

Sungyoung Choi

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

1,775
citations

257450

24
h-index

289244

40
g-index

61
all docs

61
docs citations

61
times ranked

1808
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuous blood cell separation by hydrophoretic filtration. Lab on A Chip, 2007, 7, 1532.	6.0	177
2	Continuous hydrophoretic separation and sizing of microparticles using slanted obstacles in a microchannel. Lab on A Chip, 2007, 7, 890.	6.0	147
3	Sheathless Focusing of Microbeads and Blood Cells Based on Hydrophoresis. Small, 2008, 4, 634-641.	10.0	93
4	Microfluidic Self-Sorting of Mammalian Cells to Achieve Cell Cycle Synchrony by Hydrophoresis. Analytical Chemistry, 2009, 81, 1964-1968.	6.5	90
5	Inertial blood plasma separation in a contraction-expansion array microchannel. Applied Physics Letters, 2011, 98, .	3.3	76
6	Cell sorting by deterministic cell rolling. Lab on A Chip, 2012, 12, 1427.	6.0	75
7	Hydrophoretic high-throughput selection of platelets in physiological shear-stress range. Lab on A Chip, 2011, 11, 413-418.	6.0	70
8	Phenotypic Modulation of Primary Vascular Smooth Muscle Cells by Short-Term Culture on Micropatterned Substrate. PLoS ONE, 2014, 9, e88089.	2.5	69
9	Hydrophoretic Sorting of Micrometer and Submicrometer Particles Using Anisotropic Microfluidic Obstacles. Analytical Chemistry, 2009, 81, 50-55.	6.5	61
10	Sheathless Hydrophoretic Particle Focusing in a Microchannel with Exponentially Increasing Obstacle Arrays. Analytical Chemistry, 2008, 80, 3035-3039.	6.5	56
11	Rapid laminating mixer using a contraction-expansion array microchannel. Applied Physics Letters, 2009, 95, 051902.	3.3	42
12	Microfluidic Rheometer for Characterization of Protein Unfolding and Aggregation in Microflows. Small, 2010, 6, 1306-1310.	10.0	42
13	Microfluidic parallel circuit for measurement of hydraulic resistance. Biomicrofluidics, 2010, 4, .	2.4	37
14	Design rules for size-based cell sorting and sheathless cell focusing by hydrophoresis. Journal of Chromatography A, 2013, 1302, 191-196.	3.7	37
15	Tuneable hydrophoretic separation using elastic deformation of poly(dimethylsiloxane). Lab on A Chip, 2009, 9, 1962.	6.0	34
16	Two-step photolithography to fabricate multilevel microchannels. Biomicrofluidics, 2010, 4, 46503.	2.4	32
17	Advection Flows-Enhanced Magnetic Separation for High-Throughput Bacteria Separation from Undiluted Whole Blood. Small, 2018, 14, e1801731.	10.0	32
18	Super-Resolution Three-Dimensional Imaging of Actin Filaments in Cultured Cells and the Brain via Expansion Microscopy. ACS Nano, 2020, 14, 14999-15010.	14.6	30

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19	A cell rolling cytometer reveals the correlation between mesenchymal stem cell dynamic adhesion and differentiation state. <i>Lab on A Chip</i> , 2014, 14, 161-166.	6.0	29
20	Deterministic Migration-Based Separation of White Blood Cells. <i>Small</i> , 2016, 12, 5159-5168.	10.0	29
21	Smart Pipette and Microfluidic Pipette Tip for Blood Plasma Separation. <i>Small</i> , 2016, 12, 190-197.	10.0	29
22	Microfluidic Pipette Tip for High-Purity and High-Throughput Blood Plasma Separation from Whole Blood. <i>Analytical Chemistry</i> , 2017, 89, 1439-1444.	6.5	29
23	Integrated microfluidic pneumatic circuit for point-of-care molecular diagnostics. <i>Biosensors and Bioelectronics</i> , 2019, 133, 169-176.	10.1	28
24	Inertial modulation of hydrophoretic cell sorting and focusing. <i>Applied Physics Letters</i> , 2014, 104, 074106.	3.3	26
25	A continuous-flow microfluidic syringe filter for size-based cell sorting. <i>Lab on A Chip</i> , 2015, 15, 1250-1254.	6.0	24
26	Optically Coated Mirror-Embedded Microchannel to Measure Hydrophoretic Particle Ordering in Three Dimensions. <i>Small</i> , 2009, 5, 2205-2211.	10.0	23
27	A portable somatic cell counter based on a multi-functional counting chamber and a miniaturized fluorescence microscope. <i>Talanta</i> , 2017, 170, 238-243.	5.5	20
28	Open-source and do-it-yourself microfluidics. <i>Sensors and Actuators B: Chemical</i> , 2021, 347, 130624.	7.8	19
29	Continuous sorting and washing of cancer cells from blood cells by hydrophoresis. <i>Biochip Journal</i> , 2016, 10, 81-87.	4.9	18
30	Inertia-activated cell sorting of immune-specifically labeled cells in a microfluidic device. <i>RSC Advances</i> , 2014, 4, 39140-39144.	3.6	17
31	Optofluidic Modular Blocks for On-Demand and Open-Source Prototyping of Microfluidic Systems. <i>Small</i> , 2018, 14, e1802769.	10.0	17
32	Hand-held, automatic capillary viscometer for analysis of Newtonian and non-Newtonian fluids. <i>Sensors and Actuators A: Physical</i> , 2020, 313, 112176.	4.1	17
33	Smart Microfluidic Pipette Tip Enabled by Flow-Rate Insensitive Particle Ordering. <i>Small</i> , 2014, 10, 4123-4129.	10.0	16
34	Motorized smart pipette for handheld operation of a microfluidic blood plasma separator. <i>Sensors and Actuators B: Chemical</i> , 2018, 267, 581-588.	7.8	16
35	One-Step Microfluidic Purification of White Blood Cells from Whole Blood for Immunophenotyping. <i>Analytical Chemistry</i> , 2019, 91, 13230-13236.	6.5	16
36	Hydrophoresis – A Microfluidic Principle for Directed Particle Migration in Flow. <i>Biochip Journal</i> , 2020, 14, 72-83.	4.9	16

