

Avinoam Nir

List of Publications by Year in descending order

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49
papers

880
citations

623734

14
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501196

28
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49
all docs

49
docs citations

49
times ranked

462
citing authors

#	ARTICLE	IF	CITATIONS
1	On the motion of suspended particles in stationary homogeneous turbulence. <i>Journal of Fluid Mechanics</i> , 1978, 84, 193.	3.4	119
2	Dispersive Mixing in Internal Mixers – A Theoretical Model Based on Agglomerate Rupture. <i>Rubber Chemistry and Technology</i> , 1982, 55, 1250-1285.	1.2	115
3	Shear-induced particle migration in a polydisperse concentrated suspension. <i>Journal of Rheology</i> , 1998, 42, 1329-1348.	2.6	72
4	The effect of a steady drift on the dispersion of a particle in turbulent fluid. <i>Journal of Fluid Mechanics</i> , 1979, 94, 369-381.	3.4	61
5	The effective thermal conductivity of sheared suspensions. <i>Journal of Fluid Mechanics</i> , 1976, 78, 33-48.	3.4	53
6	Dispersive Mixing in Rubber and Plastics. <i>Rubber Chemistry and Technology</i> , 1984, 57, 583-620.	1.2	43
7	On the viscous deformation of biological cells under anisotropic surface tension. <i>Journal of Fluid Mechanics</i> , 1988, 193, 217.	3.4	36
8	Deformation and breakup of a non-Newtonian slender drop in an extensional flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2005, 125, 49-59.	2.4	26
9	Viscous drop in compressional Stokes flow. <i>Journal of Fluid Mechanics</i> , 2013, 720, 169-191.	3.4	23
10	Thermocapillary interaction between a solid particle and a liquid-gas interface. <i>Physics of Fluids</i> , 1997, 9, 2818-2827.	4.0	21
11	Generalized Analytic Functions in an Extensional Stokes Flow with a Deformable Drop. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 925-951.	1.8	20
12	Liquid toroidal drop in compressional Stokes flow. <i>Journal of Fluid Mechanics</i> , 2015, 785, 372-400.	3.4	20
13	On the thermocapillary motion of partially engulfed compound drops. <i>Journal of Fluid Mechanics</i> , 2009, 626, 263-289.	3.4	17
14	Spontaneous thermocapillary interaction of drops, bubbles and particles: Unsteady convective effects at low Peclet numbers. <i>Physics of Fluids</i> , 1999, 11, 1768-1780.	4.0	16
15	Thermocapillary migration of bubbles: convective effects at low Peclet number. <i>Journal of Fluid Mechanics</i> , 2001, 443, 377-401.	3.4	15
16	Deformation and breakup of a non-Newtonian slender drop in an extensional flow: inertial effects and stability. <i>Journal of Fluid Mechanics</i> , 2006, 563, 133.	3.4	13
17	Thermocapillary motion of hybrid drops. <i>Physics of Fluids</i> , 2008, 20, 072102.	4.0	12
18	Motion and shape of an axisymmetric viscoplastic drop slowly falling through a viscous fluid. <i>Rheologica Acta</i> , 2011, 50, 361-374.	2.4	12

