Alexander Leshansky

List of Publications by Year
in descending order

65 papers	3,228 citations	201385 27 h-index	149479 56 g-index
67 all docs	67 docs citations	67 times ranked	3253 citing authors

#	Article	IF	Citations
1	Biphasic co-flow through a sudden expansion or contraction of a Hele-Shaw channel. Physical Review Fluids, 2021, 6, .	1.0	2
2	Double emulsions with ultrathin shell by microfluidic step-emulsification. Lab on A Chip, 2021, 21, 1613-1622.	3.1	15
3	Fluid-Mediated Force on a Particle Due to an Oscillating Plate and Its Effect on Deposition Measurements by a Quartz Crystal Microbalance. Physical Review Letters, 2020, 125, 144501.	2.9	5
4	Modeling Propulsion of Soft Magnetic Nanowires. Frontiers in Robotics and AI, 2020, 7, 595777.	2.0	4
5	Towards focusing of a swarm of magnetic micro/nanomotors. Physical Chemistry Chemical Physics, 2020, 22, 16407-16420.	1.3	11
6	Theory of hydrodynamic interaction of two spheres in wall-bounded shear flow. Physical Review Fluids, 2020, 5, .	1.0	4
7	Unidirectional Propulsion of Planar Magnetic Nanomachines. Physical Review Applied, 2019, 12, .	1.5	10
8	Droplet generation at Hele-Shaw microfluidic T-junction. Physics of Fluids, 2019, 31, .	1.6	47
9	Photonics of Template-Mediated Lattices of Colloidal Clusters. Langmuir, 2019, 35, 3987-3991.	1.6	9
10	Geometric constraints and optimization in externally driven propulsion. Science Robotics, 2018, 3, .	9.9	34
11	Helical Nanomachines as Mobile Viscometers. Advanced Functional Materials, 2018, 28, 1705687.	7.8	63
12	Fundamental solution of unsteady Stokes equations and force on an oscillating sphere near a wall. Physical Review E, 2018, 98, .	0.8	14
13	Role of symmetry in driven propulsion at low Reynolds number. Physical Review E, 2018, 98, .	0.8	27
14	Controlling Marangoni flow directionality: patterning nano-materials using sessile and sliding volatile droplets. European Physical Journal: Special Topics, 2017, 226, 1307-1324.	1.2	6
15	Microfluidic step-emulsification in axisymmetric geometry. Lab on A Chip, 2017, 17, 3609-3620.	3.1	30
16	Highly Efficient Freestyle Magnetic Nanoswimmer. Nano Letters, 2017, 17, 5092-5098.	4.5	182
17	Autonomous bacterial nanoswimmers target cancer. Journal of Controlled Release, 2017, 257, 68-75.	4.8	39
18	Integral representation of channel flow with interacting particles. Physical Review E, 2017, 96, 063110.	0.8	3

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19	Dynamics of arbitrary shaped propellers driven by a rotating magnetic field. Physical Review Fluids, 2017, 2, .	1.0	59
20	Shape-controlled anisotropy of superparamagnetic micro-/nanohelices. Nanoscale, 2016, 8, 14127-14138.	2.8	9
21	Flexible helical yarn swimmers. European Physical Journal E, 2016, 39, 87.	0.7	4
22	Phytoplankton's motion in turbulent ocean. Physical Review E, 2015, 92, 013017.	0.8	19
23	Optimal Length of Low Reynolds Number Nanopropellers. Nano Letters, 2015, 15, 4412-4416.	4.5	78
24	Printing Nanostructures with a Propelled Antiâ€Pinning Ink Droplet. Advanced Functional Materials, 2015, 25, 2411-2419.	7.8	14
25	Droplets in Microchannels: Dynamical Properties of the Lubrication Film. Physical Review Letters, 2015, 115, 064501.	2.9	58
26	Step-emulsification in a microfluidic device. Lab on A Chip, 2015, 15, 1023-1031.	3.1	96
27	Swimming by reciprocal motion at low Reynolds number. Nature Communications, 2014, 5, 5119.	5.8	349
28	Convective stability of turbulent Boussinesq flow in the dissipative range and flow around small particles. Physical Review E, 2014, 90, 053002.	0.8	5
29	Direct Measurement of Helical Cell Motion of the Spirochete Leptospira. Biophysical Journal, 2014, 106, 47-54.	0.2	43
30	The chiral magnetic nanomotors. Nanoscale, 2014, 6, 1580-1588.	2.8	111
31	Dynamics and polarization of superparamagnetic chiral nanomotors in a rotating magnetic field. Nanoscale, 2014, 6, 12142-12150.	2.8	38
32	Nanopropellers and Their Actuation in Complex Viscoelastic Media. ACS Nano, 2014, 8, 8794-8801.	7.3	286
33	Modeling and analysis of hydrodynamic and physico-chemical effects in bacterial deposition on surfaces. Biofouling, 2013, 29, 977-989.	0.8	13
34	Undulatory locomotion of finite filaments: lessons from<i>Caenorhabditis elegans</i>. New Journal of Physics, 2013, 15, 075022.	1.2	48
35	Thermocapillary motion of a slender viscous droplet in a channel. Physics of Fluids, 2012, 24, 022102.	1.6	1
36	Spray-Coating Route for Highly Aligned and Large-Scale Arrays of Nanowires. ACS Nano, 2012, 6, 4702-4712.	7.3	54

