Armand Ajdari

List of Publications by Year
in descending order

64 papers	14,509 citations	46918 47 h-index	118652 62 g-index
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. Physical Review E, 2009, 79, 056310.	0.8	67
2	Stochastic low Reynolds number swimmers. Journal of Physics Condensed Matter, 2009, 21, 204104.	0.7	32
3	Nonlinear electrokinetics at large voltages. New Journal of Physics, 2009, 11, 075016.	1.2	83
4	Towards an understanding of induced-charge electrokinetics at large applied voltages in concentrated solutions. Advances in Colloid and Interface Science, 2009, 152, 48-88.	7.0	742
5	Droplets and jets in microfluidic devices. Comptes Rendus Chimie, 2009, 12, 247-257.	0.2	19
6	Mechanical Response of a Small Swimmer Driven by Conformational Transitions. Physical Review Letters, 2008, 100, 038101.	2.9	76
7	Analytic results for the three-sphere swimmer at low Reynolds number. Physical Review E, 2008, 77, 036308.	0.8	160
8	High shear rheology of shear banding fluids in microchannels. Applied Physics Letters, 2008, 93, .	1.5	29
9	Droplet Traffic in Microfluidic Networks: A Simple Model for Understanding and Designing. Physical Review Letters, 2008, 100, 044501.	2.9	110
10	Stability of a jet in confined pressure-driven biphasic flows at low Reynolds number in various geometries. Physical Review E, 2008, 78, 016307.	0.8	101
11	Stability of a Jet in Confined Pressure-Driven Biphasic Flows at Low Reynolds Numbers. Physical Review Letters, 2007, 99, 104502.	2.9	232
12	Building up longitudinal concentration gradients in shallow microchannels. Lab on A Chip, 2007, 7, 1154.	3.1	19
13	Steric effects in the dynamics of electrolytes at large applied voltages. I. Double-layer charging. Physical Review E, 2007, 75, 021502.	0.8	598
14	Steric effects in the dynamics of electrolytes at large applied voltages. II. Modified Poisson-Nernst-Planck equations. Physical Review E, 2007, 75, 021503.	0.8	408
15	Thin double layer approximation to describe streaming current fields in complex geometries: Analytical framework and applications to microfluidics. Physical Review E, 2006, 73, 056306.	0.8	24
16	Experimental characterization of hydrodynamic dispersion in shallow microchannels. Lab on A Chip, 2006, 6, 930-935.	3.1	40
17	Rheology of complex fluids by particle image velocimetry in microchannels. Applied Physics Letters, 2006, 89, 024104.	1.5	78
18	Hydrodynamic Dispersion in Shallow Microchannels:â€‰the Effect of Cross-Sectional Shape. Analytical Chemistry, 2006, 78, 387-392.	3.2	139

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19	Stable Modification of PDMS Surface Properties by Plasma Polymerization:â€‰ Application to the Formation of Double Emulsions in Microfluidic Systems. Langmuir, 2006, 22, 5230-5232.	1.6	148
20	Reactive spreading and recoil of oil on water. Physics of Fluids, 2006, 18, 038105.	1.6	25
21	ac electrokinetic micropumps: The effect of geometrical confinement, Faradaic current injection, and nonlinear surface capacitance. Physical Review E, 2006, 73, 056313.	0.8	154
22	Microfluidic bypass for efficient passive regulation of droplet traffic at a junction. Applied Physics Letters, 2006, 89, 034104.	1.5	89
23	Giant Amplification of Interfacially Driven Transport by Hydrodynamic Slip: Diffusio-Osmosis and Beyond. Physical Review Letters, 2006, 96, 186102.	2.9	197
24	Droplet Traffic at a Simple Junction at Low Capillary Numbers. Physical Review Letters, 2005, 95, 208304.	2.9	115
25	Experimental study and modeling of polydimethylsiloxane peristaltic micropumps. Journal of Applied Physics, 2005, 98, 044914.	1.1	53
26	Propulsion of a Molecular Machine by Asymmetric Distribution of Reaction Products. Physical Review Letters, 2005, 94, 220801.	2.9	626
27	APPLIED PHYSICS: Droplet Control for Microfluidics. Science, 2005, 309, 887-888.	6.0	331
28	Diffuse-charge dynamics in electrochemical systems. Physical Review E, 2004, 70, 021506.	0.8	822
29	Steady flows in networks of microfluidic channels: building on the analogy with electrical circuits. Comptes Rendus Physique, 2004, 5, 539-546.	0.3	72
30	An integrated AC electrokinetic pump in a microfluidic loop for fast and tunable flow control. Analyst, The, 2004, 129, 944-949.	1.7	262
31	Generalized Onsager relations for electrokinetic effects in anisotropic and heterogeneous geometries. Physical Review E, 2004, 69, 016306.	0.8	69
32	Effects of Intermediate Bound States in Dynamic Force Spectroscopy. Biophysical Journal, 2004, 86, 1263-1269.	0.2	49
33	Aging and nonlinear rheology in suspensions of polyethylene oxideâ€“protected silica particles. Physical Review E, 2003, 67, 061403.	0.8	171
34	Pumping based on transverse electrokinetic effects. Applied Physics Letters, 2003, 83, 1486-1488.	1.5	38
35	Effective interactions between inclusions in complex fluids driven out of equilibrium. Physical Review E, 2003, 67, 061112.	0.8	23
36	Dynamic response of adhesion complexes: Beyond the single-path picture. Physical Review E, 2002, 65, 051910.	0.8	89

