Je-Kyun Park

List of Publications by Citations

186 papers	6,215 citations	45 h-index	71 g-index
214 ext. papers	6,965 ext. citations	5.8 avg, IF	6.13 L-index

#	Paper	IF	Citations
186	Multi-layered culture of human skin fibroblasts and keratinocytes through three-dimensional freeform fabrication. *Biomaterials*, **2009**, 30, 1587-95	15.6	433
185	On-demand three-dimensional freeform fabrication of multi-layered hydrogel scaffold with fluidic channels. *Biotechnology and Bioengineering*, **2010**, 105, 1178-86	4.9	187
184	Magnetic force-based multiplexed immunoassay using superparamagnetic nanoparticles in microfluidic channel. *Lab on A Chip*, **2005**, 5, 657-64	7.2	181
183	Continuous blood cell separation by hydrophoretic filtration. *Lab on A Chip*, **2007**, 7, 1532-8	7.2	161
182	A microfluidic platform for 3-dimensional cell culture and cell-based assays. *Biomedical Microdevices* , **2007**, 9, 25-34	3.7	149
181	Microfluidic system for dielectrophoretic separation based on a trapezoidal electrode array. *Lab on A Chip*, **2005**, 5, 1161-7	7.2	146
180	Label-free cancer cell separation from human whole blood using inertial microfluidics at low shear stress. *Analytical Chemistry*, **2013**, 85, 6213-8	7.8	143
179	Three-dimensional bioprinting of rat embryonic neural cells. *NeuroReport*, **2009**, 20, 798-803	1.7	128
178	Continuous hydrophoretic separation and sizing of microparticles using slanted obstacles in a microchannel. *Lab on A Chip*, **2007**, 7, 890-7	7.2	127
177	Sol-gel-derived thick-film conductometric biosensor for urea determination in serum. *Analytica Chimica Acta*, **2000**, 404, 195-203	6.6	97
176	Three-dimensional hydrodynamic focusing with a single sheath flow in a single-layer microfluidic device. *Lab on A Chip*, **2009**, 9, 3155-60	7.2	93
175	Label-free cell separation using a tunable magnetophoretic repulsion force. *Analytical Chemistry*, **2012**, 84, 3075-81	7.8	92
174	Reliable permeability assay system in a microfluidic device mimicking cerebral vasculatures. *Biomedical Microdevices*, **2012**, 14, 1141-8	3.7	91
173	In vivo nitric oxide sensor using non-conducting polymer-modified carbon fiber. *Biosensors and Bioelectronics*, **1998**, 13, 1187-95	11.8	88
172	Inertial separation in a contraction-expansion array microchannel. *Journal of Chromatography A*, **2011**, 1218, 4138-43	4.5	87
171	A simple and smart telemedicine device for developing regions: a pocket-sized colorimetric reader. *Lab on A Chip*, **2011**, 11, 120-6	7.2	86
170	Cytotoxicity test based on electrochemical impedance measurement of HepG2 cultured in microfabricated cell chip. *Analytical Biochemistry*, **2005**, 341, 308-15	3.1	85

169	Determination of breath alcohol using a differential-type amperometric biosensor based on alcohol dehydrogenase. *Analytica Chimica Acta*, **1999**, 390, 83-91	6.6	83
168	Microfluidic self-sorting of mammalian cells to achieve cell cycle synchrony by hydrophoresis. *Analytical Chemistry*, **2009**, 81, 1964-8	7.8	81
167	Sheathless focusing of microbeads and blood cells based on hydrophoresis. *Small*, **2008**, 4, 634-41	11	81
166	Continuous generation of hydrogel beads and encapsulation of biological materials using a microfluidic droplet-merging channel. *Microfluidics and Nanofluidics*, **2008**, 5, 541-549	2.8	79
165	Pressed Paper-Based Dipstick for Detection of Foodborne Pathogens with Multistep Reactions. *Analytical Chemistry*, **2016**, 88, 3781-8	7.8	76
