

# Yi Zhang

## List of Publications by Year in descending order

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Version: 2024-02-01

92  
papers

4,609  
citations

126858

33  
h-index

98753

67  
g-index

95  
all docs

95  
docs citations

95  
times ranked

5514  
citing authors

#	ARTICLE	IF	CITATIONS
1	A compact and low loss Y-junction for submicron silicon waveguide. <i>Optics Express</i> , 2013, 21, 1310.	1.7	302
2	Advances in microfluidic PCR for point-of-care infectious disease diagnostics. <i>Biotechnology Advances</i> , 2011, 29, 830-839.	6.0	256
3	Magnetic digital microfluidics – a review. <i>Lab on A Chip</i> , 2017, 17, 994-1008.	3.1	256
4	An optical neural chip for implementing complex-valued neural network. <i>Nature Communications</i> , 2021, 12, 457.	5.8	251
5	An integrated silicon photonic chip platform for continuous-variable quantum key distribution. <i>Nature Photonics</i> , 2019, 13, 839-842.	15.6	196
6	Catching bird flu in a droplet. <i>Nature Medicine</i> , 2007, 13, 1259-1263.	15.2	195
7	Continuous dielectrophoretic bacterial separation and concentration from physiological media of high conductivity. <i>Lab on A Chip</i> , 2011, 11, 2893.	3.1	192
8	3D food printing of fresh vegetables using food hydrocolloids for dysphagic patients. <i>Food Hydrocolloids</i> , 2021, 114, 106546.	5.6	167
9	An integrated fluorescence detection system for lab-on-a-chip applications. <i>Lab on A Chip</i> , 2007, 7, 27-29.	3.1	156
10	A surface topography assisted droplet manipulation platform for biomarker detection and pathogen identification. <i>Lab on A Chip</i> , 2011, 11, 398-406.	3.1	155
11	Quantum Dot Enabled Molecular Sensing and Diagnostics. <i>Theranostics</i> , 2012, 2, 631-654.	4.6	134
12	Sculpting nanoparticle dynamics for single-bacteria-level screening and direct binding-efficiency measurement. <i>Nature Communications</i> , 2018, 9, 815.	5.8	129
13	MS-qFRET: A quantum dot-based method for analysis of DNA methylation. <i>Genome Research</i> , 2009, 19, 1455-1461.	2.4	126
14	Full-Range Magnetic Manipulation of Droplets via Surface Energy Traps Enables Complex Bioassays. <i>Advanced Materials</i> , 2013, 25, 2903-2908.	11.1	118
15	Quantum dots in diagnostics and detection: principles and paradigms. <i>Analyst</i> , 2014, 139, 2968-2981.	1.7	116
16	Clockwork PCR Including Sample Preparation. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 3900-3904.	7.2	106
17	3D food printing: a categorised review of inks and their development. <i>Virtual and Physical Prototyping</i> , 2019, 14, 203-218.	5.3	100
18	Integrated Microcapillary for Sample-to-Answer Nucleic Acid Pretreatment, Amplification, and Detection. <i>Analytical Chemistry</i> , 2014, 86, 10461-10466.	3.2	91

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19	Topography-assisted electromagnetic platform for blood-to-PCR in a droplet. <i>Biosensors and Bioelectronics</i> , 2013, 50, 91-99.	5.3	89
20	A stacking flow immunoassay for the detection of dengue-specific immunoglobulins in salivary fluid. <i>Lab on A Chip</i> , 2015, 15, 1465-1471.	3.1	66
21	Efficient On-Chip Training of Optical Neural Networks Using Genetic Algorithm. <i>ACS Photonics</i> , 2021, 8, 1662-1672.	3.2	61
22	An all-in-one microfluidic device for parallel DNA extraction and gene analysis. <i>Biomedical Microdevices</i> , 2010, 12, 1043-1049.	1.4	58
23	Powder-Based 3D Printing for the Fabrication of Device with Micro and Mesoscale Features. <i>Micromachines</i> , 2020, 11, 658.	1.4	55
24	High-resolution and multi-range particle separation by microscopic vibration in an optofluidic chip. <i>Lab on A Chip</i> , 2017, 17, 2443-2450.	3.1	53
25	Counting single molecules in sub-nanolitre droplets. <i>Lab on A Chip</i> , 2010, 10, 161-164.	3.1	52
26	Nanophotonic Array-Induced Dynamic Behavior for Label-Free Shape-Selective Bacteria Sieving. <i>ACS Nano</i> , 2019, 13, 12070-12080.	7.3	48
27	Optical Potential-Well Array for High-Selectivity, Massive Trapping and Sorting at Nanoscale. <i>Nano Letters</i> , 2020, 20, 5193-5200.	4.5	47
28	A review on spacers and membranes: Conventional or hybrid additive manufacturing?. <i>Water Research</i> , 2021, 188, 116497.	5.3	46
29	Single-Tube Analysis of DNA Methylation with Silica Superparamagnetic Beads. <i>Clinical Chemistry</i> , 2010, 56, 1022-1025.	1.5	45
30	Extraction and processing of circulating DNA from large sample volumes using methylation on beads for the detection of rare epigenetic events. <i>Clinica Chimica Acta</i> , 2013, 425, 169-175.	0.5	45
31	Preliminary Investigation of the Reversible 4D Printing of a Dual-Layer Component. <i>Engineering</i> , 2019, 5, 1159-1170.	3.2	42
32	DNA methylation analysis on a droplet-in-oil PCR array. <i>Lab on A Chip</i> , 2009, 9, 1059.	3.1	41
33	Contactless reversible 4D-printing for 3D-to-3D shape morphing. <i>Virtual and Physical Prototyping</i> , 2020, 15, 481-495.	5.3	36
34	Enzymatic Incorporation of Multiple Dyes for Increased Sensitivity in QD-FRET Sensing for DNA Methylation Detection. <i>ChemBioChem</i> , 2010, 11, 71-74.	1.3	33
35	Single-Molecule Analysis Enables Free Solution Hydrodynamic Separation Using Yoctomole Levels of DNA. <i>Journal of the American Chemical Society</i> , 2011, 133, 6898-6901.	6.6	33
36	Single Quantum Dot Analysis Enables Multiplexed Point Mutation Detection by Gap Ligase Chain Reaction. <i>Small</i> , 2013, 9, 1096-1105.	5.2	33

