# Ye Ai

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 98 papers | 3,758 citations | 35 h-index | 58 g-index |
| 102 ext. papers | 4,484 ext. citations | 6.2 avg, IF | 5.99 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 98 | Biosensors for single-cell mechanical characterization **2022**, 101-123 | | |
| 97 | Accurate profiling of blood components in microliter with position-insensitive coplanar electrodes-based cytometry. *Sensors and Actuators B: Chemical*, **2022**, 367, 132068 | 8.5 | 3 |
| 96 | Single-Cell Stretching in Viscoelastic Fluids with Electronically Triggered Imaging for Cellular Mechanical Phenotyping. *Analytical Chemistry*, **2021**, 93, 4567-4575 | 7.8 | 11 |
| 95 | A low-cost and high-throughput benchtop cell sorter for isolating white blood cells from whole blood. *Electrophoresis*, **2021**, 42, 2281-2292 | 3.6 | 0 |
| 94 | Submicron-precision particle characterization in microfluidic impedance cytometry with double differential electrodes. *Lab on A Chip*, **2021**, 21, 2869-2880 | 7.2 | 8 |
| 93 | Multi-frequency single cell electrical impedance measurement for label-free cell viability analysis. *Analyst, The*, **2021**, 146, 1848-1858 | 5 | 7 |
| 92 | Sheathless and high-throughput elasto-inertial bacterial sorting for enhancing molecular diagnosis of bloodstream infection. *Lab on A Chip*, **2021**, 21, 2163-2177 | 7.2 | 3 |
| 91 | Label-Free Multivariate Biophysical Phenotyping-Activated Acoustic Sorting at the Single-Cell Level. *Analytical Chemistry*, **2021**, 93, 4108-4117 | 7.8 | 13 |
| 90 | Deterministic Sorting of Submicrometer Particles and Extracellular Vesicles Using a Combined Electric and Acoustic Field. *Nano Letters*, **2021**, 21, 6835-6842 | 11.5 | 8 |
| 89 | Physical properties-based microparticle sorting at submicron resolution using a tunable acoustofluidic device. *Sensors and Actuators B: Chemical*, **2021**, 344, 130203 | 8.5 | 2 |
| 88 | An Optimized Quantization Constraints Set for Image Restoration and Its GPU Implementation. *IEEE Transactions on Image Processing*, **2020**, | 8.7 | 3 |
| 87 | A deep learning approach for designed diffraction-based acoustic patterning in microchannels. *Scientific Reports*, **2020**, 10, 8745 | 4.9 | 19 |
| 86 | Slowness curve surface acoustic wave transducers for optimized acoustic streaming.. *RSC Advances*, **2020**, 10, 11582-11589 | 3.7 | 9 |
| 85 | Massively Multiplexed Submicron Particle Patterning in Acoustically Driven Oscillating Nanocavities. *Small*, **2020**, 16, e2000462 | 11 | 17 |
| 84 | Diffraction-based acoustic manipulation in microchannels enables continuous particle and bacteria focusing. *Lab on A Chip*, **2020**, 20, 2674-2688 | 7.2 | 17 |
| 83 | Exosome Purification and Analysis Using a Facile Microfluidic Hydrodynamic Trapping Device. *Analytical Chemistry*, **2020**, 92, 10733-10742 | 7.8 | 30 |
| 82 | Ultrasonic microstreaming for complex-trajectory transport and rotation of single particles and cells. *Lab on A Chip*, **2020**, 20, 2947-2953 | 7.2 | 14 |

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| 81 | Sub-Micron Particle Trapping: Massively Multiplexed Submicron Particle Patterning in Acoustically Driven Oscillating Nanocavities (Small 17/2020). *Small*, **2020**, 16, 2070095 | 11 | 0 |
| 80 | Dynamically tunable elasto-inertial particle focusing and sorting in microfluidics. *Lab on A Chip*, **2020**, 20, 568-581 | 7.2 | 23 |
| 79 | Acoustic manipulation of breathing MOFs particles for self-folding composite films preparation. *Sensors and Actuators A: Physical*, **2020**, 315, 112288 | 3.9 | 4 |
| 78 | Acoustic Vibration-Induced Actuation of Multiple Microrotors in Microfluidics. *Advanced Materials Technologies*, **2020**, 5, 2000323 | 6.8 | 8 |
| 77 | Enhanced Molecular Diagnosis of Bloodstream Infection with Size-Based Inertial Sorting at Submicron Resolution. *Analytical Chemistry*, **2020**, 92, 15579-15586 | 7.8 | 7 |
| 76 | Submicron Particle Concentration and Patterning with Ultralow Frequency Acoustic Vibration. *Analytical Chemistry*, **2020**, 92, 12795-12800 | 7.8 | 14 |