164	Electrochemical detection of cardiac troponin I using a microchip with the surface-functionalized poly(dimethylsiloxane) channel. *Biosensors and Bioelectronics*, **2007**, 23, 51-9	11.8	75
163	Analysis of pressure-driven air bubble elimination in a microfluidic device. *Lab on A Chip*, **2008**, 8, 176-8	7.2	70
162	Magnetophoretic immunoassay of allergen-specific IgE in an enhanced magnetic field gradient. *Analytical Chemistry*, **2007**, 79, 2214-20	7.8	70
161	Interactive manipulation of blood cells using a lens-integrated liquid crystal display based optoelectronic tweezers system. *Electrophoresis*, **2008**, 29, 1203-12	3.6	70
160	Rapid and selective concentration of microparticles in an optoelectrofluidic platform. *Lab on A Chip*, **2009**, 9, 199-206	7.2	67
159	Optoelectrofluidic platforms for chemistry and biology. *Lab on A Chip*, **2011**, 11, 33-47	7.2	65
158	Lateral flow assay-based bacterial detection using engineered cell wall binding domains of a phage endolysin. *Biosensors and Bioelectronics*, **2017**, 96, 173-177	11.8	63
157	Breast cancer diagnosis using a microfluidic multiplexed immunohistochemistry platform. *PLoS ONE*, **2010**, 5, e10441	3.7	61
156	Self-reference quantitative phase microscopy for microfluidic devices. *Optics Letters*, **2010**, 35, 514-6	3	60
155	Hydrophoretic sorting of micrometer and submicrometer particles using anisotropic microfluidic obstacles. *Analytical Chemistry*, **2009**, 81, 50-5	7.8	58
154	A microfluidic in vitro cultivation system for mechanical stimulation of bovine embryos. *Electrophoresis*, **2009**, 30, 3276-82	3.6	57
153	Inertial blood plasma separation in a contraction–expansion array microchannel. *Applied Physics Letters*, **2011**, 98, 253702	3.4	57
152	Optoelectrofluidic sandwich immunoassays for detection of human tumor marker using surface-enhanced Raman scattering. *Analytical Chemistry*, **2010**, 82, 7603-10	7.8	56

151	Enhanced discrimination of normal oocytes using optically induced pulling-up dielectrophoretic force. *Biomicrofluidics*, **2009**, 3, 14103	3.2	56
150	Hydrophoretic high-throughput selection of platelets in physiological shear-stress range. *Lab on A Chip*, **2011**, 11, 413-8	7.2	55
149	Disposable liposome immunosensor for theophylline combining an immunochromatographic membrane and a thick-film electrode. *Analytica Chimica Acta*, **1999**, 380, 17-26	6.6	53
148	Phenotypic modulation of primary vascular smooth muscle cells by short-term culture on micropatterned substrate. *PLoS ONE*, **2014**, 9, e88089	3.7	52
147	Lab-on-a-display: a new microparticle manipulation platform using a liquid crystal display (LCD). *Microfluidics and Nanofluidics*, **2007**, 3, 217-225	2.8	51
146	Microfluidic biomechanical device for compressive cell stimulation and lysis. *Sensors and Actuators B: Chemical*, **2007**, 128, 108-116	8.5	51
145	Pressed region integrated 3D paper-based microfluidic device that enables vertical flow multistep assays for the detection of C-reactive protein based on programmed reagent loading. *Sensors and Actuators B: Chemical*, **2017**, 246, 1049-1055	8.5	48
144	Paper on a disc: balancing the capillary-driven flow with a centrifugal force. *Lab on A Chip*, **2011**, 11, 3404-6	7.2	48
143	Sheathless hydrophoretic particle focusing in a microchannel with exponentially increasing obstacle arrays. *Analytical Chemistry*, **2008**, 80, 3035-9	7.8	48
142	Towards practical sample preparation in point-of-care testing: user-friendly microfluidic devices. *Lab on A Chip*, **2020**, 20, 1191-1203	7.2	46
141	In situ dynamic measurements of the enhanced SERS signal using an optoelectrofluidic SERS platform. *Lab on A Chip*, **2011**, 11, 2518-25	7.2	44
