

Ehud Yariv

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93
papers

1,354
citations

22
h-index

33
g-index

96
ext. papers

1,535
ext. citations

3.2
avg. IF

5.38
L-index

#	Paper	IF	Citations
93	Force-driven transport through periodic entropy barriers. <i>Europhysics Letters</i> , 2007 , 80, 50009	1.6	77
92	Force-free electrophoresis?. <i>Physics of Fluids</i> , 2006 , 18, 031702	4.4	74
91	Near-contact electrophoretic motion of a sphere parallel to a planar wall. <i>Journal of Fluid Mechanics</i> , 2003 , 484, 85-111	3.7	62
90	The Taylor-Melcher leaky dielectric model as a macroscale electrokinetic description. <i>Journal of Fluid Mechanics</i> , 2015 , 773, 1-33	3.7	60
89	Macroscale description of electrokinetic flows at large zeta potentials: nonlinear surface conduction. <i>Physical Review E</i> , 2012 , 86, 021503	2.4	53
88	The electrophoretic mobility of an eccentrically positioned spherical particle in a cylindrical pore. <i>Physics of Fluids</i> , 2002 , 14, 3354-3357	4.4	50
87	AN ASYMPTOTIC DERIVATION OF THE THIN-DEBYE-LAYER LIMIT FOR ELECTROKINETIC PHENOMENA. <i>Chemical Engineering Communications</i> , 2009 , 197, 3-17	2.2	45
86	Electrokinetic self-propulsion by inhomogeneous surface kinetics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011 , 467, 1645-1664	2.4	42
85	Weakly nonlinear electrophoresis of a highly charged colloidal particle. <i>Physics of Fluids</i> , 2013 , 25, 052004	4.4	35
84	Osmotic self-propulsion of slender particles. <i>Physics of Fluids</i> , 2015 , 27, 031701	4.4	34
83	Electrokinetic flows about conducting drops. <i>Journal of Fluid Mechanics</i> , 2013 , 722, 394-423	3.7	34
82	Streaming-potential phenomena in the thin-Debye-layer limit. Part 1. General theory. <i>Journal of Fluid Mechanics</i> , 2011 , 685, 306-334	3.7	33
81	Electro-convection about conducting particles. <i>Journal of Fluid Mechanics</i> , 2008 , 595, 163-172	3.7	33
80	Electro-osmotic flows over highly polarizable dielectric surfaces. <i>Physics of Fluids</i> , 2010 , 22, 052006	4.4	30
79	Electro-osmotic flow near a surface charge discontinuity. <i>Journal of Fluid Mechanics</i> , 2004 , 521, 181-189	3.7	30
78	Nonlinear electrophoresis at arbitrary field strengths: small-Dukhin-number analysis. <i>Physics of Fluids</i> , 2014 , 26, 122002	4.4	29
77	Electrophoresis of bubbles. <i>Journal of Fluid Mechanics</i> , 2014 , 753, 49-79	3.7	26

76	Strong-field electrophoresis. <i>Journal of Fluid Mechanics</i> , 2012 , 701, 333-351	3.7	26
75	Asymptotic current-voltage relations for currents exceeding the diffusion limit. <i>Physical Review E</i> , 2009 , 80, 051201	2.4	26
74	The Electrophoretic Mobility of a Closely Fitting Sphere in a Cylindrical Pore. <i>SIAM Journal on Applied Mathematics</i> , 2004 , 64, 423-441	1.8	26
73	Dielectric-solid polarization at strong fields: Breakdown of Smoluchowski's electrophoresis formula. <i>Physics of Fluids</i> , 2012 , 24, 082005	4.4	23
72	Assessing corrections to the Fick-Jacobs equation. <i>Journal of Chemical Physics</i> , 2014 , 141, 044118	3.9	22
71	Nonlinear electrophoresis of ideally polarizable particles. <i>Europhysics Letters</i> , 2008 , 82, 54004	1.6	22
70	Slender-body approximations for electro-phoresis and electro-rotation of polarizable particles. <i>Journal of Fluid Mechanics</i> , 2008 , 613, 85-94	3.7	21
69	Flow animation by unsteady temperature fields. <i>Physics of Fluids</i> , 2004 , 16, L95-L98	4.4	21
68	Wall-induced self-diffusiophoresis of active isotropic colloids. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	21
67	Ratcheting of Brownian swimmers in periodically corrugated channels: a reduced Fokker-Planck approach. <i>Physical Review E</i> , 2014 , 90, 032115	2.4	20
66	Polymerase chain reaction in natural convection systems: A convection-diffusion-reaction model. <i>Europhysics Letters</i> , 2005 , 71, 1008-1014	1.6	20
65	Phoretic self-propulsion at large Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2015 , 768,	3.7	18
64	Strong electro-osmotic flows about dielectric surfaces of zero surface charge. <i>Physical Review E</i> , 2014 , 89, 043005	2.4	18
63	Nonlinear oscillations in an electrolyte solution under ac voltage. <i>Physical Review E</i> , 2014 , 89, 032302	2.4	16
62	Migration of ion-exchange particles driven by a uniform electric field. <i>Journal of Fluid Mechanics</i> , 2010 , 655, 105-121	3.7	16
61	The diffusion-control limit revisited. <i>Physical Review Letters</i> , 2002 , 89, 266107	7.4	15
60	The effect of surface-charge convection on the settling velocity of spherical drops in a uniform electric field. <i>Journal of Fluid Mechanics</i> , 2016 , 797, 536-548	3.7	15
59	Streaming-potential phenomena in the thin-Debye-layer limit. Part 2. Moderate Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2012 , 704, 109-136	3.7	14

