

Yongxin Song

List of Publications by Year in descending order

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102
papers

4,155
citations

147726

31
h-index

118793

62
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102
all docs

102
docs citations

102
times ranked

3608
citing authors

#	ARTICLE	IF	CITATIONS
1	Zeta-potential measurement using the Smoluchowski equation and the slope of the current-time relationship in electroosmotic flow. <i>Journal of Colloid and Interface Science</i> , 2003, 261, 402-410.	5.0	626
2	Influence of Surface Heterogeneity on Electrokinetically Driven Microfluidic Mixing. <i>Langmuir</i> , 2002, 18, 1883-1892.	1.6	273
3	Heterogeneous Surface Charge Enhanced Micromixing for Electrokinetic Flows. <i>Analytical Chemistry</i> , 2004, 76, 3208-3213.	3.2	252
4	DC-Dielectrophoretic separation of biological cells by size. <i>Biomedical Microdevices</i> , 2008, 10, 243-249.	1.4	243
5	The ζ -Potential of Glass Surface in Contact with Aqueous Solutions. <i>Journal of Colloid and Interface Science</i> , 2000, 226, 328-339.	5.0	171
6	Electrokinetic motion of particles and cells in microchannels. <i>Microfluidics and Nanofluidics</i> , 2009, 6, 431-460.	1.0	171
7	Micromixing using induced-charge electrokinetic flow. <i>Electrochimica Acta</i> , 2008, 53, 5827-5835.	2.6	144
8	Multiscale phenomena in microfluidics and nanofluidics. <i>Chemical Engineering Science</i> , 2007, 62, 3443-3454.	1.9	135
9	Continuous particle separation with localized AC-dielectrophoresis using embedded electrodes and an insulating hurdle. <i>Electrochimica Acta</i> , 2009, 54, 1715-1720.	2.6	113
10	DC-dielectrophoretic separation of microparticles using an oil droplet obstacle. <i>Lab on A Chip</i> , 2006, 6, 274-279.	3.1	97
11	Electroosmotic Flow in Heterogeneous Microchannels. <i>Journal of Colloid and Interface Science</i> , 2001, 243, 255-261.	5.0	96
12	Effect of Joule heating on electrokinetic transport. <i>Electrophoresis</i> , 2008, 29, 994-1005.	1.3	93
13	Microchannel Flow with Patchwise and Periodic Surface Heterogeneity. <i>Langmuir</i> , 2002, 18, 8949-8959.	1.6	71
14	Continuous Cell Characterization and Separation by Microfluidic Alternating Current Dielectrophoresis. <i>Analytical Chemistry</i> , 2019, 91, 6304-6314.	3.2	62
15	In-situ silica nanoparticle assembly technique to develop an omniphobic membrane for durable membrane distillation. <i>Desalination</i> , 2021, 499, 114832.	4.0	53
16	An integrated microfluidic device for rapid and high-sensitivity analysis of circulating tumor cells. <i>Scientific Reports</i> , 2017, 7, 42612.	1.6	52
17	Microfluidic and Nanofluidic Resistive Pulse Sensing: A Review. <i>Micromachines</i> , 2017, 8, 204.	1.4	52
18	Eccentric electrophoretic motion of a sphere in circular cylindrical microchannels. <i>Microfluidics and Nanofluidics</i> , 2005, 1, 234-241.	1.0	50

