

Ehud Yariv

List of Publications by Year in descending order

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95
papers

1,682
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257357

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330025

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docs citations

96
times ranked

875
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Self-diffusiophoresis of Janus particles at large Damköhler numbers. <i>Journal of Engineering Mathematics</i> , 2022, 133, 1. | 0.6 | 3 |
| 2 | Phoretic self-propulsion of a slightly inhomogeneous disc. <i>Journal of Fluid Mechanics</i> , 2022, 940, . | 1.4 | 3 |
| 3 | Edge corrections for parallel-plate capacitors. <i>European Journal of Applied Mathematics</i> , 2021, 32, 226-241. | 1.4 | 6 |
| 4 | Conductivity of a medium containing a dense array of perfectly conducting square cylinders. <i>Journal of Engineering Mathematics</i> , 2021, 127, 1. | 0.6 | 0 |
| 5 | Isotropically active colloids under uniform force fields: from forced to spontaneous motion. <i>Journal of Fluid Mechanics</i> , 2021, 916, . | 1.4 | 13 |
| 6 | Longitudinal thermocapillary slip about a dilute periodic mattress of protruding bubbles. <i>IMA Journal of Applied Mathematics</i> , 2021, 86, 490-501. | 0.8 | 5 |
| 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. | 1.4 | 1 |
| 8 | Longitudinal Thermocapillary Flow over a Dense Bubble Mattress. <i>SIAM Journal on Applied Mathematics</i> , 2020, 80, 1-19. | 0.8 | 8 |
| 9 | Self-Diffusiophoresis of Slender Catalytic Colloids. <i>Langmuir</i> , 2020, 36, 6903-6915. | 1.6 | 10 |
| 10 | Transient diffusion from high-capacity solute beacons. <i>Applied Mathematics Letters</i> , 2020, 103, 106182. | 1.5 | 2 |
| 11 | Rolling of non-wetting droplets down a gently inclined plane. <i>Journal of Fluid Mechanics</i> , 2020, 903, . | 1.4 | 5 |
| 12 | Phoretic self-propulsion of Janus disks in the fast-reaction limit. <i>Physical Review Fluids</i> , 2020, 5, . | 1.0 | 5 |
| 13 | Rotation of a superhydrophobic cylinder in a viscous liquid. <i>Journal of Fluid Mechanics</i> , 2019, 880, . | 1.4 | 6 |
| 14 | Thermocapillary flow between grooved superhydrophobic surfaces: transverse temperature gradients. <i>Journal of Fluid Mechanics</i> , 2019, 871, 775-798. | 1.4 | 7 |
| 15 | Acoustics of bubbles trapped in microgrooves: From isolated subwavelength resonators to superhydrophobic metasurfaces. <i>Physical Review B</i> , 2019, 99, . | 1.1 | 7 |
| 16 | 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. | 1.4 | 6 |
| 17 | Speed of rolling droplets. <i>Physical Review Fluids</i> , 2019, 4, . | 1.0 | 5 |
| 18 | Pressure-driven plug flows between superhydrophobic surfaces of closely spaced circular bubbles. <i>Journal of Engineering Mathematics</i> , 2018, 111, 15-22. | 0.6 | 6 |

