

Yu-Kun Ren

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.

114
papers

1,837
citations

25
h-index

35
g-index

126
ext. papers

2,313
ext. citations

5
avg, IF

5.19
L-index

#	Paper	IF	Citations
114	Fluid pumping by liquid metal droplet utilizing ac electric field.. <i>Physical Review E</i> , 2022 , 105, 025102	2.4	2
113	Thermal field-actuated multifunctional double-emulsion droplet carriers: On-demand migration, core release and released particle focusing. <i>Chemical Engineering Journal</i> , 2022 , 431, 134200	14.7	2
112	A visual portable microfluidic experimental device with multiple electric field regulation functions.. <i>Lab on A Chip</i> , 2022 ,	7.2	2
111	Characterization of Particle Movement and High-Resolution Separation of Microalgal Cells via Induced-Charge Electroosmotic Advective Spiral Flow. <i>Analytical Chemistry</i> , 2021 , 93, 1667-1676	7.8	3
110	Label-Free Multitarget Separation of Particles and Cells under Flow Using Acoustic, Electrophoretic, and Hydrodynamic Forces. <i>Analytical Chemistry</i> , 2021 , 93, 7635-7646	7.8	2
109	Dielectric Characterization and Multistage Separation of Various Cells via Dielectrophoresis in a Bipolar Electrode Arrayed Device. <i>Analytical Chemistry</i> , 2021 , 93, 10220-10228	7.8	1
108	Continuous-Flow Nanoparticle Trapping Driven by Hybrid Electrokinetics in Microfluidics. <i>Electrophoresis</i> , 2021 , 42, 939-949	3.6	8
107	Pumping of electrolyte with mobile liquid metal droplets driven by continuous electrowetting: A full-scaled simulation study considering surface-coupled electrocapillary two-phase flow. <i>Electrophoresis</i> , 2021 , 42, 950-966	3.6	7
106	Flexible Microswimmer Manipulation in Multiple Microfluidic Systems Utilizing Thermal Buoyancy-Capillary Convection. <i>Analytical Chemistry</i> , 2021 , 93, 2560-2569	7.8	4
105	Dielectrophoretic medium exchange around droplets for on-chip fabrication of layer-by-layer microcapsules. <i>Lab on A Chip</i> , 2021 , 21, 3352-3360	7.2	2
104	Continuous microfluidic fabrication of anisotropic microparticles for enhanced wastewater purification. <i>Lab on A Chip</i> , 2021 , 21, 1517-1526	7.2	3
103	Flexible online in-droplet cell/synthetic particle concentration utilizing alternating current electrothermal-flow field-effect transistor. <i>Lab on A Chip</i> , 2021 , 21, 1987-1997	7.2	2
102	Flexible fabrication of lipophilic-hydrophilic micromotors by off-chip photopolymerization of three-phase immiscible flow induced Janus droplet templates. <i>Analytica Chimica Acta</i> , 2021 , 1182, 338955	6.6	1
101	Self-powered AC electrokinetic microfluidic system based on triboelectric nanogenerator. <i>Nano Energy</i> , 2021 , 89, 106451	17.1	4
100	Small universal mechanical module driven by a liquid metal droplet. <i>Lab on A Chip</i> , 2021 , 21, 2771-2780	7.2	2
99	Eccentric magnetic microcapsule for on-demand transportation, release, and evacuation in microfabrication fluidic networks. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2020 , 599, 124905	5.1	3
98	Pumping of Ionic Liquids by Liquid Metal-Enabled Electrocapillary Flow under DC-Biased AC Forcing. <i>Advanced Materials Interfaces</i> , 2020 , 7, 2000345	4.6	7

