Jong Hwan Sung

List of Publications by Year
in descending order

68 papers	4,154 citations	117453 34 h-index	114278 63 g-index
68 all docs	68 docs citations	68 times ranked	4404 citing authors

#	Article	IF	Citations
1	A microfluidic device for a pharmacokineticâ€"pharmacodynamic (PKâ€"PD) model on a chip. Lab on A Chip, 2010, 10, 446.	3.1	419
2	A micro cell culture analog (ÂµCCA) with 3-D hydrogel culture of multiple cell lines to assess metabolism-dependent cytotoxicity of anti-cancer drugs. Lab on A Chip, 2009, 9, 1385.	3.1	402
3	Microscale 3-D hydrogel scaffold for biomimetic gastrointestinal (GI) tract model. Lab on A Chip, 2011, 11, 389-392.	3.1	287
4	Recent Advances in Body-on-a-Chip Systems. Analytical Chemistry, 2019, 91, 330-351.	3.2	167
5	Microfluidic gut-on-a-chip with three-dimensional villi structure. Biomedical Microdevices, 2017, 19, 37.	1.4	161
6	On chip porous polymer membranes for integration of gastrointestinal tract epithelium with microfluidic â€˜body-on-a-chipâ€™ devices. Biomedical Microdevices, 2012, 14, 895-906.	1.4	157
7	Microfluidic Gut-liver chip for reproducing the first pass metabolism. Biomedical Microdevices, 2017, 19, 4.	1.4	140
8	Prevention of air bubble formation in a microfluidic perfusion cell culture system using a microscale bubble trap. Biomedical Microdevices, 2009, 11, 731-738.	1.4	118
9	Using physiologically-based pharmacokinetic-guided â€œbody-on-a-chipâ€• systems to predict mammalian response to drug and chemical exposure. Experimental Biology and Medicine, 2014, 239, 1225-1239.	1.1	118
10	Mimicking the human smell sensing mechanism with an artificial nose platform. Biomaterials, 2012, 33, 1722-1729.	5.7	106
11	Construction of 3D multicellular microfluidic chip for an in vitro skin model. Biomedical Microdevices, 2017, 19, 22.	1.4	100
12	A pumpless multiâ€organâ€onâ€aâ€chip (MOC) combined with a pharmacokineticâ€"pharmacodynamic (PKâ€"PD) model. Biotechnology and Bioengineering, 2017, 114, 432-443.	1.7	100
13	Piezoelectric biosensor using olfactory receptor protein expressed in Escherichia coli. Biosensors and Bioelectronics, 2006, 21, 1981-1986.	5.3	98
14	Three-dimensional intestinal villi epithelium enhances protection of human intestinal cells from bacterial infection by inducing mucin expression. Integrative Biology (United Kingdom), 2014, 6, 1122-1131.	0.6	88
15	Organâ€onâ€aâ€Chip Technology for Reproducing Multiorgan Physiology. Advanced Healthcare Materials, 2018, 7, 1700419.	3.9	88
16	Nanomaterial-Based Biosensor as an Emerging Tool for Biomedical Applications. Annals of Biomedical Engineering, 2012, 40, 1384-1397.	1.3	80
17	Organâ€onâ€aâ€chip technology and microfluidic wholeâ€body models for pharmacokinetic drug toxicity screening. Biotechnology Journal, 2013, 8, 1258-1266.	1.8	79
18	In vitro microscale systems for systematic drug toxicity study. Bioprocess and Biosystems Engineering, 2010, 33, 5-19.	1.7	74

