

Hirokazu Kaji

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

109
papers

3,833
citations

35
h-index

60
g-index

125
ext. papers

4,231
ext. citations

6.9
avg, IF

5.17
L-index

#	Paper	IF	Citations
109	Biomimetic tissues on a chip for drug discovery. <i>Drug Discovery Today</i> , 2012 , 17, 173-81	8.8	282
108	Dielectrophoretically aligned carbon nanotubes to control electrical and mechanical properties of hydrogels to fabricate contractile muscle myofibers. <i>Advanced Materials</i> , 2013 , 25, 4028-34	24	200
107	Cell docking inside microwells within reversibly sealed microfluidic channels for fabricating multiphenotype cell arrays. <i>Lab on A Chip</i> , 2005 , 5, 1380-6	7.2	200
106	Engineered contractile skeletal muscle tissue on a microgrooved methacrylated gelatin substrate. <i>Tissue Engineering - Part A</i> , 2012 , 18, 2453-65	3.9	169
105	Skeletal muscle tissue engineering: methods to form skeletal myotubes and their applications. <i>Tissue Engineering - Part B: Reviews</i> , 2014 , 20, 403-36	7.9	164
104	Gelatin methacrylate as a promising hydrogel for 3D microscale organization and proliferation of dielectrophoretically patterned cells. <i>Lab on A Chip</i> , 2012 , 12, 2959-69	7.2	135
103	Engineering systems for the generation of patterned co-cultures for controlling cell-cell interactions. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2011 , 1810, 239-50	4	133
102	An enzyme-based microfluidic biofuel cell using vitamin K3-mediated glucose oxidation. <i>Electrochimica Acta</i> , 2007 , 52, 4669-4674	6.7	130
101	Highly conductive stretchable and biocompatible electrode-hydrogel hybrids for advanced tissue engineering. <i>Advanced Healthcare Materials</i> , 2014 , 3, 1919-27	10.1	120
100	Patterned differentiation of individual embryoid bodies in spatially organized 3D hybrid microgels. <i>Advanced Materials</i> , 2010 , 22, 5276-81	24	99
99	Microelectrochemical approach to induce local cell adhesion and growth on substrates. <i>Langmuir</i> , 2004 , 20, 16-9	4	92
98	Interdigitated array of Pt electrodes for electrical stimulation and engineering of aligned muscle tissue. <i>Lab on A Chip</i> , 2012 , 12, 3491-503	7.2	89
97	Red blood cell motions in high-hematocrit blood flowing through a stenosed microchannel. <i>Journal of Biomechanics</i> , 2009 , 42, 838-43	2.9	80
96	Structural studies of enzyme-based microfluidic biofuel cells. <i>Journal of Power Sources</i> , 2008 , 178, 53-588.9		79
95	Engineered nanomembranes for directing cellular organization toward flexible biodevices. <i>Nano Letters</i> , 2013 , 13, 3185-92	11.5	78
94	In situ control of cellular growth and migration on substrates using microelectrodes. <i>Journal of the American Chemical Society</i> , 2004 , 126, 15026-7	16.4	74
93	Electrodeposition of anchored polypyrrole film on microelectrodes and stimulation of cultured cardiac myocytes. <i>Biomaterials</i> , 2007 , 28, 1480-5	15.6	71