140	Dielectrophoretic oocyte selection chip for in vitro fertilization. *Biomedical Microdevices*, **2008**, 10, 337-45	3.7	44
139	Magnetophoretic continuous purification of single-walled carbon nanotubes from catalytic impurities in a microfluidic device. *Small*, **2007**, 3, 1784-91	11	43
138	DNA biosensor based on the electrochemiluminescence of Ru(bpy)3(2+) with DNA-binding intercalators. *Bioelectrochemistry*, **2007**, 70, 228-34	5.6	43
137	In situ analysis of heterogeneity in the lipid content of single green microalgae in alginate hydrogel microcapsules. *Analytical Chemistry*, **2013**, 85, 8749-56	7.8	42
136	One-step preparation of magnetic Janus particles using controlled phase separation of polymer blends and nanoparticles. *RSC Advances*, **2013**, 3, 11801	3.7	42
135	Programmed sample delivery on a pressurized paper. *Biomicrofluidics*, **2014**, 8, 054121	3.2	41
134	Microfabricated Conductometric Urea Biosensor Based on Sol-Gel Immobilized Urease. *Electroanalysis*, **2000**, 12, 78-82	3	41

133	Finger-actuated microfluidic device for the blood cross-matching test. *Lab on A Chip*, **2018**, 18, 1215-1222	7.2	40
132	Drug permeability assay using microhole-trapped cells in a microfluidic device. *Analytical Chemistry*, **2009**, 81, 1944-51	7.8	38
131	Programmable manipulation of motile cells in optoelectronic tweezers using a grayscale image. *Applied Physics Letters*, **2008**, 93, 143901	3.4	38
130	Direct rapid prototyping of PDMS from a photomask film for micropatterning of biomolecules and cells. *Lab on A Chip*, **2009**, 9, 167-70	7.2	37
129	Plasma extraction in a capillary-driven microfluidic device using surfactant-added poly(dimethylsiloxane). *Sensors and Actuators B: Chemical*, **2010**, 145, 861-868	8.5	37
128	Experimental investigation of electrostatic particle-particle interactions in optoelectronic tweezers. *Journal of Physical Chemistry B*, **2008**, 112, 9903-8	3.4	36
127	Isomagnetophoresis to discriminate subtle difference in magnetic susceptibility. *Journal of the American Chemical Society*, **2008**, 130, 396-7	16.4	35
126	Amperometric biosensor for determination of ethanol vapor. *Biosensors and Bioelectronics*, **1995**, 10, 587-594	11.8	35
125	Rapid laminating mixer using a contraction-expansion array microchannel. *Applied Physics Letters*, **2009**, 95, 051902	3.4	34
124	Microfluidic rheometer for characterization of protein unfolding and aggregation in microflows. *Small*, **2010**, 6, 1306-10	11	34
123	Multiplexed Detection of Foodborne Pathogens from Contaminated Lettuces Using a Handheld Multistep Lateral Flow Assay Device. *Journal of Agricultural and Food Chemistry*, **2018**, 66, 290-297	5.7	31
122	Tuneable hydrophoretic separation using elastic deformation of poly(dimethylsiloxane). *Lab on A Chip*, **2009**, 9, 1962-5	7.2	30
121	Quantum dot-based immunoassay enhanced by high-density vertical ZnO nanowire array. *Biosensors and Bioelectronics*, **2014**, 55, 209-15	11.8	29
120	Enhanced blood plasma separation by modulation of inertial lift force. *Sensors and Actuators B: Chemical*, **2014**, 190, 311-317	8.5	29
119	Cellular hydrogel biopaper for patterned 3D cell culture and modular tissue reconstruction. *Advanced Healthcare Materials*, **2012**, 1, 635-9	10.1	29
118	Integrated microfluidic pumps and valves operated by finger actuation. *Lab on A Chip*, **2019**, 19, 2973-2977	7.2	28
117	Versatile immunoassays based on isomagnetophoresis. *Lab on A Chip*, **2011**, 11, 2045-8	7.2	28