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37	Electrically induced interactions between colloidal particles in the vicinity of a conducting plane. Physical Review E, 2002, 65, 061409.	0.8	94
38	Patterning Flows Using Grooved Surfaces. Analytical Chemistry, 2002, 74, 5306-5312.	3.2	366
39	Chaotic Mixer for Microchannels. Science, 2002, 295, 647-651.	6.0	2,963
40	Fluctuations of Fluctuation-Induced Casimir-Like Forces. Physical Review Letters, 2002, 89, 230601.	2.9	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. Physical Review E, 2001, 65, 016301.	0.8	118
43	Averaging rheological quantities in descriptions of soft glassy materials. Physical Review E, 2001, 63, 030502.	0.8	11
44	Pumping liquids using asymmetric electrode arrays. Physical Review E, 2000, 61, R45-R48.	0.8	370
45	Energy transduction of isothermal ratchets: Generic aspects and specific examples close to and far from equilibrium. Physical Review E, 1999, 60, 2127-2140.	0.8	235
46	A note on swimming using internally generated traveling waves. Physics of Fluids, 1999, 11, 1275-1277.	1.6	22
47	Electroosmotic Flows Created by Surface Defects in Capillary Electrophoresis. Journal of Colloid and Interface Science, 1999, 212, 338-349.	5.0	99
48	Mechanics near a jamming transition: a minimalist model. Faraday Discussions, 1999, 112, 195-207.	1.6	12
49	Stretching DNA with electric fields revisited. Biopolymers, 1998, 39, 755-759.	1.2	24
50	Symmetry Properties of the Electrophoretic Motion of Patterned Colloidal Particles. Physical Review Letters, 1998, 81, 1529-1532.	2.9	48
51	Electrophoresis of polyampholytes. Journal of Chemical Physics, 1998, 108, 1234-1244.	1.2	85
52	Modeling molecular motors. Reviews of Modern Physics, 1997, 69, 1269-1282.	16.4	1,654
53	Static and Dynamic Wetting Properties of Thin Rubber Films. Langmuir, 1996, 12, 5221-5230.	1.6	107
54	How Do Grafted Polymer Layers Alter the Dynamics of Wetting?. Langmuir, 1996, 12, 1675-1680.	1.6	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. Physical Review E, 1996, 53, 4996-5005.	0.8	168
56	Electrophoretic mobility of composite objects in free solution: Application to DNA separation. Electrophoresis, 1996, 17, 1161-1166.	1.3	57
57	Collective transport of particles in a "flashing" periodic potential. Physical Review E, 1996, 54, R5-R8.	0.8	64
58	Simultaneous Action of Electric Fields and Nonelectric Forces on a Polyelectrolyte: Motion and Deformation. Physical Review Letters, 1996, 76, 3858-3861.	2.9	159
59	A Zimm model for polyelectrolytes in an electric field. Journal of Physics Condensed Matter, 1996, 8, 9471-9475.	0.7	38
60	Electro-Osmosis on Inhomogeneously Charged Surfaces. Physical Review Letters, 1995, 75, 755-758.	2.9	270
61	Asymmetric pumping of particles. Physical Review Letters, 1994, 72, 2652-2655.	2.9	408
62	Directional motion of brownian particles induced by a periodic asymmetric potential. Nature, 1994, 370, 446-447.	13.7	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. Macromolecules, 1992, 25, 2882-2889.	2.2	114