58	Self-propulsion in a viscous fluid: arbitrary surface deformations. <i>Journal of Fluid Mechanics</i> , 2006 , 550, 139	3.7	14
57	Electro-hydrodynamic particle levitation on electrodes. <i>Journal of Fluid Mechanics</i> , 2010 , 645, 187-210	3.7	13
56	Dielectrophoretic sphere-wall repulsion due to a uniform electric field. <i>Soft Matter</i> , 2016 , 12, 6277-84	3.6	12
55	Electrohydrodynamic rotation of drops at large electric Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2016 , 788,	3.7	12
54	Curvature-Induced Dispersion in Electro-Osmotic Serpentine Flows. <i>SIAM Journal on Applied Mathematics</i> , 2004 , 64, 1099-1124	1.8	9
53	Electric conductance of highly selective nanochannels. <i>Physical Review E</i> , 2013 , 87, 054301	2.4	8
52	Electrohydrodynamic Drop Deformation by Strong Electric Fields: Slender-Body Analysis. <i>SIAM Journal on Applied Mathematics</i> , 2013 , 73, 2143-2161	1.8	8
51	Ionic currents in the presence of supporting electrolytes. <i>Physical Review Letters</i> , 2010 , 105, 176101	7.4	8
50	Induced-charge electrokinetic flows about polarizable nano-particles: the thick-Debye-layer limit. <i>Journal of Fluid Mechanics</i> , 2009 , 627, 341-360	3.7	8
49	Longitudinal pressure-driven flows between superhydrophobic grooved surfaces: Large effective slip in the narrow-channel limit. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	8
48	Thermophoresis Due to Strong Temperature Gradients. <i>SIAM Journal on Applied Mathematics</i> , 2008 , 69, 453-472	1.8	7
47	Streaming-potential phenomena in the thin-Debye-layer limit. Part 3. Shear-induced electroviscous repulsion. <i>Journal of Fluid Mechanics</i> , 2016 , 786, 84-109	3.7	7
46	Shear-induced Electrokinetic Lift at Large Péclet Numbers. <i>Mathematical Modelling of Natural Phenomena</i> , 2012 , 7, 64-81	3	6
45	Boundary effects on electro-magneto-phoresis. <i>Journal of Fluid Mechanics</i> , 2009 , 622, 195-207	3.7	6
44	Inertia-induced electrophoretic interactions. <i>Physics of Fluids</i> , 2004 , 16, L24-L27	4.4	6
43	Thermocapillary flow between longitudinally grooved superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2018 , 855, 574-594	3.7	6
42	Two-dimensional phoretic swimmers: the singular weak-advection limits. <i>Journal of Fluid Mechanics</i> , 2017 , 816,	3.7	5
41	Boundary-induced autophoresis of isotropic colloids: anomalous repulsion in the lubrication limit. <i>Journal of Fluid Mechanics</i> , 2017 , 812, 26-40	3.7	5

