

Armand Ajdari

List of Publications by Year in descending order

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64
papers

14,509
citations

47006

47
h-index

118850

62
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64
all docs

64
docs citations

64
times ranked

10376
citing authors

#	ARTICLE	IF	CITATIONS
1	Suppression of instabilities in multiphase flow by geometric confinement. <i>Physical Review E</i> , 2009, 79, 056310.	2.1	67
2	Stochastic low Reynolds number swimmers. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 204104.	1.8	32
3	Nonlinear electrokinetics at large voltages. <i>New Journal of Physics</i> , 2009, 11, 075016.	2.9	83
4	Towards an understanding of induced-charge electrokinetics at large applied voltages in concentrated solutions. <i>Advances in Colloid and Interface Science</i> , 2009, 152, 48-88.	14.7	742
5	Droplets and jets in microfluidic devices. <i>Comptes Rendus Chimie</i> , 2009, 12, 247-257.	0.5	19
6	Mechanical Response of a Small Swimmer Driven by Conformational Transitions. <i>Physical Review Letters</i> , 2008, 100, 038101.	7.8	76
7	Analytic results for the three-sphere swimmer at low Reynolds number. <i>Physical Review E</i> , 2008, 77, 036308.	2.1	160
8	High shear rheology of shear banding fluids in microchannels. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	29
9	Droplet Traffic in Microfluidic Networks: A Simple Model for Understanding and Designing. <i>Physical Review Letters</i> , 2008, 100, 044501.	7.8	110
10	Stability of a jet in confined pressure-driven biphasic flows at low Reynolds number in various geometries. <i>Physical Review E</i> , 2008, 78, 016307.	2.1	101
11	Stability of a Jet in Confined Pressure-Driven Biphasic Flows at Low Reynolds Numbers. <i>Physical Review Letters</i> , 2007, 99, 104502.	7.8	232
12	Building up longitudinal concentration gradients in shallow microchannels. <i>Lab on A Chip</i> , 2007, 7, 1154.	6.0	19
13	Steric effects in the dynamics of electrolytes at large applied voltages. I. Double-layer charging. <i>Physical Review E</i> , 2007, 75, 021502.	2.1	598
14	Steric effects in the dynamics of electrolytes at large applied voltages. II. Modified Poisson-Nernst-Planck equations. <i>Physical Review E</i> , 2007, 75, 021503.	2.1	408
15	Thin double layer approximation to describe streaming current fields in complex geometries: Analytical framework and applications to microfluidics. <i>Physical Review E</i> , 2006, 73, 056306.	2.1	24
16	Experimental characterization of hydrodynamic dispersion in shallow microchannels. <i>Lab on A Chip</i> , 2006, 6, 930-935.	6.0	40
17	Rheology of complex fluids by particle image velocimetry in microchannels. <i>Applied Physics Letters</i> , 2006, 89, 024104.	3.3	78
18	Hydrodynamic Dispersion in Shallow Microchannels: the Effect of Cross-Sectional Shape. <i>Analytical Chemistry</i> , 2006, 78, 387-392.	6.5	139

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19	Stable Modification of PDMS Surface Properties by Plasma Polymerization: Application to the Formation of Double Emulsions in Microfluidic Systems. <i>Langmuir</i> , 2006, 22, 5230-5232.	3.5	148
20	Reactive spreading and recoil of oil on water. <i>Physics of Fluids</i> , 2006, 18, 038105.	4.0	25
21	ac electrokinetic micropumps: The effect of geometrical confinement, Faradaic current injection, and nonlinear surface capacitance. <i>Physical Review E</i> , 2006, 73, 056313.	2.1	154
22	Microfluidic bypass for efficient passive regulation of droplet traffic at a junction. <i>Applied Physics Letters</i> , 2006, 89, 034104.	3.3	89
23	Giant Amplification of Interfacially Driven Transport by Hydrodynamic Slip: Diffusio-Osmosis and Beyond. <i>Physical Review Letters</i> , 2006, 96, 186102.	7.8	197
24	Droplet Traffic at a Simple Junction at Low Capillary Numbers. <i>Physical Review Letters</i> , 2005, 95, 208304.	7.8	115
25	Experimental study and modeling of polydimethylsiloxane peristaltic micropumps. <i>Journal of Applied Physics</i> , 2005, 98, 044914.	2.5	53
26	Propulsion of a Molecular Machine by Asymmetric Distribution of Reaction Products. <i>Physical Review Letters</i> , 2005, 94, 220801.	7.8	626
27	APPLIED PHYSICS: Droplet Control for Microfluidics. <i>Science</i> , 2005, 309, 887-888.	12.6	331
28	Diffuse-charge dynamics in electrochemical systems. <i>Physical Review E</i> , 2004, 70, 021506.	2.1	822
29	Steady flows in networks of microfluidic channels: building on the analogy with electrical circuits. <i>Comptes Rendus Physique</i> , 2004, 5, 539-546.	0.9	72
30	An integrated AC electrokinetic pump in a microfluidic loop for fast and tunable flow control. <i>Analyst</i> , 2004, 129, 944-949.	3.5	262
31	Generalized Onsager relations for electrokinetic effects in anisotropic and heterogeneous geometries. <i>Physical Review E</i> , 2004, 69, 016306.	2.1	69
32	Effects of Intermediate Bound States in Dynamic Force Spectroscopy. <i>Biophysical Journal</i> , 2004, 86, 1263-1269.	0.5	49
33	Aging and nonlinear rheology in suspensions of polyethylene oxide-protected silica particles. <i>Physical Review E</i> , 2003, 67, 061403.	2.1	171
34	Pumping based on transverse electrokinetic effects. <i>Applied Physics Letters</i> , 2003, 83, 1486-1488.	3.3	38
35	Effective interactions between inclusions in complex fluids driven out of equilibrium. <i>Physical Review E</i> , 2003, 67, 061112.	2.1	23
36	Dynamic response of adhesion complexes: Beyond the single-path picture. <i>Physical Review E</i> , 2002, 65, 051910.	2.1	89