116	Biomechanical analysis of cancerous and normal cells based on bulge generation in a microfluidic device. *Analyst, The*, **2008**, 133, 1432-9	5	28

115	Random breakup of microdroplets for single-cell encapsulation. *Applied Physics Letters*, **2010**, 97, 153703	3.4	27
114	In situ electrochemical enzyme immunoassay on a microchip with surface-functionalized poly(dimethylsiloxane) channel. *Enzyme and Microbial Technology*, **2006**, 39, 1122-1127	3.8	27
113	Mesh-integrated microdroplet array for simultaneous merging and storage of single-cell droplets. *Lab on A Chip*, **2012**, 12, 1594-7	7.2	26
112	Optoelectrofluidic control of colloidal assembly in an optically induced electric field. *Langmuir*, **2009**, 25, 6010-4	4	26
111	Inertial Microfluidics-Based Cell Sorting. *Biochip Journal*, **2018**, 12, 257-267	4	26
110	Automated measurement of multiple cancer biomarkers using quantum-dot-based microfluidic immunohistochemistry. *Analytical Chemistry*, **2015**, 87, 4177-83	7.8	25
109	Quantitative proteomic profiling of breast cancers using a multiplexed microfluidic platform for immunohistochemistry and immunocytochemistry. *Biomaterials*, **2011**, 32, 1396-403	15.6	25
108	Microfluidic parallel circuit for measurement of hydraulic resistance. *Biomicrofluidics*, **2010**, 4,	3.2	25
107	Fabrication of a poly(dimethylsiloxane) membrane with well-defined through-holes for three-dimensional microfluidic networks. *Journal of Micromechanics and Microengineering*, **2009**, 19, 045027	2	25
106	A microfluidic abacus channel for controlling the addition of droplets. *Lab on A Chip*, **2009**, 9, 207-12	7.2	25
105	Rapid multivortex mixing in an alternately formed contraction-expansion array microchannel. *Biomedical Microdevices*, **2010**, 12, 1019-26	3.7	25
104	Reduction of nonspecific surface-particle interactions in optoelectronic tweezers. *Applied Physics Letters*, **2008**, 92, 024108	3.4	24
103	User-friendly 3D bioassays with cell-containing hydrogel modules: narrowing the gap between microfluidic bioassays and clinical end-usersTneeds. *Lab on A Chip*, **2015**, 15, 2379-87	7.2	23
102	Dynamic light-activated control of local chemical concentration in a fluid. *Analytical Chemistry*, **2009**, 81, 5865-70	7.8	23
101	Functional Packaging of Lateral Flow Strip Allows Simple Delivery of Multiple Reagents for Multistep Assays. *Analytical Chemistry*, **2016**, 88, 10374-10378	7.8	23
100	Two-step photolithography to fabricate multilevel microchannels. *Biomicrofluidics*, **2010**, 4, 46503	3.2	21
99	Optically coated mirror-embedded microchannel to measure hydrophoretic particle ordering in three dimensions. *Small*, **2009**, 5, 2205-11	11	21
98	Microfluidic self-assembly of insulin monomers into amyloid fibrils on a solid surface. *Langmuir*, **2008**, 24, 7068-71	4	21

97	Microvalve-assisted patterning platform for measuring cellular dynamics based on 3D cell culture. *Biotechnology and Bioengineering*, **2008**, 101, 1005-13	4.9	21
96	Optoelectrofluidic enhanced immunoreaction based on optically-induced dynamic AC electroosmosis. *Lab on A Chip*, **2016**, 16, 1189-96	7.2	19
95	Development of a microplate reader compatible microfluidic device for enzyme assay. *Sensors and Actuators B: Chemical*, **2005**, 107, 980-985	8.5	19
94	Magnetophoretic Sorting of Single Cell-Containing Microdroplets. *Micromachines*, **2016**, 7,	3.3	19
93	Freestanding stacked mesh-like hydrogel sheets enable the creation of complex macroscale cellular scaffolds. *Biotechnology Journal*, **2016**, 11, 585-91	5.6	18
