

Ehud Yariv

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Self-diffusiophoresis of Janus particles at large Damköhler numbers. <i>Journal of Engineering Mathematics</i> , 2022 , 133, 1	1.2	0
92	Conductivity of a medium containing a dense array of perfectly conducting square cylinders. <i>Journal of Engineering Mathematics</i> , 2021 , 127, 1	1.2	
91	Longitudinal thermocapillary slip about a dilute periodic mattress of protruding bubbles. <i>IMA Journal of Applied Mathematics</i> , 2021 , 86, 490-501	1	0
90	Edge corrections for parallel-plate capacitors. <i>European Journal of Applied Mathematics</i> , 2021 , 32, 226-241		0
89	Phoretic self-propulsion of Janus disks in the fast-reaction limit. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	1
88	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
87	Longitudinal Thermocapillary Flow over a Dense Bubble Mattress. <i>SIAM Journal on Applied Mathematics</i> , 2020 , 80, 1-19	1.8	2
86	Self-Diffusiophoresis of Slender Catalytic Colloids. <i>Langmuir</i> , 2020 , 36, 6903-6915	4	2
85	Transient diffusion from high-capacity solute beacons. <i>Applied Mathematics Letters</i> , 2020 , 103, 106182	3.5	0
84	Rolling of non-wetting droplets down a gently inclined plane. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	1
83	Rotation of a superhydrophobic cylinder in a viscous liquid. <i>Journal of Fluid Mechanics</i> , 2019 , 880,	3.7	4
82	Thermocapillary flow between grooved superhydrophobic surfaces: transverse temperature gradients. <i>Journal of Fluid Mechanics</i> , 2019 , 871, 775-798	3.7	5
81	Acoustics of bubbles trapped in microgrooves: From isolated subwavelength resonators to superhydrophobic metasurfaces. <i>Physical Review B</i> , 2019 , 99,	3.3	3
80	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
79	Speed of rolling droplets. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	4
78	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
77	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

76	Resistive-force theory for mesh-like superhydrophobic surfaces. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	2
75	Thermocapillary flow between longitudinally grooved superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2018 , 855, 574-594	3.7	6
74	Wetting transitions and apparent contact angles on smoothly textured surfaces. <i>Physical Review E</i> , 2018 , 98,	2.4	2
73	Two-dimensional phoretic swimmers: the singular weak-advection limits. <i>Journal of Fluid Mechanics</i> , 2017 , 816,	3.7	5
72	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
71	Velocity amplification in pressure-driven flows between superhydrophobic gratings of small solid fraction. <i>Soft Matter</i> , 2017 , 13, 6287-6292	3.6	5
70	Phoretic drag reduction of chemically active homogeneous spheres under force fields and shear flows. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	3
69	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
68	Stokes resistance of a cylinder near a slippery wall. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	4
67	Wall-induced self-diffusiophoresis of active isotropic colloids. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	21
66	Dielectrophoretic sphere-wall repulsion due to a uniform electric field. <i>Soft Matter</i> , 2016 , 12, 6277-84	3.6	12
65	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
64	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
63	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
62	Electrohydrodynamic rotation of drops at large electric Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2016 , 788,	3.7	12
61	Osmotic self-propulsion of slender particles. <i>Physics of Fluids</i> , 2015 , 27, 031701	4.4	34
60	Phoretic self-propulsion at large Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2015 , 768,	3.7	18
59	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	3

58	The Taylor-Melcher leaky dielectric model as a macroscale electrokinetic description. <i>Journal of Fluid Mechanics</i> , 2015 , 773, 1-33	3.7	60
57	Nonlinear oscillations in an electrolyte solution under ac voltage. <i>Physical Review E</i> , 2014 , 89, 032302	2.4	16
56	Assessing corrections to the Fick-Jacobs equation. <i>Journal of Chemical Physics</i> , 2014 , 141, 044118	3.9	22
55	Ratcheting of Brownian swimmers in periodically corrugated channels: a reduced Fokker-Planck approach. <i>Physical Review E</i> , 2014 , 90, 032115	2.4	20
54	Electrophoresis of bubbles. <i>Journal of Fluid Mechanics</i> , 2014 , 753, 49-79	3.7	26
53	Nonlinear electrophoresis at arbitrary field strengths: small-Dukhin-number analysis. <i>Physics of Fluids</i> , 2014 , 26, 122002	4.4	29
52	Strong electro-osmotic flows about dielectric surfaces of zero surface charge. <i>Physical Review E</i> , 2014 , 89, 043005	2.4	18
51	Electrokinetic flows about conducting drops. <i>Journal of Fluid Mechanics</i> , 2013 , 722, 394-423	3.7	34
50	The electrophoretic mobility of rod-like particles. <i>Journal of Fluid Mechanics</i> , 2013 , 719,	3.7	5
49	Weakly nonlinear electrophoresis of a highly charged colloidal particle. <i>Physics of Fluids</i> , 2013 , 25, 052004	4.4	35
48	Electrokinetic particle-electrode interactions at high frequencies. <i>Physical Review E</i> , 2013 , 87, 012310	2.4	5
47	Electric conductance of highly selective nanochannels. <i>Physical Review E</i> , 2013 , 87, 054301	2.4	8
46	Electrohydrodynamic Drop Deformation by Strong Electric Fields: Slender-Body Analysis. <i>SIAM Journal on Applied Mathematics</i> , 2013 , 73, 2143-2161	1.8	8
45	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
44	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
43	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
42	Strong-field electrophoresis. <i>Journal of Fluid Mechanics</i> , 2012 , 701, 333-351	3.7	26
41	Dielectric-solid polarization at strong fields: Breakdown of Smoluchowski's electrophoresis formula. <i>Physics of Fluids</i> , 2012 , 24, 082005	4.4	23