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|----|--|-----|-----------|
| 19 | Small-solid-fraction approximations for the slip-length tensor of micropillared superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2018, 843, 637-652. | 1.4 | 8 |
| 20 | Thermocapillary flow between longitudinally grooved superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2018, 855, 574-594. | 1.4 | 7 |
| 21 | Wetting transitions and apparent contact angles on smoothly textured surfaces. <i>Physical Review E</i> , 2018, 98, . | 0.8 | 2 |
| 22 | Resistive-force theory for mesh-like superhydrophobic surfaces. <i>Physical Review Fluids</i> , 2018, 3, . | 1.0 | 3 |
| 23 | Two-dimensional phoretic swimmers: the singular weak-advection limits. <i>Journal of Fluid Mechanics</i> , 2017, 816, . | 1.4 | 10 |
| 24 | Boundary-induced autophoresis of isotropic colloids: anomalous repulsion in the lubrication limit. <i>Journal of Fluid Mechanics</i> , 2017, 812, 26-40. | 1.4 | 8 |
| 25 | Velocity amplification in pressure-driven flows between superhydrophobic gratings of small solid fraction. <i>Soft Matter</i> , 2017, 13, 6287-6292. | 1.2 | 7 |
| 26 | Phoretic drag reduction of chemically active homogeneous spheres under force fields and shear flows. <i>Physical Review Fluids</i> , 2017, 2, . | 1.0 | 8 |
| 27 | Longitudinal pressure-driven flows between superhydrophobic grooved surfaces: Large effective slip in the narrow-channel limit. <i>Physical Review Fluids</i> , 2017, 2, . | 1.0 | 11 |
| 28 | Stokes resistance of a cylinder near a slippery wall. <i>Physical Review Fluids</i> , 2017, 2, . | 1.0 | 7 |
| 29 | Dielectrophoretic sphere-wall repulsion due to a uniform electric field. <i>Soft Matter</i> , 2016, 12, 6277-6284. | 1.2 | 17 |
| 30 | 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. | 1.4 | 17 |
| 31 | The electrophoretic mobilities of a circular cylinder in close proximity to a dielectric wall. <i>Journal of Fluid Mechanics</i> , 2016, 804, . | 1.4 | 3 |
| 32 | 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. | 1.4 | 9 |
| 33 | Electrohydrodynamic rotation of drops at large electric Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2016, 788, . | 1.4 | 13 |
| 34 | Wall-induced self-diffusiophoresis of active isotropic colloids. <i>Physical Review Fluids</i> , 2016, 1, . | 1.0 | 28 |
| 35 | The Taylor-Melcher leaky dielectric model as a macroscale electrokinetic description. <i>Journal of Fluid Mechanics</i> , 2015, 773, 1-33. | 1.4 | 89 |
| 36 | Osmotic self-propulsion of slender particles. <i>Physics of Fluids</i> , 2015, 27, 031701. | 1.6 | 44 |

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|----|--|-----|-----------|
| 37 | Phoretic self-propulsion at large Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2015, 768, . | 1.4 | 22 |
| 38 | 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. | 1.0 | 6 |
| 39 | Nonlinear electrophoresis at arbitrary field strengths: small-Dukhin-number analysis. <i>Physics of Fluids</i> , 2014, 26, . | 1.6 | 50 |
| 40 | Strong electro-osmotic flows about dielectric surfaces of zero surface charge. <i>Physical Review E</i> , 2014, 89, 043005. | 0.8 | 21 |
| 41 | Nonlinear oscillations in an electrolyte solution under ac voltage. <i>Physical Review E</i> , 2014, 89, 032302. | 0.8 | 16 |
| 42 | Assessing corrections to the Fick-Jacobs equation. <i>Journal of Chemical Physics</i> , 2014, 141, 044118. | 1.2 | 25 |
| 43 | Ratcheting of Brownian swimmers in periodically corrugated channels: A reduced Fokker-Planck approach. <i>Physical Review E</i> , 2014, 90, 032115. | 0.8 | 23 |
| 44 | Electrophoresis of bubbles. <i>Journal of Fluid Mechanics</i> , 2014, 753, 49-79. | 1.4 | 32 |
| 45 | Electrokinetic flows about conducting drops. <i>Journal of Fluid Mechanics</i> , 2013, 722, 394-423. | 1.4 | 39 |
| 46 | The electrophoretic mobility of rod-like particles. <i>Journal of Fluid Mechanics</i> , 2013, 719, . | 1.4 | 7 |
| 47 | Weakly nonlinear electrophoresis of a highly charged colloidal particle. <i>Physics of Fluids</i> , 2013, 25, . | 1.6 | 55 |
| 48 | Electrokinetic particle-electrode interactions at high frequencies. <i>Physical Review E</i> , 2013, 87, 012310. | 0.8 | 6 |
| 49 | Electric conductance of highly selective nanochannels. <i>Physical Review E</i> , 2013, 87, 054301. | 0.8 | 10 |
| 50 | Electrohydrodynamic Drop Deformation by Strong Electric Fields: Slender-Body Analysis. <i>SIAM Journal on Applied Mathematics</i> , 2013, 73, 2143-2161. | 0.8 | 8 |
| 51 | Comment on "On the flow field about an electrophoretic particle" [<i>Phys. Fluids</i> 24, 102001 (2012)]. <i>Physics of Fluids</i> , 2013, 25, 049102. | 1.6 | 2 |
| 52 | 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, . | 1.4 | 2 |
| 53 | Dielectric-solid polarization at strong fields: Breakdown of Smoluchowski's electrophoresis formula. <i>Physics of Fluids</i> , 2012, 24, . | 1.6 | 28 |
| 54 | Macroscale description of electrokinetic flows at large zeta potentials: Nonlinear surface conduction. <i>Physical Review E</i> , 2012, 86, 021503. | 0.8 | 68 |

