

# Donald E Ingber

## 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.

258 papers	57,684 citations	112 h-index	240 g-index
291 ext. papers	65,116 ext. citations	12.1 avg, IF	8.2 L-index

#	Paper	IF	Citations
258	Geometric control of cell life and death. <i>Science</i> , <b>1997</b> , 276, 1425-8	33.3	3949
257	Mechanotransduction across the cell surface and through the cytoskeleton. <i>Science</i> , <b>1993</b> , 260, 1124-7	33.3	2466
256	Reconstituting organ-level lung functions on a chip. <i>Science</i> , <b>2010</b> , 328, 1662-8	33.3	2416
255	Soft lithography in biology and biochemistry. <i>Annual Review of Biomedical Engineering</i> , <b>2001</b> , 3, 335-73	12	2115
254	Microfluidic organs-on-chips. <i>Nature Biotechnology</i> , <b>2014</b> , 32, 760-72	44.5	1875
253	Polycystins 1 and 2 mediate mechanosensation in the primary cilium of kidney cells. <i>Nature Genetics</i> , <b>2003</b> , 33, 129-37	36.3	1593
252	Demonstration of mechanical connections between integrins, cytoskeletal filaments, and nucleoplasm that stabilize nuclear structure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1997</b> , 94, 849-54	11.5	1319
251	Engineering cell shape and function. <i>Science</i> , <b>1994</b> , 264, 696-8	33.3	1270
250	Tensegrity: the architectural basis of cellular mechanotransduction. <i>Annual Review of Physiology</i> , <b>1997</b> , 59, 575-99	23.1	1268
249	Mechanotransduction at a distance: mechanically coupling the extracellular matrix with the nucleus. <i>Nature Reviews Molecular Cell Biology</i> , <b>2009</b> , 10, 75-82	48.7	1245
248	Cellular mechanotransduction: putting all the pieces together again. <i>FASEB Journal</i> , <b>2006</b> , 20, 811-27	0.9	1240
247	From 3D cell culture to organs-on-chips. <i>Trends in Cell Biology</i> , <b>2011</b> , 21, 745-54	18.3	1235
246	Human gut-on-a-chip inhabited by microbial flora that experiences intestinal peristalsis-like motions and flow. <i>Lab on A Chip</i> , <b>2012</b> , 12, 2165-74	7.2	991
245	Tensegrity I. Cell structure and hierarchical systems biology. <i>Journal of Cell Science</i> , <b>2003</b> , 116, 1157-73	5.3	985
244	Cellular tensegrity: defining new rules of biological design that govern the cytoskeleton. <i>Journal of Cell Science</i> , <b>1993</b> , 104, 613-627	5.3	777
243	Mechanochemical switching between growth and differentiation during fibroblast growth factor-stimulated angiogenesis in vitro: role of extracellular matrix. <i>Journal of Cell Biology</i> , <b>1989</b> , 109, 317-30	7.3	774
242	Tensegrity II. How structural networks influence cellular information processing networks. <i>Journal of Cell Science</i> , <b>2003</b> , 116, 1397-408	5.3	683