| 75 | Microfluidic impedance cytometry device with N-shaped electrodes for lateral position measurement of single cells/particles. *Lab on A Chip*, **2019**, 19, 3609-3617 | 7.2 | 21 |
| 74 | CMOS Compatible Transient Resistive Memory with Prolonged Lifetime. *Advanced Materials Technologies*, **2019**, 4, 1900217 | 6.8 | 4 |
| 73 | Detachable Acoustophoretic System for Fluorescence-Activated Sorting at the Single-Droplet Level. *Analytical Chemistry*, **2019**, 91, 9970-9977 | 7.8 | 30 |
| 72 | Biophysical phenotyping of single cells using a differential multiconstriction microfluidic device with self-aligned 3D electrodes. *Biosensors and Bioelectronics*, **2019**, 133, 16-23 | 11.8 | 25 |
| 71 | Submicron Particle Focusing and Exosome Sorting by Wavy Microchannel Structures within Viscoelastic Fluids. *Analytical Chemistry*, **2019**, 91, 4577-4584 | 7.8 | 61 |
| 70 | A MoS2/MWCNT based fluorometric nanosensor for exosome detection and quantification. *Nanoscale Advances*, **2019**, 1, 2866-2872 | 5.1 | 20 |
| 69 | Sheathless Acoustic Fluorescence Activated Cell Sorting (aFACS) with High Cell Viability. *Analytical Chemistry*, **2019**, 91, 15425-15435 | 7.8 | 20 |
| 68 | Acoustic fields and microfluidic patterning around embedded micro-structures subject to surface acoustic waves. *Soft Matter*, **2019**, 15, 8691-8705 | 3.6 | 15 |
| 67 | Hybrid microfluidic sorting of rare cells based on high throughput inertial focusing and high accuracy acoustic manipulation.. *RSC Advances*, **2019**, 9, 31186-31195 | 3.7 | 21 |
| 66 | A rapid and meshless analytical model of acoustofluidic pressure fields for waveguide design. *Biomicrofluidics*, **2018**, 12, 024104 | 3.2 | 9 |
| 65 | Self-Aligned Acoustofluidic Particle Focusing and Patterning in Microfluidic Channels from Channel-Based Acoustic Waveguides. *Physical Review Letters*, **2018**, 120, 074502 | 7.4 | 48 |
| 64 | A New Accurate and Fast Homography Computation Algorithm for Sports and Traffic Video Analysis. *IEEE Transactions on Circuits and Systems for Video Technology*, **2018**, 28, 2993-3006 | 6.4 | 8 |

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| 63 | Sheathless inertial cell focusing and sorting with serial reverse wavy channel structures. *Microsystems and Nanoengineering*, **2018**, 4, 5 | 7.7 | 30 |
| 62 | Characterizing Deformability and Electrical Impedance of Cancer Cells in a Microfluidic Device. *Analytical Chemistry*, **2018**, 90, 912-919 | 7.8 | 49 |
| 61 | Active droplet sorting in microfluidics: a review. *Lab on A Chip*, **2017**, 17, 751-771 | 7.2 | 177 |
| 60 | Real time size-dependent particle segregation and quantitative detection in a surface acoustic wave-photoacoustic integrated microfluidic system. *Sensors and Actuators B: Chemical*, **2017**, 252, 568-576 | 8.5 | 14 |
| 59 | Boron detection and quantification based on the absorption spectra of pyridoxine and its boron complex. *Environmental Chemistry*, **2017**, 14, 135 | 3.2 | 1 |
| 58 | Selective particle and cell capture in a continuous flow using micro-vortex acoustic streaming. *Lab on A Chip*, **2017**, 17, 1769-1777 | 7.2 | 61 |
| 57 | Single-actuator Bandpass Microparticle Filtration via Traveling Surface Acoustic Waves. *Colloids and Interface Science Communications*, **2017**, 16, 6-9 | 5.4 | 15 |
| 56 | A portable image-based cytometer for rapid malaria detection and quantification. *PLoS ONE*, **2017**, 12, e0179161 | 3.7 | 28 |
| 55 | Fluorescence activated cell sorting via a focused traveling surface acoustic beam. *Lab on A Chip*, **2017**, 17, 3176-3185 | 7.2 | 77 |
| 54 | Huygens-Fresnel Acoustic Interference and the Development of Robust Time-Averaged Patterns from Traveling Surface Acoustic Waves. *Physical Review Letters*, **2017**, 118, 154501 | 7.4 | 37 |
| 53 | Virtual membrane for filtration of particles using surface acoustic waves (SAW). *Lab on A Chip*, **2016** , 16, 3515-23 | 7.2 | 33 |
| 52 | Mechanical Properties Based Particle Separation via Traveling Surface Acoustic Wave. *Analytical Chemistry*, **2016**, 88, 11844-11851 | 7.8 | 54 |
