Seok Chung

List of Publications by Year in descending order

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76031 66518 7,471 122 42 82 citations h-index g-index papers 125 125 125 10681 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	A highâ€throughput biomimetic boneâ€onâ€aâ€chip platform with artificial intelligenceâ€assisted image analysis for osteoporosis drug testing. Bioengineering and Translational Medicine, 2023, 8, .	3.9	17
2	Microfluidic one-directional interstitial flow generation from cancer to cancer associated fibroblast. Acta Biomaterialia, 2022, 144, 258-265.	4.1	10
3	Recapitulated Crosstalk between Cerebral Metastatic Lung Cancer Cells and Brain Perivascular Tumor Microenvironment in a Microfluidic Co ulture Chip. Advanced Science, 2022, 9, .	5.6	12
4	Generation of uniform liver spheroids from human pluripotent stem cells for imaging-based drug toxicity analysis. Biomaterials, 2021, 269, 120529.	5.7	38
5	Nano-Interstice Driven Powerless Blood Plasma Extraction in a Membrane Filter Integrated Microfluidic Device. Sensors, 2021, 21, 1366.	2.1	6
6	Microfluidic Reconstitution of Tumor Microenvironment for Nanomedical Applications. Advanced Healthcare Materials, 2021, 10, 2002122.	3.9	4
7	Highly efficient and scalable biomarker preconcentrator based on nanoelectrokinetics. Biosensors and Bioelectronics, 2021, 176, 112904.	5.3	7
8	Mutation-specific non-canonical pathway of PTEN as a distinct therapeutic target for glioblastoma. Cell Death and Disease, 2021, 12, 374.	2.7	15
9	Transcriptomic profiling of three-dimensional cholangiocyte spheroids long term exposed to repetitive Clonorchis sinensis excretory-secretory products. Parasites and Vectors, 2021, 14, 213.	1.0	4
10	SRPS–deep-learning-based photometric stereo using superresolution images. Journal of Computational Design and Engineering, 2021, 8, 995-1012.	1.5	3
11	Simulation and Experimental Study of Ion Concentration Polarization Induced Electroconvective Vortex and Particle Movement. Micromachines, 2021, 12, 903.	1.4	2
12	Gamma irradiation exposure for collapsed cell junctions and reduced angiogenesis of 3-D in vitro blood vessels. Scientific Reports, 2021, 11, 18230.	1.6	5
13	Drug screening by uniform patient derived colorectal cancer hydro-organoids. Biomaterials, 2021, 276, 121004.	5.7	12
14	A rapid quantitative on-site coronavirus disease 19 serological test. Biosensors and Bioelectronics, 2021, 191, 113406.	5.3	10
15	A three-dimensional in vitro model of the peripheral nervous system. NPG Asia Materials, 2021, 13, .	3.8	14
16	Modulation of Nogo receptor 1 expression orchestrates myelin-associated infiltration of glioblastoma. Brain, 2021, 144, 636-654.	3.7	16
17	Inhibition of tumor progression and M2 microglial polarization by extracellular vesicle-mediated microRNA-124 in a 3D microfluidic glioblastoma microenvironment. Theranostics, 2021, 11, 9687-9704.	4.6	38
18	Isolation of extracellular vesicles from small volumes of plasma using a microfluidic aqueous two-phase system. Lab on A Chip, 2020, 20, 3552-3559.	3.1	17

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19	Transcriptional regulatory networks of tumor-associated macrophages that drive malignancy in mesenchymal glioblastoma. Genome Biology, 2020, 21, 216.	3.8	73
20	Phenotypic Heterogeneity and Plasticity of Cancer Cell Migration in a Pancreatic Tumor Three-Dimensional Culture Model. Cancers, 2020, 12, 1305.	1.7	21
21	Remote Manipulation of Slidable Nano‣igand Switch Regulates the Adhesion and Regenerative Polarization of Macrophages. Advanced Functional Materials, 2020, 30, 2001446.	7.8	27
22	Microfluidic immunoassay for point-of-care testing using simple fluid vent control. Sensors and Actuators B: Chemical, 2020, 316, 128094.	4.0	15
23	Blood–Brain Barrier Dysfunction in a 3D In Vitro Model of Alzheimer's Disease. Advanced Science, 2019, 6, 1900962.	5.6	168
