Jianping Fu

List of Publications by Year in Descending Order

131 papers	7,257 citations	44 h-index	83 g-index
152 ext. papers	8,557 ext. citations	10.5 avg, IF	6.18 L-index

#	Paper	IF	Citations
131	Elucidating the behavior of trophectoderm derivatives in mouse implantation.. *Developmental Cell*, **2022**, 57, 295-297	10.2	
130	Engineering multiscale structural orders for high-fidelity embryoids and organoids.. *Cell Stem Cell*, **2022**, 29, 722-743	18	0
129	Micro/nanoengineered technologies for human pluripotent stem cells maintenance and differentiation. *Nano Today*, **2021**, 41, 101310-101310	17.9	2
128	Force-FAK signaling coupling at individual focal adhesions coordinates mechanosensing and microtissue repair. *Nature Communications*, **2021**, 12, 2359	17.4	10
127	Spatially resolved cell polarity proteomics of a human epiblast model. *Science Advances*, **2021**, 7,	14.3	7
126	SnapShot: Embryo models. *Stem Cell Reports*, **2021**, 16, 1142-1142.e1	8	0
125	Human embryo research, stem cell-derived embryo models and in□vitro gametogenesis: Considerations leading to the revised ISSCR guidelines. *Stem Cell Reports*, **2021**, 16, 1416-1424	8	15
124	Machine learning-assisted imaging analysis of a human epiblast model. *Integrative Biology (United Kingdom)*, **2021**, 13, 221-229	3.7	
123	Stem-cell-based embryo models for fundamental research and translation. *Nature Materials*, **2021**, 20, 132-144	27	34
122	A microfluidics-based stem cell model of early post-implantation human development. *Nature Protocols*, **2021**, 16, 309-326	18.8	4
121	Amnion signals are essential for mesoderm formation in primates. *Nature Communications*, **2021**, 12, 5126	17.4	9
120	Branching development of early post-implantation human embryonic-like tissues in 3D stem cell culture. *Biomaterials*, **2021**, 275, 120898	15.6	1
119	Multiplexed Luminescence Oxygen Channeling Immunoassay Based on Dual-Functional Barcodes with a Host-Guest Structure: A Facile and Robust Suspension Array Platform. *Small*, **2020**, 16, e1907521	11	10
118	Modeling of human neurulation using bioengineered pluripotent stem cell culture. *Current Opinion in Biomedical Engineering*, **2020**, 13, 127-133	4.4	1
117	Synthetic human embryology: towards a quantitative future. *Current Opinion in Genetics and Development*, **2020**, 63, 30-35	4.9	5
116	Bioengineered pluripotent stem cell models: new approaches to explore early human embryo development. *Current Opinion in Biotechnology*, **2020**, 66, 52-58	11.4	2
115	Mechanical Tension Promotes Formation of Gastrulation-like Nodes and Patterns Mesoderm Specification in Human Embryonic Stem Cells. *Developmental Cell*, **2020**, 55, 679-694.e11	10.2	28