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|----|--|-----|-----------|
| 55 | Shear-induced Electrokinetic Lift at Large Péclet Numbers. <i>Mathematical Modelling of Natural Phenomena</i> , 2012, 7, 64-81. | 0.9 | 7 |
| 56 | Streaming-potential phenomena in the thin-Debye-layer limit. Part 2. Moderate Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2012, 704, 109-136. | 1.4 | 15 |
| 57 | Strong-field electrophoresis. <i>Journal of Fluid Mechanics</i> , 2012, 701, 333-351. | 1.4 | 30 |
| 58 | Improved Current-Voltage Approximations for Currents Exceeding the Diffusion Limit. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 2131-2150. | 0.8 | 3 |
| 59 | Streaming-potential phenomena in the thin-Debye-layer limit. Part 1. General theory. <i>Journal of Fluid Mechanics</i> , 2011, 685, 306-334. | 1.4 | 36 |
| 60 | Electrokinetic self-propulsion by inhomogeneous surface kinetics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011, 467, 1645-1664. | 1.0 | 44 |
| 61 | One-dimensional conduction through supporting electrolytes: Two-scale cathodic Debye layer. <i>Physical Review E</i> , 2011, 84, 041204. | 0.8 | 1 |
| 62 | Irreversible Electrokinetic Repulsion at Zero-Reynolds-Number Sedimentation. <i>Physical Review Letters</i> , 2011, 107, 278301. | 2.9 | 5 |
| 63 | The elongated shape of a dielectric drop deformed by a strong electric field. <i>Journal of Fluid Mechanics</i> , 2010, 664, 286-296. | 1.4 | 5 |
| 64 | Electro-hydrodynamic particle levitation on electrodes. <i>Journal of Fluid Mechanics</i> , 2010, 645, 187-210. | 1.4 | 15 |
| 65 | Migration of ion-exchange particles driven by a uniform electric field. <i>Journal of Fluid Mechanics</i> , 2010, 655, 105-121. | 1.4 | 17 |
| 66 | Ionic Currents in the Presence of Supporting Electrolytes. <i>Physical Review Letters</i> , 2010, 105, 176101. | 2.9 | 8 |
| 67 | Electro-osmotic flows over highly polarizable dielectric surfaces. <i>Physics of Fluids</i> , 2010, 22, . | 1.6 | 31 |
| 68 | Communication: The phoretic drift of a charged particle animated by a direct ionic current. <i>Journal of Chemical Physics</i> , 2010, 133, 121102. | 1.2 | 4 |
| 69 | Asymptotic current-voltage relations for currents exceeding the diffusion limit. <i>Physical Review E</i> , 2009, 80, 051201. | 0.8 | 27 |
| 70 | AN ASYMPTOTIC DERIVATION OF THE THIN-DEBYE-LAYER LIMIT FOR ELECTROKINETIC PHENOMENA. <i>Chemical Engineering Communications</i> , 2009, 197, 3-17. | 1.5 | 47 |
| 71 | HOWARD BRENNER'S LEGACY—SO FAR. <i>Chemical Engineering Communications</i> , 2009, 197, 1-2. | 1.5 | 1 |
| 72 | 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. | 1.0 | 6 |