92	Finger-Actuated Microfluidic Display for Smart Blood Typing. *Analytical Chemistry*, **2019**, 91, 11636-11642	7.8	18
91	Measurement of molecular diffusion based on optoelectrofluidic fluorescence microscopy. *Analytical Chemistry*, **2009**, 81, 9163-7	7.8	18
90	Development of a test strip reader for a lateral flow membrane-based immunochromatographic assay. *Biotechnology and Bioprocess Engineering*, **2004**, 9, 127-131	3.1	18
89	A Microfluidic Immunostaining System Enables Quality Assured and Standardized Immunohistochemical Biomarker Analysis. *Scientific Reports*, **2017**, 7, 45968	4.9	17
88	Magnetophoretic position detection for multiplexed immunoassay using colored microspheres in a microchannel. *Biosensors and Bioelectronics*, **2009**, 24, 1870-6	11.8	17
87	Microfabricated embryonic stem cell divider for large-scale propagation of human embryonic stem cells. *Lab on A Chip*, **2007**, 7, 513-5	7.2	17
86	A new biosensor for specific determination of sucrose using an oxidoreductase of Zymomonas mobilis and invertase. *Biotechnology and Bioengineering*, **1991**, 38, 217-23	4.9	17
85	Experimental Analysis of Porosity and Permeability in Pressed Paper. *Micromachines*, **2016**, 7,	3.3	16
84	Inertia-activated cell sorting of immune-specifically labeled cells in a microfluidic device. *RSC Advances*, **2014**, 4, 39140-39144	3.7	15
83	Mechanical stimulation of bovine embryos in a microfluidic culture platform. *Biochip Journal*, **2011**, 5, 106-113	4	15
82	Preclinical analysis of irreversible electroporation on rat liver tissues using a microfabricated electroporator. *Tissue Engineering - Part C: Methods*, **2010**, 16, 1245-53	2.9	15
81	Facile and biocompatible fabrication of chemically sol-gel transitional hydrogel free-standing microarchitectures. *Biomacromolecules*, **2011**, 12, 14-8	6.9	15
80	Generation and manipulation of droplets in an optoelectrofluidic device integrated with microfluidic channels. *Applied Physics Letters*, **2009**, 95, 164102	3.4	15

79	High-throughput nanoscale lipid vesicle synthesis in a semicircular contraction-expansion array microchannel. *Biochip Journal*, **2013**, 7, 210-217	4	14
78	Pipetting-driven microfluidic immunohistochemistry to facilitate enhanced immunoreaction and effective use of antibodies. *Lab on A Chip*, **2017**, 17, 702-709	7.2	13
77	Finger-Actuated Microfluidic Concentration Gradient Generator Compatible with a Microplate. *Micromachines*, **2019**, 10,	3.3	13
76	Geometric effect of the hydrogel grid structure on in vitro formation of homogeneous MIN6 cell clusters. *Lab on A Chip*, **2014**, 14, 2183-90	7.2	13
75	Rapid one-step purification of single-cells encapsulated in alginate microcapsules from oil to aqueous phase using a hydrophobic filter paper: implications for single-cell experiments. *Biotechnology Journal*, **2014**, 9, 1233-40	5.6	13
74	On-chip testing device for electrochemotherapeutic effects on human breast cells. *Biomedical Microdevices*, **2009**, 11, 151-9	3.7	13
73	A new biosensor for specific determination of glucose or fructose using an oxidoreductase of Zymomonas mobilis. *Biotechnology and Bioengineering*, **1990**, 36, 744-9	4.9	13
72	Magnetic nanoclusters for ultrasensitive magnetophoretic assays. *Small*, **2009**, 5, 2243-6	11	12
71	Microbridge structures for uniform interval control of flowing droplets in microfluidic networks. *Biomicrofluidics*, **2011**, 5, 34117-341179	3.2	11
70	Hepatotoxicity assay using human hepatocytes trapped in microholes of a microfluidic device. *Electrophoresis*, **2010**, 31, 3167-74	3.6	11