114	Effect of Cell Spreading on Rosette Formation by Human Pluripotent Stem Cell-Derived Neural Progenitor Cells. *Frontiers in Cell and Developmental Biology*, **2020**, 8, 588941	5.7	2
113	Visualization and quantification of dynamic intercellular coupling in human embryonic stem cells using single cell sonoporation. *Scientific Reports*, **2020**, 10, 18253	4.9	1
112	Controlled modelling of human epiblast and amnion development using stem cells. *Nature*, **2019**, 573, 421-425	50.4	169
111	Microengineered human amniotic ectoderm tissue array for high-content developmental phenotyping. *Biomaterials*, **2019**, 216, 119244	15.6	10
110	Back-focal-plane interferometric detection of nanoparticles in spatially confined microfluidic channels. *Review of Scientific Instruments*, **2019**, 90, 023107	1.7	1
109	Mass-producible microporous silicon membranes for specific leukocyte subset isolation, immunophenotyping, and personalized immunomodulatory drug screening in vitro. *Lab on A Chip*, **2019**, 19, 3065-3076	7.2	5
108	Human Primordial Germ Cells Are Specified from Lineage-Primed Progenitors. *Cell Reports*, **2019**, 29, 4568-4582.e5	10.6	44
107	Dorsal-ventral patterned neural cyst from human pluripotent stem cells in a neurogenic niche. *Science Advances*, **2019**, 5, eaax5933	14.3	36
106	Biophysical Phenotyping and Modulation of ALDH+ Inflammatory Breast Cancer Stem-Like Cells. *Small*, **2019**, 15, e1802891	11	12
105	Biophysical phenotypes and determinants of anterior vs. posterior primitive streak cells derived from human pluripotent stem cells. *Acta Biomaterialia*, **2019**, 86, 125-134	10.8	6
104	Carbon Nanotube Strain Sensor Based Hemoretractometer for Blood Coagulation Testing. *ACS Sensors*, **2018**, 3, 670-676	9.2	7
103	Nanotopography regulates motor neuron differentiation of human pluripotent stem cells. *Nanoscale*, **2018**, 10, 3556-3565	7.7	26
102	A systems mechanobiology model to predict cardiac reprogramming outcomes on different biomaterials. *Biomaterials*, **2018**, 181, 280-292	15.6	10
101	Magnetothermal heating facilitates the cryogenic recovery of stem cell-laden alginate-FeO nanocomposite hydrogels. *Biomaterials Science*, **2018**, 6, 3139-3151	7.4	14
100	Acoustic Actuation of Integrin-Bound Microbubbles for Mechanical Phenotyping during Differentiation and Morphogenesis of Human Embryonic Stem Cells. *Small*, **2018**, 14, e1803137	11	11
99	Acoustic Tweezing Cytometry Induces Rapid Initiation of Human Embryonic Stem Cell Differentiation. *Scientific Reports*, **2018**, 8, 12977	4.9	16
98	Mechanics-guided embryonic patterning of neuroectoderm tissue from human pluripotent stem cells. *Nature Materials*, **2018**, 17, 633-641	27	107
97	Modulation of Micro RNA Expression and Osteoblast Differentiation by Nanotopography. *International Journal of Oral and Maxillofacial Implants*, **2018**, 33, 269-280	2.8	20

96	Microfluidics for cryopreservation. *Biotechnology Advances*, **2017**, 35, 323-336	17.8	56
95	Centrifugal microfluidics for sorting immune cells from whole blood. *Sensors and Actuators B: Chemical*, **2017**, 245, 1050-1061	8.5	25
94	Notch signaling in regulating angiogenesis in a 3D biomimetic environment. *Lab on A Chip*, **2017**, 17, 1948-1959	7.2	14
93	Acoustic tweezing cytometry enhances osteogenesis of human mesenchymal stem cells through cytoskeletal contractility and YAP activation. *Biomaterials*, **2017**, 134, 22-30	15.6	34
92	Microfluidic-based high-throughput optical trapping of nanoparticles. *Lab on A Chip*, **2017**, 17, 2125-2134	7.2	15
91	Mechanotransduction-Induced Reversible Phenotypic Switching in Prostate Cancer Cells. *Biophysical Journal*, **2017**, 112, 1236-1245	2.9	11
90	AC Electroosmosis-Enhanced Nanoplasmofluidic Detection of Ultralow-Concentration Cytokine. *Nano Letters*, **2017**, 17, 2374-2380	11.5	40
89	Self-organized amniogenesis by human pluripotent stem cells in a biomimetic implantation-like niche. *Nature Materials*, **2017**, 16, 419-425	27	124
88	Capillary assisted deposition of carbon nanotube film for strain sensing. *Applied Physics Letters*, **2017**, 111, 173105	3.4	7
87	An apicosome initiates self-organizing morphogenesis of human pluripotent stem cells. *Journal of Cell Biology*, **2017**, 216, 3981-3990	7.3	20
86	Tracking the tumor invasion front using long-term fluidic tumoroid culture. *Scientific Reports*, **2017**, 7, 10784	4.9	15
85	A pluripotent stem cell-based model for post-implantation human amniotic sac development. *Nature Communications*, **2017**, 8, 208	17.4	129
84	Controlled Tubular Unit Formation from Collagen Film for Modular Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2017**, 3, 2860-2868	5.5	9
83	Effects of substrate stiffness and actomyosin contractility on coupling between force transmission and vinculin-paxillin recruitment at single focal adhesions. *Molecular Biology of the Cell*, **2017**, 28, 1901-1911	3.5	46
82	Emerging Roles of YAP/TAZ in Mechanobiology **2016**, 83-96		
81	Clot Retraction: A Miniaturized Hemoretractometer for Blood Clot Retraction Testing (Small 29/2016). *Small*, **2016**, 12, 3925	11	
80	Types of Clinical Samples and Cellular Enrichment Strategies **2016**, 1-28		
79	Accelerated Biofluid Filling in Complex Microfluidic Networks by Vacuum-Pressure Accelerated Movement (V-PAM). *Small*, **2016**, 12, 4521-30	11	4