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19	Gutâ€“liver on a chip toward an in vitro model of hepatic steatosis. Biotechnology and Bioengineering, 2018, 115, 2817-2827.	1.7	74
20	A microfluidic cell culture device (Î¼FCCD) to culture epithelial cells with physiological and morphological properties that mimic those of the human intestine. Biomedical Microdevices, 2015, 17, 9966.	1.4	61
21	Microfluidic assay-based optical measurement techniques for cell analysis: A review of recent progress. Biosensors and Bioelectronics, 2016, 77, 227-236.	5.3	60
22	Fabrication of degradable carboxymethyl cellulose (CMC) microneedle with laser writing and replica molding process for enhancement of transdermal drug delivery. Biotechnology and Bioprocess Engineering, 2016, 21, 110-118.	1.4	55
23	Microfluidic skin chip with vasculature for recapitulating the immune response of the skin tissue. Biotechnology and Bioengineering, 2020, 117, 1853-1863.	1.7	55
24	Integration of<i>in silico</i>and<i>in vitro</i>platforms for pharmacokineticâ€“pharmacodynamic modeling. Expert Opinion on Drug Metabolism and Toxicology, 2010, 6, 1063-1081.	1.5	54
25	Microtechnology for Mimicking In Vivo Tissue Environment. Annals of Biomedical Engineering, 2012, 40, 1289-1300.	1.3	51
26	3D gut-liver chip with a PK model for prediction of first-pass metabolism. Biomedical Microdevices, 2017, 19, 100.	1.4	51
27	Hydrogelâ€based threeâ€dimensional cell culture for organâ€onâ€aâ€chip applications. Biotechnology Progress, 2017, 33, 580-589.	1.3	47
28	Transdermal delivery of cosmetic ingredients using dissolving polymer microneedle arrays. Biotechnology and Bioprocess Engineering, 2015, 20, 543-549.	1.4	46
29	Fluorescence optical detection in situ for realâ€time monitoring of cytochrome P450 enzymatic activity of liver cells in multiple microfluidic devices. Biotechnology and Bioengineering, 2009, 104, 516-525.	1.7	44
30	Strategies for using mathematical modeling approaches to design and interpret multi-organ microphysiological systems (MPS). APL Bioengineering, 2019, 3, 021501.	3.3	42
31	Fabrication of a pumpless, microfluidic skin chip from different collagen sources. Journal of Industrial and Engineering Chemistry, 2017, 56, 375-381.	2.9	40
32	Fabrication and characterization of microfluidic liver-on-a-chip using microsomal enzymes. Enzyme and Microbial Technology, 2013, 53, 159-164.	1.6	38
33	A Microfluidic Device with 3-D Hydrogel Villi Scaffold to Simulate Intestinal Absorption. Journal of Nanoscience and Nanotechnology, 2013, 13, 7220-7228.	0.9	37
34	Development of 3D skin-equivalent in a pump-less microfluidic chip. Journal of Industrial and Engineering Chemistry, 2018, 60, 355-359.	2.9	37
35	Three-dimensional in vitro gut model on a villi-shaped collagen scaffold. Biochip Journal, 2017, 11, 219-231.	2.5	35
36	Pharmacokinetic and pharmacodynamic insights from microfluidic intestine-on-a-chip models. Expert Opinion on Drug Metabolism and Toxicology, 2019, 15, 1005-1019.	1.5	35