69	Foldable paper-based analytical device for the detection of an acetylcholinesterase inhibitor using an angle-based readout. *Sensors and Actuators B: Chemical*, **2018**, 273, 322-327	8.5	10
68	Moldless electroplating for cylindrical microchannel fabrication. *Electrochemistry Communications*, **2005**, 7, 913-917	5.1	10
67	Flow Injection Analysis of Glucose, Fructose, and Sucrose Using a Biosensor Constructed with Permeabilized Zymomonas mobilis and Invertase. *Biotechnology Progress*, **1995**, 11, 58-63	2.8	9
66	Breast cancer diagnostics using microfluidic multiplexed immunohistochemistry. *Methods in Molecular Biology*, **2013**, 949, 349-64	1.4	9
65	Integrated pumpless microfluidic chip for the detection of foodborne pathogens by polymerase chain reaction and electrochemical analysis. *Sensors and Actuators B: Chemical*, **2021**, 329, 129130	8.5	9
64	Optical path-length modulation for three-dimensional particle measurement in mirror-embedded microchannels. *Lab on A Chip*, **2010**, 10, 335-40	7.2	8
63	Pushbutton-activated microfluidic dropenser for droplet digital PCR. *Biosensors and Bioelectronics*, **2021**, 181, 113159	11.8	8
62	Hand-Maneuverable Collagen Sheet with Micropatterns for 3D Modular Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2019**, 5, 339-345	5.5	8

61	On-site extraction and purification of bacterial nucleic acids from blood samples using an unpowered microfluidic device. *Sensors and Actuators B: Chemical*, **2020**, 320, 128346	8.5	7
60	Reciprocating flow-assisted nucleic acid purification using a finger-actuated microfluidic device. *Lab on A Chip*, **2020**, 20, 3346-3353	7.2	7
59	High-throughput culture and embedment of spheroid array using droplet contact-based spheroid transfer. *Biomicrofluidics*, **2018**, 12, 044109	3.2	7
58	A quantum dot-based microfluidic multi-window platform for quantifying the biomarkers of breast cancer cells. *Integrative Biology (United Kingdom)*, **2014**, 6, 430-7	3.7	7
57	Optoelectrofluidic behavior of metal–polymer hybrid colloidal particles. *Applied Physics Letters*, **2013**, 102, 054105	3.4	7
56	Dielectrophoresis in a slanted microchannel for separation of microparticles and bacteria. *Journal of Nanoscience and Nanotechnology*, **2013**, 13, 7993-7	1.3	7
55	Optoelectrofluidic Manipulation of Nanoparticles and Biomolecules. *Advances in OptoElectronics*, **2011**, 2011, 1-13	0.5	7
54	Microdevice for analyzing the effect of electrochemotherapy on cancer cells. *Analytical Chemistry*, **2009**, 81, 3517-22	7.8	7
53	Microfluidic channel-integrated hanging drop array chip operated by pushbuttons for spheroid culture and analysis. *Analyst, The*, **2020**, 145, 6974-6980	5	7
52	Colorimetric Detection of O157:H7 with Signal Enhancement Using Size-Based Filtration on a Finger-Powered Microfluidic Device. *Sensors*, **2020**, 20,	3.8	7
51	Toxicity Assessment of Iron Oxide Nanoparticles Based on Cellular Magnetic Loading Using Magnetophoretic Sorting in a Trapezoidal Microchannel. *Analytical Chemistry*, **2018**, 90, 920-927	7.8	7
50	Optoelectrofluidic printing system for fabricating hydrogel sheets with on-demand patterned cells and microparticles. *Biofabrication*, **2017**, 9, 015011	10.5	6
49	Microfabricated cell culture system for the live cell observation of the multilayered proliferation of undifferentiated HT-29 cells. *Biochip Journal*, **2017**, 11, 308-315	4	6
48	Reduction in microparticle adsorption using a lateral interconnection method in a PDMS-based microfluidic device. *Electrophoresis*, **2013**, 34, 3119-25	3.6	6