78	Microfluidics: Accelerated Biofluid Filling in Complex Microfluidic Networks by Vacuum-Pressure Accelerated Movement (V-PAM) (Small 33/2016). *Small*, **2016**, 12, 4444-4444	11	
77	Mechanosensitive subcellular rheostasis drives emergent single-cell mechanical homeostasis. *Nature Materials*, **2016**, 15, 961-967	27	57
76	Multiparametric Biomechanical and Biochemical Phenotypic Profiling of Single Cancer Cells Using an Elasticity Microcytometer. *Small*, **2016**, 12, 2300-11	11	31
75	Multiplexed Nanoplasmonic Temporal Profiling of T-Cell Response under Immunomodulatory Agent Exposure. *ACS Sensors*, **2016**, 1, 941-948	9.2	29
74	Angiogenesis in Liquid Tumors: An In Vitro Assay for Leukemic-Cell-Induced Bone Marrow Angiogenesis. *Advanced Healthcare Materials*, **2016**, 5, 1014-24	10.1	36
73	A Miniaturized Hemoretractometer for Blood Clot Retraction Testing. *Small*, **2016**, 12, 3926-34	11	16
72	Nanoroughened adhesion-based capture of circulating tumor cells with heterogeneous expression and metastatic characteristics. *BMC Cancer*, **2016**, 16, 614	4.8	18
71	Surface micromachining of polydimethylsiloxane for microfluidics applications. *Biomicrofluidics*, **2016**, 10, 054114	3.2	8
70	Acoustic Tweezing Cytometry (ATC) on Dissociated Human Embryonic Stem Cells (HESCS). *Biophysical Journal*, **2016**, 110, 95a	2.9	2
69	Atomic force microscopy indentation and inverse analysis for non-linear viscoelastic identification of breast cancer cells. *Mathematical Biosciences*, **2016**, 277, 77-88	3.9	20
68	On human pluripotent stem cell control: The rise of 3D bioengineering and mechanobiology. *Biomaterials*, **2015**, 52, 26-43	15.6	90
67	Supersoft lithography: candy-based fabrication of soft silicone microstructures. *Lab on A Chip*, **2015** , 15, 3760-5	7.2	28
66	Rapid, automated, parallel quantitative immunoassays using highly integrated microfluidics and AlphaLISA. *Scientific Reports*, **2015**, 5, 11339	4.9	40
65	Age-Associated Increase in Skin Fibroblast-Derived Prostaglandin E2 Contributes to Reduced Collagen Levels in Elderly Human Skin. *Journal of Investigative Dermatology*, **2015**, 135, 2181-2188	4.3	37
64	Fluorescent porous carbon nanocapsules for two-photon imaging, NIR/pH dual-responsive drug carrier, and photothermal therapy. *Biomaterials*, **2015**, 53, 117-26	15.6	95
63	Multiplex serum cytokine immunoassay using nanoplasmonic biosensor microarrays. *ACS Nano*, **2015**, 9, 4173-81	16.7	201
62	Improving survival of disassociated human embryonic stem cells by mechanical stimulation using acoustic tweezing cytometry. *Biophysical Journal*, **2015**, 108, 1315-1317	2.9	8
61	Desktop aligner for fabrication of multilayer microfluidic devices. *Review of Scientific Instruments*, **2015**, 86, 075008	1.7	27

