YongTae Kim

List of Publications by Year
in descending order

58 papers	2,283 citations	236612 25 h-index	223531 46 g-index
63 all docs	63 docs citations	63 times ranked	3510 citing authors

#	Article	IF	Citations
1	Microengineered human bloodâ€“brain barrier platform for understanding nanoparticle transport mechanisms. Nature Communications, 2020, 11, 175.	5.8	236
2	Mass Production and Size Control of Lipidâ€“Polymer Hybrid Nanoparticles through Controlled Microvortices. Nano Letters, 2012, 12, 3587-3591.	4.5	189
3	Probing nanoparticle translocation across the permeable endothelium in experimental atherosclerosis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1078-1083.	3.3	171
4	Optimization of lipid nanoparticles for the delivery of nebulized therapeutic mRNA to the lungs. Nature Biomedical Engineering, 2021, 5, 1059-1068.	11.6	165
5	Microfluidics in nanoparticle drug delivery; From synthesis to pre-clinical screening. Advanced Drug Delivery Reviews, 2018, 128, 29-53.	6.6	159
6	Fabrication of circular microfluidic channels by combining mechanical micromilling and soft lithography. Lab on A Chip, 2011, 11, 1550.	3.1	127
7	HDL-Mimetic PLGA Nanoparticle To Target Atherosclerosis Plaque Macrophages. Bioconjugate Chemistry, 2015, 26, 443-451.	1.8	127
8	Synthesis of Polymerâ€“Lipid Nanoparticles for Image-Guided Delivery of Dual Modality Therapy. Bioconjugate Chemistry, 2013, 24, 1429-1434.	1.8	104
9	Single Step Reconstitution of Multifunctional High-Density Lipoprotein-Derived Nanomaterials Using Microfluidics. ACS Nano, 2013, 7, 9975-9983.	7.3	104
10	Tumor Microenvironment on a Chip: The Progress and Future Perspective. Bioengineering, 2017, 4, 64.	1.6	56
11	Nanomedicines for endothelial disorders. Nano Today, 2015, 10, 759-776.	6.2	49
12	3D Microfluidic Bone Tumor Microenvironment Comprised of Hydroxyapatite/Fibrin Composite. Frontiers in Bioengineering and Biotechnology, 2019, 7, 168.	2.0	49
13	Nanotherapeutics engineered to cross the blood-brain barrier for advanced drug delivery to the central nervous system. Journal of Industrial and Engineering Chemistry, 2019, 73, 8-18.	2.9	49
14	Single-cell analysis reveals effective siRNA delivery in brain tumors with microbubble-enhanced ultrasound and cationic nanoparticles. Science Advances, 2021, 7, .	4.7	47
15	Microvascularized tumor organoids-on-chips: advancing preclinical drug screening with pathophysiological relevance. Nano Convergence, 2021, 8, 12.	6.3	43
16	Modulation of fluidic resistance and capacitance for long-term, high-speed feedback control of a microfluidic interface. Lab on A Chip, 2009, 9, 2603.	3.1	41
17	Response of an actin filament network model under cyclic stretching through a coarse grained Monte Carlo approach. Journal of Theoretical Biology, 2011, 274, 109-119.	0.8	39
18	Development of a Shapeâ€Memory Tube to Prevent Vascular Stenosis. Advanced Materials, 2019, 31, e1904476.	11.1	38

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19	Detection of Dynamic Spatiotemporal Response to Periodic Chemical Stimulation in a Xenopus Embryonic Tissue. PLoS ONE, 2011, 6, e14624.	1.1	35
20	Engineering living systems on chips: from cells to human on chips. Microfluidics and Nanofluidics, 2014, 16, 907-920.	1.0	35
21	Mechanochemical actuators of embryonic epithelial contractility. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14366-14371.	3.3	34
22	Hyaluronic Acid-Based Nanogels Produced by Microfluidics-Facilitated Self-Assembly Improves the Safety Profile of the Cationic Host Defense Peptide Novicidin. Pharmaceutical Research, 2015, 32, 2727-35.	1.7	32
23	Engineered biomimetic nanoparticle for dual targeting of the cancer stem-like cell population in sonic hedgehog medulloblastoma. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24205-24212.	3.3	32
24	Detection of frequency-dependent endothelial response to oscillatory shear stress using a microfluidic transcellular monitor. Scientific Reports, 2017, 7, 10019.	1.6	31
25	Implantable Vascularized Liver Chip for Crossâ€Validation of Disease Treatment with Animal Model. Advanced Functional Materials, 2019, 29, 1900075.	7.8	28
26	Advanced Fabrication Techniques of Microengineered Physiological Systems. Micromachines, 2020, 11, 730.	1.4	26
27	Controlled surface topography regulates collective 3D migration by epithelialâ€"mesenchymal composite embryonic tissues. Biomaterials, 2015, 58, 1-9.	5.7	21
28	Robust manufacturing of lipid-polymer nanoparticles through feedback control of parallelized swirling microvortices. Lab on A Chip, 2017, 17, 2805-2813.	3.1	18
29	Advanced Human BBBâ€onâ€aâ€Chip: A New Platform for Alzheimer's Disease Studies. Advanced Healthcare Materials, 2021, 10, e2002285.	3.9	18
30	Detecting the functional complexities between high-density lipoprotein mimetics. Biomaterials, 2018, 170, 58-69.	5.7	17
31	Antiâ€Atherogenic Effect of Stem Cell Nanovesicles Targeting Disturbed Flow Sites. Small, 2020, 16, e2000012.	5.2	14
32	Three-Dimensional Chemical Profile Manipulation Using Two-Dimensional Autonomous Microfluidic Control. Journal of the American Chemical Society, 2010, 132, 1339-1347.	6.6	13
33	Dynamic control of 3D chemical profiles with a single 2D microfluidic platform. Lab on A Chip, 2011, 11, 2182.	3.1	12
34	Heparin-functionalized polymer graft surface eluting MK2 inhibitory peptide to improve hemocompatibility and anti-neointimal activity. Journal of Controlled Release, 2017, 266, 321-330.	4.8	12
35	Human Bloodâ€"Brain Barrier on a Chip: Featuring Unique Multicellular Cooperation in Pathophysiology. Trends in Biotechnology, 2021, 39, 749-752.	4.9	12
36	Microengineered Vascular Systems for Drug Development. Journal of the Association for Laboratory Automation, 2015, 20, 251-258.	2.8	11