97	A Simulation Analysis of Nanofluidic Ion Current Rectification Using a Metal-Dielectric Janus Nanopore Driven by Induced-Charge Electrokinetic Phenomena. <i>Micromachines</i> , 2020 , 11,	3.3	3
96	Three-Fluid Sequential Micromixing-Assisted Nanoparticle Synthesis Utilizing Alternating Current Electrothermal Flow. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 12514-12524	3.9	3
95	Buoyancy-Free Janus Microcylinders as Mobile Microelectrode Arrays for Continuous Microfluidic Biomolecule Collection within a Wide Frequency Range: A Numerical Simulation Study. <i>Micromachines</i> , 2020 , 11,	3.3	5
94	On ion transport regulation with field-effect nonlinear electroosmosis control in microfluidics embedding an ion-selective medium. <i>Electrophoresis</i> , 2020 , 41, 778-792	3.6	6
93	Liquid metal droplet-enabled electrocapillary flow in biased alternating electric fields: a theoretical analysis from the perspective of induced-charge electrokinetics. <i>Journal of Micromechanics and Microengineering</i> , 2020 , 30, 085007	2	3
92	Multiple frequency electrothermal induced flow: theory and microfluidic applications. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 175304	3	8
91	Efficient particle and droplet manipulation utilizing the combined thermal buoyancy convection and temperature-enhanced rotating induced-charge electroosmotic flow. <i>Analytica Chimica Acta</i> , 2020 , 1096, 108-119	6.6	11
90	High-throughput and Multimodal Separation of Microbeads Using Cyclical Induced-charge Electro-osmotic Vortices and Its Application in Size Fractionation of Crumpled Graphene Oxide Balls. <i>Applied Materials Today</i> , 2020 , 19, 100545	6.6	8
89	Flexible Particle Focusing and Switching in Continuous Flow via Controllable Thermal Buoyancy Convection. <i>Analytical Chemistry</i> , 2020 , 92, 2778-2786	7.8	6
88	Combined alternating current electrothermal and dielectrophoresis-induced tunable patterning to actuate on-chip microreactions and switching at a floating electrode. <i>Sensors and Actuators B: Chemical</i> , 2020 , 304, 127397	8.5	4
87	Continuous microfluidic mixing and the highly controlled nanoparticle synthesis using direct current-induced thermal buoyancy convection. <i>Microfluidics and Nanofluidics</i> , 2020 , 24, 1	2.8	28
86	A Numerical Investigation of Enhancing Microfluidic Heterogeneous Immunoassay on Bipolar Electrodes Driven by Induced-Charge Electroosmosis in Rotating Electric Fields. <i>Micromachines</i> , 2020 , 11,	3.3	2
85	Fabrication of syntactic foam fillers manipulation of on-chip quasi concentric nanoparticle-shelled droplet templates. <i>Lab on A Chip</i> , 2020 , 20, 4600-4610	7.2	4
84	Dielectrophoresis Response of Water-in-Oil-in-Water Double Emulsion Droplets with Singular or Dual Cores. <i>Micromachines</i> , 2020 , 11,	3.3	6
83	A microscopic physical description of electrothermal-induced flow for control of ion current transport in microfluidics interfacing nanofluidics. <i>Electrophoresis</i> , 2019 , 40, 2683-2698	3.6	24
82	Three-dimensional paper based platform for automatically running multiple assays in a single step. <i>Talanta</i> , 2019 , 200, 177-185	6.2	8
81	Efficient Micro/Nanoparticle Concentration using Direct Current-Induced Thermal Buoyancy Convection for Multiple Liquid Media. <i>Analytical Chemistry</i> , 2019 , 91, 4457-4465	7.8	12
80	Induced charge electro-osmotic particle separation. <i>Nanoscale</i> , 2019 , 11, 6410-6421	7.7	14