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37	Serial dilution via surface energy trap-assisted magnetic droplet manipulation. <i>Lab on A Chip</i> , 2013, 13, 4827.	3.1	31
38	Micro magnetic gyromixer for speeding up reactions in droplets. <i>Microfluidics and Nanofluidics</i> , 2012, 12, 787-794.	1.0	30
39	Unconventional Split Aptamers Cleaved at Functionally Essential Sites Preserve Biorecognition Capability. <i>Analytical Chemistry</i> , 2019, 91, 15811-15817.	3.2	29
40	Fouling mitigation in reverse osmosis processes with 3D printed sinusoidal spacers. <i>Water Research</i> , 2021, 207, 117818.	5.3	25
41	Trapping cells in paper for white blood cell count. <i>Biosensors and Bioelectronics</i> , 2015, 69, 121-127.	5.3	24
42	A “culture” shift: Application of molecular techniques for diagnosing polymicrobial infections. <i>Biotechnology Advances</i> , 2019, 37, 476-490.	6.0	24
43	A 3D-printed modular magnetic digital microfluidic architecture for on-demand bioanalysis. <i>Microsystems and Nanoengineering</i> , 2020, 6, 48.	3.4	24
44	Colloidal Rings in a Liquid Mixture. <i>Langmuir</i> , 2005, 21, 7271-7275.	1.6	23
45	Smart ring resonator-based sensor for multicomponent chemical analysis via machine learning. <i>Photonics Research</i> , 2021, 9, B38.	3.4	23
46	Multifunctional Virus Manipulation with Large-Scale Arrays of All-Dielectric Resonant Nanocavities. <i>Laser and Photonics Reviews</i> , 2022, 16, .	4.4	23
47	A droplet microfluidic approach to single-stream nucleic acid isolation and mutation detection. <i>Microfluidics and Nanofluidics</i> , 2014, 17, 425-430.	1.0	22
48	Continuous optical sorting of nanoscale biomolecules in integrated microfluidic-nanophotonic chips. <i>Sensors and Actuators B: Chemical</i> , 2021, 331, 129428.	4.0	22
49	Post-printing surface modification and functionalization of 3D-printed biomedical device. <i>International Journal of Bioprinting</i> , 2017, 3, 93.	1.7	21
50	3D-printed Bioreactors for In Vitro Modeling and Analysis. <i>International Journal of Bioprinting</i> , 2020, 6, 267.	1.7	21
51	Magnetic Soft Millirobots 3D Printed by Circulating Vat Photopolymerization to Manipulate Droplets Containing Hazardous Agents for In Vitro Diagnostics. <i>Advanced Materials</i> , 2022, 34, e2200061.	11.1	21
52	Homogeneous Immunochemical Assay on the Lateral Flow Strip for Measurement of DNase I Activity. <i>Analytical Chemistry</i> , 2015, 87, 10193-10198.	3.2	20
53	Optofluidics in bio-imaging applications. <i>Photonics Research</i> , 2019, 7, 532.	3.4	20
54	Magnetic digital microfluidics on a bioinspired surface for point-of-care diagnostics of infectious disease. <i>Electrophoresis</i> , 2019, 40, 1178-1185.	1.3	19

