Lailai Zhu

List of Publications by Year
in descending order

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48 papers	1,785 citations	471061 17 h-index	264894 42 g-index
48 all docs	48 docs citations	48 times ranked	1964 citing authors

#	Article	IF	Citations
1	A laser-engraved wearable sensor for sensitive detection of uric acid and tyrosine in sweat. Nature Biotechnology, 2020, 38, 217-224.	9.4	683
2	Self-propulsion in viscoelastic fluids: Pushers vs. pullers. Physics of Fluids, 2012, 24, .	1.6	152
3	Low-Reynolds-number swimming in aÂcapillaryÂtube. Journal of Fluid Mechanics, 2013, 726, 285-311.	1.4	120
4	Squirming through shear-thinning fluids. Journal of Fluid Mechanics, 2015, 784, .	1.4	80
5	Micropropulsion and microrheology in complex fluids via symmetry breaking. Physics of Fluids, 2012, 24, .	1.6	79
6	Locomotion by tangential deformation in a polymeric fluid. Physical Review E, 2011, 83, 011901.	0.8	77
7	A microfluidic device to sort capsules by deformability: a numerical study. Soft Matter, 2014, 10, 7705-7711.	1.2	49
8	Viscous Taylor droplets in axisymmetric and planar tubes: from Brethertonâ€™s theory to empirical models. Microfluidics and Nanofluidics, 2018, 22, 1.	1.0	35
9	Shape Optimization of the Diffuser Blade of an Axial Blood Pump by Computational Fluid Dynamics. Artificial Organs, 2010, 34, 185-192.	1.0	34
10	A pancake droplet translating in a Hele-Shaw cell: lubrication film and flow field. Journal of Fluid Mechanics, 2016, 798, 955-969.	1.4	30
11	Inertial manipulation of bubbles in rectangular microfluidic channels. Lab on A Chip, 2018, 18, 1035-1046.	3.1	30
12	The motion of a deforming capsule through a corner. Journal of Fluid Mechanics, 2015, 770, 374-397.	1.4	28
13	Swimming with a cage: low-Reynolds-number locomotion inside a droplet. Soft Matter, 2017, 13, 3161-3173.	1.2	27
14	An efficient multilayer RBF neural network and its application to regression problems. Neural Computing and Applications, 2022, 34, 4133-4150.	3.2	24
15	Motion of an elastic capsule in a constricted microchannel. European Physical Journal E, 2015, 38, 134.	0.7	23
16	Flow around a squirmer in a shear-thinning fluid. Journal of Non-Newtonian Fluid Mechanics, 2019, 268, 101-110.	1.0	23
17	Laboratory layered latte. Nature Communications, 2017, 8, 1960.	5.8	20
18	Bifurcation Dynamics of a Particle-Encapsulating Droplet in Shear Flow. Physical Review Letters, 2017, 119, 064502.	2.9	17

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19	Sorting by interfacial tension (SIFT): Label-free enzyme sorting using droplet microfluidics. Analytica Chimica Acta, 2019, 1089, 108-114.	2.6	17
20	Propulsion driven by self-oscillation via an electrohydrodynamic instability. Physical Review Fluids, 2019, 4, .	1.0	17
21	Particle motion nearby rough surfaces. Physical Review Fluids, 2020, 5, .	1.0	17
22	The dynamics of a capsule in a wall-bounded oscillating shear flow. Physics of Fluids, 2015, 27, .	1.6	16
23	Harnessing elasticity to generate self-oscillation via an electrohydrodynamic instability. Journal of Fluid Mechanics, 2020, 888, .	1.4	15
24	Effects of the intrinsic curvature of elastic filaments on the propulsion of a flagellated microrobot. Physics of Fluids, 2020, 32, .	1.6	15
25	Self-peeling of frozen water droplets upon impacting a cold surface. Communications Physics, 2022, 5, .	2.0	13
26	Film thickness distribution in gravity-driven pancake-shaped droplets rising in a Hele-ShawÂcell. Journal of Fluid Mechanics, 2019, 874, 1021-1040.	1.4	12
27	Low-Reynolds-number, biflagellated Quincke swimmers with multiple forms of motion. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	12
28	Optimizing low-Reynolds-number predation via optimal control and reinforcement learning. Journal of Fluid Mechanics, 2022, 944, .	1.4	12
29	A note on a swirling squirmer in a shear-thinning fluid. Physics of Fluids, 2020, 32, .	1.6	11
30	Squirming in a viscous fluid enclosed by a Brinkman medium. Physical Review E, 2020, 101, 063105.	0.8	11
31	Time-dependent motion of a confined bubble in a tube: transition between two steady states. Journal of Fluid Mechanics, 2018, 857, .	1.4	10
32	Rayleigh-Taylor instability of viscous liquid films under a temperature-controlled inclined substrate. Physical Review Fluids, 2021, 6, .	1.0	9
33	HEMOLYSIS ANALYSIS OF AXIAL BLOOD PUMPS WITH VARIOUS STRUCTURE IMPELLERS. Journal of Mechanics in Medicine and Biology, 2013, 13, 1350054.	0.3	8
34	The stability of a rising droplet: an inertialess non-modal growth mechanism. Journal of Fluid Mechanics, 2016, 786, .	1.4	8
35	Propulsion of an elastic filament in a shear-thinning fluid. Soft Matter, 2021, 17, 3829-3839.	1.2	8
36	Inertial gravity current produced by the drainage of a cylindrical reservoir from an outer orÂinnerÂedge. Journal of Fluid Mechanics, 2019, 874, 185-209.	1.4	6

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37	The Hydrodynamics of a Micro-Rocket Propelled by a Deformable Bubble. Fluids, 2019, 4, 48.	0.8	6
38	Actuating a curved elastic filament for bidirectional propulsion. Physical Review Fluids, 2020, 5, .	1.0	6
39	Multilayer perceptron neural network activated by adaptive Gaussian radial basis function and its application to predict lid-driven cavity flow. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 1757-1772.	1.5	6
40	Non-unique bubble dynamics in a vertical capillary with an external flow. Journal of Fluid Mechanics, 2021, 911, .	1.4	5
41	Rotational propulsion enabled by inertia. European Physical Journal E, 2014, 37, 16.	0.7	4
42	Upcoming flow promotes the bundle formation of bacterial flagella. Biophysical Journal, 2021, 120, 4391-4398.	0.2	4
43	Hydrodynamic Focusing of an Elastic Capsule in Stokes flow: An Exploratory Numerical Study. Procedia IUTAM, 2015, 16, 41-49.	1.2	2
44	Rotation of a low-Reynolds-number watermill: theory and simulations. Journal of Fluid Mechanics, 2018, 849, 57-75.	1.4	2
45	Pattern formation in oil-in-water emulsions exposed to a salt gradient. Physical Review Fluids, 2019, 4, .	1.0	1
46	Viscoelastic levitation. Journal of Fluid Mechanics, 2022, 943, .	1.4	1
47	A low-Reynolds-number actuator driven by instability: rotating or oscillating. Nonlinear Dynamics, 2021, 106, 2005.	2.7	0
48	Video: Instability and bifurcation of a particle-encapsulating droplet in creeping shear flow. , 0, , .		0