

# Shuichi Takayama

## List of Publications by Citations

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72  
papers

3,406  
citations

31  
h-index

58  
g-index

77  
ext. papers

3,859  
ext. citations

8.4  
avg, IF

5.15  
L-index

#	Paper	IF	Citations
72	Subcellular positioning of small molecules. <i>Nature</i> , <b>2001</b> , 411, 1016	50.4	419
71	Microfluidic endothelium for studying the intravascular adhesion of metastatic breast cancer cells. <i>PLoS ONE</i> , <b>2009</b> , 4, e5756	3.7	252
70	Quantitative measurement and control of oxygen levels in microfluidic poly(dimethylsiloxane) bioreactors during cell culture. <i>Biomedical Microdevices</i> , <b>2007</b> , 9, 123-34	3.7	190
69	Organs-on-a-chip: a focus on compartmentalized microdevices. <i>Annals of Biomedical Engineering</i> , <b>2012</b> , 40, 1211-27	4.7	152
68	Microfeature guided skeletal muscle tissue engineering for highly organized 3-dimensional free-standing constructs. <i>Biomaterials</i> , <b>2009</b> , 30, 1150-5	15.6	128
67	Polymeric aqueous biphasic systems for non-contact cell printing on cells: engineering heterocellular embryonic stem cell niches. <i>Advanced Materials</i> , <b>2010</b> , 22, 2628-31	24	117
66	Mechanism and specificity of human alpha-1,3-fucosyltransferase V. <i>Biochemistry</i> , <b>1996</b> , 35, 11183-95	3.2	116
65	384 hanging drop arrays give excellent Z-factors and allow versatile formation of co-culture spheroids. <i>Biotechnology and Bioengineering</i> , <b>2012</b> , 109, 1293-304	4.9	102
64	Individually programmable cell stretching microwell arrays actuated by a Braille display. <i>Biomaterials</i> , <b>2008</b> , 29, 2646-55	15.6	99
63	Formation of stable small cell number three-dimensional ovarian cancer spheroids using hanging drop arrays for preclinical drug sensitivity assays. <i>Gynecologic Oncology</i> , <b>2015</b> , 138, 181-9	4.9	85
62	Pumps for microfluidic cell culture. <i>Electrophoresis</i> , <b>2014</b> , 35, 245-57	3.6	83
61	Micro-ring structures stabilize microdroplets to enable long term spheroid culture in 384 hanging drop array plates. <i>Biomedical Microdevices</i> , <b>2012</b> , 14, 313-23	3.7	82
60	Epithelium damage and protection during reopening of occluded airways in a physiologic microfluidic pulmonary airway model. <i>Biomedical Microdevices</i> , <b>2011</b> , 13, 731-42	3.7	80
59	Reversible on-demand cell alignment using reconfigurable microtopography. <i>Biomaterials</i> , <b>2008</b> , 29, 1705-12	15.6	79
58	Use of Air-Liquid Two-Phase Flow in Hydrophobic Microfluidic Channels for Disposable Flow Cytometers. <i>Biomedical Microdevices</i> , <b>2002</b> , 4, 141-149	3.7	79
57	Recent developments in multiplexing techniques for immunohistochemistry. <i>Expert Review of Molecular Diagnostics</i> , <b>2015</b> , 15, 1171-86	3.8	75
56	Rapid Prototyping of Microstructures with Bell-Shaped Cross-Sections and Its Application to Deformation-Based Microfluidic Valves. <i>Advanced Materials</i> , <b>2004</b> , 16, 1320-1323	24	75