60	Lumen Formation Is an Intrinsic Property of Isolated Human Pluripotent Stem Cells. *Stem Cell Reports*, **2015**, 5, 954-962	8	62
59	Biocompatible PEG-Chitosan@Carbon Dots Hybrid Nanogels for Two-Photon Fluorescence Imaging, Near-Infrared Light/pH Dual-Responsive Drug Carrier, and Synergistic Therapy. *Advanced Functional Materials*, **2015**, 25, 5537-5547	15.6	164
58	Two-bubble acoustic tweezing cytometry for biomechanical probing and stimulation of cells. *Biophysical Journal*, **2015**, 108, 32-42	2.9	19
57	Substrates with engineered step changes in rigidity induce traction force polarity and durotaxis. *Cellular and Molecular Bioengineering*, **2014**, 7, 26-34	3.9	36
56	Microfluidic blood cell sorting: now and beyond. *Small*, **2014**, 10, 1687-703	11	107
55	Integrated micro/nanoengineered functional biomaterials for cell mechanics and mechanobiology: a materials perspective. *Advanced Materials*, **2014**, 26, 1494-533	24	109
54	Integrated nanoplasmonic sensing for cellular functional immunoanalysis using human blood. *ACS Nano*, **2014**, 8, 2667-76	16.7	76
53	Global architecture of the F-actin cytoskeleton regulates cell shape-dependent endothelial mechanotransduction. *Integrative Biology (United Kingdom)*, **2014**, 6, 300-11	3.7	35
52	Tuning the surface properties of hydrogel at the nanoscale with focused ion irradiation. *Soft Matter* , **2014**, 10, 8448-56	3.6	10
51	Encoding through the host-guest structure: construction of multiplexed fluorescent beads. *Chemical Communications*, **2014**, 50, 14041-4	5.8	18
50	Harnessing mechanobiology of human pluripotent stem cells for regenerative medicine. *ACS Chemical Neuroscience*, **2014**, 5, 621-3	5.7	5
49	Ultrasensitive ELISA using enzyme-loaded nanospherical brushes as labels. *Analytical Chemistry*, **2014**, 86, 9367-71	7.8	78
48	Hippo/YAP-mediated rigidity-dependent motor neuron differentiation of human pluripotent stem cells. *Nature Materials*, **2014**, 13, 599-604	27	191
47	Continuous-flow microfluidic blood cell sorting for unprocessed whole blood using surface-micromachined microfiltration membranes. *Lab on A Chip*, **2014**, 14, 2565-75	7.2	96
46	Nanotopographical Surfaces for Stem Cell Fate Control: Engineering Mechanobiology from the Bottom. *Nano Today*, **2014**, 9, 759-784	17.9	136
45	Single-Crystalline, Nanoporous Gallium Nitride Films With Fine Tuning of Pore Size for Stem Cell Engineering. *Journal of Nanotechnology in Engineering and Medicine*, **2014**, 5, 0410041-410049		3
44	Emerging microengineered tools for functional analysis and phenotyping of blood cells. *Trends in Biotechnology*, **2014**, 32, 586-594	15.1	17
43	How vinculin regulates force transmission. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 9788-93	11.5	175

42	Adhesion strength-based, label-free isolation of human pluripotent stem cells. *Nature Methods*, **2013**, 10, 438-44	21.6	93
41	Mechanobiology: a new frontier for human pluripotent stem cells. *Integrative Biology (United Kingdom)*, **2013**, 5, 450-7	3.7	23
40	Nanoroughened surfaces for efficient capture of circulating tumor cells without using capture antibodies. *ACS Nano*, **2013**, 7, 566-75	16.7	194
39	Surface-micromachined microfiltration membranes for efficient isolation and functional immunophenotyping of subpopulations of immune cells. *Advanced Healthcare Materials*, **2013**, 2, 965-975	10.1	38
38	Microfabricated nanotopological surfaces for study of adhesion-dependent cell mechanosensitivity. *Small*, **2013**, 9, 81-9	11	21
37	Emerging microfluidic tools for functional cellular immunophenotyping: a new potential paradigm for immune status characterization. *Frontiers in Oncology*, **2013**, 3, 98	5.3	22
36	Acoustic tweezing cytometry for live-cell subcellular modulation of intracellular cytoskeleton contractility. *Scientific Reports*, **2013**, 3, 2176	4.9	63
35	Uniaxial cell stretching device for live-cell imaging of mechanosensitive cellular functions. *Review of Scientific Instruments*, **2013**, 84, 114304	1.7	49
34	Photolithographic surface micromachining of polydimethylsiloxane (PDMS). *Lab on A Chip*, **2012**, 12, 391-5	7.2	107
33	Elastomeric microposts integrated into microfluidics for flow-mediated endothelial mechanotransduction analysis. *Lab on A Chip*, **2012**, 12, 1865-73	7.2	70
32	Live-cell subcellular measurement of cell stiffness using a microengineered stretchable micropost array membrane. *Integrative Biology (United Kingdom)*, **2012**, 4, 1289-98	3.7	46
31	UV-modulated substrate rigidity for multiscale study of mechanoresponsive cellular behaviors. *Langmuir*, **2012**, 28, 10789-96	4	24
30	A silicone-based stretchable micropost array membrane for monitoring live-cell subcellular cytoskeletal response. *Lab on A Chip*, **2012**, 12, 731-40	7.2	80
29	Nanotopography influences adhesion, spreading, and self-renewal of human embryonic stem cells. *ACS Nano*, **2012**, 6, 4094-103	16.7	287
28	An integrated microfluidic platform for in situ cellular cytokine secretion immunophenotyping. *Lab on A Chip*, **2012**, 12, 4093-101	7.2	55
27	Forcing stem cells to behave: a biophysical perspective of the cellular microenvironment. *Annual Review of Biophysics*, **2012**, 41, 519-42	21.1	319
26	Mechanics regulates fate decisions of human embryonic stem cells. *PLoS ONE*, **2012**, 7, e37178	3.7	92
25	Microengineered synthetic cellular microenvironment for stem cells. *Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology*, **2012**, 4, 414-27	9.2	10

