Antonio Ramos

List of Publications by Year
in descending order

128 papers	6,795 citations	136740 32 h-index	62479 80 g-index
128 all docs	128 docs citations	128 times ranked	3165 citing authors

#	Article	IF	Citations
1	The role of particle-electrode wall interactions in mobility of active Janus particles driven by electric fields. Journal of Colloid and Interface Science, 2022, 616, 465-475.	5.0	13
2	Wall Repulsion of Charged Colloidal Particles during Electrophoresis in Microfluidic Channels. Physical Review Letters, 2022, 128, 074501.	2.9	11
3	Stationary Electro-osmotic Flow Driven by ac Fields around Insulators. Physical Review Applied, 2021, 15, .	1.5	20
4	Continuous Particle Separation in Microfluidics: Deterministic Lateral Displacement Assisted by Electric Fields. Micromachines, 2021, 12, 66.	1.4	1
5	Stationary electro-osmotic flow driven by AC fields around charged dielectric spheres. Journal of Fluid Mechanics, 2021, 924, .	1.4	11
6	Concentrationâ€“Polarization Electroosmosis near Insulating Constrictions within Microfluidic Channels. Analytical Chemistry, 2021, 93, 14667-14674.	3.2	7
7	Short communication: A simple and accurate method of measuring the zetaâ€potential of microfluidic channels. Electrophoresis, 2021, , .	1.3	4
8	Shaping liquid films by dielectrophoresis. Flow, 2021, 1, .	1.0	3
9	Electrokinetic biased deterministic lateral displacement: scaling analysis and simulations. Journal of Chromatography A, 2020, 1623, 461151.	1.8	15
10	Dipolophoresis and Travelling-Wave Dipolophoresis of Metal Microparticles. Micromachines, 2020, 11, 259.	1.4	4
11	Dielectrophoretic Force Equilibrium of Complex Particles. Physical Review Applied, 2020, 14, .	1.5	1
12	Combining DC and AC electric fields with deterministic lateral displacement for micro- and nano-particle separation. Biomicrofluidics, 2019, 13, 054110.	1.2	26
13	Electrorotation of semiconducting microspheres. Physical Review E, 2019, 100, 042616.	0.8	11
14	Editorial for the Special Issue on AC Electrokinetics in Microfluidic Devices. Micromachines, 2019, 10, 345.	1.4	0
15	AC electrokinetic biased deterministic lateral displacement for tunable particle separation. Lab on A Chip, 2019, 19, 1386-1396.	3.1	49
16	Electrokinetics of metal cylinders. Physical Review E, 2019, 99, 032603.	0.8	4
17	Modeling the AC Electrokinetic Behavior of Semiconducting Spheres. Micromachines, 2019, 10, 100.	1.4	11
18	Electro-Orientation of Silver Nanowires in Alternating Fields. Langmuir, 2019, 35, 687-694.	1.6	10

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19	Controllable production of Janus ligaments by AC fields in a flow-focusing junction. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	0
20	Soap-film flow induced by electric fields in asymmetric frames. Physical Review E, 2018, 97, 043110.	0.8	1
21	Review on the physics of electrospray: From electrokinetics to the operating conditions of single and coaxial Taylor cone-jets, and AC electrospray. Journal of Aerosol Science, 2018, 125, 32-56.	1.8	182
22	Numerical study of soap-film flow by nonuniform alternating electric fields. Physical Review E, 2017, 95, 022806.	0.8	2
23	Pumping of electrolytes by electrical forces induced on the diffusion layer: A weakly nonlinear analysis. Physical Review E, 2017, 95, 022802.	0.8	6
24	Nano-scale AC electrokinetics and electrohydrodynamics. Journal Physics D: Applied Physics, 2017, 50, 011001.	1.3	2
25	Electrorotation and Electroorientation of Semiconductor Nanowires. Langmuir, 2017, 33, 8553-8561.	1.6	16
26	Droplet group production in an AC electro-flow-focusing microdevice. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	4
27	AC electrified jets in a flow-focusing device: Jet length scaling. Biomicrofluidics, 2016, 10, 043504.	1.2	20
28	AC electrokinetics of conducting microparticles: A review. Current Opinion in Colloid and Interface Science, 2016, 24, 79-90.	3.4	62
29	Electrorotation of a metal sphere immersed in an electrolyte of finite Debye length. Physical Review E, 2015, 92, 052313.	0.8	25
30	Wall effects on the electrical manipulation of metal nanowires. Electrophoresis, 2015, 36, 1414-1422.	1.3	5
31	Self-assembly of metal nanowires induced by alternating current electric fields. Applied Physics Letters, 2015, 106, .	1.5	21
32	Simulation of liquid film motor: a charge induction mechanism. Microfluidics and Nanofluidics, 2015, 19, 133-139.	1.0	12
33	Breakup length of AC electrified jets in a microfluidic flow-focusing junction. Microfluidics and Nanofluidics, 2015, 19, 787-794.	1.0	29
34	Induced soap-film flow by non-uniform alternating electric field. Journal of Electrostatics, 2015, 73, 112-116.	1.0	9
35	AC Electroosmosis: Basics and Lab-on-a-Chip Applications. , 2015, , 1-7.		2
36	Electro-orientation of a metal nanowire counterbalanced by thermal torques. Physical Review E, 2014, 89, 062306.	0.8	16

