German Drazer

List of Publications by Year
in descending order

61 papers	1,638 citations	257429 24 h-index	315719 38 g-index
61 all docs	61 docs citations	61 times ranked	1625 citing authors

#	Article	IF	Citations
1	Deterministic and stochastic behaviour of non-Brownian spheres in sheared suspensions. Journal of Fluid Mechanics, 2002, 460, 307-335.	3.4	106
2	Permeability anisotropy induced by the shear displacement of rough fracture walls. Water Resources Research, 2005, 41, .	4.2	102
3	Flow channeling in a single fracture induced by shear displacement. Geothermics, 2006, 35, 576-588.	3.4	87
4	Directional Locking and the Role of Irreversible Interactions in Deterministic Hydrodynamics Separations in Microfluidic Devices. Physical Review Letters, 2009, 103, 078301.	7.8	87
5	Directional locking and deterministic separation in periodic arrays. Journal of Fluid Mechanics, 2009, 627, 379-401.	3.4	66
6	Gravity Driven Deterministic Lateral Displacement for Particle Separation in Microfluidic Devices. Analytical Chemistry, 2012, 84, 10621-10627.	6.5	60
7	Design and development of microbioreactors for long-term cell culture in controlled oxygen microenvironments. Biomedical Microdevices, 2012, 14, 145-152.	2.8	59
8	Experimental evidence of power-law trapping-time distributions in porous media. Physical Review E, 1999, 60, 5858-5864.	2.1	55
9	Anomalous diffusion with absorption: Exact time-dependent solutions. Physical Review E, 2000, 61, 1417-1422.	2.1	55
10	Transport in rough self-affine fractures. Physical Review E, 2002, 66, 026303.	2.1	48
11	Separation of Suspended Particles by Arrays of Obstacles in Microfluidic Devices. Physical Review Letters, 2007, 98, 050602.	7.8	45
12	Permeability of self-affine rough fractures. Physical Review E, 2000, 62, 8076-8085.	2.1	41
13	Tracer dispersion in two-dimensional rough fractures. Physical Review E, 2001, 63, 056104.	2.1	39
14	Microstructure and velocity fluctuations in sheared suspensions. Journal of Fluid Mechanics, 2004, 511, 237-263.	3.4	38
15	Hydrodynamic interactions in dissipative particle dynamics. Physics of Fluids, 2008, 20, .	4.0	37
16	Force driven separation of drops by deterministic lateral displacement. Lab on A Chip, 2012, 12, 2903.	6.0	37
17	Adsorption Phenomena in the Transport of a Colloidal Particle through a Nanochannel Containing a Partially Wetting Fluid. Physical Review Letters, 2002, 89, 244501.	7.8	35
18	Nanoscale simulations of directional locking. Physics of Fluids, 2010, 22, .	4.0	35

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19	Capillary Drop Penetration Method to Characterize the Liquid Wetting of Powders. Langmuir, 2017, 33, 56-65.	3.5	31
20	Molecular simulation of translational and rotational diffusion of Janus nanoparticles at liquid interfaces. Journal of Chemical Physics, 2015, 142, 014701.	3.0	29
21	Microbioreactors to manipulate oxygen tension and shear stress in the microenvironment of vascular stem and progenitor cells. Biotechnology and Applied Biochemistry, 2012, 59, 97-105.	3.1	28
22	The Effect of Fracture Roughness on the Onset of Nonlinear Flow. Water Resources Research, 2020, 56, e2020WR028049.	4.2	28
23	Wetting and particle adsorption in nanoflows. Physics of Fluids, 2005, 17, 017102.	4.0	27
24	Toward predicting tensile strength of pharmaceutical tablets by ultrasound measurement in continuous manufacturing. International Journal of Pharmaceutics, 2016, 507, 83-89.	5.2	27
25	Micropatterned Charge Heterogeneities via Vapor Deposition of Aminosilanes. Langmuir, 2015, 31, 10725-10733.	3.5	22
26	Tracer dispersion in packings of porous activated carbon grains. Chemical Engineering Science, 1999, 54, 4137-4144.	3.8	20
27	Inertia and scaling in deterministic lateral displacement. Biomicrofluidics, 2013, 7, 064111.	2.4	20
28	Directional locking in deterministic lateral-displacement microfluidic separation systems. Physical Review E, 2014, 90, 012302.	2.1	20
29	Fractionation by shape in deterministic lateral displacement microfluidic devices. Microfluidics and Nanofluidics, 2015, 19, 427-434.	2.2	20
30	Trajectory and distribution of suspended non-Brownian particles moving past a fixed spherical or cylindrical obstacle. Journal of Fluid Mechanics, 2013, 714, 213-237.	3.4	18
31	Vector separation of particles and cells using an array of slanted open cavities. Lab on A Chip, 2013, 13, 1086.	6.0	18
32	The effect of mechanical strain on properties of lubricated tablets compacted at different pressures. Powder Technology, 2016, 301, 657-664.	4.2	18
33	Partition-induced vector chromatography in microfluidic devices. Journal of Colloid and Interface Science, 2011, 356, 341-351.	9.4	16
34	Stochastic and Deterministic Vector Chromatography of Suspended Particles in One-Dimensional Periodic Potentials. Physical Review Letters, 2012, 108, 214501.	7.8	16
35	Electrokinetically driven deterministic lateral displacement for particle separation in microfluidic devices. Microfluidics and Nanofluidics, 2015, 18, 1195-1200.	2.2	16
36	An analytical study of stochastic resonance in a monostable non-harmonic system. Physica A: Statistical Mechanics and Its Applications, 2000, 283, 255-260.	2.6	15