| 51 | Flow-rate-insensitive deterministic particle sorting using a combination of travelling and standing surface acoustic waves. *Microfluidics and Nanofluidics*, **2016**, 20, 1 | 2.8 | 28 |
| 50 | Highly focused high-frequency travelling surface acoustic waves (SAW) for rapid single-particle sorting. *Lab on A Chip*, **2016**, 16, 471-9 | 7.2 | 113 |
| 49 | Continuous micro-vortex-based nanoparticle manipulation via focused surface acoustic waves. *Lab on A Chip*, **2016**, 17, 91-103 | 7.2 | 111 |
| 48 | Self-Aligned Interdigitated Transducers for Acoustofluidics. *Micromachines*, **2016**, 7, | 3.3 | 30 |
| 47 | A Microfluidic DNA Sensor Based on Three-Dimensional (3D) Hierarchical $MoS_2$/Carbon Nanotube Nanocomposites. *Sensors*, **2016**, 16, | 3.8 | 17 |
| 46 | Acoustic tweezers via sub-time-of-flight regime surface acoustic waves. *Science Advances*, **2016**, 2, e1600089 | 12.5 | 91 |

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| 45 | Highly Localized Acoustic Streaming and Size-Selective Submicrometer Particle Concentration Using High Frequency Microscale Focused Acoustic Fields. *Analytical Chemistry*, **2016**, 88, 5513-22 | 7.8 | 118 |
| 44 | Detachable Acoustofluidic System for Particle Separation via a Traveling Surface Acoustic Wave. *Analytical Chemistry*, **2016**, 88, 5316-23 | 7.8 | 71 |
| 43 | Simple and low cost integration of highly conductive three-dimensional electrodes in microfluidic devices. *Biomedical Microdevices*, **2015**, 17, 4 | 3.7 | 20 |
| 42 | Volumetric measurement of human red blood cells by MOSFET-based microfluidic gate. *Electrophoresis*, **2015**, 36, 1862-5 | 3.6 | 9 |
| 41 | The Poisson distribution and beyond: methods for microfluidic droplet production and single cell encapsulation. *Lab on A Chip*, **2015**, 15, 3439-59 | 7.2 | 278 |
| 40 | Radiation dominated acoustophoresis driven by surface acoustic waves. *Journal of Colloid and Interface Science*, **2015**, 455, 203-11 | 9.3 | 32 |
| 39 | The patterning mechanism of carbon nanotubes using surface acoustic waves: the acoustic radiation effect or the dielectrophoretic effect. *Nanoscale*, **2015**, 7, 14047-54 | 7.7 | 42 |
| 38 | A Compact Optofluidic Cytometer for Detection and Enumeration of Tumor Cells. *Journal of Lightwave Technology*, **2015**, 33, 3433-3438 | 4 | 19 |
| 37 | Two dimensional atomically thin MoS2 nanosheets and their sensing applications. *Nanoscale*, **2015**, 7, 19358-76 | 7.7 | 174 |
| 36 | DNA single-base mismatch study using graphene oxide nanosheets-based fluorometric biosensors. *Analytical Chemistry*, **2015**, 87, 9132-6 | 7.8 | 26 |
| 35 | A novel single-layered MoS2 nanosheet based microfluidic biosensor for ultrasensitive detection of DNA. *Nanoscale*, **2015**, 7, 2245-9 | 7.7 | 88 |
| 34 | Dual characterization of biological cells by optofluidic microscope and resistive pulse sensor. *Electrophoresis*, **2015**, 36, 420-3 | 3.6 | 10 |
| 33 | Numerical and experimental characterization of solid-state micropore-based cytometer for detection and enumeration of biological cells. *Electrophoresis*, **2015**, 36, 737-43 | 3.6 | 11 |
| 32 | On-Demand Lensless Single Cell Imaging Activated by Differential Resistive Pulse Sensing. *Analytical Chemistry*, **2015**, 87, 6516-9 | 7.8 | 43 |
| 31 | Differential microfluidic sensor on printed circuit board for biological cells analysis. *Electrophoresis*, **2015**, 36, 1854-8 | 3.6 | 16 |
| 30 | pH-regulated ionic current rectification in conical nanopores functionalized with polyelectrolyte brushes. *Physical Chemistry Chemical Physics*, **2014**, 16, 2465-74 | 3.6 | 50 |
| 29 | Direct numerical simulation of AC dielectrophoretic particle-particle interactive motions. *Journal of Colloid and Interface Science*, **2014**, 417, 72-9 | 9.3 | 54 |
| 28 | Portable resistive pulse-activated lens-free cell imaging system. *RSC Advances*, **2014**, 4, 56342-56345 | 3.7 | 15 |

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| 27 | Separation of biological cells in a microfluidic device using surface acoustic waves (SAWs) **2014**, | | 1 |