79	Continuous Particle Trapping, Switching, and Sorting Utilizing a Combination of Dielectrophoresis and Alternating Current Electrothermal Flow. <i>Analytical Chemistry</i> , 2019 , 91, 5729-5738	7.8	25
78	Multifrequency Induced-Charge Electroosmosis. <i>Micromachines</i> , 2019 , 10,	3.3	1
77	Microparticle separation using asymmetrical induced-charge electro-osmotic vortices on an arc-edge-based floating electrode. <i>Analyst, The</i> , 2019 , 144, 5150-5163	5	5
76	Tri-fluid mixing in a microchannel for nanoparticle synthesis. <i>Lab on A Chip</i> , 2019 , 19, 2936-2946	7.2	13
75	Compound-Droplet-Pairs-Filled Hydrogel Microfiber for Electric-Field-Induced Selective Release. <i>Small</i> , 2019 , 15, e1903098	11	18
74	A micro-needle induced strategy for preparation of monodisperse liquid metal droplets in glass capillary microfluidics. <i>Microfluidics and Nanofluidics</i> , 2019 , 23, 1	2.8	6
73	Reversible Aggregation and Dispersion of Particles at a Liquid-Liquid Interface Using Space Charge Injection. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1801920	4.6	4
72	Effect of vortex on mass transport and mixing in microcapillary channels. <i>Chemical Engineering Journal</i> , 2019 , 362, 442-452	14.7	15
71	On hybrid electroosmotic kinetics for field-effect-reconfigurable nanoparticle trapping in a four-terminal spiral microelectrode array. <i>Electrophoresis</i> , 2019 , 40, 979-992	3.6	17
70	Electrically controlled rapid release of actives encapsulated in double-emulsion droplets. <i>Lab on A Chip</i> , 2018 , 18, 1121-1129	7.2	34
69	On traveling-wave field-effect flow control for simultaneous induced-charge electroosmotic pumping and mixing in microfluidics: physical perspectives and theoretical analysis. <i>Journal of Micromechanics and Microengineering</i> , 2018 , 28, 055004	2	10
68	Ratiometric system based on graphene quantum dots and Eu for selective detection of tetracyclines. <i>Analytica Chimica Acta</i> , 2018 , 1022, 131-137	6.6	86
67	Simulation analysis of rectifying microfluidic mixing with field-effect-tunable electrothermal induced flow. <i>Electrophoresis</i> , 2018 , 39, 779-793	3.6	12
66	On the Bipolar DC Flow Field-Effect-Transistor for Multifunctional Sample Handling in Microfluidics: A Theoretical Analysis under the Debye-Huckel Limit. <i>Micromachines</i> , 2018 , 9,	3.3	6
65	On AC-Field-Induced Nonlinear Electroosmosis next to the Sharp Corner-Field-Singularity of Leaky Dielectric Blocks and Its Application in on-Chip Micro-Mixing. <i>Micromachines</i> , 2018 , 9,	3.3	24
64	On Developing Field-Effect-Tunable Nanofluidic Ion Diodes with Bipolar, Induced-Charge Electrokinetics. <i>Micromachines</i> , 2018 , 9,	3.3	5
63	Flexible particle flow-focusing in microchannel driven by droplet-directed induced-charge electroosmosis. <i>Electrophoresis</i> , 2018 , 39, 597-607	3.6	15
62	Dielectrophoretic separation with a floating-electrode array embedded in microfabricated fluidic networks. <i>Physics of Fluids</i> , 2018 , 30, 112003	4.4	18

61	Electric Field-Induced Cutting of Hydrogel Microfibers with Precise Length Control for Micromotors and Building Blocks. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 40228-40237	9.5	16
60	An efficient micromixer actuated by induced-charge electroosmosis using asymmetrical floating electrodes. <i>Microfluidics and Nanofluidics</i> , 2018 , 22, 1	2.8	19
59	A High-Throughput Electrokinetic Micromixer via AC Field-Effect Nonlinear Electroosmosis Control in 3D Electrode Configurations. <i>Micromachines</i> , 2018 , 9,	3.3	12
58	High-Throughput Separation, Trapping, and Manipulation of Single Cells and Particles by Combined Dielectrophoresis at a Bipolar Electrode Array. <i>Analytical Chemistry</i> , 2018 , 90, 11461-11469	7.8	42
57	Flexible Continuous Particle Beam Switching via External-Field-Reconfigurable Asymmetric Induced-Charge Electroosmosis. <i>Analytical Chemistry</i> , 2018 , 90, 11376-11384	7.8	15
56	Induced-charge electrokinetics in rotating electric fields: A linear asymptotic analysis. <i>Physics of Fluids</i> , 2018 , 30, 062006	4.4	22
55	Controllable rotating behavior of individual dielectric microrod in a rotating electric field. <i>Electrophoresis</i> , 2017 , 38, 1427-1433	3.6	15
54	A Fast and Effective Microfluidic Spraying-Plunging Method for High-Resolution Single-Particle Cryo-EM. <i>Structure</i> , 2017 , 25, 663-670.e3	5.2	77
53	Fluid pumping and cells separation by DC-biased traveling wave electroosmosis and dielectrophoresis. <i>Microfluidics and Nanofluidics</i> , 2017 , 21, 1	2.8	11
52	On controlling the flow behavior driven by induction electrohydrodynamics in microfluidic channels. <i>Electrophoresis</i> , 2017 , 38, 983-995	3.6	12
51	A simple microfluidic method for one-step encapsulation of reagents with varying concentrations in double emulsion drops for nanoliter-scale reactions and analyses. <i>Analytical Methods</i> , 2017 , 9, 2511-2516	3.2	12
50	Continuously Electrotriggered Core Coalescence of Double-Emulsion Drops for Microreactions. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 12282-12289	9.5	39
49	Osmolarity-controlled swelling behaviors of dual-cored double-emulsion drops. <i>Microfluidics and Nanofluidics</i> , 2017 , 21, 1	2.8	12
48	Sequential Coalescence Enabled Two-Step Microreactions in Triple-Core Double-Emulsion Droplets Triggered by an Electric Field. <i>Small</i> , 2017 , 13, 1702188	11	26
47	A Simplified Microfluidic Device for Particle Separation with Two Consecutive Steps: Induced Charge Electro-osmotic Prefocusing and Dielectrophoretic Separation. <i>Analytical Chemistry</i> , 2017 , 89, 9583-9592	7.8	51
46	Formation Characteristics of microbubble in a co-flowing liquid in microfluidic chip. <i>IOP Conference Series: Earth and Environmental Science</i> , 2017 , 81, 012162	0.3	
45	Microreactions: Sequential Coalescence Enabled Two-Step Microreactions in Triple-Core Double-Emulsion Droplets Triggered by an Electric Field (Small 46/2017). <i>Small</i> , 2017 , 13,	11	1
44	Control of two-phase flow in microfluidics using out-of-phase electroconvective streaming. <i>Physics of Fluids</i> , 2017 , 29, 112002	4.4	27

