Shuichi Takayama

List of Publications by Year
in descending order

72	4,389	117453 34	106150 65
papers	citations	h-index	g-index

77	77	77	5752
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Subcellular positioning of small molecules. Nature, 2001, 411, 1016-1016.	13.7	496
2	Microfluidic Endothelium for Studying the Intravascular Adhesion of Metastatic Breast Cancer Cells. PLoS ONE, 2009, 4, e5756.	1.1	283
3	A guide to the organ-on-a-chip. Nature Reviews Methods Primers, 2022, 2, .	11.8	247
4	Quantitative measurement and control of oxygen levels in microfluidic poly(dimethylsiloxane) bioreactors during cell culture. Biomedical Microdevices, 2007, 9, 123-134.	1.4	216
5	Organs-on-a-Chip: A Focus on Compartmentalized Microdevices. Annals of Biomedical Engineering, 2012, 40, 1211-1227.	1.3	174
6	Microfeature guided skeletal muscle tissue engineering for highly organized 3-dimensional free-standing constructs. Biomaterials, 2009, 30, 1150-1155.	5.7	144
7	Pumps for microfluidic cell culture. Electrophoresis, 2014, 35, 245-257.	1.3	135
8	Polymeric Aqueous Biphasic Systems for Nonâ€Contact Cell Printing on Cells: Engineering Heterocellular Embryonic Stem Cell Niches. Advanced Materials, 2010, 22, 2628-2631.	11.1	124
9	Mechanism and Specificity of Human Î±-1,3-Fucosyltransferase Vâ€. Biochemistry, 1996, 35, 11183-11195.	1.2	121
10	Individually programmable cell stretching microwell arrays actuated by a Braille display. Biomaterials, 2008, 29, 2646-2655.	5.7	114
11	384 hanging drop arrays give excellent Z â€factors and allow versatile formation of coâ€culture spheroids. Biotechnology and Bioengineering, 2012, 109, 1293-1304.	1.7	114
12	Formation of stable small cell number three-dimensional ovarian cancer spheroids using hanging drop arrays for preclinical drug sensitivity assays. Gynecologic Oncology, 2015, 138, 181-189.	0.6	107
13	Micro-ring structures stabilize microdroplets to enable long term spheroid culture in 384 hanging drop array plates. Biomedical Microdevices, 2012, 14, 313-323.	1.4	106
14	Recent developments in multiplexing techniques for immunohistochemistry. Expert Review of Molecular Diagnostics, 2015, 15, 1171-1186.	1.5	105
15	Title is missing!. Biomedical Microdevices, 2002, 4, 141-149.	1.4	102
16	Epithelium damage and protection during reopening of occluded airways in a physiologic microfluidic pulmonary airway model. Biomedical Microdevices, 2011, 13, 731-742.	1.4	98
17	Single cell trapping in larger microwells capable of supporting cell spreading and proliferation. Microfluidics and Nanofluidics, 2010, 8, 263-268.	1.0	90
18	Media additives to promote spheroid circularity and compactness in hanging drop platform. Biomaterials Science, 2015, 3, 336-344.	2.6	84

