# Moran Bercovici

List of Publications by Year
in descending order



| 58 | 1,341 | 393982 | 360668 |
|---|---|---|---|
| papers | citations | 19 h-index | 35 g-index |

| 59 | 59 | 59 | 1437 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Rapid phenotypic antimicrobial susceptibility testing using nanoliter arrays. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5787-E5795. | 3.3 | 126 |
| 2 | Open source simulation tool for electrophoretic stacking, focusing, and separation. Journal of Chromatography A, 2009, 1216, 1008-1018. | 1.8 | 106 |
| 3 | Rapid hybridization of nucleic acids using isotachophoresis. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11127-11132. | 3.3 | 89 |
| 4 | 1000-fold sample focusing on paper-based microfluidic devices. Lab on A Chip, 2014, 14, 4465-4474. | 3.1 | 89 |
| 5 | Acceleration of Surface-Based Hybridization Reactions Using Isotachophoretic Focusing. Analytical Chemistry, 2014, 86, 3028-3036. | 3.2 | 78 |
| 6 | Ionic strength effects on electrophoretic focusing and separations. Electrophoresis, 2010, 31, 910-919. | 1.3 | 61 |
| 7 | Oxidized Porous Silicon Nanostructures Enabling Electrokinetic Transport for Enhanced DNA Detection. Advanced Functional Materials, 2015, 25, 6725-6732. | 7.8 | 58 |
| 8 | Clinical Validation of Integrated Nucleic Acid and Protein Detection on an Electrochemical Biosensor Array for Urinary Tract Infection Diagnosis. PLoS ONE, 2011, 6, e26846. | 1.1 | 55 |
| 9 | Microfluidic Assay for Continuous Bacteria Detection Using Antimicrobial Peptides and Isotachophoresis. Analytical Chemistry, 2014, 86, 10106-10113. | 3.2 | 40 |
| 10 | Amplification-free detection of DNA in a paper-based microfluidic device using electroosmotically balanced isotachophoresis. Lab on A Chip, 2018, 18, 861-868. | 3.1 | 40 |
| 11 | Reconfigurable microfluidics. Nature Reviews Chemistry, 2022, 6, 70-80. | 13.8 | 38 |
| 12 | On Chip Protein Pre-Concentration for Enhancing the Sensitivity of Porous Silicon Biosensors. ACS Sensors, 2017, 2, 1767-1773. | 4.0 | 37 |
| 13 | Isotachophoresis-Based Surface Immunoassay. Analytical Chemistry, 2017, 89, 7373-7381. | 3.2 | 30 |
| 14 | Robust and highâ€resolution simulations of nonlinear electrokinetic processes in variable crossâ€section channels. Electrophoresis, 2012, 33, 3036-3051. | 1.3 | 27 |
| 15 | Compact adaptive-grid scheme for high numerical resolution simulations of isotachophoresis. Journal of Chromatography A, 2010, 1217, 588-599. | 1.8 | 25 |
| 16 | Highâ€sensitivity detection using isotachophoresis with variable crossâ€section geometry. Electrophoresis, 2011, 32, 563-572. | 1.3 | 25 |
| 17 | Microscale Hydrodynamic Cloaking and Shielding via Electro-Osmosis. Physical Review Letters, 2021, 126, 184502. | 2.9 | 25 |
| 18 | Dynamic microscale flow patterning using electrical modulation of zeta potential. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10258-10263. | 3.3 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Flow patterning in Hele-Shaw configurations using non-uniform electro-osmotic slip. Physics of Fluids, 2015, 27, 102001. | 1.6 | 21 |
| 20 | Nanoliter Cell Culture Array with Tunable Chemical Gradients. Analytical Chemistry, 2018, 90, 7480-7488. | 3.2 | 21 |
| 21 | Electroosmotic Flow Dipole: Experimental Observation and Flow Field Patterning. Physical Review Letters, 2019, 122, 224502. | 2.9 | 19 |
| 22 | Microfluidic device for coupling isotachophoretic sample focusing with nanopore single-molecule sensing. Nanoscale, 2020, 12, 17805-17811. | 2.8 | 19 |
| 23 | Viscous-elastic dynamics of power-law fluids within an elastic cylinder. Physical Review Fluids, 2017, 2, . | 1.0 | 18 |
| 24 | Elastic deformations driven by non-uniform lubrication flows. Journal of Fluid Mechanics, 2017, 812, 841-865. | 1.4 | 17 |
| 25 | Focusing analytes from 50â€‰Î¼L into 500 pL: On-chip focusing from large sample volumes using isotachophoresis. Scientific Reports, 2017, 7, 10467. | 1.6 | 17 |
| 26 | Sample distribution in peak mode isotachophoresis. Physics of Fluids, 2014, 26, . | 1.6 | 16 |
| 27 | Focused upon Hybridization: Rapid and High Sensitivity Detection of DNA Using Isotachophoresis and Peptide Nucleic Acid Probes. Analytical Chemistry, 2015, 87, 9459-9466. | 3.2 | 16 |
| 28 | Dynamic control of capillary flow in porous media by electroosmotic pumping. Lab on A Chip, 2019, 19, 328-334. | 3.1 | 16 |
| 29 | Intermediate States of Wetting on Hierarchical Superhydrophobic Surfaces. Langmuir, 2020, 36, 5517-5523. | 1.6 | 16 |
| 30 | Real-Time Monitoring of Fluorescence in Situ Hybridization Kinetics. Analytical Chemistry, 2018, 90, 11470-11477. | 3.2 | 15 |
| 31 | Elastohydrodynamics of a pre-stretched finite elastic sheet lubricated by a thin viscous film with application to microfluidic soft actuators. Journal of Fluid Mechanics, 2019, 862, 732-752. | 1.4 | 15 |
| 32 | Nonuniform Electro-osmotic Flow Drives Fluid-Structure Instability. Physical Review Letters, 2020, 124, 024501. | 2.9 | 15 |
| 33 | Electro-osmotic flow enhancement over superhydrophobic surfaces. Physical Review Fluids, 2020, 5, . | 1.0 | 13 |
| 34 | Simulation Tool Coupling Nonlinear Electrophoresis and Reaction Kinetics for Design and Optimization of Biosensors. Analytical Chemistry, 2014, 86, 7835-7842. | 3.2 | 12 |
| 35 | Spatially Resolved Genetic Analysis of Tissue Sections Enabled by Microscale Flow Confinement Retrieval and Isotachophoretic Purification. Angewandte Chemie - International Edition, 2019, 58, 15259-15262. | 7.2 | 11 |
| 36 | Fabrication of freeform optical components by fluidic shaping. Optica, 2021, 8, 1501. | 4.8 | 11 |