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37	Disruptive Microfluidics: From Life Sciences to World Health to Energy. Disruptive Science and Technology, 2012, 1, 41-53.	1.0	10
38	Modeling and Control of a Nonlinear Mechanism for High Performance Microfluidic Systems. IEEE Transactions on Control Systems Technology, 2013, 21, 203-211.	3.2	10
39	Microfluidic one-directional interstitial flow generation from cancer to cancer associated fibroblast. Acta Biomaterialia, 2022, 144, 258-265.	4.1	10
40	Detection of thioredoxin-1 using ultra-sensitive ELISA with enzyme-encapsulated human serum albumin nanoparticle. Nano Convergence, 2019, 6, 37.	6.3	9
41	Probing the Effect of Bioinspired Nanomaterials on Angiogenic Sprouting With a Microengineered Vascular System. IEEE Nanotechnology Magazine, 2018, 17, 393-397.	1.1	8
42	High-density lipoprotein mimetic nanotherapeutics for cardiovascular and neurodegenerative diseases. Nano Research, 2018, 11, 5130-5143.	5.8	8
43	Dynamics of individual polymers using microfluidic based microcurvilinear flow. Lab on A Chip, 2009, 9, 2339.	3.1	6
44	Polymeric Nanoparticles Controlled by Onâ€Chip Selfâ€Assembly Enhance Cancer Treatment Effectiveness. Advanced Healthcare Materials, 2020, 9, 2001633.	3.9	6
45	Engineered Heterochronic Parabiosis in 3D Microphysiological System for Identification of Muscle Rejuvenating Factors. Advanced Functional Materials, 2020, 30, 2002924.	7.8	5
46	Organs-on-Chips. , 2019, , 384-393.		3
47	High-precision microfluidic pressure control through modulation of dual fluidic resistances. International Journal of Dynamics and Control, 2018, 6, 1175-1182.	1.5	2
48	Nonlinear modeling and control of a mechanically coupled variable resistance and squeeze pump for pressure regulation in microfluidics. , 2010, , .		1
49	Probing the dynamic responses of individual actin filaments under fluidic mechanical stimulation via microfluidics. Applied Physics Letters, 2013, 102, 193704.	1.5	1
50	Response of an Actin Filament Network Model Under Cyclic Stretching Through a Coarse Grained Monte Carlo Approach. , 2010, , .		0
51	Nonlinear Modeling for Interface Control in a Three-Lane Microfluidic Channel. , 2010, , .		0
52	Controlling Embryonic Cell Sheet Migration using Microfluidics. Biophysical Journal, 2012, 102, 417a.	0.2	0
53	Analyzing the Early Tissue Mechanical Response to Chemokine Signaling using Microfluidics. Biophysical Journal, 2013, 104, 320a.	0.2	0
54	Probing Collective Migration of a Complex Multi-Cellular Embryonic Tissue Through Novel 3D Bioetching. Biophysical Journal, 2014, 106, 172a.	0.2	0

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55	Probing Dynamic Reassembly of Chemically-Etched 3D Embryonic Tissue. Biophysical Journal, 2015, 108, 332a.	0.2	0
56	Probing Multicellular Dynamics in Xenopus Laevis Embryonic Development Using a Mechanical Engineering Based Microfluidic Feedback Approach. , 2010, , .		0
57	Replicating heterochronic parabiosis on a 3D microphysiological circuit to study the systemic regulation of aging muscle. FASEB Journal, 2019, 33, 701.9.	0.2	0
58	In Vitro Alzheimerâ€™s Disease Modeling Using Stem Cells. , 2020, , 263-285.		0