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37	A microfluidic chip with gravityâ€induced unidirectional flow for perfusion cell culture. Biotechnology Progress, 2019, 35, e2701.	1.3	35
38	Microphysiological systems for recapitulating physiology and function of blood-brain barrier. Biomaterials, 2020, 232, 119732.	5.7	34
39	A Combined Pharmacokineticâ€"Pharmacodynamic (PKâ€"PD) Model for Tumor Growth in the Rat with UFT Administration. Journal of Pharmaceutical Sciences, 2009, 98, 1885-1904.	1.6	31
40	Fabrication and characterization of dissolving microneedle arrays for improving skin permeability of cosmetic ingredients. Journal of Industrial and Engineering Chemistry, 2016, 39, 121-126.	2.9	26
41	A Gut-Brain Axis-on-a-Chip for studying transport across epithelial and endothelial barriers. Journal of Industrial and Engineering Chemistry, 2021, 101, 126-134.	2.9	26
42	In vitro hepatic steatosis model based on gutâ€"liverâ€onâ€aâ€chip. Biotechnology Progress, 2021, 37, e3121.	1.3	24
43	Real-time fluorescence detection of multiple microscale cell culture analog devicesin situ. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2007, 71A, 857-865.	1.1	23
44	Multi-organ-on-a-chip for pharmacokinetics and toxicokinetic study of drugs. Expert Opinion on Drug Metabolism and Toxicology, 2021, 17, 969-986.	1.5	23
45	Microtechnologyâ€based organ systems and wholeâ€body models for drug screening. Biotechnology Journal, 2016, 11, 746-756.	1.8	22
46	In vitro 3D skin model using gelatin methacrylate hydrogel. Journal of Industrial and Engineering Chemistry, 2018, 66, 254-261.	2.9	22
47	Construction of pancreasâ€"muscleâ€"liver microphysiological system (MPS) for reproducing glucose metabolism. Biotechnology and Bioengineering, 2019, 116, 3433-3445.	1.7	22
48	Mimicking the Human Physiology with Microphysiological Systems (MPS). Biochip Journal, 2019, 13, 115-126.	2.5	22
49	Investigation of portable in situ fluorescence optical detection for microfluidic 3D cell culture assays. Optics Letters, 2010, 35, 1374.	1.7	20
50	Microtechnology-Based Multi-Organ Models. Bioengineering, 2017, 4, 46.	1.6	20
51	Fabrication of micrometer-scale porous gelatin scaffolds for 3D cell culture. Journal of Industrial and Engineering Chemistry, 2017, 50, 183-189.	2.9	15
52	Application of chemical reaction engineering principles to â€œbodyâ€onâ€aâ€chipâ€• systems. AIChE Journal, 2018, 64, 4351-4360.	1.8	15
53	Three-tissue microphysiological system for studying inflammatory responses in gut-liver Axis. Biomedical Microdevices, 2020, 22, 65.	1.4	15
54	Organ-on-a-Chip for Studying Gut-Brain Interaction Mediated by Extracellular Vesicles in the Gut Microenvironment. International Journal of Molecular Sciences, 2021, 22, 13513.	1.8	15

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55	Gutâ€"Kidney Axis on Chip for Studying Effects of Antibiotics on Risk of Hemolytic Uremic Syndrome by Shiga Toxin-Producing Escherichia coli. Toxins, 2021, 13, 775.	1.5	14
56	A microfluidic device for evaluating the dynamics of the metabolism-dependent antioxidant activity of nutrients. Lab on A Chip, 2014, 14, 2948.	3.1	13
57	Pharmacokinetic-based multi-organ chip for recapitulating organ interactions. Methods in Cell Biology, 2018, 146, 183-197.	0.5	12
58	Multiorganâ€onâ€aâ€chip for realization of gutâ€skin axis. Biotechnology and Bioengineering, 2022, 119, 2590-2601.	1.7	11
59	Effect of culture condition on cell viability and gel contraction in a skin chip. Journal of Industrial and Engineering Chemistry, 2020, 87, 60-67.	2.9	9
60	Microtechnology-based <i>in vitro</i> models: Mimicking liver function and pathophysiology. APL Bioengineering, 2021, 5, 041505.	3.3	9
61	A body-on-a-chip (BOC) system for studying gut-liver interaction. Methods in Cell Biology, 2020, 158, 1-10.	0.5	8
62	Selfâ€assembled DNAâ€based giant thrombin nanoparticles for controlled release. Biotechnology Journal, 2013, 8, 215-220.	1.8	7
63	Solving Medical Problems with BioMEMS. IEEE Pulse, 2011, 2, 51-59.	0.1	6
64	Development of a Pumpless Microfluidic System to Study the Interaction between Gut Microbes and Intestinal Epithelial Cells. Biotechnology and Bioprocess Engineering, 2022, 27, 221-233.	1.4	5
65	Gut-on-a-chip microphysiological systems for the recapitulation of the gut microenvironment. , 2020, , 295-310.		4
66	Robust parameter estimation for physiologically based pharmacokinetic model of Tegafur with dissolution dynamics. Chemical Engineering Research and Design, 2015, 104, 730-739.	2.7	2
67	Quantitative cell analysis in situ on a short time scale using a microscale cell culture assay. , 2007, , .		0
68	Introduction to the Special Issue on Micro- and Nanofabrication Techniques. Annals of Biomedical Engineering, 2012, 40, 1209-1210.	1.3	0