43	Microbubble Formation in a Co-flowing Liquid in a Microfluidic Chip. <i>Chemical Engineering and Technology</i> , 2017 , 40, 1512-1521	2	5
42	Enhanced model-based design of a high-throughput three dimensional micromixer driven by alternating-current electrothermal flow. <i>Electrophoresis</i> , 2017 , 38, 258-269	3.6	17
41	A universal design of field-effect-tunable microfluidic ion diode based on a gating cation-exchange nanoporous membrane. <i>Physics of Fluids</i> , 2017 , 29, 112001	4.4	27
40	An integrated microfluidic system for zebrafish larva organs injection 2017 ,		5
39	Fluid Flow and Mixing Induced by AC Continuous Electrowetting of Liquid Metal Droplet. <i>Micromachines</i> , 2017 , 8, 119	3.3	14
38	Simulation Analysis of Improving Microfluidic Heterogeneous Immunoassay Using Induced Charge Electroosmosis on a Floating Gate. <i>Micromachines</i> , 2017 , 8,	3.3	9
37	Electrode Cooling Effect on Out-Of-Phase Electrothermal Streaming in Rotating Electric Fields. <i>Micromachines</i> , 2017 , 8,	3.3	8
36	A novel micromixer based on the alternating current-flow field effect transistor. <i>Lab on A Chip</i> , 2016 , 17, 186-197	7.2	30
35	Large-Scale Single Particle and Cell Trapping based on Rotating Electric Field Induced-Charge Electroosmosis. <i>Analytical Chemistry</i> , 2016 , 88, 11791-11798	7.8	28
34	Particle rotational trapping on a floating electrode by rotating induced-charge electroosmosis. <i>Biomicrofluidics</i> , 2016 , 10, 054103	3.2	18
33	Scaled particle focusing in a microfluidic device with asymmetric electrodes utilizing induced-charge electroosmosis. <i>Lab on A Chip</i> , 2016 , 16, 2803-12	7.2	37
32	A multifunctional resealable perfusion chip for cell culture and tissue engineering. <i>RSC Advances</i> , 2016 , 6, 27183-27190	3.7	5
31	Continuous separation of multiple size microparticles using alternating current dielectrophoresis in microfluidic device with acupuncture needle electrodes. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2016 , 29, 325-331	2.5	8
30	Enhanced particle trapping performance of induced charge electroosmosis. <i>Electrophoresis</i> , 2016 , 37, 1326-36	3.6	19
29	In-plane microvortices micromixer-based AC electrothermal for testing drug induced death of tumor cells. <i>Biomicrofluidics</i> , 2016 , 10, 064102	3.2	29
28	Effects of discrete-electrode arrangement on traveling-wave electroosmotic pumping. <i>Journal of Micromechanics and Microengineering</i> , 2016 , 26, 095003	2	16
27	A dual-core double emulsion platform for osmolarity-controlled microreactor triggered by coalescence of encapsulated droplets. <i>Biomicrofluidics</i> , 2016 , 10, 034111	3.2	20
26	On utilizing alternating current-flow field effect transistor for flexibly manipulating particles in microfluidics and nanofluidics. <i>Biomicrofluidics</i> , 2016 , 10, 034105	3.2	27