47	Mirror-embedded microchannel for three-dimensional measurement of particle position. *Applied Physics Letters*, **2008**, 93, 191909	3.4	6
46	Microfluidic Micropillar Arrays for 3D Cell Culture. *Open Biotechnology Journal*, **2008**, 2, 224-228	2	6
45	Visualization and label-free quantification of microfluidic mixing using quantitative phase imaging. *Applied Optics*, **2017**, 56, 6341-6347	1.7	5
44	Plant array chip for the germination and growth screening of Arabidopsis thaliana. *Lab on A Chip*, **2017**, 17, 3071-3077	7.2	5

43	Organic Solvent and Surfactant Resistant Paper-Fluidic Devices Fabricated by One-Step Embossing of Nonwoven Polypropylene Sheet. *Micromachines*, **2017**, 8, 30	3.3	5
42	A bio-fluidic device for adaptive sample pretreatment and its application to measurements ofEscherichia coli concentrations. *Biotechnology and Bioprocess Engineering*, **2006**, 11, 54-60	3.1	5
41	Submicro photopatterning of alkanethiolate self-assembled monolayer using a negative mask and its application in the fabrication of biomolecular photodiode. *Materials Science and Engineering C*, **2004**, 24, 91-94	8.3	5
40	Controlled 3D co-culture of beta cells and endothelial cells in a micropatterned collagen sheet for reproducible construction of an improved pancreatic pseudo-tissue. *APL Bioengineering*, **2020**, 4, 046103	6.6	5
39	Fabrication of a Perfusable 3D In Vitro Artery-Mimicking Multichannel System for Artery Disease Models. *ACS Biomaterials Science and Engineering*, **2020**, 6, 5326-5336	5.5	5
38	On-chip generation of monodisperse giant unilamellar lipid vesicles containing quantum dots. *Electrophoresis*, **2016**, 37, 1353-8	3.6	5
37	Extraordinary Figure-of-Merit of Magnetic Resonance from Ultrathin Silicon Nanohole Membrane as All-Dielectric Metamaterial. *Advanced Optical Materials*, **2017**, 5, 1600628	8.1	4
36	Superparamagnetic nanoparticle-based nanobiomolecular detection in a microfluidic channel. *Current Applied Physics*, **2006**, 6, 976-981	2.6	4
35	Disposable thick-film amperometric biosensor with multiple working electrodes fabricated on a single substrate. *Sensors and Actuators B: Chemical*, **1996**, 34, 490-492	8.5	4
34	Microarray-integrated optoelectrofluidic immunoassay system. *Biomicrofluidics*, **2016**, 10, 034106	3.2	4
33	Inertial Microfluidics-Based Separation of Microalgae Using a Contraction-Expansion Array Microchannel. *Micromachines*, **2021**, 12,	3.3	4
32	A magnetophoresis-based microfluidic detection platform under a static-fluid environment. *Microfluidics and Nanofluidics*, **2017**, 21, 1	2.8	3
31	Assembly of hydrogel units for 3D microenvironment in a poly(dimethylsiloxane) channel. *Micro and Nano Systems Letters*, **2017**, 5,	2	3
30	A fully automated analyzer for multiple detection of allergen-specific immunoglobulin E. *Analytical Methods*, **2015**, 7, 8889-8895	3.2	3
29	Construction of Modular Hydrogel Sheets for Micropatterned Macro-scaled 3D Cellular Architecture. *Journal of Visualized Experiments*, **2016**,	1.6	3
28	Vertically sheathing laminar flow-based immunoassay using simultaneous diffusion-driven immune reactions.. *RSC Advances*, **2019**, 9, 23791-23796	3.7	3
27	Demonstration of Interposed Modular Hydrogel Sheet for Multicellular Analysis in a Microfluidic Assembly Platform. *Scientific Reports*, **2017**, 7, 1289	4.9	3
26	Microfluidic pycnometer for in situ analysis of fluids in microchannels. *Analytical Chemistry*, **2009**, 81, 2569-74	7.8	3