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|---|---|---|---|
| 37 | Monitoring Dissociation Kinetics during Electrophoretic Focusing to Enable Highâ€Specificity Nucleic Acid Detection. Angewandte Chemie - International Edition, 2018, 57, 3343-3348. | 7.2 | 9 |
| 38 | Microscopic scan-free surface profiling over extended axial ranges by point-spread-function engineering. Science Advances, 2020, 6, . | 4.7 | 9 |
| 39 | Diffusion dependent focusing regimes in peak mode counterflow isotachophoresis. Physics of Fluids, 2015, 27, 072003. | 1.6 | 8 |
| 40 | Current Monitoring in a Microchannel with Repeated Constrictions for Accurate Detection of Sample Location in Isotachophoresis. Analytical Chemistry, 2015, 87, 388-393. | 3.2 | 8 |
| 41 | Fluidic shaping of optical components. Flow, 2021, 1, . | 1.0 | 6 |
| 42 | Flow of power-law liquids in a Hele-Shaw cell driven by non-uniform electro-osmotic slip in the case of strong depletion. Journal of Fluid Mechanics, 2016, 807, 235-257. | 1.4 | 5 |
| 43 | Spatially Resolved Genetic Analysis of Tissue Sections Enabled by Microscale Flow Confinement Retrieval and Isotachophoretic Purification. Angewandte Chemie, 2019, 131, 15403-15406. | 1.6 | 5 |
| 44 | Dipolar thermocapillary motor and swimmer. Physical Review Fluids, 2019, 4, . | 1.0 | 5 |
| 45 | Interfacial instability of thin films in soft microfluidic configurations actuated by electro-osmotic flow. Physical Review Fluids, 2020, 5, . | 1.0 | 5 |
| 46 | Monitoring Dissociation Kinetics during Electrophoretic Focusing to Enable Highâ€Specificity Nucleic Acid Detection. Angewandte Chemie, 2018, 130, 3401-3406. | 1.6 | 4 |
| 47 | Tunable Bidirectional Electroosmotic Flow for Diffusionâ€Based Separations. Angewandte Chemie - International Edition, 2020, 59, 12894-12899. | 7.2 | 4 |
| 48 | Electrokinetic Scanning Probe. Small, 2020, 16, 1904268. | 5.2 | 3 |
| 49 | Tunable Bidirectional Electroosmotic Flow for Diffusionâ€Based Separations. Angewandte Chemie, 2020, 132, 12994-12999. | 1.6 | 3 |
| 50 | Shaping liquid films by dielectrophoresis. Flow, 2021, 1, . | 1.0 | 3 |
| 51 | Extraction of electrokinetically separated analytes with on-demand encapsulation. Lab on A Chip, 2018, 18, 3588-3597. | 3.1 | 2 |
| 52 | Optical Biosensors: Oxidized Porous Silicon Nanostructures Enabling Electrokinetic Transport for Enhanced DNA Detection (Adv. Funct. Mater. 43/2015). Advanced Functional Materials, 2015, 25, 6824-6824. | 7.8 | 1 |
| 53 | Electrokinetic Scanning Probes: Electrokinetic Scanning Probe (Small 5/2020). Small, 2020, 16, 2070028. | 5.2 | 0 |
| 54 | Biointegrated Subtractive Microfabrication by Hydrodynamic Flow Confinement. , 2020, , . | | 0 |

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|---|---|---|---|
| 55 | Biointegrated Fluidic Milling. Advanced Materials Technologies, 2021, 6, 2000843. | 3.0 | 0 |
| 56 | Indirect Fluorescence Detection of Non Fluorescent Analytes Using Isotachophoretic Mobility Markers. , 2008, , . | | 0 |
| 57 | 1,000-fold Sensitivity Enhancement of Porous Si-based Optical Biosensors for Nucleic Acid and Proteins Detection. , 2017, , . | | 0 |
| 58 | Toward microscale flow control using non-uniform electro-osmotic flow. , 2018, , . | | 0 |