92	In situ formation of injectable chitosan-gelatin hydrogels through double crosslinking for sustained intraocular drug delivery. <i>Materials Science and Engineering C</i> , 2018 , 88, 1-12	8.3	70
91	Preparation and characterization of collagen microspheres for sustained release of VEGF. <i>Journal of Materials Science: Materials in Medicine</i> , 2010 , 21, 1891-8	4.5	63
90	Localized chemical stimulation to micropatterned cells using multiple laminar fluid flows. <i>Lab on A Chip</i> , 2003 , 3, 208-11	7.2	63
89	Electrically induced contraction of C2C12 myotubes cultured on a porous membrane-based substrate with muscle tissue-like stiffness. <i>Biomaterials</i> , 2010 , 31, 6981-6	15.6	57
88	Three-dimensional co-culture of C2C12/PC12 cells improves skeletal muscle tissue formation and function. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2017 , 11, 582-595	4.4	55
87	On-demand patterning of protein matrixes inside a microfluidic device. <i>Analytical Chemistry</i> , 2006 , 78, 5469-73	7.8	55
86	Electrical stimulation as a biomimicry tool for regulating muscle cell behavior. <i>Organogenesis</i> , 2013 , 9, 87-92	1.7	53
85	Electrically regulated differentiation of skeletal muscle cells on ultrathin graphene-based films. <i>RSC Advances</i> , 2014 , 4, 9534	3.7	52
84	Microfluidic co-cultures of retinal pigment epithelial cells and vascular endothelial cells to investigate choroidal angiogenesis. <i>Scientific Reports</i> , 2017 , 7, 3538	4.9	51
83	Directed assembly of cell-laden microgels for building porous three-dimensional tissue constructs. <i>Journal of Biomedical Materials Research - Part A</i> , 2011 , 97, 93-102	5.4	49
82	Controlled cocultures of HeLa cells and human umbilical vein endothelial cells on detachable substrates. <i>Lab on A Chip</i> , 2009 , 9, 427-32	7.2	45
81	Micropatterned polymeric nanosheets for local delivery of an engineered epithelial monolayer. <i>Advanced Materials</i> , 2014 , 26, 1699-705	24	44
80	Patterning cellular motility using an electrochemical technique and a geometrically confined environment. <i>Langmuir</i> , 2006 , 22, 10784-7	4	43
79	Drug delivery devices for retinal diseases. <i>Advanced Drug Delivery Reviews</i> , 2018 , 128, 148-157	18.5	39
78	Designer hydrophilic regions regulate droplet shape for controlled surface patterning and 3D microgel synthesis. <i>Small</i> , 2012 , 8, 393-403	11	39
77	A microfluidic-based neurotoxin concentration gradient for the generation of an in vitro model of Parkinson's disease. <i>Biomicrofluidics</i> , 2011 , 5, 22214	3.2	38
76	A polymeric device for controlled transscleral multi-drug delivery to the posterior segment of the eye. <i>Acta Biomaterialia</i> , 2014 , 10, 680-7	10.8	36
75	Fiber-assisted molding (FAM) of surfaces with tunable curvature to guide cell alignment and complex tissue architecture. <i>Small</i> , 2014 , 10, 4851-7	11	35

74	Axisymmetric polydimethylsiloxane microchannels for in vitro hemodynamic studies. <i>Biofabrication</i> , 2009 , 1, 035005	10.5	35
73	Micropatterning contractile C2C12 myotubes embedded in a fibrin gel. <i>Biotechnology and Bioengineering</i> , 2010 , 105, 1161-7	4.9	35
72	Biofuel cell anode: NAD ⁺ /glucose dehydrogenase-coimmobilized ketjenblack electrode. <i>Chemical Physics Letters</i> , 2009 , 480, 123-126	2.5	34
71	A scalable controlled-release device for transscleral drug delivery to the retina. <i>Biomaterials</i> , 2011 , 32, 1950-6	15.6	34
70	Patterning the surface cytophobicity of an albumin-physisorbed substrate by electrochemical means. <i>Langmuir</i> , 2005 , 21, 6966-9	4	34
69	Controlled release of drugs from gradient hydrogels for high-throughput analysis of cell-drug interactions. <i>Analytical Chemistry</i> , 2012 , 84, 1302-9	7.8	32
68	A contactless electrical stimulator: application to fabricate functional skeletal muscle tissue. <i>Biomedical Microdevices</i> , 2013 , 15, 109-15	3.7	31
67	Totally shape-conformable electrode/hydrogel composite for on-skin electrophysiological measurements. <i>Sensors and Actuators B: Chemical</i> , 2016 , 237, 49-53	8.5	28
66	Selective capture of a specific cell type from mixed leucocytes in an electrode-integrated microfluidic device. <i>Biosensors and Bioelectronics</i> , 2009 , 24, 2892-7	11.8	27
65	Pharmacological characterization of micropatterned cardiac myocytes. <i>Biomaterials</i> , 2003 , 24, 4239-44	15.6	27
64	Modeling angiogenesis with micro- and nanotechnology. <i>Lab on A Chip</i> , 2017 , 17, 4186-4219	7.2	26
63	Intracellular Ca ²⁺ imaging for micropatterned cardiac myocytes. <i>Biotechnology and Bioengineering</i> , 2003 , 81, 748-51	4.9	25
62	Monitoring impedance changes associated with motility and mitosis of a single cell. <i>Lab on A Chip</i> , 2010 , 10, 2546-50	7.2	23
61	Directing the flow of medium in controlled cocultures of HeLa cells and human umbilical vein endothelial cells with a microfluidic device. <i>Lab on A Chip</i> , 2010 , 10, 2374-9	7.2	21
60	A platform for controlled dual-drug delivery to the retina: protective effects against light-induced retinal damage in rats. <i>Advanced Healthcare Materials</i> , 2014 , 3, 1555-60, 1524	10.1	19
59	Portable Micropatterns of Neuronal Cells Supported by Thin Hydrogel Films. <i>ACS Biomaterials Science and Engineering</i> , 2015 , 1, 329-334	5.5	18
58	Localized electrical stimulation to C2C12 myotubes cultured on a porous membrane-based substrate. <i>Biomedical Microdevices</i> , 2009 , 11, 413-9	3.7	18
57	3D Printing Techniques and Their Applications to Organ-on-a-Chip Platforms: A Systematic Review. <i>Sensors</i> , 2021 , 21,	3.8	18