55	Single cell trapping in larger microwells capable of supporting cell spreading and proliferation. <i>Microfluidics and Nanofluidics</i> , <b>2010</b> , 8, 263-268	2.8	70
54	Patterning alginate hydrogels using light-directed release of caged calcium in a microfluidic device. <i>Biomedical Microdevices</i> , <b>2010</b> , 12, 145-51	3.7	64
53	Media additives to promote spheroid circularity and compactness in hanging drop platform. <i>Biomaterials Science</i> , <b>2015</b> , 3, 336-44	7.4	60
52	DNA linearization through confinement in nanofluidic channels. <i>Analytical and Bioanalytical Chemistry</i> , <b>2008</b> , 391, 2395-409	4.4	58
51	Budding-like division of all-aqueous emulsion droplets modulated by networks of protein nanofibrils. <i>Nature Communications</i> , <b>2018</b> , 9, 2110	17.4	58
50	Dispersible hydrogel force sensors reveal patterns of solid mechanical stress in multicellular spheroid cultures. <i>Nature Communications</i> , <b>2019</b> , 10, 144	17.4	52
49	Polyelectrolyte-Clay-Protein Layer Films on Microfluidic PDMS Bioreactor Surfaces for Primary Murine Bone Marrow Culture. <i>Advanced Functional Materials</i> , <b>2007</b> , 17, 2701-2709	15.6	46
48	Aqueous two-phase printing of cell-containing contractile collagen microgels. <i>Biomaterials</i> , <b>2013</b> , 34, 9623-31	15.6	45
47	Unsteady propagation of a liquid plug in a liquid-lined straight tube. <i>Physics of Fluids</i> , <b>2008</b> , 20, 62104	4.4	45
46	Fracture of metal coated elastomers. <i>Soft Matter</i> , <b>2011</b> , 7, 6493	3.6	44
45	Liquid and surfactant delivery into pulmonary airways. <i>Respiratory Physiology and Neurobiology</i> , <b>2008</b> , 163, 222-31	2.8	37
44	Polymeric Aqueous Biphasic System Rehydration Facilitates High Throughput Cell Exclusion Patterning For Cell Migration Studies. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 2920-2926	15.6	35
43	Microprinted feeder cells guide embryonic stem cell fate. <i>Biotechnology and Bioengineering</i> , <b>2011</b> , 108, 2509-16	4.9	35
42	Precisely targeted delivery of cells and biomolecules within microchannels using aqueous two-phase systems. <i>Biomedical Microdevices</i> , <b>2011</b> , 13, 1043-51	3.7	34
41	Dispersible oxygen microsensors map oxygen gradients in three-dimensional cell cultures. <i>Biomaterials Science</i> , <b>2017</b> , 5, 2106-2113	7.4	31
40	Timing is everything: using fluidics to understand the role of temporal dynamics in cellular systems. <i>Microfluidics and Nanofluidics</i> , <b>2009</b> , 6, 717-729	2.8	29
39	Microfluidic automation using elastomeric valves and droplets: reducing reliance on external controllers. <i>Small</i> , <b>2012</b> , 8, 2925-34	11	27
38	Patterning bacterial communities on epithelial cells. <i>PLoS ONE</i> , <b>2013</b> , 8, e67165	3.7	27

37	Microfluidic oscillators with widely tunable periods. <i>Lab on A Chip</i> , <b>2013</b> , 13, 1644-8	7.2	23
36	A platform for artificial intelligence based identification of the extravasation potential of cancer cells into the brain metastatic niche. <i>Lab on A Chip</i> , <b>2019</b> , 19, 1162-1173	7.2	22
35	Defined topologically-complex protein matrices to manipulate cell shape via three-dimensional fiber-like patterns. <i>Lab on A Chip</i> , <b>2014</b> , 14, 2191-201	7.2	21
34	Microfluidic systems: a new toolbox for pluripotent stem cells. <i>Biotechnology Journal</i> , <b>2013</b> , 8, 180-91	5.6	21
33	Acceptor substrate-based selective inhibition of galactosyltransferases. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>1998</b> , 8, 3359-64	2.9	21
32	A guide to the organ-on-a-chip. <i>Nature Reviews Methods Primers</i> , <b>2022</b> , 2,		21
31	Cell co-culture patterning using aqueous two-phase systems. <i>Journal of Visualized Experiments</i> , <b>2013</b> ,	1.6	20
30	Bioengineering for intestinal organoid cultures. <i>Current Opinion in Biotechnology</i> , <b>2017</b> , 47, 51-58	11.4	19
29	Aqueous biphasic microprinting approach to tissue engineering. <i>Biomicrofluidics</i> , <b>2011</b> , 5, 13404	3.2	18
28	Rapid Self-Assembly of Macroscale Tissue Constructs at Biphasic Aqueous Interfaces. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 1694-1699	15.6	16
27	Microscale integrated sperm sorter. <i>Methods in Molecular Biology</i> , <b>2006</b> , 321, 227-44	1.4	16
26	Surface-templated hydrogel patterns prompt matrix-dependent migration of breast cancer cells towards chemokine-secreting cells. <i>Acta Biomaterialia</i> , <b>2015</b> , 13, 68-77	10.8	14
25	Aqueous two-phase system-mediated antibody micropatterning enables multiplexed immunostaining of cell monolayers and tissues. <i>Biotechnology Journal</i> , <b>2015</b> , 10, 121-5	5.6	14
24	Integration of Sensors in Gastrointestinal Organoid Culture for Biological Analysis. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , <b>2018</b> , 6, 123-131.e1	7.9	14
23	Elevating sampling. <i>Lab on A Chip</i> , <b>2014</b> , 14, 3165-71	7.2	14
22	Quantitative inference of cellular parameters from microfluidic cell culture systems. <i>Biotechnology and Bioengineering</i> , <b>2009</b> , 103, 966-74	4.9	13
21	Aqueous Two-Phase System Patterning of Microbubbles: Localized Induction of Apoptosis in Sonoporated Cells. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3420-3431	15.6	12
20	Alginate Microencapsulation for Three-Dimensional In Vitro Cell Culture. <i>ACS Biomaterials Science and Engineering</i> , <b>2021</b> , 7, 2864-2879	5.5	12