24	In silico experimentation of glioma microenvironment development and anti-tumor therapy. *PLoS Computational Biology*, **2012**, 8, e1002355	5	23
23	Cell Shape and Substrate Rigidity Both Regulate Cell Stiffness. *Biophysical Journal*, **2011**, 100, 303a	2.9	5
22	Cell shape and substrate rigidity both regulate cell stiffness. *Biophysical Journal*, **2011**, 100, L25-7	2.9	298
21	Assaying stem cell mechanobiology on microfabricated elastomeric substrates with geometrically modulated rigidity. *Nature Protocols*, **2011**, 6, 187-213	18.8	190
20	Synergistic regulation of cell function by matrix rigidity and adhesive pattern. *Biomaterials*, **2011**, 32, 9584-93	15.6	63
19	Nanofluidic devices for rapid continuous-flow bioseparation. *Methods in Molecular Biology*, **2011**, 790, 127-40	1.4	
18	Mechanical regulation of cell function with geometrically modulated elastomeric substrates. *Nature Methods*, **2010**, 7, 733-6	21.6	804
17	Continuous-flow bioseparation using microfabricated anisotropic nanofluidic sieving structures. *Nature Protocols*, **2009**, 4, 1681-98	18.8	26
16	Rapid quantification of disease-marker proteins using continuous-flow immunoseparation in a nanosieve fluidic device. *Analytical Chemistry*, **2009**, 81, 7067-74	7.8	18
15	Simulation of the contractile response of cells on an array of micro-posts. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2009**, 367, 3477-97	3	74
14	Artificial molecular sieves and filters: a new paradigm for biomolecule separation. *Trends in Biotechnology*, **2008**, 26, 311-20	15.1	70
13	Integrated electroplated heat spreaders for high power semiconductor lasers. *Journal of Applied Physics*, **2008**, 104, 064907	2.5	2
12	Patterning Cell and Tissue Function. *Cellular and Molecular Bioengineering*, **2008**, 1, 15-23	3.9	20
11	Decreasing effective nanofluidic filter size by modulating electrical double layers: separation enhancement in microfabricated nanofluidic filters. *Electrophoresis*, **2008**, 29, 4646-51	3.6	9
10	Molecular sieving using nanofilters: past, present and future. *Lab on A Chip*, **2008**, 8, 23-33	7.2	227
9	A patterned anisotropic nanofluidic sieving structure for continuous-flow separation of DNA and proteins. *Nature Nanotechnology*, **2007**, 2, 121-8	28.7	271
8	Molecular sieving in periodic free-energy landscapes created by patterned nanofilter arrays. *Physical Review Letters*, **2006**, 97, 018103	7.4	103
7	A Nanofilter Array Chip for Fast Gel-Free Biomolecule Separation. *Applied Physics Letters*, **2005**, 87, 263902	3.4	107

List of Publications

6	Stretchable micropost array cytometry32-46	
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4	Protocol for controlled modeling of human epiblast and amnion development using stem cells	3
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