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37	Electric-field-induced rotation of Brownian metal nanowires. Physical Review E, 2013, 88, 033025.	0.8	26
38	Electrorotation of titanium microspheres. Electrophoresis, 2013, 34, 979-986.	1.3	24
39	Electro-orientation and electrorotation of metal nanowires. Physical Review E, 2013, 88, 063018.	0.8	44
40	AFM, Tapping Mode. , 2012, , 99-99.		2
41	Numerical study of dc-biased ac-electrokinetic flow over symmetrical electrodes. Biomicrofluidics, 2012, 6, 12817-1281710.	1.2	6
42	Actuation of co-flowing electrolytes in a microfluidic system by microelectrode arrays. Microfluidics and Nanofluidics, 2012, 13, 441-449.	1.0	17
43	Alternating Current Electrokinetic Properties of Gold-Coated Microspheres. Langmuir, 2012, 28, 13861-13870.	1.6	80
44	Ab Initio DFT Simulations of Nanostructures. , 2012, , 11-17.		3
45	AFM. , 2012, , 83-83.		0
46	AC Electroosmosis: Basics and Lab-on-a-Chip Applications. , 2012, , 25-30.		1
47	Configurable AC electroosmotic pumping and mixing. Microelectronic Engineering, 2012, 90, 47-50.	1.1	14
48	DC-biased AC-electrokinetics: a conductivity gradient driven fluid flow. Lab on A Chip, 2011, 11, 4241.	3.1	20
49	Electrorotation of Metallic Microspheres. Langmuir, 2011, 27, 2128-2131.	1.6	52
50	Taylor cones in a leaky dielectric liquid under an ac electric field. Physical Review E, 2011, 84, 035301.	0.8	10
51	Electrokinetics and Electrohydrodynamics in Microsystems. , 2011, , .		142
52	Effects of Faradaic currents on AC electroosmotic flows with coplanar symmetric electrodes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 376, 47-52.	2.3	9
53	Microwave-induced water flow in a microchannel built on a coplanar waveguide. Journal of Applied Physics, 2011, 110, 064912.	1.1	4
54	Electrohydrodynamic pumping in microsystems. Journal of Physics: Conference Series, 2011, 301, 012028.	0.3	2

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55	Dielectrophoretic and AC electroosmotic trapping of DNA: Numerical simulation incorporating fluid dynamics and steric particle effects. Journal of Electrostatics, 2011, 69, 111-118.	1.0	14
56	Electrohydrodynamic actuation of co-flowing liquids by means of microelectrode arrays. Journal of Physics: Conference Series, 2011, 301, 012031.	0.3	1
57	Electrohydrodynamic Pumping in Microsystems. , 2011, , 127-175.		3
58	Initial concentration and fluidic effects on the dielectrophoretic trapping of DNA. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2755-2758.	0.8	1
59	Effect of the combined action of Faradaic currents and mobility differences in ac electro-osmosis. Physical Review E, 2010, 81, 016320.	0.8	33
60	Electrothermally driven flows in ac electrowetting. Physical Review E, 2010, 81, 015303.	0.8	61
61	Microwave-induced water flows in microsystems. Applied Physics Letters, 2009, 94, 024104.	1.5	8
62	Force criterion of different electrolytes in microchannel. Chinese Physics B, 2009, 18, 4349-4352.	0.7	3
63	AC electrokinetic pumping on symmetric electrode arrays. Microfluidics and Nanofluidics, 2009, 7, 767-772.	1.0	33
64	Water flows induced by microwave electric fields in microsystems. Journal of Electrostatics, 2009, 67, 377-380.	1.0	3
65	Electrical manipulation of electrolytes with conductivity gradients in microsystems. Journal of Electrostatics, 2009, 67, 372-376.	1.0	19
66	Flow Reversal in Traveling-Wave Electrokinetics: An Analysis of Forces Due to Ionic Concentration Gradients. Langmuir, 2009, 25, 4988-4997.	1.6	44
67	Experiments on traveling-wave electroosmosis: effect of electrolyte conductivity. IEEE Transactions on Dielectrics and Electrical Insulation, 2009, 16, 417-423.	1.8	13
68	The effect of electrode height on the performance of travelling-wave electroosmotic micropumps. Microfluidics and Nanofluidics, 2008, 5, 307-312.	1.0	19
69	Pumping of electrolytes using travelling-wave electro-osmosis: a weakly nonlinear analysis. Microfluidics and Nanofluidics, 2008, 5, 507-515.	1.0	15
70	Micro- and nano-particle manipulation by dielectrophoresis: devices for particle trapping and the influence of steric effects. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3794-3797.	0.8	4
71	Trapping and manipulation of nanoparticles by using jointly dielectrophoresis and AC electroosmosis. Journal of Physics: Conference Series, 2008, 100, 052015.	0.3	5
72	A symmetry electrode array for AC and traveling wave electroosmosis pumping. , 2008, , .		0