56	Transscleral sustained vasohibin-1 delivery by a novel device suppressed experimentally-induced choroidal neovascularization. <i>PLoS ONE</i> , 2013 , 8, e58580	3.7	17
55	Contractile Skeletal Muscle Cells Cultured with a Conducting Soft Wire for Effective, Selective Stimulation. <i>Scientific Reports</i> , 2018 , 8, 2253	4.9	16
54	A porous membrane-based culture substrate for localized in situ electroporation of adherent mammalian cells. <i>Sensors and Actuators B: Chemical</i> , 2007 , 128, 5-11	8.5	16
53	Localized immobilization of proteins onto microstructures within a preassembled microfluidic device. <i>Sensors and Actuators B: Chemical</i> , 2008 , 128, 545-551	8.5	16
52	Anisotropic growth of conducting polymers along heparin-modified surfaces. <i>Langmuir</i> , 2007 , 23, 8304-74		13
51	Long-Term Protection of Genetically Ablated Rabbit Retinal Degeneration by Sustained Transscleral Unoprostone Delivery 2016 , 57, 6527-6538		13
50	Patterning Adherent Cells within Microchannels by Combination of Electrochemical Biolithography Technique and Repulsive Dielectrophoretic Force. <i>Electrochemistry</i> , 2008 , 76, 555-558	1.2	12
49	Integration of an electrochemical-based biolithography technique into an AFM system. <i>Analytical and Bioanalytical Chemistry</i> , 2008 , 391, 2711-6	4.4	11
48	Electrochemical manipulation of cell populations supported by biodegradable polymeric nanosheets for cell transplantation therapy. <i>Biomaterials Science</i> , 2017 , 5, 216-222	7.4	10
47	Stepwise formation of patterned cell co-cultures in silicone tubing. <i>Biotechnology and Bioengineering</i> , 2007 , 98, 919-25	4.9	10
46	Micropatterned HeLa Cell Culture on PEG Monolayer-Coated Glass Substrates. <i>Chemistry Letters</i> , 2002 , 31, 904-905	1.7	10
45	Spatiotemporal sub-cellular biopatterning using an AFM-assisted electrochemical system. <i>Electrochemistry Communications</i> , 2009 , 11, 1781-1784	5.1	9
44	Minimally-invasive transepidermal potentiometry with microneedle salt bridge. <i>Biomedical Microdevices</i> , 2016 , 18, 55	3.7	8
43	Electrodes combined with an agarose stamp for addressable micropatterning. <i>Langmuir</i> , 2010 , 26, 11526-9		7
42	Pharmacokinetic and Safety Evaluation of a Transscleral Sustained Unoprostone Release Device in Monkey Eyes 2018 , 59, 644-652		7
41	Prototyping a Versatile Two-Layer Multi-Channel Microfluidic Device for Direct-Contact Cell-Vessel Co-Culture. <i>Micromachines</i> , 2020 , 11,	3.3	6
40	Protective effects of sustained transscleral unoprostone delivery against retinal degeneration in S334ter rhodopsin mutant rats. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016 , 104, 1730-1737	3.5	6
39	Microfluidic systems for controlling stem cell microenvironments 2019 , 31-63		6