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37	Transport properties of Brownian particles confined to a narrow channel by a periodic potential. Physics of Fluids, 2009, 21, .	4.0	15
38	Gravity driven deterministic lateral displacement for suspended particles in a 3D obstacle array. Scientific Reports, 2016, 6, 31428.	3.3	14
39	Centrifuge-based deterministic lateral displacement separation. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	14
40	Nonequilibrium potential approach: Local and global stability of stationary patterns in an activator-inhibitor system with fast inhibition. Physica A: Statistical Mechanics and Its Applications, 1997, 240, 571-585.	2.6	13
41	Irreversibility and pinching in deterministic particle separation. Applied Physics Letters, 2011, 99, 064102.	3.3	13
42	Exact expression for the diffusion propagator in a family of time-dependent anharmonic potentials. Physical Review E, 1999, 60, 2540-2546.	2.1	12
43	Colloidal transport within nematic liquid crystals with arrays of obstacles. Soft Matter, 2018, 14, 83-91.	2.7	12
44	Fluid enhancement of particle transport in nanochannels. Physics of Fluids, 2006, 18, 117102.	4.0	11
45	Transport of Brownian particles in a narrow, slowly varying serpentine channel. Journal of Chemical Physics, 2015, 142, 154114.	3.0	10
46	Concentration dependence of diffusionâ€“adsorption rate in activated carbon. Chemical Engineering Science, 1999, 54, 4285-4291.	3.8	9
47	Anomalous transport in activated carbon porous samples: power-law trapping-time distributions. Physica A: Statistical Mechanics and Its Applications, 2000, 283, 181-186.	2.6	9
48	Hysteresis, Force Oscillations, and Nonequilibrium Effects in the Adhesion of Spherical Nanoparticles to Atomically Smooth Surfaces. Physical Review Letters, 2005, 95, 016102.	7.8	9
49	Dynamic Effects on the Mobilization of a Deposited Nanoparticle by a Moving Liquid-Liquid Interface. Physical Review Letters, 2018, 121, 238002.	7.8	9
50	Deterministic separation of suspended particles in a reconfigurable obstacle array. Journal of Micromechanics and Microengineering, 2015, 25, 114002.	2.6	8
51	Stableâ€“unstable crossover in non-Newtonian radial Heleâ€“Shaw flow. Physica A: Statistical Mechanics and Its Applications, 2000, 283, 187-192.	2.6	7
52	Deterministic fractionation of binary suspensions moving past a line of microposts. Microfluidics and Nanofluidics, 2014, 17, 519-526.	2.2	7
53	Liquid-based stationary phase for deterministic lateral displacement separation in microfluidics. Soft Matter, 2017, 13, 7649-7656.	2.7	7
54	Exact time-dependent solutions for anomalous diffusion with absorption. Granular Matter, 2001, 3, 105-107.	2.2	6

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55	Analysis of the trajectory of a sphere moving through a geometric constriction. Physics of Fluids, 2013, 25, 062001.	4.0	6
56	Mechanism governing separation in microfluidic pinched flow fractionation devices. Microfluidics and Nanofluidics, 2014, 17, 1003-1009.	2.2	6
57	Tracer dispersion in double porosity porous media with nonlinear adsorption. Physica A: Statistical Mechanics and Its Applications, 1998, 257, 371-375.	2.6	5
58	Transport of Brownian particles confined to a weakly corrugated channel. Physics of Fluids, 2010, 22, .	4.0	5
59	Space-time transformations within the path-integral approach to stochastic processes. Physical Review E, 1996, 54, 86-91.	2.1	4
60	Capillary rise in a closed column: Application to the characterization of powders. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 602, 124822.	4.7	4
61	The effect of neighbors on the effective inertial collision efficiency of cylindrical collectors. Journal of Aerosol Science, 2022, 160, 105910.	3.8	2