

Adam Feinberg

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.

83 papers	6,546 citations	33 h-index	80 g-index
93 ext. papers	7,919 ext. citations	9 avg, IF	6.18 L-index

#	Paper	IF	Citations
83	Three-dimensional printing of complex biological structures by freeform reversible embedding of suspended hydrogels. <i>Science Advances</i> , 2015 , 1, e1500758	14.3	912
82	3D bioprinting of collagen to rebuild components of the human heart. <i>Science</i> , 2019 , 365, 482-487	33.3	629
81	Muscular thin films for building actuators and powering devices. <i>Science</i> , 2007 , 317, 1366-70	33.3	572
80	A tissue-engineered jellyfish with biomimetic propulsion. <i>Nature Biotechnology</i> , 2012 , 30, 792-7	44.5	419
79	Engineered antifouling microtopographies--correlating wettability with cell attachment. <i>Biofouling</i> , 2006 , 22, 11-21	3.3	391
78	Engineered antifouling microtopographies - effect of feature size, geometry, and roughness on settlement of zoospores of the green alga <i>Ulva</i> . <i>Biofouling</i> , 2007 , 23, 55-62	3.3	376
77	Development of polydimethylsiloxane substrates with tunable elastic modulus to study cell mechanobiology in muscle and nerve. <i>PLoS ONE</i> , 2012 , 7, e51499	3.7	356
76	3D Printing PDMS Elastomer in a Hydrophilic Support Bath via Freeform Reversible Embedding. <i>ACS Biomaterials Science and Engineering</i> , 2016 , 2, 1781-1786	5.5	242
75	Biohybrid actuators for robotics: A review of devices actuated by living cells. <i>Science Robotics</i> , 2017 , 2,	18.6	202
74	Antifouling potential of lubricious, micro-engineered, PDMS elastomers against zoospores of the green fouling alga <i>Ulva</i> (Enteromorpha). <i>Biofouling</i> , 2004 , 20, 53-63	3.3	183
73	Generation of functional ventricular heart muscle from mouse ventricular progenitor cells. <i>Science</i> , 2009 , 326, 426-9	33.3	182
72	Controlling the contractile strength of engineered cardiac muscle by hierarchal tissue architecture. <i>Biomaterials</i> , 2012 , 33, 5732-41	15.6	166
71	Functional maturation of human pluripotent stem cell derived cardiomyocytes in vitro--correlation between contraction force and electrophysiology. <i>Biomaterials</i> , 2015 , 51, 138-150	15.6	144
70	Biohybrid thin films for measuring contractility in engineered cardiovascular muscle. <i>Biomaterials</i> , 2010 , 31, 3613-21	15.6	130
69	Cryopreserved cell-laden alginate microgel bioink for 3D bioprinting of living tissues. <i>Materials Today Chemistry</i> , 2019 , 12, 61-70	6.2	90
68	Optimizing the structure and contractility of engineered skeletal muscle thin films. <i>Acta Biomaterialia</i> , 2013 , 9, 7885-94	10.8	77
67	Biological Soft Robotics. <i>Annual Review of Biomedical Engineering</i> , 2015 , 17, 243-65	12	70

66	Nuclear morphology and deformation in engineered cardiac myocytes and tissues. <i>Biomaterials</i> , 2010 , 31, 5143-50	15.6	70
65	FRESH 3D Bioprinting a Full-Size Model of the Human Heart. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 6453-6459	5.5	66
64	Surface-initiated assembly of protein nanofabrics. <i>Nano Letters</i> , 2010 , 10, 2184-91	11.5	63
63	Differentiation of Cardiomyocytes from Human Pluripotent Stem Cells Using Monolayer Culture. <i>Biomarker Insights</i> , 2015 , 10, 71-6	3.5	62
62	Organ-on-a-chip: Three-dimensional self-rolled biosensor array for electrical interrogations of human electrogenic spheroids. <i>Science Advances</i> , 2019 , 5, eaax0729	14.3	60
61	Understanding the Role of ECM Protein Composition and Geometric Micropatterning for Engineering Human Skeletal Muscle. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 2076-89	4.7	60
60	Large volume syringe pump extruder for desktop 3D printers. <i>HardwareX</i> , 2018 , 3, 49-61	2.7	55
59	In vitro expansion of corneal endothelial cells on biomimetic substrates. <i>Scientific Reports</i> , 2015 , 5, 79554.9	4.9	54
58	Conformal nanopatterning of extracellular matrix proteins onto topographically complex surfaces. <i>Nature Methods</i> , 2015 , 12, 134-6	21.6	52
57	Engineered skeletal muscle tissue for soft robotics: fabrication strategies, current applications, and future challenges. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2014 , 6, 178-95	9.2	51
56	Systematic variation of microtopography, surface chemistry and elastic modulus and the state dependent effect on endothelial cell alignment. <i>Journal of Biomedical Materials Research - Part A</i> , 2008 , 86, 522-34	5.4	51
55	Hierarchical architecture influences calcium dynamics in engineered cardiac muscle. <i>Experimental Biology and Medicine</i> , 2011 , 236, 366-73	3.7	49
54	Natural Biomaterials for Corneal Tissue Engineering, Repair, and Regeneration. <i>Advanced Healthcare Materials</i> , 2018 , 7, e1701434	10.1	42
53	Functional differences in engineered myocardium from embryonic stem cell-derived versus neonatal cardiomyocytes. <i>Stem Cell Reports</i> , 2013 , 1, 387-96	8	39
52	Optimization of Silicone 3D Printing with Hierarchical Machine Learning. <i>3D Printing and Additive Manufacturing</i> , 2019 , 6, 181-189	4	37
51	Scaffold-free tissue engineering of functional corneal stromal tissue. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2018 , 12, 59-69	4.4	36
50	Expert-guided optimization for 3D printing of soft and liquid materials. <i>PLoS ONE</i> , 2018 , 13, e0194890	3.7	32
49	Emergence of FRESH 3D printing as a platform for advanced tissue biofabrication. <i>APL Bioengineering</i> , 2021 , 5, 010904	6.6	30