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73	Flow of electrolytes induced by AC voltages in a point-plane electrode microsystem. , 2008, , .		0
74	Effect of the difference in ion mobilities on traveling-wave electro-osmosis. , 2008, , .		1
75	Traveling-Wave Electrokinetic Micropumps: Velocity, Electrical Current, and Impedance Measurements. Langmuir, 2008, 24, 9361-9369.	1.6	44
76	Electrohydromechanical analysis based on conductivity gradient in microchannel. Chinese Physics B, 2008, 17, 4541-4546.	0.7	13
77	Experiments on pumping of liquids using arrays of microelectrodes subjected to travelling wave potentials. Journal of Physics: Conference Series, 2008, 142, 012055.	0.3	2
78	Pumping electrolytes with arrays of electrodes subjected to travelling-wave potentials: Electrode design. , 2007, , .		0
79	Control of two-phase flow in a microfluidic system using ac electric fields. Applied Physics Letters, 2007, 91, 254107.	1.5	20
80	A linear analysis of the effect of Faradaic currents on traveling-wave electroosmosis. Journal of Colloid and Interface Science, 2007, 309, 323-331.	5.0	42
81	Novel systems for configurable AC electroosmotic pumping. Microfluidics and Nanofluidics, 2007, 3, 709-714.	1.0	33
82	Electrohydrodynamic and Magnetohydrodynamic Micropumps. , 2007, , 59-116.		14
83	Experiments on AC electrokinetic pumping of liquids using arrays of microelectrodes. IEEE Transactions on Dielectrics and Electrical Insulation, 2006, 13, 670-677.	1.8	69
84	Electrothermal flows generated by alternating and rotating electric fields in microsystems. Journal of Fluid Mechanics, 2006, 564, 415.	1.4	142
85	<title>AC electric field microfluidic control in microsystems</title>. , 2005, , .		1
86	AC electrokinetic pumping of liquids using arrays of microelectrodes. , 2005, , .		6
87	Manipulation of bio-particles by means of nonuniform AC electric fields. , 2005, 5839, 138.		0
88	Pumping of liquids with traveling-wave electroosmosis. Journal of Applied Physics, 2005, 97, 084906.	1.1	153
89	Pumping of electrolytes using arrays of asymmetric pairs of microelectrodes subjected to ac voltages. Institute of Physics Conference Series, 2004, , 187-192.	0.3	3
90	Electrohydrodynamics in microelectrode structures. Institute of Physics Conference Series, 2004, , 175-180.	0.3	0