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37	Electrically induced interactions between colloidal particles in the vicinity of a conducting plane. <i>Physical Review E</i> , 2002, 65, 061409.	2.1	94
38	Patterning Flows Using Grooved Surfaces. <i>Analytical Chemistry</i> , 2002, 74, 5306-5312.	6.5	366
39	Chaotic Mixer for Microchannels. <i>Science</i> , 2002, 295, 647-651.	12.6	2,963
40	Fluctuations of Fluctuation-Induced Casimir-Like Forces. <i>Physical Review Letters</i> , 2002, 89, 230601.	7.8	46
41	Patterning Flows Using Grooved Surfaces: Application to Microfluidics. , 2002, , 620-622.		1
42	Transverse electrokinetic and microfluidic effects in micropatterned channels: Lubrication analysis for slab geometries. <i>Physical Review E</i> , 2001, 65, 016301.	2.1	118
43	Averaging rheological quantities in descriptions of soft glassy materials. <i>Physical Review E</i> , 2001, 63, 030502.	2.1	11
44	Pumping liquids using asymmetric electrode arrays. <i>Physical Review E</i> , 2000, 61, R45-R48.	2.1	370
45	Energy transduction of isothermal ratchets: Generic aspects and specific examples close to and far from equilibrium. <i>Physical Review E</i> , 1999, 60, 2127-2140.	2.1	235
46	A note on swimming using internally generated traveling waves. <i>Physics of Fluids</i> , 1999, 11, 1275-1277.	4.0	22
47	Electroosmotic Flows Created by Surface Defects in Capillary Electrophoresis. <i>Journal of Colloid and Interface Science</i> , 1999, 212, 338-349.	9.4	99
48	Mechanics near a jamming transition: a minimalist model. <i>Faraday Discussions</i> , 1999, 112, 195-207.	3.2	12
49	Stretching DNA with electric fields revisited. <i>Biopolymers</i> , 1998, 39, 755-759.	2.4	24
50	Symmetry Properties of the Electrophoretic Motion of Patterned Colloidal Particles. <i>Physical Review Letters</i> , 1998, 81, 1529-1532.	7.8	48
51	Electrophoresis of polyampholytes. <i>Journal of Chemical Physics</i> , 1998, 108, 1234-1244.	3.0	85
52	Modeling molecular motors. <i>Reviews of Modern Physics</i> , 1997, 69, 1269-1282.	45.6	1,654
53	Static and Dynamic Wetting Properties of Thin Rubber Films. <i>Langmuir</i> , 1996, 12, 5221-5230.	3.5	107
54	How Do Grafted Polymer Layers Alter the Dynamics of Wetting?. <i>Langmuir</i> , 1996, 12, 1675-1680.	3.5	50

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55	Generation of transverse fluid currents and forces by an electric field: Electro-osmosis on charge-modulated and undulated surfaces. <i>Physical Review E</i> , 1996, 53, 4996-5005.	2.1	168
56	Electrophoretic mobility of composite objects in free solution: Application to DNA separation. <i>Electrophoresis</i> , 1996, 17, 1161-1166.	2.4	57
57	Collective transport of particles in a "flashing" periodic potential. <i>Physical Review E</i> , 1996, 54, R5-R8.	2.1	64
58	Simultaneous Action of Electric Fields and Nonelectric Forces on a Polyelectrolyte: Motion and Deformation. <i>Physical Review Letters</i> , 1996, 76, 3858-3861.	7.8	159
59	A Zimm model for polyelectrolytes in an electric field. <i>Journal of Physics Condensed Matter</i> , 1996, 8, 9471-9475.	1.8	38
60	Electro-Osmosis on Inhomogeneously Charged Surfaces. <i>Physical Review Letters</i> , 1995, 75, 755-758.	7.8	270
61	Asymmetric pumping of particles. <i>Physical Review Letters</i> , 1994, 72, 2652-2655.	7.8	408
62	Directional motion of brownian particles induced by a periodic asymmetric potential. <i>Nature</i> , 1994, 370, 446-447.	27.8	593
63	Wetting of Grafted Polymer Surfaces by Compatible Chains. , 1994, , 301-311.		43
64	Surface modes and deformation energy of a molten polymer brush. <i>Macromolecules</i> , 1992, 25, 2882-2889.	4.8	114