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55	Application of polydopamine in biomedical microfluidic devices. <i>Microfluidics and Nanofluidics</i> , 2018, 22, 1.	1.0	18
56	Trapping and Detection of Single Viruses in an Optofluidic Chip. <i>ACS Sensors</i> , 2021, 6, 3445-3450.	4.0	18
57	Mapping DNA Quantity into Electrophoretic Mobility through Quantum Dot Nanotethers for High-Resolution Genetic and Epigenetic Analysis. <i>ACS Nano</i> , 2012, 6, 858-864.	7.3	17
58	A Simple Thermoplastic Substrate Containing Hierarchical Silica Lamellae for High-Molecular-Weight DNA Extraction. <i>Advanced Materials</i> , 2016, 28, 10630-10636.	11.1	17
59	Massive nanophotonic trapping and alignment of rod-shaped bacteria for parallel single-cell studies. <i>Sensors and Actuators B: Chemical</i> , 2020, 306, 127562.	4.0	17
60	Systematic Engineering approach for optimization of multi-component alternative protein-fortified 3D printing food Ink. <i>Food Hydrocolloids</i> , 2022, 131, 107803.	5.6	17
61	Multi-Color Au/Ag Nanoparticles for Multiplexed Lateral Flow Assay Based on Spatial Separation and Color Co-localization. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	15
62	Chemical reaction monitoring via the light focusing in optofluidic waveguides. <i>Sensors and Actuators B: Chemical</i> , 2019, 280, 16-23.	4.0	14
63	A 3D-printed magnetic digital microfluidic diagnostic platform for rapid colorimetric sensing of carbapenemase-producing Enterobacteriaceae. <i>Microsystems and Nanoengineering</i> , 2021, 7, 47.	3.4	14
64	Three-dimensional-printing for microfluidics or the other way around?. <i>International Journal of Bioprinting</i> , 2019, 5, 192.	1.7	14
65	Rapid generation of chemical combinations on a magnetic digital microfluidic array. <i>RSC Advances</i> , 2019, 9, 21741-21747.	1.7	13
66	Deep learning-enabled high-speed <i>Cryptosporidium</i> and <i>Giardia</i> detection. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2021, 99, 1123-1133.	1.1	13
67	Optofluidic Microengine in A Dynamic Flow Environment via Self-Induced Back-Action. <i>ACS Photonics</i> , 2020, 7, 1500-1507.	3.2	12
68	A perspective on magnetic microfluidics: Towards an intelligent future. <i>Biomicrofluidics</i> , 2022, 16, 011301.	1.2	11
69	Charge-Dependent Regulation in DNA Adsorption on 2D Clay Minerals. <i>Scientific Reports</i> , 2019, 9, 6808.	1.6	7
70	Magnetic Digital Microfluidics for Point-of-Care Testing: Where Are We Now?. <i>Current Medicinal Chemistry</i> , 2021, 28, 6323-6336.	1.2	7
71	Directly interface microreaction tube and test strip for the detection of Salmonella in food with combined isothermal amplification and lateral flow assay. <i>Food Microbiology</i> , 2022, 107, 104062.	2.1	6
72	Machine Learning-Based Pipeline for High Accuracy Bioparticle Sizing. <i>Micromachines</i> , 2020, 11, 1084.	1.4	5

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73	Sieve-through vertical flow platform for efficient liquid exchange in particle-based assays. <i>Analytica Chimica Acta</i> , 2019, 1051, 94-102.	2.6	3
74	A Perspective on the Role of Point-of-Care "Immuno-Triaging" to Optimize COVID-19 Vaccination Distribution in a Time of Scarcity. <i>Frontiers in Public Health</i> , 2021, 9, 638316.	1.3	3
75	Geomorphology-assisted manipulation of magnet-actuated droplet for solid phase DNA extraction and droplet-in-oil PCR. , 2010, , .		2
76	Quantum dot FRET linker probes for highly sensitive DNA methylation detection. , 2012, , .		2
77	High-resolution quantification by charge-dominant electrophoretic mobility shift of quantum dots. <i>Electrophoresis</i> , 2015, 36, 1011-1015.	1.3	2
78	An automated all-in-one microfluidic device for parallel solid phase DNA extraction and droplet-in-oil PCR analysis. , 2010, , .		1
79	Increasing throughput and sensitivity of DNA Methylation analysis through functional nanoparticles. , 2011, , .		0
80	An active gyroscopic magnetic micromixer for rapid fluid mixing in droplet based microfluidic systems. , 2011, , .		0
81	Fully integrated droplet based point-of-care platform for molecular detection from crude biosamples. , 2011, , .		0
82	Quantum dot electrophoretic mobility shift assay and its application to the measurement of exonuclease activity. , 2012, , .		0
83	Electromagnet-actuated droplet platform for sample-to-answer genetic detection. , 2013, , .		0
84	Flip-drop: Droplet array created by surface energy trap for combinatorial screening. , 2013, , .		0
85	All-in-one droplet platform for multiplexed genetic detection in blood. , 2013, , .		0
86	An Integrated Platform for Single Molecule Free Solution Hydrodynamic Separation Using Yoctomoles of DNA and Picoliter Samples. , 2012, , .		0
87	Sorting and measurement of single gold nanoparticles in an optofluidic chip. , 2017, , .		0
88	Parallel alignment of bacteria using near-field optical force array for cell sorting. , 2017, , .		0
89	Particle trapping and hopping in an optofluidic fishnet. , 2017, , .		0
90	An Automatic Cell Cyclic Motor in Microfluidics via Self-Induced Back-Action. , 2020, , .		0

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91	Coupling assisted high efficiency sorting of spherical and rod-shaped bacteria in an optofluidic chip. , 2020, , .		0
92	Reversible 4D printing. , 2022, , 395-417.		0