40	Thermocapillary flow between grooved superhydrophobic surfaces: transverse temperature gradients. <i>Journal of Fluid Mechanics</i> , 2019 , 871, 775-798	3.7	5
39	The electrophoretic mobility of rod-like particles. <i>Journal of Fluid Mechanics</i> , 2013 , 719,	3.7	5
38	Velocity amplification in pressure-driven flows between superhydrophobic gratings of small solid fraction. <i>Soft Matter</i> , 2017 , 13, 6287-6292	3.6	5
37	Electrokinetic particle-electrode interactions at high frequencies. <i>Physical Review E</i> , 2013 , 87, 012310	2.4	5
36	Boundary-induced electrophoresis of uncharged conducting particles: near-contact approximation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2009 , 465, 1939-1948 ^{2.4}	2.4	5
35	Irreversible electrokinetic repulsion at zero-Reynolds-number sedimentation. <i>Physical Review Letters</i> , 2011 , 107, 278301	7.4	5
34	The elongated shape of a dielectric drop deformed by a strong electric field. <i>Journal of Fluid Mechanics</i> , 2010 , 664, 286-296	3.7	5
33	Electro-magneto-phoresis of slender bodies. <i>Journal of Fluid Mechanics</i> , 2007 , 577, 331-340	3.7	5
32	Rotation of a superhydrophobic cylinder in a viscous liquid. <i>Journal of Fluid Mechanics</i> , 2019 , 880,	3.7	4
31	Small-solid-fraction approximations for the slip-length tensor of micropillared superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2018 , 843, 637-652	3.7	4
30	Effects of solute mass transfer on the stability of capillary jets. <i>Journal of Fluid Mechanics</i> , 2003 , 474, 95-115	3.7	4
29	Stokes resistance of a cylinder near a slippery wall. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	4
28	Speed of rolling droplets. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	4
27	Acoustics of bubbles trapped in microgrooves: From isolated subwavelength resonators to superhydrophobic metasurfaces. <i>Physical Review B</i> , 2019 , 99,	3.3	3
26	Application of Schwarz-Christoffel mapping to the analysis of conduction through a slot. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015 , 471, 20150292 ^{2.4}	2.4	3
25	Improved Current-Voltage Approximations for Currents Exceeding the Diffusion Limit. <i>SIAM Journal on Applied Mathematics</i> , 2011 , 71, 2131-2150	1.8	3
24	Phoretic drag reduction of chemically active homogeneous spheres under force fields and shear flows. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	3
23	Pressure-driven plug flows between superhydrophobic surfaces of closely spaced circular bubbles. <i>Journal of Engineering Mathematics</i> , 2018 , 111, 15-22	1.2	2

22	Comment on On the flow field about an electrophoretic particle [Phys. Fluids 24, 102001 (2012)]. <i>Physics of Fluids</i> , 2013 , 25, 049102	4.4	2
21	Deformation of leaky-dielectric fluid globules under strong electric fields: boundary layers and jets at large Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2013 , 734,	3.7	2
20	Communication: The phoretic drift of a charged particle animated by a direct ionic current. <i>Journal of Chemical Physics</i> , 2010 , 133, 121102	3.9	2
19	Slip-driven thermal rectification. <i>Europhysics Letters</i> , 2007 , 79, 24001	1.6	2
18	Resistive-force theory for mesh-like superhydrophobic surfaces. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	2
17	Longitudinal Thermocapillary Flow over a Dense Bubble Mattress. <i>SIAM Journal on Applied Mathematics</i> , 2020 , 80, 1-19	1.8	2
16	Self-Diffusiophoresis of Slender Catalytic Colloids. <i>Langmuir</i> , 2020 , 36, 6903-6915	4	2
15	The electrophoretic mobilities of a circular cylinder in close proximity to a dielectric wall. <i>Journal of Fluid Mechanics</i> , 2016 , 804,	3.7	2
14	Wetting transitions and apparent contact angles on smoothly textured surfaces. <i>Physical Review E</i> , 2018 , 98,	2.4	2
13	Stokes resistance of a solid cylinder near a superhydrophobic surface. Part 1. Grooves perpendicular to cylinder axis. <i>Journal of Fluid Mechanics</i> , 2019 , 868, 212-243	3.7	1
12	One-dimensional conduction through supporting electrolytes: two-scale cathodic Debye layer. <i>Physical Review E</i> , 2011 , 84, 041204	2.4	1
11	Displacing small particles by unsteady temperature fields. <i>Journal of Fluid Mechanics</i> , 2005 , 530, 125-134	3.7	1
10	Anomalous sedimentation of a small Brownian sphere in a vertical circular cylinder of periodically varying radius. <i>Physics of Fluids</i> , 2003 , 15, 1082-1085	4.4	1
9	Phoretic self-propulsion of Janus disks in the fast-reaction limit. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	1
8	Rolling of non-wetting droplets down a gently inclined plane. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	1
7	Small Péclet-number mass transport to a finite strip: An advection-diffusion-reaction model of surface-based biosensors. <i>European Journal of Applied Mathematics</i> , 2020 , 31, 763-781	1	0
6	Transient diffusion from high-capacity solute beacons. <i>Applied Mathematics Letters</i> , 2020 , 103, 106182	3.5	0
5	Longitudinal thermocapillary slip about a dilute periodic mattress of protruding bubbles. <i>IMA Journal of Applied Mathematics</i> , 2021 , 86, 490-501	1	0

- 4 Edge corrections for parallel-plate capacitors. *European Journal of Applied Mathematics*, **2021**, 32, 226-241 ○
- 3 Self-diffusiophoresis of Janus particles at large Damköhler numbers. *Journal of Engineering Mathematics*, **2022**, 133, 1 1.2 ○
- 2 HOWARD BRENNER'S LEGACY SO FAR. *Chemical Engineering Communications*, **2009**, 197, 1-2 2.2
- 1 Conductivity of a medium containing a dense array of perfectly conducting square cylinders. *Journal of Engineering Mathematics*, **2021**, 127, 1 1.2