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	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
2	Multiorganâ€onâ€aâ€chip for realization of gutâ€skin axis. Biotechnology and Bioengineering, 2022, 119, 2590-2601.	1.7	11
3	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
4	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
5	In vitro hepatic steatosis model based on gutâ€“liverâ€onâ€aâ€chip. Biotechnology Progress, 2021, 37, e3121.	1.3	24
6	Microtechnology-based <i>in vitro</i> models: Mimicking liver function and pathophysiology. APL Bioengineering, 2021, 5, 041505.	3.3	9
7	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
8	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
9	Gut-on-a-chip microphysiological systems for the recapitulation of the gut microenvironment. , 2020, , 295-310.		4
10	Microphysiological systems for recapitulating physiology and function of blood-brain barrier. Biomaterials, 2020, 232, 119732.	5.7	34
11	Three-tissue microphysiological system for studying inflammatory responses in gut-liver Axis. Biomedical Microdevices, 2020, 22, 65.	1.4	15
12	Microfluidic skin chip with vasculature for recapitulating the immune response of the skin tissue. Biotechnology and Bioengineering, 2020, 117, 1853-1863.	1.7	55
13	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
14	A body-on-a-chip (BOC) system for studying gut-liver interaction. Methods in Cell Biology, 2020, 158, 1-10.	0.5	8
15	Construction of pancreasâ€“muscleâ€“liver microphysiological system (MPS) for reproducing glucose metabolism. Biotechnology and Bioengineering, 2019, 116, 3433-3445.	1.7	22
16	Mimicking the Human Physiology with Microphysiological Systems (MPS). Biochip Journal, 2019, 13, 115-126.	2.5	22
17	Strategies for using mathematical modeling approaches to design and interpret multi-organ microphysiological systems (MPS). APL Bioengineering, 2019, 3, 021501.	3.3	42
18	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

#	Article	IF	Citations
19	Recent Advances in Body-on-a-Chip Systems. Analytical Chemistry, 2019, 91, 330-351.	3.2	167
20	A microfluidic chip with gravityâ€induced unidirectional flow for perfusion cell culture. Biotechnology Progress, 2019, 35, e2701.	1.3	35
21	Development of 3D skin-equivalent in a pump-less microfluidic chip. Journal of Industrial and Engineering Chemistry, 2018, 60, 355-359.	2.9	37
22	Organâ€onâ€aâ€Chip Technology for Reproducing Multiorgan Physiology. Advanced Healthcare Materials, 2018, 7, 1700419.	3.9	88
23	Application of chemical reaction engineering principles to â€œbodyâ€onâ€aâ€chipâ€• systems. AIChE Journal, 2018, 64, 4351-4360.	1.8	15
24	Pharmacokinetic-based multi-organ chip for recapitulating organ interactions. Methods in Cell Biology, 2018, 146, 183-197.	0.5	12
25	Gutâ€"liver on a chip toward an in vitro model of hepatic steatosis. Biotechnology and Bioengineering, 2018, 115, 2817-2827.	1.7	74
26	In vitro 3D skin model using gelatin methacrylate hydrogel. Journal of Industrial and Engineering Chemistry, 2018, 66, 254-261.	2.9	22
27	Microfluidic Gut-liver chip for reproducing the first pass metabolism. Biomedical Microdevices, 2017, 19, 4.	1.4	140
28	Fabrication of micrometer-scale porous gelatin scaffolds for 3D cell culture. Journal of Industrial and Engineering Chemistry, 2017, 50, 183-189.	2.9	15
29	Hydrogelâ€based threeâ€dimensional cell culture for organâ€onâ€aâ€chip applications. Biotechnology Progress, 2017, 33, 580-589.	1.3	47
30	Microfluidic gut-on-a-chip with three-dimensional villi structure. Biomedical Microdevices, 2017, 19, 37.	1.4	161
31	Construction of 3D multicellular microfluidic chip for an in vitro skin model. Biomedical Microdevices, 2017, 19, 22.	1.4	100
32	Fabrication of a pumpless, microfluidic skin chip from different collagen sources. Journal of Industrial and Engineering Chemistry, 2017, 56, 375-381.	2.9	40
33	3D gut-liver chip with a PK model for prediction of first-pass metabolism. Biomedical Microdevices, 2017, 19, 100.	1.4	51
34	Three-dimensional in vitro gut model on a villi-shaped collagen scaffold. Biochip Journal, 2017, 11, 219-231.	2.5	35
35	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
36	Microtechnology-Based Multi-Organ Models. Bioengineering, 2017, 4, 46.	1.6	20

#	Article	IF	Citations
37	Microtechnologyâ€based organ systems and wholeâ€body models for drug screening. Biotechnology Journal, 2016, 11, 746-756.	1.8	22
38	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
39	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
40	Microfluidic assay-based optical measurement techniques for cell analysis: A review of recent progress. Biosensors and Bioelectronics, 2016, 77, 227-236.	5.3	60
41	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
42	Transdermal delivery of cosmetic ingredients using dissolving polymer microneedle arrays. Biotechnology and Bioprocess Engineering, 2015, 20, 543-549.	1.4	46
43	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
44	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
45	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
46	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
47	Organâ€onâ€aâ€chip technology and microfluidic wholeâ€body models for pharmacokinetic drug toxicity screening. Biotechnology Journal, 2013, 8, 1258-1266.	1.8	79
48	Selfâ€assembled DNAâ€based giant thrombin nanoparticles for controlled release. Biotechnology Journal, 2013, 8, 215-220.	1.8	7
49	Fabrication and characterization of microfluidic liver-on-a-chip using microsomal enzymes. Enzyme and Microbial Technology, 2013, 53, 159-164.	1.6	38
50	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
51	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
52	Nanomaterial-Based Biosensor as an Emerging Tool for Biomedical Applications. Annals of Biomedical Engineering, 2012, 40, 1384-1397.	1.3	80
53	Microtechnology for Mimicking In Vivo Tissue Environment. Annals of Biomedical Engineering, 2012, 40, 1289-1300.	1.3	51
54	Introduction to the Special Issue on Micro- and Nanofabrication Techniques. Annals of Biomedical Engineering, 2012, 40, 1209-1210.	1.3	0

#	Article	IF	Citations
55	Mimicking the human smell sensing mechanism with an artificial nose platform. Biomaterials, 2012, 33, 1722-1729.	5.7	106
56	Solving Medical Problems with BioMEMS. IEEE Pulse, 2011, 2, 51-59.	0.1	6
57	Microscale 3-D hydrogel scaffold for biomimetic gastrointestinal (GI) tract model. Lab on A Chip, 2011, 11, 389-392.	3.1	287
58	In vitro microscale systems for systematic drug toxicity study. Bioprocess and Biosystems Engineering, 2010, 33, 5-19.	1.7	74
59	A microfluidic device for a pharmacokineticâ€“pharmacodynamic (PKâ€“PD) model on a chip. Lab on A Chip, 2010, 10, 446.	3.1	419
60	Investigation of portable in situ fluorescence optical detection for microfluidic 3D cell culture assays. Optics Letters, 2010, 35, 1374.	1.7	20
61	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
62	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
63	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
64	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
65	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
66	Quantitative cell analysis in situ on a short time scale using a microscale cell culture assay. , 2007, , .		0
67	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
68	Piezoelectric biosensor using olfactory receptor protein expressed in Escherichia coli. Biosensors and Bioelectronics, 2006, 21, 1981-1986.	5.3	98