24	Balance of interstitial flow magnitude and vascular endothelial growth factor concentration modulates three-dimensional microvascular network formation. APL Bioengineering, 2019, 3, 036102.	3.3	63
25	Repurposing Penfluridol in Combination with Temozolomide for the Treatment of Glioblastoma. Cancers, 2019, 11, 1310.	1.7	18
26	Clonorchis sinensis excretory-secretory products increase malignant characteristics of cholangiocarcinoma cells in three-dimensional co-culture with biliary ductal plates. PLoS Pathogens, 2019, 15, e1007818.	2.1	32
27	Pre-Metastatic Niches: Macrophages-Triggered Sequential Remodeling of Endothelium-Interstitial Matrix to Form Pre-Metastatic Niche in Microfluidic Tumor Microenvironment (Adv. Sci. 11/2019). Advanced Science, 2019, 6, 1970068.	5.6	2
28	Effect of cross-linking on the dimensional stability and biocompatibility of a tailored 3D-bioprinted gelatin scaffold. International Journal of Biological Macromolecules, 2019, 135, 659-667.	3.6	23
29	Wire Electrodes Embedded in Artificial Conduit for Long-term Monitoring of the Peripheral Nerve Signal. Micromachines, 2019, 10, 184.	1.4	4
30	Self-organization of hepatocyte morphogenesis depending on the size of collagen microbeads relative to hepatocytes. Biofabrication, 2019, 11, 035007.	3.7	7
31	Endothelial-neurosphere crosstalk in microwell arrays regulates self-renewal and differentiation of human neural stem cells. Journal of Industrial and Engineering Chemistry, 2019, 74, 148-157.	2.9	6
32	Macrophagesâ€Triggered Sequential Remodeling of Endotheliumâ€Interstitial Matrix to Form Preâ€Metastatic Niche in Microfluidic Tumor Microenvironment. Advanced Science, 2019, 6, 1900195.	5.6	74
33	Identification of different gene expressions between diffuse- and intestinal-type spheroid-forming gastric cancer cells. Gastric Cancer, 2019, 22, 967-979.	2.7	8
34	Origami-paper-based device for microvesicle/exosome preconcentration and isolation. Lab on A Chip, 2019, 19, 3917-3921.	3.1	25
35	In vivo–mimicking microfluidic perfusion culture of pancreatic islet spheroids. Science Advances, 2019, 5, eaax4520.	4.7	101
36	Graphene-oxide quenching-based molecular beacon imaging of exosome-mediated transfer of neurogenic miR-193a on microfluidic platform. Biosensors and Bioelectronics, 2019, 126, 647-656.	5.3	35

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37	Construction of Continuous Capillary Networks Stabilized by Pericyte-like Perivascular Cells. Tissue Engineering - Part A, 2019, 25, 499-510.	1.6	40
38	Graded 6-OHDA-induced dopamine depletion in the nigrostriatal pathway evokes progressive pathological neuronal activities in the subthalamic nucleus of a hemi-parkinsonian mouse. Behavioural Brain Research, 2018, 344, 42-47.	1.2	11
39	Microfluidic co-culture of pancreatic tumor spheroids with stellate cells as a novel 3D model for investigation ofÂstroma-mediated cell motility and drug resistance. Journal of Experimental and Clinical Cancer Research, 2018, 37, 4.	3.5	129
40	Enhanced oxygen permeability in membrane-bottomed concave microwells for the formation of pancreatic islet spheroids. Acta Biomaterialia, 2018, 65, 185-196.	4.1	24
41	Isolation of spheroid-forming single cells from gastric cancer cell lines: enrichment of cancer stem-like cells. BioTechniques, 2018, 65, 197-203.	0.8	16
42	Cancer-derived exosomes trigger endothelial to mesenchymal transition followed by the induction of cancer-associated fibroblasts. Acta Biomaterialia, 2018, 76, 146-153.	4.1	116
43	Effect of the pore size in a 3D bioprinted gelatin scaffold on fibroblast proliferation. Journal of Industrial and Engineering Chemistry, 2018, 67, 388-395.	2.9	50
44	Hydrogel-incorporating unit in a well: 3D cell culture for high-throughput analysis. Lab on A Chip, 2018, 18, 2604-2613.	3.1	19
45	Generation of digitized microfluidic filling flow by vent control. Biosensors and Bioelectronics, 2017, 92, 465-471.	5.3	9