19	Patchy surfaces stabilize dextran-polyethylene glycol aqueous two-phase system liquid patterns. <i>Langmuir</i> , <b>2013</b> , 29, 5508-14	4	11
18	Delivery of proteases in aqueous two-phase systems enables direct purification of stem cell colonies from feeder cell co-cultures for differentiation into functional cardiomyocytes. <i>Advanced Healthcare Materials</i> , <b>2013</b> , 2, 1440-4	10.1	11
17	DNA-Based Biomaterials for Immunoengineering. <i>Advanced Healthcare Materials</i> , <b>2019</b> , 8, e1801243	10.1	9
16	Elongation of fibers from highly viscous dextran solutions enables fabrication of rapidly dissolving drug carrying fabrics. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 313-9	10.1	8
15	One-incubation one-hour multiplex ELISA enabled by aqueous two-phase systems. <i>Analyst, The</i> , <b>2020</b> , 145, 3517-3527	5	8
14	Reduction of bicyclo[3.3.1]nonane-2,8-diones with baker's yeast. <i>Bioorganic and Medicinal Chemistry</i> , <b>1994</b> , 2, 395-401	3.4	6
13	Guided corona generates wettability patterns that selectively direct cell attachment inside closed microchannels. <i>Biomedical Microdevices</i> , <b>2010</b> , 12, 769-75	3.7	5
12	Protocell arrays for simultaneous detection of diverse analytes. <i>Nature Communications</i> , <b>2021</b> , 12, 5724	17.4	5
11	Fracture fabrication of a multi-scale channel device that efficiently captures and linearizes DNA from dilute solutions. <i>Lab on A Chip</i> , <b>2015</b> , 15, 1329-34	7.2	4
10	One-dimensional patterning of cells in silicone wells via compression-induced fracture. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2014</b> , 102, 1361-9	5.4	4
9	MISpheroid: a knowledgebase and transparency tool for minimum information in spheroid identity. <i>Nature Methods</i> , <b>2021</b> , 18, 1294-1303	21.6	4
8	Microbubbles: Aqueous Two-Phase System Patterning of Microbubbles: Localized Induction of Apoptosis in Sonoporated Cells (Adv. Funct. Mater. 27/2013). <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3366-3366	15.6	3
7	Dynamic simulations show repeated narrowing maximizes DNA linearization in elastomeric nanochannels. <i>Biomicrofluidics</i> , <b>2016</b> , 10, 064108	3.2	2
6	A High-Throughput Distal Lung Air-Blood Barrier Model Enabled By Density-Driven Underside Epithelium Seeding. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2100879	10.1	1
5	Protocell Arrays for Simultaneous Detection of Diverse Analytes		1
4	Determination of Aqueous Two-Phase System Binodals and Tie-Lines by Electrowetting-on-Dielectric Droplet Manipulation. <i>ChemBioChem</i> , <b>2019</b> , 20, 270-275	3.8	1
3	Embracing Heterogeneity and Disorder. <i>Israel Journal of Chemistry</i> , <b>2019</b> , 59, 95-99	3.4	
2	Novel monolithic Blightly-Open doormat(SOD) valve enables efficient fabrication of highly-scalable microfluidic gas-on-gas multiplexer. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 297, 126776 <sup>8.5</sup>		

- 1 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 15.6