38	A drug refillable device for transscleral sustained drug delivery to the retina. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2019 , 136, 184-191	5.7	5
37	Hydrogel-based bioassay sheets for in vitro evaluation of contraction-dependent metabolic regulation in skeletal muscle cells. <i>Biomaterials Science</i> , 2014 , 2, 252-256	7.4	5
36	Conducting Polymer-Based Electrodes for Controlling Cellular Functions. <i>Electrochemistry</i> , 2008 , 76, 532-534	1.2	5
35	Microstamp-Based Micromachining for Modulation of Growth of Cultured Neuronal Cells. <i>JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing</i> , 2004 , 47, 956-961		5
34	Application of clotrimazole via a novel controlled release device provides potent retinal protection. <i>Journal of Materials Science: Materials in Medicine</i> , 2015 , 26, 230	4.5	4
33	A 3D Printed Self-Sustainable Cell-Encapsulation Drug Delivery Device for Periocular Transplant-Based Treatment of Retinal Degenerative Diseases. <i>Micromachines</i> , 2020 , 11,	3.3	4
32	Controlled basic fibroblast growth factor release device made of poly(ethyleneglycol) dimethacrylates for creating a subcutaneous neovascular bed for cell transplantation. <i>Journal of Biomedical Materials Research - Part A</i> , 2017 , 105, 3017-3024	5.4	4
31	Organ-on-a-Chip Platforms for Drug Screening and Delivery in Tumor Cells: A Systematic Review.. <i>Cancers</i> , 2022 , 14,	6.6	4
30	Transscleral Controlled Delivery of Geranylgeranylacetone Using a Polymeric Device Protects Rat Retina Against Light Injury. <i>Advances in Experimental Medicine and Biology</i> , 2016 , 854, 471-7	3.6	3
29	Highly stretchable cell-cultured hydrogel sheet. <i>RSC Advances</i> , 2015 , 5, 66334-66338	3.7	3
28	A self-deploying drug release device using polymeric films. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2018 , 106, 780-786	3.5	3
27	Transfer of two-dimensional patterns of human umbilical vein endothelial cells into fibrin gels to facilitate vessel formation. <i>Chemical Communications</i> , 2010 , 46, 2070-2	5.8	3
26	Fabrication and Characterization of Micropatterned Living Cells. <i>Hyomen Kagaku</i> , 2004 , 25, 290-295		3
25	Intrascleral transplantation of a collagen sheet with cultured brain-derived neurotrophic factor expressing cells partially rescues the retina from damage due to acute high intraocular pressure. <i>Advances in Experimental Medicine and Biology</i> , 2014 , 801, 837-43	3.6	3
24	Recent trends of biomaterials and biosensors for organ-on-chip platforms. <i>Bioprinting</i> , 2022 , 26, e002027		3
23	A multilayered sheet-type device capable of sustained drug release and deployment control. <i>Biomedical Microdevices</i> , 2019 , 21, 60	3.7	2
22	Bonding of synthetic hydrogels with fibrin as the glue to engineer hydrogel-based biodevices. <i>Journal of Bioscience and Bioengineering</i> , 2014 , 118, 94-7	3.3	2
21	Physicochemical and biological characterization of sustained isopropyl unoprostone-release device made of poly(ethyleneglycol) dimethacrylates. <i>Journal of Materials Science: Materials in Medicine</i> , 2017 , 28, 107	4.5	2

20	Microdroplet Patterning: Designer Hydrophilic Regions Regulate Droplet Shape for Controlled Surface Patterning and 3D Microgel Synthesis (Small 3/2012). <i>Small</i> , 2012 , 8, 326-326	11	2
19	Transscleral sustained ranibizumab delivery using an episcleral implantable device: Suppression of laser-induced choroidal neovascularization in rats. <i>International Journal of Pharmaceutics</i> , 2019 , 567, 118458	6.5	1
18	Microfluidic Systems for Controlling Stem Cells Microenvironments 2013 , 175-203		1
17	In-situ?????????????????????????. <i>Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan</i> , 2008 , 59, 371-376	0.1	1
16	Microscale Biomaterials for Tissue Engineering 2011 , 119-138		1
15	An Open-Source Add-On EVOM Device for Real-Time Transepithelial/Endothelial Electrical Resistance Measurements in Multiple Transwell Samples. <i>Micromachines</i> , 2021 , 12,	3.3	1
14	On-chip disease models of the human retina 2019 , 351-372		1
13	Microfabrication and Nanofabrication Techniques 2015 , 207-219		0
12	Effect of sustained insulin-releasing device made of poly(ethylene glycol) dimethacrylates on retinal function in streptozotocin-induced diabetic rats. <i>Journal of Materials Science: Materials in Medicine</i> , 2020 , 31, 52	4.5	
11	Generation of patterned cell co-cultures in silicone tubing using a microelectrode technique and electrostatic assembly. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 5861-4		
10	?????????:?????????. <i>Electrochemistry</i> , 2006 , 74, 905-910	1.2	
9	Development of Cell Delivery System for the Subretinal Space Using Biodegradable Nanosheets. <i>ECS Meeting Abstracts</i> , 2020 , MA2020-02, 2789-2789	0	
8	Development of a 3D Printed Refillable Drug Delivery Device for Sustained Release to the Retina. <i>ECS Meeting Abstracts</i> , 2020 , MA2020-02, 3290-3290	0	
7	Drug and Cell Delivery Systems for Posterior Ocular Diseases. <i>Membrane</i> , 2020 , 45, 240-244	0	
6	Electrochemical In-Situ Micropatterning of Cells and Polymers. <i>IFMBE Proceedings</i> , 2009 , 2173-2176	0.2	
5	2C43 Cell delivery to the subretinal space of rats using nanosheets. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , 2015 , 2015.27, 419-420	0	
4	2G42 Development of an injectable drug release device using polymeric films. <i>The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME</i> , 2016 , 2016.28, _2G42-1_- _2G42-5_	0	
3	Impedance Sensing of Biological Processes in Mammalian Cells 293-308		

- 2 6PM3-PMN-004 Polymeric Ultra-thin Films for Cell Delivery System. *The Proceedings of the Symposium on Micro-Nano Science and Technology*, **2013**, 2013.5, 179-180 ○
- 1 1C31 Applications of micro/nanotechnologies to ophthalmology. *The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME*, **2014**, 2014.26, 87-88 ○