241	A human disease model of drug toxicity-induced pulmonary edema in a lung-on-a-chip microdevice. <i>Science Translational Medicine</i> , <b>2012</b> , 4, 159ra147	17.5	624
240	The structural and mechanical complexity of cell-growth control. <i>Nature Cell Biology</i> , <b>1999</b> , 1, E131-8	23.4	610
239	Mechanical control of tissue and organ development. <i>Development (Cambridge)</i> , <b>2010</b> , 137, 1407-20	6.6	604
238	Mechanobiology and diseases of mechanotransduction. <i>Annals of Medicine</i> , <b>2003</b> , 35, 564-77	1.5	597
237	Mechanical behavior in living cells consistent with the tensegrity model. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2001</b> , 98, 7765-70	11.5	538
236	Contributions of microbiome and mechanical deformation to intestinal bacterial overgrowth and inflammation in a human gut-on-a-chip. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E7-15	11.5	523
235	Human kidney proximal tubule-on-a-chip for drug transport and nephrotoxicity assessment. <i>Integrative Biology (United Kingdom)</i> , <b>2013</b> , 5, 1119-29	3.7	514
234	Viscoelastic retraction of single living stress fibers and its impact on cell shape, cytoskeletal organization, and extracellular matrix mechanics. <i>Biophysical Journal</i> , <b>2006</b> , 90, 3762-73	2.9	511
233	Microengineered physiological biomimicry: organs-on-chips. <i>Lab on A Chip</i> , <b>2012</b> , 12, 2156-64	7.2	505
232	Microtubules can bear enhanced compressive loads in living cells because of lateral reinforcement. <i>Journal of Cell Biology</i> , <b>2006</b> , 173, 733-41	7.3	503
231	Cell fates as high-dimensional attractor states of a complex gene regulatory network. <i>Physical Review Letters</i> , <b>2005</b> , 94, 128701	7.4	480
230	Preparation of poly(glycolic acid) bonded fiber structures for cell attachment and transplantation. <i>Journal of Biomedical Materials Research Part B</i> , <b>1993</b> , 27, 183-9		476
229	Microfabrication of human organs-on-chips. <i>Nature Protocols</i> , <b>2013</b> , 8, 2135-57	18.8	441
228	Gut-on-a-Chip microenvironment induces human intestinal cells to undergo villus differentiation. <i>Integrative Biology (United Kingdom)</i> , <b>2013</b> , 5, 1130-40	3.7	438
227	A bioinspired omniphobic surface coating on medical devices prevents thrombosis and biofouling. <i>Nature Biotechnology</i> , <b>2014</b> , 32, 1134-40	44.5	433
226	How does extracellular matrix control capillary morphogenesis?. <i>Cell</i> , <b>1989</b> , 58, 803-5	56.2	429
225	Fibronectin controls capillary endothelial cell growth by modulating cell shape. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1990</b> , 87, 3579-83	11.5	427
224	Small airway-on-a-chip enables analysis of human lung inflammation and drug responses in vitro. <i>Nature Methods</i> , <b>2016</b> , 13, 151-7	21.6	426

223	Subcellular positioning of small molecules. <i>Nature</i> , <b>2001</b> , 411, 1016	50.4	419
222	A mechanosensitive transcriptional mechanism that controls angiogenesis. <i>Nature</i> , <b>2009</b> , 457, 1103-8	50.4	416
221	Directional control of lamellipodia extension by constraining cell shape and orienting cell tractional forces. <i>FASEB Journal</i> , <b>2002</b> , 16, 1195-204	0.9	390
220	Engineered in vitro disease models. <i>Annual Review of Pathology: Mechanisms of Disease</i> , <b>2015</b> , 10, 195-262	34	373
219	Cellular adaptation to mechanical stress: role of integrins, Rho, cytoskeletal tension and mechanosensitive ion channels. <i>Journal of Cell Science</i> , <b>2006</b> , 119, 508-18	5.3	361
218	Development of a primary human Small Intestine-on-a-Chip using biopsy-derived organoids. <i>Scientific Reports</i> , <b>2018</b> , 8, 2871	4.9	356
217	Geometric control of switching between growth, apoptosis, and differentiation during angiogenesis using micropatterned substrates. <i>In Vitro Cellular and Developmental Biology - Animal</i> , <b>1999</b> , 35, 441-8	2.6	350
216	Shear-activated nanotherapeutics for drug targeting to obstructed blood vessels. <i>Science</i> , <b>2012</b> , 337, 738-42	33.3	347
215	Insoluble fibronectin activates the Na/H antiporter by clustering and immobilizing integrin alpha 5 beta 1, independent of cell shape. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1991</b> , 88, 7849-53	11.5	344
214	Modelling cancer in microfluidic human organs-on-chips. <i>Nature Reviews Cancer</i> , <b>2019</b> , 19, 65-81	31.3	340
213	The architecture of life. <i>Scientific American</i> , <b>1998</b> , 278, 48-57	0.5	337
212	Integrin binding and mechanical tension induce movement of mRNA and ribosomes to focal adhesions. <i>Nature</i> , <b>1998</b> , 392, 730-3	50.4	327
211	Paper-supported 3D cell culture for tissue-based bioassays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 18457-62	11.5	322
210	Cell tension, matrix mechanics, and cancer development. <i>Cancer Cell</i> , <b>2005</b> , 8, 175-6	24.3	321
209	Combined microfluidic-micromagnetic separation of living cells in continuous flow. <i>Biomedical Microdevices</i> , <b>2006</b> , 8, 299-308	3.7	307
208	Self-assembly of three-dimensional prestressed tensegrity structures from DNA. <i>Nature Nanotechnology</i> , <b>2010</b> , 5, 520-4	28.7	301
207	Using Mixed Self-Assembled Monolayers Presenting RGD and (EG)3OH Groups To Characterize Long-Term Attachment of Bovine Capillary Endothelial Cells to Surfaces. <i>Journal of the American Chemical Society</i> , <b>1998</b> , 120, 6548-6555	16.4	300
206	Microfluidic Organ-on-a-Chip Models of Human Intestine. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , <b>2018</b> , 5, 659-668	7.9	299