46	Battery operated preconcentration-assisted lateral flow assay. Lab on A Chip, 2017, 17, 2451-2458.	3.1	43
47	In vitro nasal mucosa gland-like structure formation on a chip. Lab on A Chip, 2017, 17, 1578-1584.	3.1	30
48	Ethanol-dispersed and antibody-conjugated polymer nanofibers for the selective capture and 3-dimensional culture of EpCAM-positive cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 1617-1625.	1.7	16
49	Differential heart rate variability and physiological responses associated with accumulated shortand long-term stress in rodents. Physiology and Behavior, 2017, 171, 21-31.	1.0	23
50	Mycobacterial cord factor enhances migration of neutrophilâ€like HLâ€60 cells by prolonging AKT phosphorylation. Microbiology and Immunology, 2017, 61, 523-530.	0.7	1
51	On-Chip Lipid Extraction Using Superabsorbent Polymers for Mass Spectrometry. Analytical Chemistry, 2017, 89, 13365-13373.	3.2	15
52	Convective exosome-tracing microfluidics for analysis of cell-non-autonomous neurogenesis. Biomaterials, 2017, 112, 82-94.	5.7	39
53	Spheroid Formation of Hepatocarcinoma Cells in Microwells: Experiments and Monte Carlo Simulations. PLoS ONE, 2016, 11, e0161915.	1.1	21
54	Co-Culture of Tumor Spheroids and Fibroblasts in a Collagen Matrix-Incorporated Microfluidic Chip Mimics Reciprocal Activation in Solid Tumor Microenvironment. PLoS ONE, 2016, 11, e0159013.	1.1	205

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55	Constructive remodeling of a synthetic endothelial extracellular matrix. Scientific Reports, 2016, 5, 18290.	1.6	28
56	Simple and Highly Sensitive Molecular Diagnosis of Zika Virus by Lateral Flow Assays. Analytical Chemistry, 2016, 88, 12272-12278.	3.2	73
57	Ion concentration polarization for pre-concentration of biological samples without pH change. Analyst, The, 2016, 141, 6510-6514.	1.7	15
58	Intrinsic FGF2 and FGF5 promotes angiogenesis of human aortic endothelial cells in 3D microfluidic angiogenesis system. Scientific Reports, 2016, 6, 28832.	1.6	45
59	Viscoelastic lithography for fabricating self-organizing soft micro-honeycomb structures with ultra-high aspect ratios. Nature Communications, 2016, 7, 11269.	5.8	38
60	Study on chemotaxis and chemokinesis of bone marrow-derived mesenchymal stem cells in hydrogel-based 3D microfluidic devices. Biomaterials Research, 2016, 20, 25.	3.2	24
61	Angiogenic Type I Collagen Extracellular Matrix Integrated with Recombinant Bacteriophages Displaying Vascular Endothelial Growth Factors. Advanced Healthcare Materials, 2016, 5, 205-212.	3.9	4
62	An aptamer-antibody complex (oligobody) as a novel delivery platform for targeted cancer therapies. Journal of Controlled Release, 2016, 229, 1-9.	4.8	66
63	Collagen-based brain microvasculature model <i>in vitro</i> using three-dimensional printed template. Biomicrofluidics, 2015, 9, 024115.	1.2	123
64	Recapitulation of inÂvivo-like paracrine signals of human mesenchymal stem cells for functional neuronal differentiation of human neural stem cells in a 3D microfluidic system. Biomaterials, 2015, 63, 177-188.	5.7	67
65	Nanointerstice-driven microflow patterns in physical interrupts. Microfluidics and Nanofluidics, 2015, 18, 1433-1438.	1.0	6
66	Timescale analysis for estimating upper limit perfusion rate in a microfluidic perfusion cell culture platform. Microfluidics and Nanofluidics, 2015, 19, 777-786.	1.0	5
67	A quantitative microfluidic angiogenesis screen for studying anti-angiogenic therapeutic drugs. Lab on A Chip, 2015, 15, 301-310.	3.1	116
68	Clonorchis sinensis Infestation Promotes Three-Dimensional Aggregation and Invasion of Cholangiocarcinoma Cells. PLoS ONE, 2014, 9, e110705.	1.1	19
69	Reconstituting Vascular Microenvironment of Neural Stem Cell Niche in Threeâ€Dimensional Extracellular Matrix. Advanced Healthcare Materials, 2014, 3, 1457-1464.	3.9	58
