Sung-Jin Kim

List of Publications by Year
in descending order

45 papers	646 citations	516710 16 h-index	610901 24 g-index
46 all docs	46 docs citations	46 times ranked	683 citing authors

#	Article	IF	Citations
1	Temperature-Programmed Natural Convection for Micromixing and Biochemical Reaction in a Single Microfluidic Chamber. Analytical Chemistry, 2009, 81, 4510-4516.	6.5	54
2	Constant Flow-Driven Microfluidic Oscillator for Different Duty Cycles. Analytical Chemistry, 2012, 84, 1152-1156.	6.5	43
3	Pulsatile micromixing using water-head-driven microfluidic oscillators. Chemical Engineering Journal, 2017, 313, 1364-1369.	12.7	41
4	Multiple independent autonomous hydraulic oscillators driven by a common gravity head. Nature Communications, 2015, 6, 7301.	12.8	37
5	Enhanced Sensitivity of Iontronic Graphene Tactile Sensors Facilitated by Spreading of Ionic Liquid Pinned on Graphene Grid. Advanced Functional Materials, 2020, 30, 1908993.	14.9	35
6	Microfluidic Automation Using Elastomeric Valves and Droplets: Reducing Reliance on External Controllers. Small, 2012, 8, 2925-2934.	10.0	32
7	Preprogrammed capillarity to passively control system-level sequential and parallel microfluidic flows. Lab on A Chip, 2013, 13, 2091.	6.0	28
8	Water-head-driven microfluidic oscillators for autonomous control of periodic flows and generation of aqueous two-phase system droplets. Lab on A Chip, 2017, 17, 286-292.	6.0	28
9	Microfluidic oscillators with widely tunable periods. Lab on A Chip, 2013, 13, 1644.	6.0	27
10	Study of SU-8 to make a Ni master-mold: Adhesion, sidewall profile, and removal. Electrophoresis, 2006, 27, 3284-3296.	2.4	26
11	Passive Microfluidic Control of Two Merging Streams by Capillarity and Relative Flow Resistance. Analytical Chemistry, 2005, 77, 6494-6499.	6.5	25
12	Preprogrammed, Parallel On-Chip Immunoassay Using System-Level Capillarity Control. Analytical Chemistry, 2013, 85, 6902-6907.	6.5	21
13	Elastomeric microfluidic valve with low, constant opening threshold pressure. RSC Advances, 2015, 5, 23239-23245.	3.6	20
14	Pulsatile plasma filtration and cell-free DNA amplification using a water-head-driven point-of-care testing chip. Lab on A Chip, 2018, 18, 915-922.	6.0	20
15	Analyzing threshold pressure limitations in microfluidic transistors for self-regulated microfluidic circuits. Applied Physics Letters, 2012, 101, 234107.	3.3	19
16	Stepwise waveform generator for autonomous microfluidic control. Sensors and Actuators B: Chemical, 2018, 266, 614-619.	7.8	16
17	Autonomous microfluidic actuators for periodic sequential flow generation. Science Advances, 2019, 5, eaat3080.	10.3	14
18	Microfluidic Actuation via 3D-Printed Molds toward Multiplex Biosensing of Cell Apoptosis. ACS Sensors, 2019, 4, 2181-2189.	7.8	13

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19	Microfluidic single valve oscillator for blood plasma filtration. Sensors and Actuators B: Chemical, 2019, 296, 126692.	7.8	13
20	Passive droplet generation in aqueous two-phase systems with a variable-width microchannel. Soft Matter, 2019, 15, 4647-4655.	2.7	12
21	Passive regulation of volumeâ€flow ratio for microfluidic streams with different hydrophilicity and viscosity. Electrophoresis, 2010, 31, 709-713.	2.4	11
22	Water-head pumps provide precise and fast microfluidic pumping and switching versus syringe pumps. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	11
23	Microfluidic chip with movable layers for the manipulation of biochemicals. Lab on A Chip, 2018, 18, 1867-1874.	6.0	9
24	Predictable Duty Cycle Modulation through Coupled Pairing of Syringes with Microfluidic Oscillators. Micromachines, 2014, 5, 1254-1269.	2.9	8
25	Hydrophilic strips for preventing air bubble formation in a microfluidic chamber. Electrophoresis, 2015, 36, 2896-2901.	2.4	8
26	Modular fluidic resistors to enable widely tunable flow rate and fluidic switching period in a microfluidic oscillator. Electrophoresis, 2017, 38, 977-982.	2.4	8
27	Analysis of Membrane Behavior of a Normally Closed Microvalve Using a Fluid-Structure Interaction Model. Micromachines, 2017, 8, 355.	2.9	8
28	Microfluidic sputum homogenizer driven by water-head pressure. Sensors and Actuators B: Chemical, 2018, 277, 431-436.	7.8	7
29	Fluidic handling system for PCR-based sample-to-answer detection of viral nucleic acids. Sensors and Actuators B: Chemical, 2021, 349, 130788.	7.8	7
30	Method to prevent backflow in a capillarity network for bioassays: Exploiting time constant ratios. Sensors and Actuators B: Chemical, 2018, 255, 3630-3635.	7.8	5
31	Influence of surface tension-driven network parameters on backflow strength. RSC Advances, 2019, 9, 10345-10351.	3.6	5
32	Viable Bacterial Cell Patterning Using a Pulsed Jet Electrospray System. Journal of Microbiology and Biotechnology, 2015, 25, 381-385.	2.1	5
33	Super-hydrophobic microfluidic channels fabricated via xurography-based polydimethylsiloxane (PDMS) micromolding. Chemical Engineering Science, 2022, 258, 117768.	3.8	5
34	Anomalous pulse change in gravity-driven microfluidic oscillator and its application to photodiode switching. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	4
35	Preprogrammed microfluidic system for parallel anti-reflection coating by layer-by-layer assembly. Lab on A Chip, 2021, 21, 4629-4636.	6.0	4
36	Passive washing using inlet-pressure difference and a washing valve. Journal of Micromechanics and Microengineering, 2007, 17, N22-N29.	2.6	3

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37	Iontronic Graphene Tactile Sensors: Enhanced Sensitivity of Iontronic Graphene Tactile Sensors Facilitated by Spreading of Ionic Liquid Pinned on Graphene Grid (Adv. Funct. Mater. 14/2020). Advanced Functional Materials, 2020, 30, 2070089.	14.9	3
38	Comparative study on the intrinsic NO2 gas sensing capability of triarylamine-based amorphous organic semiconductors. Dyes and Pigments, 2021, 186, 109017.	3.7	3
39	Gravity-Driven Fluid Pumping and Cell Manipulation. Microsystems and Nanosystems, 2017, , 175-192.	0.1	2
40	Movable Layer Device for Rapid Detection of Influenza a H1N1 Virus Using Highly Bright Multi-Quantum Dot-Embedded Particles and Magnetic Beads. Nanomaterials, 2022, 12, 284.	4.1	2
41	Gravity-driven pulsatile micromixer without using dynamic off-chip controllers. , 2017, , .		1
42	Microfluidic stepwise-waveform regulator driven by constant pressure. , 2018, , .		1
43	Microfluidic random number generator driven by water-head pressure and human finger push. Sensors and Actuators A: Physical, 2020, 302, 111802.	4.1	1
44	Characterization of Constant Flow-Driven Microfluidic Oscillator. Journal of Microelectromechanical Systems, 2020, 29, 68-75.	2.5	1
45	Fluidic system with movable layers for all-in-one assay of cell-free DNA in blood. Sensors and Actuators B: Chemical, 2022, 362, 131793.	7.8	0