205	Prevascularization of porous biodegradable polymers. <i>Biotechnology and Bioengineering</i> , <b>1993</b> , 42, 716-239	28.9	297
204	Bone marrow-on-a-chip replicates hematopoietic niche physiology in vitro. <i>Nature Methods</i> , <b>2014</b> , 11, 663-9	21.6	293
203	Mechanosensitive mechanisms in transcriptional regulation. <i>Journal of Cell Science</i> , <b>2012</b> , 125, 3061-73	5.3	285
202	A complex human gut microbiome cultured in an anaerobic intestine-on-a-chip. <i>Nature Biomedical Engineering</i> , <b>2019</b> , 3, 520-531	19	283
201	Mechanobiology and developmental control. <i>Annual Review of Cell and Developmental Biology</i> , <b>2013</b> , 29, 27-61	12.6	279
200	Mechanical control of tissue morphogenesis during embryological development. <i>International Journal of Developmental Biology</i> , <b>2006</b> , 50, 255-66	1.9	275
199	Patterning Mammalian Cells Using Elastomeric Membranes. <i>Langmuir</i> , <b>2000</b> , 16, 7811-7819	4	271
198	TRPV4 channels mediate cyclic strain-induced endothelial cell reorientation through integrin-to-integrin signaling. <i>Circulation Research</i> , <b>2009</b> , 104, 1123-30	15.7	259
197	Distinct Contributions of Astrocytes and Pericytes to Neuroinflammation Identified in a 3D Human Blood-Brain Barrier on a Chip. <i>PLoS ONE</i> , <b>2016</b> , 11, e0150360	3.7	258
196	Quantifying cell-generated mechanical forces within living embryonic tissues. <i>Nature Methods</i> , <b>2014</b> , 11, 183-9	21.6	257
195	Tensegrity, cellular biophysics, and the mechanics of living systems. <i>Reports on Progress in Physics</i> , <b>2014</b> , 77, 046603	14.4	254
194	Mature induced-pluripotent-stem-cell-derived human podocytes reconstitute kidney glomerular-capillary-wall function on a chip. <i>Nature Biomedical Engineering</i> , <b>2017</b> , 1,	19	253
193	Nanomagnetic actuation of receptor-mediated signal transduction. <i>Nature Nanotechnology</i> , <b>2008</b> , 3, 36-40	28.7	247
192	A combined micromagnetic-microfluidic device for rapid capture and culture of rare circulating tumor cells. <i>Lab on A Chip</i> , <b>2012</b> , 12, 2175-81	7.2	235
191	Tissue engineering and developmental biology: going biomimetic. <i>Tissue Engineering</i> , <b>2006</b> , 12, 3265-83		233
190	Hypoxia-enhanced Blood-Brain Barrier Chip recapitulates human barrier function and shuttling of drugs and antibodies. <i>Nature Communications</i> , <b>2019</b> , 10, 2621	17.4	231
189	Can cancer be reversed by engineering the tumor microenvironment?. <i>Seminars in Cancer Biology</i> , <b>2008</b> , 18, 356-64	12.7	229
188	Control of basement membrane remodeling and epithelial branching morphogenesis in embryonic lung by Rho and cytoskeletal tension. <i>Developmental Dynamics</i> , <b>2005</b> , 232, 268-81	2.9	222