70	A microfluidic 3D inÂvitro model for specificity of breast cancer metastasis to bone. Biomaterials, 2014, 35, 2454-2461.	5.7	440
71	Microfluidic in-reservoir pre-concentration using a buffer drain technique. Lab on A Chip, 2014, 14, 2778-2782.	3.1	9
72	Implantable microfluidic device for the formation of three-dimensional vasculature by human endothelial progenitor cells. Biotechnology and Bioprocess Engineering, 2014, 19, 379-385.	1.4	16

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73	Smooth muscle progenitor cells from peripheral blood promote the neovascularization of endothelial colony-forming cells. Biochemical and Biophysical Research Communications, 2014, 449, 405-411.	1.0	17
74	Largeâ€Scale, Ultrapliable, and Freeâ€Standing Nanomembranes. Advanced Materials, 2013, 25, 2167-2173.	11.1	53
75	Single-step UV diffraction lithography to define a hydrophobic SU-8 interconnected hoodoo structure. Microsystem Technologies, 2013, 19, 1025-1032.	1.2	4
76	A three-dimensional microfluidic tumor cell migration assay to screen the effect of anti-migratory drugs and interstitial flow. Microfluidics and Nanofluidics, 2013, 14, 969-981.	1.0	33
77	Extracellular Matrix Heterogeneity Regulates Threeâ€Dimensional Morphologies of Breast Adenocarcinoma Cell Invasion. Advanced Healthcare Materials, 2013, 2, 790-794.	3.9	33
78	Hydrogels: Extracellular Matrix Heterogeneity Regulates Threeâ€Dimensional Morphologies of Breast Adenocarcinoma Cell Invasion (Adv. Healthcare Mater. 6/2013). Advanced Healthcare Materials, 2013, 2, 920-920.	3.9	1
79	A microfluidic array for quantitative analysis of human neural stem cell self-renewal and differentiation in three-dimensional hypoxic microenvironment. Biomaterials, 2013, 34, 6607-6614.	5.7	44
80	Hydrodynamic effects on bacterial biofilm development in a microfluidic environment. Lab on A Chip, 2013, 13, 1846.	3.1	60
81	The Stabilization Effect of Mesenchymal Stem Cells on the Formation of Microvascular Networks in a Microfluidic Device. Journal of Biomechanical Science and Engineering, 2013, 8, 114-128.	0.1	14
82	In Vitro Model of Tumor Cell Extravasation. PLoS ONE, 2013, 8, e56910.	1.1	201
83	Microfluidic Approaches to Bacterial Biofilm Formation. Molecules, 2012, 17, 9818-9834.	1.7	122
84	Microfluidic assay for simultaneous culture of multiple cell types on surfaces or within hydrogels. Nature Protocols, 2012, 7, 1247-1259.	5.5	518
85	In vitro angiogenesis assay for the study of cell-encapsulation therapy. Lab on A Chip, 2012, 12, 2942.	3.1	21
86	Microfluidic platforms for the study of cancer metastasis. Biomedical Engineering Letters, 2012, 2, 72-77.	2.1	13
87	Generation of core-shell microcapsules with three-dimensional focusing device for efficient formation of cell spheroid. Lab on A Chip, 2011, 11, 246-252.	3.1	140
88	A high-throughput microfluidic assay to study neurite response to growth factor gradients. Lab on A Chip, 2011, 11, 497-507.	3.1	145
89	Sprouting Angiogenesis under a Chemical Gradient Regulated by Interactions with an Endothelial Monolayer in a Microfluidic Platform. Analytical Chemistry, 2011, 83, 8454-8459.	3.2	102
90	In vitro 3D collective sprouting angiogenesis under orchestrated ANG-1 and VEGF gradients. Lab on A Chip, 2011, 11, 2175.	3.1	142

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91	Hot embossing for fabrication of a microfluidic 3D cell culture platform. Biomedical Microdevices, 2011, 13, 325-333.	1.4	83
92	Microfluidic assay of endothelial cell migration in 3D interpenetrating polymer semi-network HA-Collagen hydrogel. Biomedical Microdevices, 2011, 13, 717-723.	1.4	46
93	Differentiation of Embryonic Stem Cells into Cardiomyocytes in a Compliant Microfluidic System. Annals of Biomedical Engineering, 2011, 39, 1840-1847.	1.3	77
94	Concentration gradients in microfluidic 3D matrix cell culture systems. International Journal of Micro-nano Scale Transport, 2010, 1, 27-36.	0.2	30