48	3D bioprinting from the micrometer to millimeter length scales: Size does matter. <i>Current Opinion in Biomedical Engineering</i> , 2017 , 1, 31-37	4.4	28
47	Engineering Aligned Skeletal Muscle Tissue Using Decellularized Plant-Derived Scaffolds. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 3046-3054	5.5	28
46	Progress in three-dimensional bioprinting. <i>MRS Bulletin</i> , 2017 , 42, 557-562	3.2	28
45	Engineered Basement Membranes for Regenerating the Corneal Endothelium. <i>Advanced Healthcare Materials</i> , 2016 , 5, 2942-2950	10.1	25
44	Cytoskeletal prestress regulates nuclear shape and stiffness in cardiac myocytes. <i>Experimental Biology and Medicine</i> , 2015 , 240, 1543-54	3.7	24
43	Graphene Microelectrode Arrays for Electrical and Optical Measurements of Human Stem Cell-Derived Cardiomyocytes. <i>Cellular and Molecular Bioengineering</i> , 2018 , 11, 407-418	3.9	23
42	Engineering high-density endothelial cell monolayers on soft substrates. <i>Acta Biomaterialia</i> , 2009 , 5, 2013-24	10.8	23
41	3D Printing Silicone Elastomer for Patient-Specific Wearable Pulse Oximeter. <i>Advanced Healthcare Materials</i> , 2020 , 9, e1901735	10.1	22
40	Engineered tissue grafts: opportunities and challenges in regenerative medicine. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2012 , 4, 207-20	6.6	22
39	Investigating the Energetics of Bioadhesion on Microengineered Siloxane Elastomers. <i>ACS Symposium Series</i> , 2003 , 196-211	0.4	22
38	Shrink Wrapping Cells in a Defined Extracellular Matrix to Modulate the Chemo-Mechanical Microenvironment. <i>Cellular and Molecular Bioengineering</i> , 2014 , 7, 355-368	3.9	16
37	Three-dimensional fuzzy graphene ultra-microelectrodes for subcellular electrical recordings. <i>Nano Research</i> , 2020 , 13, 1444-1452	10	15
36	Extracellular Matrix Structure and Composition in the Early Four-Chambered Embryonic Heart. <i>Cells</i> , 2020 , 9,	7.9	14
35	Dynamic loading of human engineered heart tissue enhances contractile function and drives a desmosome-linked disease phenotype. <i>Science Translational Medicine</i> , 2021 , 13,	17.5	14
34	Fabrication of freestanding alginate microfibers and microstructures for tissue engineering applications. <i>Biofabrication</i> , 2014 , 6, 024104	10.5	13
33	3D Bioprinting using UNiversal Orthogonal Network (UNION) Bioinks. <i>Advanced Functional Materials</i> , 2021 , 31, 2007983	15.6	13
32	Hierarchical Machine Learning for High-Fidelity 3D Printed Biopolymers. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 7021-7031	5.5	11
31	Intracellular action potential recordings from cardiomyocytes by ultrafast pulsed laser irradiation of fuzzy graphene microelectrodes. <i>Science Advances</i> , 2021 , 7,	14.3	11

