Coupled Droplet Oscillators with S_n Symmetry. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 1204-1219.	0.8	2
49	Simulating Heat Transfer During Transient Dropwise Condensation on a Low-Thermal-Conductivity Substrate. <i>Langmuir</i> , 2019, 35, 11566-11578.	1.6	2
50	Electro-Osmotic Gripper Characterization for Layered Assembly. <i>3D Printing and Additive Manufacturing</i> , 0, , .	1.4	0