| 26 | Separation of Escherichia coli bacteria from peripheral blood mononuclear cells using standing surface acoustic waves. *Analytical Chemistry*, **2013**, 85, 9126-34 | 7.8 | 131 |
| 25 | Field effect control of electrokinetic transport in micro/nanofluidics. *Sensors and Actuators B: Chemical*, **2012**, 161, 1150-1167 | 8.5 | 39 |
| 24 | Droplet translocation by focused surface acoustic waves. *Microfluidics and Nanofluidics*, **2012**, 13, 715-722 | 2.8 | 49 |
| 23 | Polarization Effect of a Dielectric Membrane on the Ionic Current Rectification in a Conical Nanopore. *Journal of Physical Chemistry C*, **2011**, 115, 24951-24959 | 3.8 | 26 |
| 22 | Electrokinetic particle translocation through a nanopore. *Physical Chemistry Chemical Physics*, **2011**, 13, 4060-71 | 3.6 | 61 |
| 21 | Electrophoretic motion of a soft spherical particle in a nanopore. *Colloids and Surfaces B: Biointerfaces*, **2011**, 88, 165-74 | 6 | 32 |
| 20 | Direct numerical simulation of electrokinetic translocation of a cylindrical particle through a nanopore using a Poisson-Boltzmann approach. *Electrophoresis*, **2011**, 32, 996-1005 | 3.6 | 25 |
| 19 | Electrokinetic motion of a deformable particle: dielectrophoretic effect. *Electrophoresis*, **2011**, 32, 2282-91 | 3.6 | 23 |
| 18 | Electrokinetic particle translocation through a nanopore containing a floating electrode. *Electrophoresis*, **2011**, 32, 1864-74 | 3.6 | 27 |
| 17 | A high-throughput dielectrophoresis-based cell electrofusion microfluidic device. *Electrophoresis*, **2011**, 32, 2488-95 | 3.6 | 31 |
| 16 | Ionic current rectification in a conical nanofluidic field effect transistor. *Sensors and Actuators B: Chemical*, **2011**, 157, 742-751 | 8.5 | 40 |
| 15 | Dielectrophoretic choking phenomenon in a converging-diverging microchannel. *Biomicrofluidics*, **2010**, 4, 13201 | 3.2 | 42 |
| 14 | Effects of Electroosmotic Flow on Ionic Current Rectification in Conical Nanopores. *Journal of Physical Chemistry C*, **2010**, 114, 3883-3890 | 3.8 | 139 |
| 13 | Field effect regulation of DNA translocation through a nanopore. *Analytical Chemistry*, **2010**, 82, 8217-25 | 7.8 | 93 |
| 12 | DC dielectrophoretic particle-particle interactions and their relative motions. *Journal of Colloid and Interface Science*, **2010**, 346, 448-54 | 9.3 | 72 |
| 11 | DC electrokinetic particle transport in an L-shaped microchannel. *Langmuir*, **2010**, 26, 2937-44 | 4 | 65 |
| 10 | Wall-induced lateral migration in particle electrophoresis through a rectangular microchannel. *Journal of Colloid and Interface Science*, **2010**, 347, 142-6 | 9.3 | 56 |

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| 9 | A low-voltage nano-porous electroosmotic pump. *Journal of Colloid and Interface Science*, **2010**, 350, 465-70 | 9.3 | 40 |
| 8 | Contact configuration modification at carbon nanotube-metal interface during nanowelding. *Journal of Applied Physics*, **2009**, 106, 124308 | 2.5 | 10 |
| 7 | Transient electrophoretic motion of a charged particle through a converging-diverging microchannel: effect of direct current-dielectrophoretic force. *Electrophoresis*, **2009**, 30, 2499-506 | 3.6 | 60 |
| 6 | Effect of linear surface-charge non-uniformities on the electrokinetic ionic-current rectification in conical nanopores. *Journal of Colloid and Interface Science*, **2009**, 329, 376-83 | 9.3 | 35 |
| 5 | dc electrokinetic transport of cylindrical cells in straight microchannels. *Biomicrofluidics*, **2009**, 3, 44110 | 3.2 | 51 |
| 4 | Pressure-driven transport of particles through a converging-diverging microchannel. *Biomicrofluidics*, **2009**, 3, 22404 | 3.2 | 35 |
| 3 | Electrokinetic Particle Transport in Micro-/Nanofluidics | | 25 |
| 2 | Label-Free Cell Viability Assay and Enrichment of Cryopreserved Cells Using Microfluidic Cytometry and On-Demand Sorting. *Advanced Materials Technologies*,2100906 | 6.8 | 3 |
| 1 | Field Effect Control of Ion, Fluid, and Particle Transport in Micro/Nanofluidics2688-2704 | | |