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|----|--|-----|-----------|
| 73 | Induced-charge electrokinetic flows about polarizable nano-particles: the thick-Debye-layer limit. <i>Journal of Fluid Mechanics</i> , 2009, 627, 341-360. | 1.4 | 9 |
| 74 | Boundary effects on electro-magneto-phoresis. <i>Journal of Fluid Mechanics</i> , 2009, 622, 195-207. | 1.4 | 6 |
| 75 | Electro-convection about conducting particles. <i>Journal of Fluid Mechanics</i> , 2008, 595, 163-172. | 1.4 | 35 |
| 76 | Thermophoresis Due to Strong Temperature Gradients. <i>SIAM Journal on Applied Mathematics</i> , 2008, 69, 453-472. | 0.8 | 7 |
| 77 | Nonlinear electrophoresis of ideally polarizable particles. <i>Europhysics Letters</i> , 2008, 82, 54004. | 0.7 | 22 |
| 78 | Slender-body approximations for electro-phoresis and electro-rotation of polarizable particles. <i>Journal of Fluid Mechanics</i> , 2008, 613, 85-94. | 1.4 | 23 |
| 79 | Force-driven transport through periodic entropy barriers. <i>Europhysics Letters</i> , 2007, 80, 50009. | 0.7 | 81 |
| 80 | Slip-driven thermal rectification. <i>Europhysics Letters</i> , 2007, 79, 24001. | 0.7 | 2 |
| 81 | Electro-magneto-phoresis of slender bodies. <i>Journal of Fluid Mechanics</i> , 2007, 577, 331-340. | 1.4 | 5 |
| 82 | Self-propulsion in a viscous fluid: arbitrary surface deformations. <i>Journal of Fluid Mechanics</i> , 2006, 550, 139. | 1.4 | 18 |
| 83 | “Force-free” electrophoresis?. <i>Physics of Fluids</i> , 2006, 18, 031702. | 1.6 | 87 |
| 84 | Polymerase chain reaction in natural convection systems: A convection-diffusion-reaction model. <i>Europhysics Letters</i> , 2005, 71, 1008-1014. | 0.7 | 24 |
| 85 | Displacing small particles by unsteady temperature fields. <i>Journal of Fluid Mechanics</i> , 2005, 530, 125-134. | 1.4 | 1 |
| 86 | Curvature-Induced Dispersion in Electro-Osmotic Serpentine Flows. <i>SIAM Journal on Applied Mathematics</i> , 2004, 64, 1099-1124. | 0.8 | 12 |
| 87 | Flow animation by unsteady temperature fields. <i>Physics of Fluids</i> , 2004, 16, L95-L98. | 1.6 | 24 |
| 88 | Inertia-induced electrophoretic interactions. <i>Physics of Fluids</i> , 2004, 16, L24-L27. | 1.6 | 8 |
| 89 | Electro-osmotic flow near a surface charge discontinuity. <i>Journal of Fluid Mechanics</i> , 2004, 521, 181-189. | 1.4 | 32 |
| 90 | The Electrophoretic Mobility of a Closely Fitting Sphere in a Cylindrical Pore. <i>SIAM Journal on Applied Mathematics</i> , 2004, 64, 423-441. | 0.8 | 30 |

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|----|--|-----|-----------|
| 91 | 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. | 1.6 | 1 |
| 92 | Near-contact electrophoretic motion of a sphere parallel to a planar wall. <i>Journal of Fluid Mechanics</i> , 2003, 484, 85-111. | 1.4 | 69 |
| 93 | Effects of solute mass transfer on the stability of capillary jets. <i>Journal of Fluid Mechanics</i> , 2003, 474, 95-115. | 1.4 | 4 |
| 94 | The Diffusion-Control Limit Revisited. <i>Physical Review Letters</i> , 2002, 89, 266107. | 2.9 | 15 |
| 95 | The electrophoretic mobility of an eccentrically positioned spherical particle in a cylindrical pore. <i>Physics of Fluids</i> , 2002, 14, 3354-3357. | 1.6 | 55 |