#	Article	IF	Citations
19	Reversible on-demand cell alignment using reconfigurable microtopography. Biomaterials, 2008, 29, 1705-1712.	5.7	83
20	Dispersible hydrogel force sensors reveal patterns of solid mechanical stress in multicellular spheroid cultures. Nature Communications, 2019, 10, 144.	5.8	83
21	Budding-like division of all-aqueous emulsion droplets modulated by networks of protein nanofibrils. Nature Communications, 2018, 9, 2110.	5.8	82
22	Rapid Prototyping of Microstructures with Bell-Shaped Cross-Sections and Its Application to Deformation-Based Microfluidic Valves. Advanced Materials, 2004, 16, 1320-1323.	11.1	81
23	Patterning alginate hydrogels using light-directed release of caged calcium in a microfluidic device. Biomedical Microdevices, 2010, 12, 145-151.	1.4	72
24	Aqueous two-phase printing of cell-containing contractile collagen microgels. Biomaterials, 2013, 34, 9623-9631.	5.7	64
25	DNA linearization through confinement in nanofluidic channels. Analytical and Bioanalytical Chemistry, 2008, 391, 2395-2409.	1.9	60
26	Fracture of metal coated elastomers. Soft Matter, 2011, 7, 6493.	1.2	53
27	Unsteady propagation of a liquid plug in a liquid-lined straight tube. Physics of Fluids, 2008, 20, 62104.	1.6	51
28	Polyelectrolyteâ€Clayâ€Protein Layer Films on Microfluidic PDMS Bioreactor Surfaces for Primary Murine Bone Marrow Culture. Advanced Functional Materials, 2007, 17, 2701-2709.	7.8	50
29	Liquid and surfactant delivery into pulmonary airways. Respiratory Physiology and Neurobiology, 2008, 163, 222-231.	0.7	48
30	Dispersible oxygen microsensors map oxygen gradients in three-dimensional cell cultures. Biomaterials Science, 2017, 5, 2106-2113.	2.6	45
31	Rehydration of Polymeric, Aqueous, Biphasic System Facilitates High Throughput Cell Exclusion Patterning for Cell Migration Studies. Advanced Functional Materials, 2011, 21, 2920-2926.	7.8	41
32	Alginate Microencapsulation for Three-Dimensional In Vitro Cell Culture. ACS Biomaterials Science and Engineering, 2021, 7, 2864-2879.	2.6	41
33	Microprinted feeder cells guide embryonic stem cell fate. Biotechnology and Bioengineering, 2011, 108, 2509-2516.	1.7	39
34	MISpheroID: a knowledgebase and transparency tool for minimum information in spheroid identity. Nature Methods, 2021, 18, 1294-1303.	9.0	38
35	Precisely targeted delivery of cells and biomolecules within microchannels using aqueous two-phase systems. Biomedical Microdevices, 2011, 13, 1043-1051.	1.4	37
36	Timing is everything: using fluidics to understand the role of temporal dynamics in cellular systems. Microfluidics and Nanofluidics, 2009, 6, 717-729.	1.0	32

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37	Microfluidic Automation Using Elastomeric Valves and Droplets: Reducing Reliance on External Controllers. Small, 2012, 8, 2925-2934.	5.2	32
38	A platform for artificial intelligence based identification of the extravasation potential of cancer cells into the brain metastatic niche. Lab on A Chip, 2019, 19, 1162-1173.	3.1	32
39	Patterning Bacterial Communities on Epithelial Cells. PLoS ONE, 2013, 8, e67165.	1.1	31
40	Microfluidic oscillators with widely tunable periods. Lab on A Chip, 2013, 13, 1644.	3.1	27
41	Microfluidic systems: A new toolbox for pluripotent stem cells. Biotechnology Journal, 2013, 8, 180-191.	1.8	27
42	Bioengineering for intestinal organoid cultures. Current Opinion in Biotechnology, 2017, 47, 51-58.	3.3	26
43	Defined topologically-complex protein matrices to manipulate cell shape via three-dimensional fiber-like patterns. Lab on A Chip, 2014, 14, 2191-2201.	3.1	24
44	Acceptor substrate-based selective inhibition of galactosyltransferases. Bioorganic and Medicinal Chemistry Letters, 1998, 8, 3359-3364.	1.0	23
45	Cell Co-culture Patterning Using Aqueous Two-phase Systems. Journal of Visualized Experiments, 2013, , .	0.2	22
46	Integration of Sensors in Gastrointestinal Organoid CultureÂforÂBiological Analysis. Cellular and Molecular Gastroenterology and Hepatology, 2018, 6, 123-131.e1.	2.3	22
47	Aqueous biphasic microprinting approach to tissue engineering. Biomicrofluidics, 2011, 5, 13404.	1.2	20
48	Rapid Selfâ€Assembly of Macroscale Tissue Constructs at Biphasic Aqueous Interfaces. Advanced Functional Materials, 2015, 25, 1694-1699.	7.8	19
49	Aqueous twoâ€phase systemâ€mediated antibody micropatterning enables multiplexed immunostaining of cell monolayers and tissues. Biotechnology Journal, 2015, 10, 121-125.	1.8	19
50	DNAâ€Based Biomaterials for Immunoengineering. Advanced Healthcare Materials, 2019, 8, e1801243.	3.9	18
51	Protocell arrays for simultaneous detection of diverse analytes. Nature Communications, 2021, 12, 5724.	5.8	18
52	Microscale Integrated Sperm Sorter. , 2006, 321, 227-244.		17
53	Surface-templated hydrogel patterns prompt matrix-dependent migration of breast cancer cells towards chemokine-secreting cells. Acta Biomaterialia, 2015, 13, 68-77.	4.1	17
54	Quantitative inference of cellular parameters from microfluidic cell culture systems. Biotechnology and Bioengineering, 2009, 103, 966-974.	1.7	16