40	Macroscale description of electrokinetic flows at large zeta potentials: nonlinear surface conduction. <i>Physical Review E</i> , 2012 , 86, 021503	2.4	53
39	Shear-induced Electrokinetic Lift at Large Péclet Numbers. <i>Mathematical Modelling of Natural Phenomena</i> , 2012 , 7, 64-81	3	6
38	Improved Current-Voltage Approximations for Currents Exceeding the Diffusion Limit. <i>SIAM Journal on Applied Mathematics</i> , 2011 , 71, 2131-2150	1.8	3
37	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
36	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
35	One-dimensional conduction through supporting electrolytes: two-scale cathodic Debye layer. <i>Physical Review E</i> , 2011 , 84, 041204	2.4	1
34	Irreversible electrokinetic repulsion at zero-Reynolds-number sedimentation. <i>Physical Review Letters</i> , 2011 , 107, 278301	7.4	5
33	Ionic currents in the presence of supporting electrolytes. <i>Physical Review Letters</i> , 2010 , 105, 176101	7.4	8
32	Electro-osmotic flows over highly polarizable dielectric surfaces. <i>Physics of Fluids</i> , 2010 , 22, 052006	4.4	30
31	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
30	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
29	Electro-hydrodynamic particle levitation on electrodes. <i>Journal of Fluid Mechanics</i> , 2010 , 645, 187-210	3.7	13
28	Migration of ion-exchange particles driven by a uniform electric field. <i>Journal of Fluid Mechanics</i> , 2010 , 655, 105-121	3.7	16
27	Asymptotic current-voltage relations for currents exceeding the diffusion limit. <i>Physical Review E</i> , 2009 , 80, 051201	2.4	26
26	AN ASYMPTOTIC DERIVATION OF THE THIN-DEBYE-LAYER LIMIT FOR ELECTROKINETIC PHENOMENA. <i>Chemical Engineering Communications</i> , 2009 , 197, 3-17	2.2	45
25	HOWARD BRENNER'S LEGACY SO FAR. <i>Chemical Engineering Communications</i> , 2009 , 197, 1-2	2.2	
24	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	5
23	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

22	Boundary effects on electro-magneto-phoresis. <i>Journal of Fluid Mechanics</i> , 2009 , 622, 195-207	3.7	6
21	Electro-convection about conducting particles. <i>Journal of Fluid Mechanics</i> , 2008 , 595, 163-172	3.7	33
20	Thermophoresis Due to Strong Temperature Gradients. <i>SIAM Journal on Applied Mathematics</i> , 2008 , 69, 453-472	1.8	7
19	Nonlinear electrophoresis of ideally polarizable particles. <i>Europhysics Letters</i> , 2008 , 82, 54004	1.6	22
18	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
17	Electro-magneto-phoresis of slender bodies. <i>Journal of Fluid Mechanics</i> , 2007 , 577, 331-340	3.7	5
16	Force-driven transport through periodic entropy barriers. <i>Europhysics Letters</i> , 2007 , 80, 50009	1.6	77
15	Slip-driven thermal rectification. <i>Europhysics Letters</i> , 2007 , 79, 24001	1.6	2
14	Self-propulsion in a viscous fluid: arbitrary surface deformations. <i>Journal of Fluid Mechanics</i> , 2006 , 550, 139	3.7	14
13	Force-free electrophoresis?. <i>Physics of Fluids</i> , 2006 , 18, 031702	4.4	74
12	Displacing small particles by unsteady temperature fields. <i>Journal of Fluid Mechanics</i> , 2005 , 530, 125-134	3.7	1
11	Polymerase chain reaction in natural convection systems: A convection-diffusion-reaction model. <i>Europhysics Letters</i> , 2005 , 71, 1008-1014	1.6	20
10	Curvature-Induced Dispersion in Electro-Osmotic Serpentine Flows. <i>SIAM Journal on Applied Mathematics</i> , 2004 , 64, 1099-1124	1.8	9
9	Flow animation by unsteady temperature fields. <i>Physics of Fluids</i> , 2004 , 16, L95-L98	4.4	21
8	Inertia-induced electrophoretic interactions. <i>Physics of Fluids</i> , 2004 , 16, L24-L27	4.4	6
7	Electro-osmotic flow near a surface charge discontinuity. <i>Journal of Fluid Mechanics</i> , 2004 , 521, 181-189	3.7	30
6	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
5	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

4	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
3	Effects of solute mass transfer on the stability of capillary jets. <i>Journal of Fluid Mechanics</i> , 2003 , 474, 95-115	3-7	4
2	The diffusion-control limit revisited. <i>Physical Review Letters</i> , 2002 , 89, 266107	7-4	15
1	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