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37	Obstructed Breakup of Slender Drops in a Microfluidic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>T</mml:mi></mml:math>Junction. Physical Review Letters, 2012, 108, 264502.	2.9	93
38	The Oseen problem for a finite collection of spheres settling in a viscous liquid. European Journal of Mechanics, B/Fluids, 2012, 31, 71-79.	1.2	1
39	Numerical investigation of elongated drops in a microfluidic T-junction. Physics of Fluids, 2011, 23, .	1.6	72
40	Rupture of thin liquid films: Generalization of weakly nonlinear theory. Physical Review E, 2011, 83, 031603.	0.8	3
41	Do small swimmers mix the ocean?. Physical Review E, 2010, 82, 025301.	0.8	27
42	Enhanced low-Reynolds-number propulsion in heterogeneous viscous environments. Physical Review E, 2009, 80, 051911.	0.8	129
43	Breakup of drops in a microfluidic T junction. Physics of Fluids, 2009, 21, .	1.6	176
44	On the forced convective heat transport in a droplet-laden flow in microchannels. Microfluidics and Nanofluidics, 2008, 4, 533-542.	1.0	42
45	Surface tank treading: Propulsion of Purcellâ€™s toroidal swimmer. Physics of Fluids, 2008, 20, 063104.	1.6	59
46	Efficiency of cargo towing by a microswimmer. Physical Review E, 2008, 77, 055305.	0.8	27
47	Collective diffusion in sheared colloidal suspensions. Journal of Fluid Mechanics, 2008, 597, 305-341.	1.4	21
48	A frictionless microswimmer. New Journal of Physics, 2007, 9, 145-145.	1.2	67
49	Tunable Nonlinear Viscoelastic â€œFocusingâ€•in a Microfluidic Device. Physical Review Letters, 2007, 98, 234501.	2.9	259
50	The rheologic properties of erythrocytes: a study using an automated rheoscope. Rheologica Acta, 2007, 46, 621-627.	1.1	12
51	Actin-based propulsion of a microswimmer. Physical Review E, 2006, 74, 012901.	0.8	9
52	Chaos and threshold for irreversibility in sheared suspensions. Nature, 2005, 438, 997-1000.	13.7	286
53	Nonlinear rupture of thin liquid films on solid surfaces. Physical Review E, 2005, 71, 040601.	0.8	6
54	Dynamic structure factor study of diffusion in strongly sheared suspensions. Journal of Fluid Mechanics, 2005, 527, 141-169.	1.4	30

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55	Force on a sphere via the generalized reciprocal theorem. Physics of Fluids, 2004, 16, 843-844.	1.6	4
56	The leading effect of fluid inertia on the motion of rigid bodies at low Reynolds number. Journal of Fluid Mechanics, 2004, 505, 235-248.	1.4	7
57	The weakly inertial settling of particles in a viscous fluid. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 3079-3098.	1.0	5
58	Spontaneous Interaction of Drops, Bubbles and Particles in Viscous Fluid Driven by Capillary Inhomogeneities. Industrial & Engineering Chemistry Research, 2002, 41, 357-366.	1.8	10
59	Thermocapillary migration of bubbles: convective effects at low PÃ©clet number. Journal of Fluid Mechanics, 2001, 443, 377-401.	1.4	15
60	On the influence of mass transfer on coalescence of bubbles. International Journal of Multiphase Flow, 2001, 27, 189-196.	1.6	12
61	Thermocapillary Alignment of Gas Bubbles Induced by Convective Transport. Journal of Colloid and Interface Science, 2001, 240, 544-551.	5.0	13
62	Dynamics of Thin Liquid Films with Nonsoluble Surfactants:Â Weakly Nonlinear Analysis. Langmuir, 2000, 16, 2049-2051.	1.6	7
63	Spontaneous thermocapillary interaction of drops, bubbles and particles: Unsteady convective effects at low Peclet numbers. Physics of Fluids, 1999, 11, 1768-1780.	1.6	16
64	Thermocapillary interaction between a solid particle and a liquid-gas interface. Physics of Fluids, 1997, 9, 2818-2827.	1.6	21
65	Mobility of a Slender Object in Entangled Polymer Solution. Macromolecules, 0, , .	2.2	3