#	ARTICLE	IF	CITATIONS
19	Shear-induced particles migration in a Bingham fluid. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 238, 80-91.	2.4	11
20	Modelling Twin Rotor Mixers and Extruders. <i>International Polymer Processing</i> , 1990, 5, 155-163.	0.5	10
21	Spontaneous thermocapillary interaction of drops: Effect of surface deformation at nonzero capillary number. <i>Physics of Fluids</i> , 2002, 14, 1326-1339.	4.0	10
22	Spontaneous Interaction of Drops, Bubbles and Particles in Viscous Fluid Driven by Capillary Inhomogeneities. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 357-366.	3.7	10
23	On the evolution and breakup of slender drops in an extensional flow. <i>Physics of Fluids</i> , 2012, 24, .	4.0	10
24	Surface diffusion as rate determining step in activated chemisorption. <i>Canadian Journal of Chemical Engineering</i> , 1984, 62, 233-240.	1.7	9
25	Viscous dissipation rate in concentrated suspensions. <i>Physics of Fluids</i> , 1994, 6, 3189-3191.	4.0	9
26	Spontaneous thermocapillary interaction of drops: Unsteady convective effects at high Peclet numbers. <i>Physics of Fluids</i> , 2001, 13, 368-381.	4.0	9
27	A Dispersive Mixing Testing Apparatus. <i>International Polymer Processing</i> , 1987, 2, 13-20.	0.5	8
28	Axisymmetric thermal wake interaction of two drops in a gravity field at low Reynolds and high Peclet numbers. <i>Physics of Fluids</i> , 2003, 15, 3006.	4.0	8
29	Stationary regimes of axisymmetric thermal wake interaction of two buoyant drops at low Reynolds and high Peclet number. <i>Physics of Fluids</i> , 2006, 18, 072103.	4.0	8
30	Non-Newtonian slender drops in a simple shear flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 228, 38-45.	2.4	8
31	Evolution and stationarity of liquid toroidal drop in compressional Stokes flow. <i>Journal of Fluid Mechanics</i> , 2018, 835, 1-23.	3.4	8
32	The Fertilization Dance: A Mechanical View of the Egg Rotation During the Initial Spermatozoa-Ovum Interaction. <i>Journal of Theoretical Biology</i> , 2002, 214, 171-179.	1.7	7
33	The leading effect of fluid inertia on the motion of rigid bodies at low Reynolds number. <i>Journal of Fluid Mechanics</i> , 2004, 505, 235-248.	3.4	7
34	Interaction of viscous drops in a yield stress material. <i>Rheologica Acta</i> , 2011, 50, 375-387.	2.4	7
35	Marangoni and Natural Convection in a Horizontal Layer of Viscoplastic Fluid with Concentration Dependent Yield Stress. <i>Exact Analytical Solutions. Microgravity Science and Technology</i> , 2009, 21, 59-65.	1.4	6
36	The weakly inertial settling of particles in a viscous fluid. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2003, 459, 3079-3098.	2.1	5

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37	Interaction and ordering of bubbles levitated in vortical flow. <i>Microgravity Science and Technology</i> , 2007, 19, 78-80.	1.4	4
38	Viscoplastic flows with free boundaries and interfaces. <i>Reviews in Chemical Engineering</i> , 2010, 26, .	4.4	4
39	Approximating stationary deformation of flat and toroidal drops in compressional viscous flow using generalized Cassini ovals. <i>Journal of Fluid Mechanics</i> , 2021, 921, .	3.4	4
40	Shapes and stability of viscous rotating drops in a compressional/extensional flow. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	4
41	Deformation of a partially engulfed compound drop slowly moving in an immiscible viscous fluid. <i>Physics of Fluids</i> , 2011, 23, 023101.	4.0	3
42	Effect of added mass on the interaction of bubbles in a low-Reynolds-number shear flow. <i>Physical Review E</i> , 2016, 93, 023105.	2.1	3
43	Deformation of an axisymmetric viscoplastic drop in extensional/compressional flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 292, 104534.	2.4	3
44	Dynamic and stationary shapes of rotating toroidal drops in viscous linear flows. <i>Journal of Fluid Mechanics</i> , 2021, 923, .	3.4	3
45	Viscoplastic toroidal drop in compressional Stokes flow. <i>Physics of Fluids</i> , 2021, 33, 073101.	4.0	3
46	Modelling Twin Rotor Mixers and Extruders. <i>International Polymer Processing</i> , 1992, 7, 204-211.	0.5	3
47	EFFECTIVE CONDUCTIVITY OF A DILUTE SUSPENSION AT MODERATE PARTICLE PECLET NUMBERS. <i>Chemical Engineering Communications</i> , 1989, 82, 163-175.	2.6	1
48	Spontaneous thermocapillary drops interaction: The effect of a surface reaction. <i>AIChE Journal</i> , 2007, 53, 2783-2794.	3.6	1
49	ENHANCED TRANSFER FROM SUSPENSION TO POROUS BOUNDARIES. <i>Chemical Engineering Communications</i> , 1983, 21, 251-257.	2.6	0