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91	Electrohydrodynamics and dielectrophoresis in microsystems: scaling laws. Journal Physics D: Applied Physics, 2003, 36, 2584-2597.	1.3	587
92	Pumping of liquids with ac voltages applied to asymmetric pairs of microelectrodes. Physical Review E, 2003, 67, 056302.	0.8	205
93	Electrothermal Liquid Motion in Microsystems Subjected to Alternating and Rotating Electric Fields. , 2003, , .		1
94	Manipulation of Bio-Particles in Microelectrode Structures by Means of Non-Uniform AC Electric Fields. , 2002, , 165.		2
95	Fluid flow induced by nonuniform ac electric fields in electrolytes on microelectrodes.â€ƒIII.â€ƒObservation of streamlines and numerical simulation. Physical Review E, 2002, 66, 026305.	0.8	330
96	Numerical solution of the dielectrophoretic and travelling wave forces for interdigitated electrode arrays using the finite element method. Journal of Electrostatics, 2002, 56, 235-254.	1.0	155
97	The dielectrophoretic and travelling wave forces generated by interdigitated electrode arrays: analytical solution using Fourier series. Journal Physics D: Applied Physics, 2001, 34, 1553-1561.	1.3	185
98	Electrothermally induced fluid flow on microelectrodes. Journal of Electrostatics, 2001, 53, 71-87.	1.0	251
99	Comment on â€œTheoretical Model of Electrode Polarization and AC Electroosmotic Fluid Flow in Planar Electrode Arraysâ€• Journal of Colloid and Interface Science, 2001, 243, 265-266.	5.0	4
100	The dielectrophoretic and travelling wave forces generated by interdigitated electrode arrays: analytical solution using Fourier series. Journal Physics D: Applied Physics, 2001, 34, 2708-2708.	1.3	8
101	Avalanches in fine, cohesive powders. Physical Review E, 2000, 62, 6851-6860.	0.8	52
102	An automated apparatus for measuring the tensile strength and compressibility of fine cohesive powders. Review of Scientific Instruments, 2000, 71, 2791-2795.	0.6	49
103	Fluid flow induced by nonuniform ac electric fields in electrolytes on microelectrodes. I.â€ƒExperimental measurements. Physical Review E, 2000, 61, 4011-4018.	0.8	434
104	Fluid flow induced by nonuniform ac electric fields in electrolytes on microelectrodes. II.â€ƒA linear double-layer analysis. Physical Review E, 2000, 61, 4019-4028.	0.8	332
105	Ac electrokinetics: a survey of sub-micrometre particle dynamics. Journal Physics D: Applied Physics, 2000, 33, 632-641.	1.3	200
106	Electric field induced fluid flow on microelectrodes: the effect of illumination. Journal Physics D: Applied Physics, 2000, 33, L13-L17.	1.3	103
107	On the breakup of slender liquid bridges: Experiments and a 1-D numerical analysis. European Journal of Mechanics, B/Fluids, 1999, 18, 649-658.	1.2	15
108	Parametric instability of conducting, slightly viscous liquid jets under periodic electric fields. Journal of Electrostatics, 1999, 47, 27-38.	1.0	15

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109	The role of electrohydrodynamic forces in the dielectrophoretic manipulation and separation of particles. Journal of Electrostatics, 1999, 47, 71-81.	1.0	64
110	AC Electric-Field-Induced Fluid Flow in Microelectrodes. Journal of Colloid and Interface Science, 1999, 217, 420-422.	5.0	458
111	Flow Regimes in Fine Cohesive Powders. Physical Review Letters, 1999, 82, 1156-1159.	2.9	100
112	The tensile strength of cohesive powders and its relationship to consolidation, free volume and cohesivity. Powder Technology, 1998, 97, 237-245.	2.1	96
113	Ac electrokinetics: a review of forces in microelectrode structures. Journal Physics D: Applied Physics, 1998, 31, 2338-2353.	1.3	1,085
114	The charged bouncing ball: An experimental model for period-doubling bifurcation. Europhysics Letters, 1997, 37, 541-546.	0.7	8
115	Parametric instability of dielectric, slightly viscous liquid jets under ac electric fields. Physics of Fluids, 1997, 9, 1830-1837.	1.6	6
116	Stability of insulating viscous jets under axial electric fields. Journal of Electrostatics, 1997, 40-41, 161-166.	1.0	4
117	Effect of viscosity on the stability of an interface subjected to highâ€frequency magnetic fields. Physics of Fluids, 1996, 8, 1907-1916.	1.6	4
118	Bifurcation diagrams of axisymmetric liquid bridges subjected to axial electric fields. Physics of Fluids, 1994, 6, 3580-3590.	1.6	3
119	Conical points in liquid-liquid interfaces subjected to electric fields. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 184, 268-272.	0.9	69
120	Equilibrium shapes and bifurcation of captive dielectric drops subjected to electric fields. Journal of Electrostatics, 1994, 33, 61-86.	1.0	14
121	Experiments on dielectric liquid bridges subjected to axial electric fields. Physics of Fluids, 1994, 6, 3206-3208.	1.6	40
122	Bifurcation diagrams of axisymmetric liquid bridges of arbitrary volume in electric and gravitational axial fields. Journal of Fluid Mechanics, 1993, 249, 207.	1.4	15
123	Equilibrium Shapes, Stability and Dynamical Behaviour of Liquid Captive Menisci under Gravitational, Centrifugal and Electrical Fields. , 1992, , 271-283.		0
124	Shapes and stability of liquid bridges subjected to a.c. electric fields. Journal of Electrostatics, 1991, 26, 143-156.	1.0	7
125	Electrical stabilization of dielectric liquid bridges in microgravity. , 0, , .		0
126	AC electric-field-induced fluid flow in microelectrode structures: scaling laws. , 0, , .		1

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127	Pumping of liquids using travelling wave electro-osmosis: a nonlinear analysis. , 0, , .		0
128	Experiments on AC electrokinetic pumping of liquids using arrays of microelectrodes. , 0, , .		0