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55	Elevating sampling. Lab on A Chip, 2014, 14, 3165-3171.	3.1	15
56	Patchy Surfaces Stabilize Dextranâ€“Polyethylene Glycol Aqueous Two-Phase System Liquid Patterns. Langmuir, 2013, 29, 5508-5514.	1.6	13
57	Aqueous Twoâ€Phase System Patterning of Microbubbles: Localized Induction of Apoptosis in Sonoporated Cells. Advanced Functional Materials, 2013, 23, 3420-3431.	7.8	13
58	One-incubation one-hour multiplex ELISA enabled by aqueous two-phase systems. Analyst, The, 2020, 145, 3517-3527.	1.7	12
59	Delivery of Proteases in Aqueous Twoâ€Phase Systems Enables Direct Purification of Stem Cell Colonies from Feeder Cell Coâ€Cultures for Differentiation into Functional Cardiomyocytes. Advanced Healthcare Materials, 2013, 2, 1440-1444.	3.9	11
60	Elongation of Fibers from Highly Viscous Dextran Solutions Enables Fabrication of Rapidly Dissolving Drug Carrying Fabrics. Advanced Healthcare Materials, 2015, 4, 313-319.	3.9	10
61	Reduction of bicyclo[3.3.1]nonane-2,8-diones with baker's yeast. Bioorganic and Medicinal Chemistry, 1994, 2, 395-401.	1.4	6
62	Guided corona generates wettability patterns that selectively direct cell attachment inside closed microchannels. Biomedical Microdevices, 2010, 12, 769-775.	1.4	6
63	Oneâ€dimensional patterning of cells in silicone wells via compressionâ€induced fracture. Journal of Biomedical Materials Research - Part A, 2014, 102, 1361-1369.	2.1	6
64	A Highâ€Throughput Distal Lung Airâ€“Blood Barrier Model Enabled By Densityâ€Driven Underside Epithelium Seeding. Advanced Healthcare Materials, 2021, 10, e2100879.	3.9	6
65	Fracture fabrication of a multi-scale channel device that efficiently captures and linearizes DNA from dilute solutions. Lab on A Chip, 2015, 15, 1329-1334.	3.1	5
66	Determination of Aqueous Twoâ€Phase System Binodals and Tieâ€Lines by Electrowettingâ€onâ€Dielectric Droplet Manipulation. ChemBioChem, 2018, 20, 270-275.	1.3	4
67	Microbubbles: Aqueous Twoâ€Phase System Patterning of Microbubbles: Localized Induction of Apoptosis in Sonoporated Cells (Adv. Funct. Mater. 27/2013). Advanced Functional Materials, 2013, 23, 3366-3366.	7.8	3
68	Dynamic simulations show repeated narrowing maximizes DNA linearization in elastomeric nanochannels. Biomicrofluidics, 2016, 10, 064108.	1.2	3
69	Novel monolithic â€œSlightly-Open doormatâ€•(SOD) valve enables efficient fabrication of highly-scalable microfluidic gas-on-gas multiplexer. Sensors and Actuators B: Chemical, 2019, 297, 126776.	4.0	1
70	Nucleic Acid Partitioning in PEG-Ficoll Protocells. Journal of Chemical & Engineering Data, 2022, 67, 1964-1971.	1.0	1
71	Cell-Exclusion Patterning: Rehydration of Polymeric, Aqueous, Biphasic System Facilitates High Throughput Cell Exclusion Patterning for Cell Migration Studies (Adv. Funct. Mater. 15/2011). Advanced Functional Materials, 2011, 21, 2919-2919.	7.8	0
72	Embracing Heterogeneity and Disorder. Israel Journal of Chemistry, 2019, 59, 95-99.	1.0	0