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19	Three-Dimensional Structure of Electroosmotic Flow over Heterogeneous Surfaces. <i>Journal of Physical Chemistry B</i> , 2003, 107, 12212-12220.	1.2	48
20	Experimental validation of induced-charge electrokinetic motion of electrically conducting particles. <i>Electrochimica Acta</i> , 2013, 87, 270-276.	2.6	47
21	Dielectrophoretic Force on a Sphere near a Planar Boundary. <i>Langmuir</i> , 2005, 21, 12037-12046.	1.6	45
22	Dielectric Force and Relative Motion between Two Spherical Particles in Electrophoresis. <i>Langmuir</i> , 2006, 22, 1602-1608.	1.6	45
23	A microfluidic chip for heterogeneous immunoassay using electrokinetical control. <i>Microfluidics and Nanofluidics</i> , 2005, 1, 346-355.	1.0	43
24	A Label-Free Microfluidic Biosensor for Activity Detection of Single Microalgae Cells Based on Chlorophyll Fluorescence. <i>Sensors</i> , 2013, 13, 16075-16089.	2.1	42
25	Counting bacteria on a microfluidic chip. <i>Analytica Chimica Acta</i> , 2010, 681, 82-86.	2.6	41
26	Joule heating effects on electroosmotic entry flow. <i>Electrophoresis</i> , 2017, 38, 572-579.	1.3	41
27	Near-wall electrophoretic motion of spherical particles in cylindrical capillaries. <i>Journal of Colloid and Interface Science</i> , 2005, 289, 286-290.	5.0	38
28	Induced charge effects on electrokinetic entry flow. <i>Physics of Fluids</i> , 2017, 29, .	1.6	35
29	Separation of nanoparticles by a nano-orifice based DC-dielectrophoresis method in a pressure-driven flow. <i>Nanoscale</i> , 2016, 8, 18945-18955.	2.8	34
30	Electrokinetic preconcentration of particles and cells in microfluidic reservoirs. <i>Analyst, The</i> , 2015, 140, 2869-2875.	1.7	33
31	Simultaneous diamagnetic and magnetic particle trapping in ferrofluid microflows via a single permanent magnet. <i>Biomicrofluidics</i> , 2015, 9, 044102.	1.2	32
32	Nanoparticle detection by microfluidic Resistive Pulse Sensor with a submicron sensing gate and dual detecting channels-two stage differential amplifier. <i>Sensors and Actuators B: Chemical</i> , 2011, 155, 930-936.	4.0	30
33	A novel microfluidic resistive pulse sensor with multiple voltage input channels and a side sensing gate for particle and cell detection. <i>Analytica Chimica Acta</i> , 2019, 1052, 113-123.	2.6	28
34	DC dielectrophoresis separation of marine algae and particles in a microfluidic chip. <i>Science China Chemistry</i> , 2012, 55, 524-530.	4.2	27
35	Capacitive detection of living microalgae in a microfluidic chip. <i>Sensors and Actuators B: Chemical</i> , 2014, 194, 164-172.	4.0	27
36	Electrophoretic mobility of oil droplets in electrolyte and surfactant solutions. <i>Electrophoresis</i> , 2015, 36, 2489-2497.	1.3	26

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37	Detection of size spectrum of microalgae cells in an integrated underwater microfluidic device. <i>Journal of Experimental Marine Biology and Ecology</i> , 2015, 473, 129-137.	0.7	26
38	Recent advances in dielectrophoresis-based cell viability assessment. <i>Electrophoresis</i> , 2020, 41, 917-932.	1.3	22
39	Smartphone based microfluidic lab-on-chip device for real-time detection, counting and sizing of living algae. <i>Measurement: Journal of the International Measurement Confederation</i> , 2022, 187, 110304.	2.5	22
40	Focusing particles by induced charge electrokinetic flow in a microchannel. <i>Electrophoresis</i> , 2016, 37, 666-675.	1.3	21
41	Manipulation and separation of oil droplets by using asymmetric nano-orifice induced DC dielectrophoretic method. <i>Journal of Colloid and Interface Science</i> , 2018, 512, 389-397.	5.0	21
42	Automatic particle detection and sorting in an electrokinetic microfluidic chip. <i>Electrophoresis</i> , 2013, 34, 684-690.	1.3	20
43	AC dielectrophoretic deformable particle-particle interactions and their relative motions. <i>Electrophoresis</i> , 2020, 41, 952-958.	1.3	20
44	Deformation and Interaction of Droplet Pairs in a Microchannel Under ac Electric Fields. <i>Physical Review Applied</i> , 2015, 4, .	1.5	19
45	Vortex trapping and separation of particles in shear thinning fluids. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	19
46	High-throughput and sensitive particle counting by a novel microfluidic differential resistive pulse sensor with multidetecting channels and a common reference channel. <i>Electrophoresis</i> , 2015, 36, 495-501.	1.3	18
47	Electrokinetic motion of a spherical polystyrene particle at a liquid-fluid interface. <i>Journal of Colloid and Interface Science</i> , 2018, 509, 432-439.	5.0	16
48	An induction current method for determining the critical micelle concentration and the polarity of surfactants. <i>Colloid and Polymer Science</i> , 2015, 293, 1525-1534.	1.0	15
49	Size-based cell sorting with a resistive pulse sensor and an electromagnetic pump in a microfluidic chip. <i>Electrophoresis</i> , 2015, 36, 398-404.	1.3	15
50	Sheathless electrokinetic particle separation in a bifurcating microchannel. <i>Biomicrofluidics</i> , 2016, 10, 054104.	1.2	15
51	Surface-conduction enhanced dielectrophoretic-like particle migration in electric-field driven fluid flow through a straight rectangular microchannel. <i>Physics of Fluids</i> , 2017, 29, .	1.6	15
52	Insulator-based dielectrophoretic focusing and trapping of particles in non-Newtonian fluids. <i>Electrophoresis</i> , 2021, 42, 2154-2161.	1.3	15
53	Ionic Diode Based on an Asymmetric-Shaped Carbon Black Nanoparticle Membrane. <i>Advanced Functional Materials</i> , 2021, 31, 2104341.	7.8	15
54	Translational motion of a spherical particle near a planar liquid-fluid interface. <i>Journal of Colloid and Interface Science</i> , 2008, 319, 344-352.	5.0	14