187	Mechanical control of cyclic AMP signalling and gene transcription through integrins. <i>Nature Cell Biology</i> , <b>2000</b> , 2, 666-8	23.4	221
186	Cellular tensegrity: defining new rules of biological design that govern the cytoskeleton. <i>Journal of Cell Science</i> , <b>1993</b> , 104 ( Pt 3), 613-27	5.3	216
185	A linked organ-on-chip model of the human neurovascular unit reveals the metabolic coupling of endothelial and neuronal cells. <i>Nature Biotechnology</i> , <b>2018</b> , 36, 865-874	44.5	207
184	Human Organ Chip Models Recapitulate Orthotopic Lung Cancer Growth, Therapeutic Responses, and Tumor Dormancy In Vitro. <i>Cell Reports</i> , <b>2017</b> , 21, 508-516	10.6	204
183	Selective Deposition of Proteins and Cells in Arrays of Microwells. <i>Langmuir</i> , <b>2001</b> , 17, 2828-2834	4	201
182	An extracorporeal blood-cleansing device for sepsis therapy. <i>Nature Medicine</i> , <b>2014</b> , 20, 1211-6	50.5	199
181	The riddle of morphogenesis: a question of solution chemistry or molecular cell engineering?. <i>Cell</i> , <b>1993</b> , 75, 1249-52	56.2	194
180	Organs-on-chips with integrated electrodes for trans-epithelial electrical resistance (TEER) measurements of human epithelial barrier function. <i>Lab on A Chip</i> , <b>2017</b> , 17, 2264-2271	7.2	192
179	Probing transmembrane mechanical coupling and cytomechanics using magnetic twisting cytometry. <i>Biochemistry and Cell Biology</i> , <b>1995</b> , 73, 327-35	3.6	192
178	A microstructural approach to cytoskeletal mechanics based on tensegrity. <i>Journal of Theoretical Biology</i> , <b>1996</b> , 181, 125-36	2.3	187
177	Mechanical forces alter zyxin unbinding kinetics within focal adhesions of living cells. <i>Journal of Cellular Physiology</i> , <b>2006</b> , 207, 187-94	7	184
176	Ultra-rapid activation of TRPV4 ion channels by mechanical forces applied to cell surface beta1 integrins. <i>Integrative Biology (United Kingdom)</i> , <b>2010</b> , 2, 435-42	3.7	179
175	Mechanotransduction of fluid stresses governs 3D cell migration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 2447-52	11.5	173
174	Mechanical control of tissue growth: function follows form. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 11571-2	11.5	173
173	Role of RhoA, mDia, and ROCK in cell shape-dependent control of the Skp2-p27kip1 pathway and the G1/S transition. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 26323-30	5.4	172
172	Cytoskeletal control of growth and cell fate switching. <i>Current Opinion in Cell Biology</i> , <b>2009</b> , 21, 864-70	9	170
171	Controlling Mammalian Cell Spreading and Cytoskeletal Arrangement with Conveniently Fabricated Continuous Wavy Features on Poly(dimethylsiloxane). <i>Langmuir</i> , <b>2002</b> , 18, 3273-3280	4	169
170	Role of basal lamina in neoplastic disorganization of tissue architecture. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1981</b> , 78, 3901-5	11.5	168