30	3D Bioprinting of Engineered Tissue Flaps with Hierarchical Vessel Networks (VesselNet) for Direct Host-To-Implant Perfusion. <i>Advanced Materials</i> , 2021 , 33, e2102661	24	11
29	Stretch-dependent changes in molecular conformation in fibronectin nanofibers. <i>Biomaterials Science</i> , 2017 , 5, 1629-1639	7.4	10
28	ECM protein nanofibers and nanostructures engineered using surface-initiated assembly. <i>Journal of Visualized Experiments</i> , 2014 ,	1.6	10
27	3D printed biaxial stretcher compatible with live fluorescence microscopy.. <i>HardwareX</i> , 2020 , 7,	2.7	9
26	Defined Micropatterning of ECM Protein Adhesive Sites on Alginate Microfibers for Engineering Highly Anisotropic Muscle Cell Bundles. <i>Advanced Materials Technologies</i> , 2016 , 1, 1600003	6.8	9
25	Biohybrid Actuators for Soft Robotics: Challenges in Scaling Up. <i>Actuators</i> , 2020 , 9, 96	2.4	9
24	Fibronectin-based nanomechanical biosensors to map 3D surface strains in live cells and tissue. <i>Nature Communications</i> , 2020 , 11, 5883	17.4	9
23	3D Printing Hydrogel-Based Soft and Biohybrid Actuators: A Mini-Review on Fabrication Techniques, Applications, and Challenges. <i>Frontiers in Robotics and AI</i> , 2021 , 8, 673533	2.8	9
22	A high performance open-source syringe extruder optimized for extrusion and retraction during FRESH 3D bioprinting. <i>HardwareX</i> , 2021 , 9,	2.7	9
21	Nanofiber Biomaterials 2013 , 977-1010		8
20	Patterning on Topography for Generation of Cell Culture Substrates with Independent Nanoscale Control of Chemical and Topographical Extracellular Matrix Cues. <i>Current Protocols in Cell Biology</i> , 2017 , 75, 10.23.1-10.23.25	2.3	7
19	Engineering aligned human cardiac muscle using developmentally inspired fibronectin micropatterns. <i>Scientific Reports</i> , 2021 , 11, 11502	4.9	7
18	Spontaneous Helical Structure Formation in Laminin Nanofibers. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 7993-8000	7.3	6
17	Gain-of-function mutation in ubiquitin-ligase KLHL24 causes desmin degradation and dilatation in hiPSC-derived engineered heart tissues. <i>Journal of Clinical Investigation</i> , 2021 ,	15.9	5
16	Measuring the Poisson's Ratio of Fibronectin Using Engineered Nanofibers. <i>Scientific Reports</i> , 2017 , 7, 13413	4.9	4
15	Recapitulating human cardio-pulmonary co-development using simultaneous multilineage differentiation of pluripotent stem cells.. <i>ELife</i> , 2022 , 11,	8.9	4
14	Engineering Micrometer and Nanometer Scale Features in Polydimethylsiloxane Elastomers for Controlled Cell Function. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 711, 1		3
13	FRESH 3D bioprinting a contractile heart tube using human stem cell-derived cardiomyocytes.. <i>Biofabrication</i> , 2022 ,	10.5	3

12	Nano- and Microstructured ECM and Biomimetic Scaffolds for Cardiac Tissue Engineering 2014 , 195-226	2
11	Characterization of Chemically and Topographically Modified Siloxane Elastomer for Controlled Cell Growth. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 711, 1	1
10	Dynamic Loading of Human Engineered Heart Tissue Enhances Contractile Function and Drives Desmosome-linked Disease Phenotype	1
9	Fibronectin-Based Nanomechanical Biosensors to Map 3D Strains in Live Cells and Tissues	1
8	Recapitulate Human Cardio-pulmonary Co-development Using Simultaneous Multilineage Differentiation of Pluripotent Stem Cells	1
7	Recent Advances in Cellular and Molecular Bioengineering for Building and Translation of Biological Systems. <i>Cellular and Molecular Bioengineering</i> , 2021 , 14, 1-16	3.9 1
6	Modeling neuron growth using isogeometric collocation based phase field method.. <i>Scientific Reports</i> , 2022 , 12, 8120	4.9 1
5	Peroxiredoxin-1 Tyr194 phosphorylation regulates LOX-dependent extracellular matrix remodelling in breast cancer. <i>British Journal of Cancer</i> , 2021 , 125, 1146-1157	8.7 o
4	Endothelial superoxide dismutase 2 is decreased in sickle cell disease and regulates fibronectin processing.. <i>Function</i> , 2022 , 3, zqac005	6.1 o
3	Continuous fiber extruder for desktop 3D printers toward long fiber embedded hydrogel 3D printing.. <i>HardwareX</i> , 2022 , 11, e00297	2.7 o
2	FRESH 3D Bioprinting a Ventricle-like Cardiac Construct Using Human Stem Cell-Derived Cardiomyocytes. <i>Methods in Molecular Biology</i> , 2022 , 71-85	1.4 o
1	3D Bioprinting of Engineered Tissue Flaps with Hierarchical Vessel Networks (VesselNet) for Direct Host-To-Implant Perfusion (Adv. Mater. 42/2021). <i>Advanced Materials</i> , 2021 , 33, 2170335	24