95	Temperature-dependent threshold shear stress of red blood cell aggregation. Journal of Biomechanics, 2010, 43, 546-550.	0.9	45
96	Microfluidic Platforms for Studies of Angiogenesis, Cell Migration, and Cell–Cell Interactions. Annals of Biomedical Engineering, 2010, 38, 1164-1177.	1.3	140
97	A low resistance microfluidic system for the creation of stable concentration gradients in a defined 3D microenvironment. Biomedical Microdevices, 2010, 12, 1027-1041.	1.4	40
98	Applications of micromixing technology. Analyst, The, 2010, 135, 460.	1.7	192
99	Transportâ€mediated angiogenesis in 3D epithelial coculture. FASEB Journal, 2009, 23, 2155-2164.	0.2	179
100	Biomechanical Regulation of Endothelium-dependent Events Critical for Adaptive Remodeling. Journal of Biological Chemistry, 2009, 284, 8412-8420.	1.6	44
101	Surfaceâ€Treatmentâ€Induced Threeâ€Dimensional Capillary Morphogenesis in a Microfluidic Platform. Advanced Materials, 2009, 21, 4863-4867.	11.1	85
102	Nanointersticeâ€Driven Microflow. Small, 2009, 5, 609-613.	5.2	30
103	Cell migration into scaffolds under co-culture conditions in a microfluidic platform. Lab on A Chip, 2009, 9, 269-275.	3.1	456
104	Microfluidic synthesis of a cell adhesive Janus polyurethane microfiber. Lab on A Chip, 2009, 9, 2596.	3.1	75
105	Nonâ€Lithographic Wrinkle Nanochannels for Protein Preconcentration. Advanced Materials, 2008, 20, 3011-3016.	11.1	125
106	Design, fabrication and implementation of a novel multi-parameter control microfluidic platform for three-dimensional cell culture and real-time imaging. Lab on A Chip, 2008, 8, 1468.	3.1	312
107	On-chip erythrocyte deformability test under optical pressure. Lab on A Chip, 2007, 7, 516.	3.1	33
108	Poly(dimethylsiloxane)-Based Protein Preconcentration Using a Nanogap Generated by Junction Gap Breakdown. Analytical Chemistry, 2007, 79, 6868-6873.	3.2	138

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109	Expansion channel for microchip flow cytometers. Lab on A Chip, 2006, 6, 1381.	3.1	18
110	Ultra-thin microchannel-type electrophoresis chip for TIRFM-based single-DNA observation in the femtomole concentration. Current Applied Physics, 2006, 6, e137-e140.	1.1	0
111	Microfabricated fluorescence-activated cell sorter through hydrodynamic flow manipulation. Microsystem Technologies, 2006, 12, 746-753.	1.2	26
112	Asymmetric nozzle structure for particles converging into a highly confined region. Current Applied Physics, 2006, 6, 992-995.	1.1	14
113	Active sealing for soft polymer microchips: method and practical applications. Journal of Micromechanics and Microengineering, 2006, 16, 708-714.	1.5	15
114	Serial dilution microchip for cytotoxicity test. Journal of Micromechanics and Microengineering, 2004, 14, 1165-1170.	1.5	36
115	Rapid three-dimensional passive rotation micromixer using the breakup process. Journal of Micromechanics and Microengineering, 2004, 14, 6-14.	1.5	127
116	Retinal Pigment Epithelial Cell Behavior is Modulated by Alterations in Focal Cell–Substrate Contacts. , 2004, 45, 4210.		33
117	In-plane single-crystal-silicon microneedles for minimally invasive microfluid systems. Sensors and Actuators A: Physical, 2004, 114, 276-284.	2.0	97
118	Development of MEMS-based Cerebrospinal Fluid Shunt System. Biomedical Microdevices, 2003, 5, 311-321.	1.4	22
119	Functional integration of serial dilution and capillary electrophoresis on a PDMS microchip. Biotechnology and Bioprocess Engineering, 2003, 8, 233-239.	1.4	8
120	Effects of peak anomalies with the hydrophilic or hydrophobic properties of reservoirs during serial injection on a capillary electrophoresis microchip. Journal of Chromatography A, 2003, 1013, 111-122.	1.8	12
121	PDMS-based micro PCR chip with Parylene coating. Journal of Micromechanics and Microengineering, 2003, 13, 768-774.	1.5	356
122	Development of endovascular microtools. Journal of Micromechanics and Microengineering, 2002, 12, 824-831.	1.5	22