169	Tumor-Derived Extracellular Vesicles Breach the Intact Blood-Brain Barrier Transcytosis. <i>ACS Nano</i> , <b>2019</b> , 13, 13853-13865	16.7	167
168	Nanoparticle targeting of anti-cancer drugs that alter intracellular signaling or influence the tumor microenvironment. <i>Advanced Drug Delivery Reviews</i> , <b>2014</b> , 79-80, 107-18	18.5	163
167	Extracellular matrix controls myosin light chain phosphorylation and cell contractility through modulation of cell shape and cytoskeletal prestress. <i>American Journal of Physiology - Cell Physiology</i> , <b>2004</b> , 286, C518-28	5.4	162
166	Primary Human Lung Alveolus-on-a-chip Model of Intravascular Thrombosis for Assessment of Therapeutics. <i>Clinical Pharmacology and Therapeutics</i> , <b>2018</b> , 103, 332-340	6.1	161
165	Reproducing human and cross-species drug toxicities using a Liver-Chip. <i>Science Translational Medicine</i> , <b>2019</b> , 11,	17.5	161
164	Gene Expression Dynamics Inspector (GEDI): for integrative analysis of expression profiles. <i>Bioinformatics</i> , <b>2003</b> , 19, 2321-2	7.2	161
163	Micromagnetic-microfluidic blood cleansing device. <i>Lab on A Chip</i> , <b>2009</b> , 9, 1171-7	7.2	160
162	Quantitative prediction of human pharmacokinetic responses to drugs via fluidically coupled vascularized organ chips. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 421-436	19	154
161	Matched-Comparative Modeling of Normal and Diseased Human Airway Responses Using a Microengineered Breathing Lung Chip. <i>Cell Systems</i> , <b>2016</b> , 3, 456-466.e4	10.6	152
160	Robotic fluidic coupling and interrogation of multiple vascularized organ chips. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 407-420	19	150
159	Mechanochemical control of mesenchymal condensation and embryonic tooth organ formation. <i>Developmental Cell</i> , <b>2011</b> , 21, 758-69	10.2	137
158	Stability of Surface-Immobilized Lubricant Interfaces under Flow. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 1792-1800	18.00	136
157	Organs-on-Chips with combined multi-electrode array and transepithelial electrical resistance measurement capabilities. <i>Lab on A Chip</i> , <b>2017</b> , 17, 2294-2302	7.2	134
156	Reverse Engineering Human Pathophysiology with Organs-on-Chips. <i>Cell</i> , <b>2016</b> , 164, 1105-1109	56.2	131
155	Cytoskeletal mechanics in pressure-overload cardiac hypertrophy. <i>Circulation Research</i> , <b>1997</b> , 80, 281-9	15.7	126
154	Directional control of cell motility through focal adhesion positioning and spatial control of Rac activation. <i>FASEB Journal</i> , <b>2008</b> , 22, 1649-59	0.9	125
153	An antifouling coating that enables affinity-based electrochemical biosensing in complex biological fluids. <i>Nature Nanotechnology</i> , <b>2019</b> , 14, 1143-1149	28.7	125
152	Mechanical continuity and reversible chromosome disassembly within intact genomes removed from living cells. <i>Journal of Cellular Biochemistry</i> , <b>1997</b> , 65, 114-130	4.7	124