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37	A smart multi-pipette for hand-held operation of microfluidic devices. <i>Analyst, The</i> , 2016, 141, 5753-5758.	3.5	14
38	On-Chip Cell Staining and Counting Platform for the Rapid Detection of Blood Cells in Cerebrospinal Fluid. <i>Sensors</i> , 2018, 18, 1124.	3.8	14
39	Open-source, handheld, wireless spectrometer for rapid biochemical assays. <i>Sensors and Actuators B: Chemical</i> , 2020, 306, 127537.	7.8	14
40	On-site fabrication of injectable ¹³¹ I-labeled microgels for local radiotherapy. <i>Journal of Controlled Release</i> , 2020, 322, 337-345.	9.9	14
41	A Reconfigurable Microfluidics Platform for Microparticle Separation and Fluid Mixing. <i>Micromachines</i> , 2016, 7, 139.	2.9	13
42	3D-Printed Capillary Circuits for Calibration-Free Viscosity Measurement of Newtonian and Non-Newtonian Fluids. <i>Micromachines</i> , 2018, 9, 314.	2.9	13
43	Optical path-length modulation for three-dimensional particle measurement in mirror-embedded microchannels. <i>Lab on A Chip</i> , 2010, 10, 335-340.	6.0	10
44	Field-free, sheathless cell focusing in exponentially expanding hydrophoretic channels for microflow cytometry. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2013, 83, 1034-1040.	1.5	10
45	Handheld Microflow Cytometer Based on a Motorized Smart Pipette, a Microfluidic Cell Concentrator, and a Miniaturized Fluorescence Microscope. <i>Sensors</i> , 2019, 19, 2761.	3.8	9
46	Mirror-embedded microchannel for three-dimensional measurement of particle position. <i>Applied Physics Letters</i> , 2008, 93, 191909.	3.3	7
47	Microfluidics: Smart Microfluidic Pipette Tip Enabled by Flow-Rate Insensitive Particle Ordering (Small) <i>Trends in Microfluidics</i> , 2017, 10, 10.1016/j.tmic.2017.07.001	10.0	7
48	Rapid preparation and single-cell analysis of concentrated blood smears using a high-throughput blood cell separator and a microfabricated grid film. <i>Journal of Chromatography A</i> , 2017, 1507, 141-148.	3.7	7
49	An open-source programmable smart pipette for portable cell separation and counting. <i>RSC Advances</i> , 2019, 9, 41877-41885.	3.6	7
50	High-throughput residual white blood cell counter enabled by microfluidic cell enrichment and reagent-containing patch integration. <i>Sensors and Actuators B: Chemical</i> , 2019, 283, 549-555.	7.8	7
51	Characterization of ATPase Activity of Free and Immobilized Chromatophore Membrane Vesicles of <i>Rhodobacter sphaeroides</i> . <i>Journal of Microbiology and Biotechnology</i> , 2017, 27, 2173-2179.	2.1	7
52	Open-Source Fluorescence Spectrometer for Noncontact Scientific Research and Education. <i>Journal of Chemical Education</i> , 0, .	2.3	7
53	Continuous medium exchange and cell isolation by size-selective passage through slanted micro-obstacles. <i>Journal of Micromechanics and Microengineering</i> , 2014, 24, 025007.	2.6	6
54	A 3D-Printed Multichannel Viscometer for High-Throughput Analysis of Frying Oil Quality. <i>Sensors</i> , 2018, 18, 1625.	3.8	6

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55	Pumpless Microflow Cytometry Enabled by Viscosity Modulation and Immunobead Labeling. <i>Analytical Chemistry</i> , 2018, 90, 8254-8260.	6.5	6
56	Wind-up precision pump for portable microfluidics. <i>Sensors and Actuators B: Chemical</i> , 2021, 347, 130592.	7.8	4
57	Blood Divider for Simple, Surface Tension-Based Isolation of Peripheral Blood Mononuclear Cells. <i>Advanced Materials Technologies</i> , 2022, 7, 2100691.	5.8	3
58	Modular Microfluidics: Optofluidic Modular Blocks for On-Demand and Open-Source Prototyping of Microfluidic Systems (<i>Small</i> 52/2018). <i>Small</i> , 2018, 14, 1870257.	10.0	0