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55	Electrokinetic motion of a spherical micro particle at an oil-water interface in microchannel. <i>Electrophoresis</i> , 2018, 39, 807-815.	1.3	14
56	A simple, flexible, and porous polypyrrole-wax gourd evaporator with excellent light absorption for efficient solar steam generation. <i>International Journal of Energy Research</i> , 2021, 45, 21476-21486.	2.2	14
57	Tunable particle/cell separation across aqueous two-phase system interface by electric pulse in microfluidics. <i>Journal of Colloid and Interface Science</i> , 2022, 612, 23-34.	5.0	14
58	Effects of sodium hypochlorite treatment on the chlorophyll fluorescence in photosystem II of microalgae. <i>Science of the Total Environment</i> , 2022, 833, 155192.	3.9	14
59	Improving particle detection sensitivity of a microfluidic resistive pulse sensor by a novel electrokinetic flow focusing method. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1.	1.0	13
60	Electrokinetic motion of a submerged oil droplet near an air-water interface. <i>Chemical Engineering Science</i> , 2018, 192, 264-272.	1.9	13
61	Automatic detecting and counting magnetic beads-labeled target cells from a suspension in a microfluidic chip. <i>Electrophoresis</i> , 2019, 40, 897-905.	1.3	13
62	Zeta potentials of PDMS surfaces modified with poly(ethylene glycol) by physisorption. <i>Electrophoresis</i> , 2020, 41, 761-768.	1.3	13
63	Detecting zeta potential of polydimethylsiloxane (PDMS) in electrolyte solutions with atomic force microscope. <i>Journal of Colloid and Interface Science</i> , 2020, 578, 116-123.	5.0	13
64	ALGAE DETECTION AND SHIP'S BALLAST WATER ANALYSIS BY A MICROFLUIDIC LAB-ON-CHIP DEVICE. <i>Instrumentation Science and Technology</i> , 2012, 40, 305-315.	0.9	12
65	Induced-charge electrokinetics in a conducting nanochannel with broken geometric symmetry: Towards a flexible control of ionic transport. <i>Physics of Fluids</i> , 2015, 27, .	1.6	12
66	Quantitative evaluation of radiation dose by γ -H2AX on a microfluidic chip in a miniature fluorescence cytometer. <i>Radiation Measurements</i> , 2014, 62, 71-77.	0.7	11
67	An induced current method for measuring zeta potential of electrolyte solution-air interface. <i>Journal of Colloid and Interface Science</i> , 2014, 416, 101-104.	5.0	11
68	A novel method for measuring zeta potentials of solid-liquid interfaces. <i>Analytica Chimica Acta</i> , 2015, 853, 689-695.	2.6	11
69	Zeta potentials of polydimethylsiloxane surfaces modified by polybrene of different concentrations. <i>Electrophoresis</i> , 2016, 37, 567-572.	1.3	11
70	Detection of activity of single microalgae cells in a new microfluidic cell capturing chip. <i>Measurement Science and Technology</i> , 2016, 27, 125701.	1.4	11
71	Vortex generation in electroosmotic flow in a straight polydimethylsiloxane microchannel with different polybrene modified-to-unmodified section length ratios. <i>Microfluidics and Nanofluidics</i> , 2019, 23, 1.	1.0	11
72	Flow of Non-Newtonian Fluids in a Single-Cavity Microchannel. <i>Micromachines</i> , 2021, 12, 836.	1.4	11