151	COVID-19 tissue atlases reveal SARS-CoV-2 pathology and cellular targets. <i>Nature</i> , <b>2021</b> , 595, 107-113	50.4	124
150	Mechanical properties of individual focal adhesions probed with a magnetic microneedle. <i>Biochemical and Biophysical Research Communications</i> , <b>2004</b> , 313, 758-64	3.4	123
149	Modulation of the Cellular Uptake of DNA Origami through Control over Mass and Shape. <i>Nano Letters</i> , <b>2018</b> , 18, 3557-3564	11.5	121
148	Hepatocyte culture on biodegradable polymeric substrates. <i>Biotechnology and Bioengineering</i> , <b>1991</b> , 38, 145-58	4.9	119
147	Topographical Micropatterning of Poly(dimethylsiloxane) Using Laminar Flows of Liquids in Capillaries. <i>Advanced Materials</i> , <b>2001</b> , 13, 570-574	24	114
146	Human Gut-On-A-Chip Supports Polarized Infection of Coxsackie B1 Virus In Vitro. <i>PLoS ONE</i> , <b>2017</b> , 12, e0169412	3.7	112
145	A shear gradient-activated microfluidic device for automated monitoring of whole blood haemostasis and platelet function. <i>Nature Communications</i> , <b>2016</b> , 7, 10176	17.4	109
144	Measuring direct current trans-epithelial electrical resistance in organ-on-a-chip microsystems. <i>Lab on A Chip</i> , <b>2015</b> , 15, 745-52	7.2	105
143	Physiologically Based Pharmacokinetic and Pharmacodynamic Analysis Enabled by Microfluidically Linked Organs-on-Chips. <i>Annual Review of Pharmacology and Toxicology</i> , <b>2018</b> , 58, 37-64	17.9	103
142	Platform for high-throughput testing of the effect of soluble compounds on 3D cell cultures. <i>Analytical Chemistry</i> , <b>2013</b> , 85, 8085-94	7.8	103
141	A combinatorial cell-laden gel microarray for inducing osteogenic differentiation of human mesenchymal stem cells. <i>Scientific Reports</i> , <b>2014</b> , 4, 3896	4.9	102
140	Global cytoskeletal control of mechanotransduction in kidney epithelial cells. <i>Experimental Cell Research</i> , <b>2004</b> , 301, 23-30	4.2	101
139	Modeling radiation injury-induced cell death and countermeasure drug responses in a human Gut-on-a-Chip. <i>Cell Death and Disease</i> , <b>2018</b> , 9, 223	9.8	100
138	On-chip recapitulation of clinical bone marrow toxicities and patient-specific pathophysiology. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 394-406	19	97
137	Activation of mechanosensitive ion channel TRPV4 normalizes tumor vasculature and improves cancer therapy. <i>Oncogene</i> , <b>2016</b> , 35, 314-22	9.2	95
136	Basement membrane as a spatial organizer of polarized epithelia. Exogenous basement membrane reorients pancreatic epithelial tumor cells in vitro. <i>American Journal of Pathology</i> , <b>1986</b> , 122, 129-39	5.8	91
135	Control of lung vascular permeability and endotoxin-induced pulmonary oedema by changes in extracellular matrix mechanics. <i>Nature Communications</i> , <b>2013</b> , 4, 1759	17.4	87
134	Filamin links cell shape and cytoskeletal structure to Rho regulation by controlling accumulation of p190RhoGAP in lipid rafts. <i>Journal of Cell Science</i> , <b>2007</b> , 120, 456-67	5.3	87