25	Assembly and Disassembly of the Micropatterned Collagen Sheets Containing Cells for Location-Based Cellular Function Analysis. *Biochip Journal*, **2021**, 15, 77-89	4	3
24	Biomarker barcodes: multiplexed microfluidic immunohistochemistry enables high-throughput analysis of tissue microarray. *Lab on A Chip*, **2021**, 21, 3471-3482	7.2	3
23	Design criteria and standardization of a microfluidic cell culture system for investigating cellular migration. *Journal of Micromechanics and Microengineering*, **2019**, 29, 043003	2	2
22	Microchannel Integrated Comb-Type Electrode System for Electrochemical Detection **2006**,		2
21	Multilayered and heterogeneous hydrogel construct printing system with crosslinking aerosol. *Biofabrication*, **2021**, 13,	10.5	2
20	Microfluidic on-chip immunohistochemistry directly from a paraffin-embedded section. *Biomicrofluidics*, **2018**, 12, 044110	3.2	1
19	Lab-on-a-Chip Technology for Integrative Bioengineering **2010**,		1
18	Microfluidics: Small 19/2009. *Small*, **2009**, 5, NA-NA	11	1
17	Self-reference extended depth-of-field quantitative phase microscopy **2010**,		1
16	A microfluidic magnetophoresis chip for continuous single-walled carbon nanotube purification from magnetic force-induced superparamagnetic metal catalyst **2007**,		1
15	Lab-on-a-Display: Microparticles Manipulation using Liquid Crystal Display **2006**,		1
14	Chips-on-a-plate device for monitoring cellular migration in a microchannel-based intestinal follicle-associated epithelium model. *Biomicrofluidics*, **2019**, 13, 064127	3.2	1
13	Label-free monitoring of 3D cortical neuronal growth using optical diffraction tomography. *Biomedical Optics Express*, **2021**, 12, 6928-6939	3.5	1
12	On-demand three-dimensional freeform fabrication of multi-layered hydrogel scaffold with fluidic channels. *Biotechnology and Bioengineering*, **2010**, n/a-n/a	4.9	1
11	Modular 3D In Vitro Artery-Mimicking Multichannel System for Recapitulating Vascular Stenosis and Inflammation.. *Micromachines*, **2021**, 12,	3.3	1
10	Direct Microextrusion Printing of a Low Viscosity Hydrogel on a Supportive Microstructured Bioprinting Substrate for the Vasculogenesis of Endothelial Cells. *Advanced Materials Technologies*,2101326	6.8	1
9	DNA chip replication for a personalized DNA chip. *New Biotechnology*, **2006**, 23, 129-34		0
8	Droplet contact-based spheroid transfer technique as a multi-step assay tool for spheroid arrays. *Lab on A Chip*, **2021**, 21, 4155-4165	7.2	0

7	Bioprinting of heterogeneous and multilayered cell-hydrogel constructs using continuous multi-material printing and aerosol-based crosslinking.. *STAR Protocols*, **2022**, 3, 101303	1.4	0
6	Tissue Reconstruction: Cellular Hydrogel Biopaper for Patterned 3D Cell Culture and Modular Tissue Reconstruction (Adv. Healthcare Mater. 5/2012). *Advanced Healthcare Materials*, **2012**, 1, 530-530	10.1	
5	Hydrophoretic Separation Method Applicable to Biological Samples. *NATO Science for Peace and Security Series A: Chemistry and Biology*, **2010**, 577-594	0.1	
4	Biological Applications of Programmable Optoelectrofluidic Manipulation. *Materials Research Society Symposia Proceedings*, **2009**, 1173, 20		
3	Nanobiotechnology for Stem Cell Culture and Maintenance291-310		
2	Programmable Cell Manipulation Using Lab-on-a-Display. *NATO Science for Peace and Security Series A: Chemistry and Biology*, **2010**, 595-613	0.1	
1	Pushbutton-activated microfluidic cartridge as a user-friendly sample preparation tool for diagnostics. *Biomicrofluidics*, **2021**, 15, 041302	3.2	