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73	A new hand-held microfluidic cytometer for evaluating irradiation damage by analysis of the damaged cells distribution. <i>Scientific Reports</i> , 2016, 6, 23165.	1.6	10
74	Charge-based separation of particles and cells with similar sizes via the wall-induced electrical lift. <i>Electrophoresis</i> , 2017, 38, 320-326.	1.3	10
75	Electrokinetic vortex formation near a two-part cylinder with same-sign zeta potentials in a straight microchannel. <i>Electrophoresis</i> , 2020, 41, 793-801.	1.3	10
76	Insights into the impact of polydopamine modification on permeability and anti-fouling performance of forward osmosis membrane. <i>Chemosphere</i> , 2022, 291, 132744.	4.2	10
77	Near-infrared surface plasmon resonance sensor with a graphene-gold surface architecture for ultra-sensitive biodetection. <i>Analytica Chimica Acta</i> , 2022, 1205, 339692.	2.6	10
78	Nanoparticle and microorganism detection with a side-micron-orifice-based resistive pulse sensor. <i>Analyst</i> , 2020, 145, 5466-5474.	1.7	9
79	Joule heating-enabled electrothermal enrichment of nanoparticles in insulator-based dielectrophoretic microdevices. <i>Electrophoresis</i> , 2021, 42, 626-634.	1.3	9
80	Constriction length dependent instabilities in the microfluidic entry flow of polymer solutions. <i>Soft Matter</i> , 2021, 17, 9198-9209.	1.2	9
81	Electrokinetic Motion of an Oil Droplet Attached to a Water-Air Interface from Below. <i>Journal of Physical Chemistry B</i> , 2018, 122, 1738-1746.	1.2	8
82	Detection of viability of micro-algae cells by optofluidic hologram pattern. <i>Biomicrofluidics</i> , 2018, 12, 024111.	1.2	8
83	Revisit of wall-induced lateral migration in particle electrophoresis through a straight rectangular microchannel: Effects of particle zeta potential. <i>Electrophoresis</i> , 2019, 40, 955-960.	1.3	8
84	Electrokinetic detection and separation of living algae in a microfluidic chip: implication for ship ballast water analysis. <i>Environmental Science and Pollution Research</i> , 2021, 28, 22853-22863.	2.7	8
85	Conductivity-difference-enhanced DC dielectrophoretic particle separation in a microfluidic chip. <i>Analyst</i> , 2022, 147, 1106-1116.	1.7	8
86	Automatic and Selective Single Cell Manipulation in a Pressure-Driven Microfluidic Lab-On-Chip Device. <i>Micromachines</i> , 2017, 8, 172.	1.4	7
87	A Fiber-Optic Surface Plasmon Resonance Sensor for Bio-Detection in Visible to Near-Infrared Images. <i>Biosensors</i> , 2022, 12, 9.	2.3	7
88	Effect of induced surface charge of metal particles on particle sizing by resistive pulse sensing technique. <i>Journal of Colloid and Interface Science</i> , 2014, 423, 20-24.	5.0	6
89	Coalescence of a Water Drop with an Air-Liquid Interface: Electric Current Generation and Critical Micelle Concentration (CMC) Sensing Application. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 16981-16990.	4.0	6
90	Simultaneous and continuous particle separation and counting via localized DC-dielectrophoresis in a microfluidic chip. <i>RSC Advances</i> , 2021, 11, 3827-3833.	1.7	6

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91	Novel strategy to enhance the desalination performance of flow-electrode capacitive deionization process via the assistance of electro-catalytic water splitting. <i>Separation and Purification Technology</i> , 2021, 279, 119753.	3.9	6
92	A Novel Dielectric Barrier Discharge (DBD) Reactor with Streamer and Glow Corona Discharge for Improved Ozone Generation at Atmospheric Pressure. <i>Micromachines</i> , 2021, 12, 1287.	1.4	6
93	Thin liquid film between a floating oil droplet and a glass slide under DC electric field. <i>Journal of Colloid and Interface Science</i> , 2019, 534, 262-269.	5.0	5
94	Electrokinetically driven continuous-flow enrichment of colloidal particles by Joule heating induced temperature gradient focusing in a convergent-divergent microfluidic structure. <i>Scientific Reports</i> , 2017, 7, 10803.	1.6	4
95	Corrosion of marine carbon steel by electrochemically treated ballast water. <i>Journal of Marine Engineering and Technology</i> , 2009, 8, 49-55.	1.9	3
96	Electrokinetic motion of a micro oil droplet under a glass slide. <i>Electrophoresis</i> , 2019, 40, 1034-1040.	1.3	3
97	Quantitative viability detection for a single microalgae cell by two-level photoexcitation. <i>Analyst, The</i> , 2020, 145, 3931-3938.	1.7	3
98	Interplay of induced charge electroosmosis and electrothermal flow in insulator-based dielectrophoresis. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	3
99	Fluid rheological effects on streaming dielectrophoresis in a postâ€array microchannel. <i>Electrophoresis</i> , 2022, 43, 717-723.	1.3	3
100	Sizeâ€dependent electrophoretic motion of polystyrene particles at polyethylene glycolâ€dextran interfaces. <i>Electrophoresis</i> , 2022, 43, 2112-2119.	1.3	3
101	Living algae detection with a PDMS-liquid chlorophyll fluorescence microfluidic chip filter and a smartphone. <i>Analyst, The</i> , 2022, 147, 3723-3731.	1.7	1
102	Probing zeta potential of glass in electrolyte solutions by colloidal probe technique. , 2021, , .		0