133	Clear castable polyurethane elastomer for fabrication of microfluidic devices. <i>Lab on A Chip</i> , <b>2013</b> , 13, 3956-64	7.2	85
132	Inhibition of mammary tumor growth using lysyl oxidase-targeting nanoparticles to modify extracellular matrix. <i>Nano Letters</i> , <b>2012</b> , 12, 3213-7	11.5	83
131	Assessment of whole blood thrombosis in a microfluidic device lined by fixed human endothelium. <i>Biomedical Microdevices</i> , <b>2016</b> , 18, 73	3.7	80
130	Is it Time for Reviewer 3 to Request Human Organ Chip Experiments Instead of Animal Validation Studies?. <i>Advanced Science</i> , <b>2020</b> , 7, 2002030	13.6	79
129	A multi-modular tensegrity model of an actin stress fiber. <i>Journal of Biomechanics</i> , <b>2008</b> , 41, 2379-87	2.9	78
128	Manufacturing of Large-Scale Functional Objects Using Biodegradable Chitosan Bioplastic. <i>Macromolecular Materials and Engineering</i> , <b>2014</b> , 299, 932-938	3.9	77
127	Human Intestinal Morphogenesis Controlled by Transepithelial Morphogen Gradient and Flow-Dependent Physical Cues in a Microengineered Gut-on-a-Chip. <i>iScience</i> , <b>2019</b> , 15, 391-406	6.1	75
126	From cellular mechanotransduction to biologically inspired engineering: 2009 Pritzker Award Lecture, BMES Annual Meeting October 10, 2009. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 1148-61	4.7	75
125	Human Colon-on-a-Chip Enables Continuous In Vitro Analysis of Colon Mucus Layer Accumulation and Physiology. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , <b>2020</b> , 9, 507-526	7.9	75
124	Unexpected strength and toughness in chitosan-fibroin laminates inspired by insect cuticle. <i>Advanced Materials</i> , <b>2012</b> , 24, 480-4	24	74
123	Directed differentiation of human induced pluripotent stem cells into mature kidney podocytes and establishment of a Glomerulus Chip. <i>Nature Protocols</i> , <b>2018</b> , 13, 1662-1685	18.8	72
122	A discrete cell cycle checkpoint in late G(1) that is cytoskeleton-dependent and MAP kinase (Erk)-independent. <i>Experimental Cell Research</i> , <b>2002</b> , 275, 255-64	4.2	67
121	Non-invasive sensing of transepithelial barrier function and tissue differentiation in organs-on-chips using impedance spectroscopy. <i>Lab on A Chip</i> , <b>2019</b> , 19, 452-463	7.2	66
120	Biology-inspired microphysiological systems to advance patient benefit and animal welfare in drug development. <i>ALTEX: Alternatives To Animal Experimentation</i> , <b>2020</b> , 37, 365-394	4.3	66
119	Species-specific enhancement of enterohemorrhagic E. coli pathogenesis mediated by microbiome metabolites. <i>Microbiome</i> , <b>2019</b> , 7, 43	16.6	64
118	Organ-on-Chip Recapitulates Thrombosis Induced by an anti-CD154 Monoclonal Antibody: Translational Potential of Advanced Microengineered Systems. <i>Clinical Pharmacology and Therapeutics</i> , <b>2018</b> , 104, 1240-1248	6.1	62
117	A human-airway-on-a-chip for the rapid identification of candidate antiviral therapeutics and prophylactics. <i>Nature Biomedical Engineering</i> , <b>2021</b> , 5, 815-829	19	62
116	Developmentally inspired human organs on chips. <i>Development (Cambridge)</i> , <b>2018</b> , 145,	6.6	59

115	Biomechanical forces promote blood development through prostaglandin E2 and the cAMP-PKA signaling axis. <i>Journal of Experimental Medicine</i> , <b>2015</b> , 212, 665-80	16.6	58
114	Cytoskeletal filament assembly and the control of cell spreading and function by extracellular matrix. <i>Journal of Cell Science</i> , <b>1995</b> , 108 ( Pt 6), 2311-20	5.3	57
113	Silencing HoxA1 by intraductal injection of siRNA lipidoid nanoparticles prevents mammary tumor progression in mice. <i>Science Translational Medicine</i> , <b>2014</b> , 6, 217ra2	17.5	55
112	A mini-microscope for in situ monitoring of cells. <i>Lab on A Chip</i> , <b>2012</b> , 12, 3976-82	7.2	55
111	Tensegrity-guided self assembly: from molecules to living cells. <i>Soft Matter</i> , <b>2009</b> , 5, 1137-1145	3.6	55
110	SEBS elastomers for fabrication of microfluidic devices with reduced drug absorption by injection molding and extrusion. <i>Microfluidics and Nanofluidics</i> , <b>2017</b> , 21, 1	2.8	52
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8	Species-specific enhancement of enterohemorrhagic E. Coli pathogenesis mediated by microbiome metabolites		



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- 6 Human colon-on-a-chip enables continuous in vitro analysis of colon mucus layer accumulation and physiology 1
- 5 Rapid antifouling nanocomposite coating enables highly sensitive multiplexed electrochemical detection of myocardial infarction and concussion markers 1
- 4 Mechanosensation Mediates Long-Range Spatial Decision-Making in an Aneural Organism. *Advanced Materials*, **2021**, 33, e2008161 24 0
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