25	Electrocoalescence of paired droplets encapsulated in double-emulsion drops. <i>Lab on A Chip</i> , 2016 , 16, 4313-4318	7.2	28
24	Induced-charge electroosmotic trapping of particles. <i>Lab on A Chip</i> , 2015 , 15, 2181-91	7.2	70
23	Trapping and chaining self-assembly of colloidal polystyrene particles over a floating electrode by using combined induced-charge electroosmosis and attractive dipole-dipole interactions. <i>Soft Matter</i> , 2015 , 11, 8105-12	3.6	30
22	Rapid, targeted and culture-free viral infectivity assay in drop-based microfluidics. <i>Lab on A Chip</i> , 2015 , 15, 3934-40	7.2	43
21	Continuous-flow focusing of microparticles using induced-charge electroosmosis in a microfluidic device with 3D AgPDMS electrodes. <i>RSC Advances</i> , 2015 , 5, 66602-66610	3.7	17
20	Label-free single-cell protein quantification using a drop-based mix-and-read system. <i>Scientific Reports</i> , 2015 , 5, 12756	4.9	22
19	Alternating current electrokinetics enhanced in situ capacitive immunoassay. <i>Electrophoresis</i> , 2015 , 36, 471-4	3.6	20
18	Artifact-Free Quantification and Sequencing of Rare Recombinant Viruses by Using Drop-Based Microfluidics. <i>ChemBioChem</i> , 2015 , 16, 2167-71	3.8	18
17	Continuous dielectrophoretic particle separation using a microfluidic device with 3D electrodes and vaulted obstacles. <i>Electrophoresis</i> , 2015 , 36, 1744-53	3.6	45
16	AC Electrothermal Circulatory Pumping Chip for Cell Culture. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 26792-801	9.5	40
15	Effects of chip geometries on dielectrophoresis and electrorotation investigation. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2014 , 27, 103-110	2.5	5
14	Convection and mass transfer enhanced rapid capacitive serum immunoassay. <i>RSC Advances</i> , 2014 , 4, 9064	3.7	9
13	Control of the dielectric microrods rotation in liquid by alternating current electric field. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2014 , 27, 622-627	2.5	1
12	Diabetes attenuates the inhibitory effects of endomorphin-2, but not endomorphin-1 on gastrointestinal transit in mice. <i>European Journal of Pharmacology</i> , 2014 , 738, 1-7	5.3	5
11	A theoretical and numerical investigation of travelling wave induction microfluidic pumping in a temperature gradient. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 075501	3	34
10	Effect of the crossing-structure sequence on mixing performance within three-dimensional micromixers. <i>Biomicrofluidics</i> , 2014 , 8, 034106	3.2	18
9	A Mathematical Model of the Knee Joint for Estimation of Forces and Torques During Standing-up. <i>Lecture Notes in Electrical Engineering</i> , 2014 , 21-28	0.2	
8	Automatic microcircuit formation based on gold-coated SU-8 microrods via dielectrophoresis. <i>Chinese Physics B</i> , 2013 , 22, 087701	1.2	

7	Characterization of opioid activities of endomorphin analogs with C-terminal amide to hydrazide conversion. <i>Neuropeptides</i> , 2013 , 47, 297-304	3.3	10
6	An effective splitting-and-recombination micromixer with self-rotated contact surface for wide Reynolds number range applications. <i>Biomicrofluidics</i> , 2013 , 7, 54121	3.2	45
5	Actuation of co-flowing electrolytes in a microfluidic system by microelectrode arrays. <i>Microfluidics and Nanofluidics</i> , 2012 , 13, 441-449	2.8	17
4	Alternating current electrokinetic properties of gold-coated microspheres. <i>Langmuir</i> , 2012 , 28, 13861-704	7.2	
3	Microwire formation based on dielectrophoresis of electroless gold plated polystyrene microspheres. <i>Chinese Physics B</i> , 2011 , 20, 057701	1.2	8
2	Manipulation of gold coated microspheres using electroration. <i>Science China Technological Sciences</i> , 2011 , 54, 643-649	3.5	4
1	Electrical manipulation of electrolytes with conductivity gradients in microsystems. <i>Journal of Electrostatics</i> , 2009 , 67, 372-376	1.7	17