Milica Radisic

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.

188 papers	12,966 citations	58 h-index	111 g-index
221 ext. papers	14,816 ext. citations	9.7 avg, IF	6.72 L-index

#	Paper	IF	Citations
188	Functional assembly of engineered myocardium by electrical stimulation of cardiac myocytes cultured on scaffolds. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 18129-34	11.5	732
187	Biowire: a platform for maturation of human pluripotent stem cell-derived cardiomyocytes. *Nature Methods*, **2013**, 10, 781-7	21.6	624
186	Advances in organ-on-a-chip engineering. *Nature Reviews Materials*, **2018**, 3, 257-278	73.3	426
185	Electrical stimulation systems for cardiac tissue engineering. *Nature Protocols*, **2009**, 4, 155-73	18.8	386
184	Challenges in cardiac tissue engineering. *Tissue Engineering - Part B: Reviews*, **2010**, 16, 169-87	7.9	372
183	Biodegradable scaffold with built-in vasculature for organ-on-a-chip engineering and direct surgical anastomosis. *Nature Materials*, **2016**, 15, 669-78	27	354
182	Oxygen gradients correlate with cell density and cell viability in engineered cardiac tissue. *Biotechnology and Bioengineering*, **2006**, 93, 332-43	4.9	310
181	A microfabricated platform to measure and manipulate the mechanics of engineered cardiac microtissues. *Tissue Engineering - Part A*, **2012**, 18, 910-9	3.9	289
180	Biomimetic approach to cardiac tissue engineering: oxygen carriers and channeled scaffolds. *Tissue Engineering*, **2006**, 12, 2077-91		261
179	Medium perfusion enables engineering of compact and contractile cardiac tissue. *American Journal of Physiology - Heart and Circulatory Physiology*, **2004**, 286, H507-16	5.2	260
178	Influence of substrate stiffness on the phenotype of heart cells. *Biotechnology and Bioengineering*, **2010**, 105, 1148-60	4.9	252
177	Scaffolds with covalently immobilized VEGF and Angiopoietin-1 for vascularization of engineered tissues. *Biomaterials*, **2010**, 31, 226-41	15.6	243
176	A Platform for Generation of Chamber-Specific Cardiac Tissues and Disease Modeling. *Cell*, **2019**, 176, 913-927.e18	56.2	239
175	High-density seeding of myocyte cells for cardiac tissue engineering. *Biotechnology and Bioengineering*, **2003**, 82, 403-14	4.9	237
174	Vascular endothelial growth factor immobilized in collagen scaffold promotes penetration and proliferation of endothelial cells. *Acta Biomaterialia*, **2008**, 4, 477-89	10.8	230
173	Organ-on-a-chip devices advance to market. *Lab on A Chip*, **2017**, 17, 2395-2420	7.2	224
172	Advanced tools for tissue engineering: scaffolds, bioreactors, and signaling. *Tissue Engineering*, **2006**, 12, 3285-305		223

171	Cardiac tissue engineering using perfusion bioreactor systems. *Nature Protocols*, **2008**, 3, 719-38	18.8	222
170	Flexible shape-memory scaffold for minimally invasive delivery of functional tissues. *Nature Materials*, **2017**, 16, 1038-1046	27	217
169	Design and formulation of functional pluripotent stem cell-derived cardiac microtissues. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E4698-707	11.5	209
168	Mathematical model of oxygen distribution in engineered cardiac tissue with parallel channel array perfused with culture medium containing oxygen carriers. *American Journal of Physiology - Heart and Circulatory Physiology*, **2005**, 288, H1278-89	5.2	199
167	Biodegradable collagen patch with covalently immobilized VEGF for myocardial repair. *Biomaterials* , **2011**, 32, 1280-90	15.6	192
166	Microfluidic patterning for fabrication of contractile cardiac organoids. *Biomedical Microdevices*, **2007**, 9, 149-57	3.7	159
165	Organ-On-A-Chip Platforms: A Convergence of Advanced Materials, Cells, and Microscale Technologies. *Advanced Healthcare Materials*, **2018**, 7, 1700506	10.1	155
164	Interactive effects of surface topography and pulsatile electrical field stimulation on orientation and elongation of fibroblasts and cardiomyocytes. *Biomaterials*, **2007**, 28, 4277-93	15.6	152
163	Maturing human pluripotent stem cell-derived cardiomyocytes in human engineered cardiac tissues. *Advanced Drug Delivery Reviews*, **2016**, 96, 110-34	18.5	148
162	Synergistic Engineering: Organoids Meet Organs-on-a-Chip. *Cell Stem Cell*, **2017**, 21, 297-300	18	146
161	Pre-treatment of synthetic elastomeric scaffolds by cardiac fibroblasts improves engineered heart tissue. *Journal of Biomedical Materials Research - Part A*, **2008**, 86, 713-24	5.4	139
160	Biomaterials in myocardial tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine*, **2016**, 10, 11-28	4.4	136
159	Perfusable branching microvessel bed for vascularization of engineered tissues. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E3414-23	11.5	135
158	A peptide-modified chitosan-collagen hydrogel for cardiac cell culture and delivery. *Acta Biomaterialia*, **2012**, 8, 1022-36	10.8	115
157	Biomimetic approach to tissue engineering. *Seminars in Cell and Developmental Biology*, **2009**, 20, 665-73	7.5	114
156	Peptide-mediated selective adhesion of smooth muscle and endothelial cells in microfluidic shear flow. *Langmuir*, **2007**, 23, 5050-5	4	112
155	Mechanical properties and remodeling of hybrid cardiac constructs made from heart cells, fibrin, and biodegradable, elastomeric knitted fabric. *Tissue Engineering*, **2005**, 11, 1122-32		111
154	Cell culture chips for simultaneous application of topographical and electrical cues enhance phenotype of cardiomyocytes. *Lab on A Chip*, **2009**, 9, 564-75	7.2	109

153	Distilling complexity to advance cardiac tissue engineering. *Science Translational Medicine*, **2016**, 8, 342ps13	17.5	108
152	A novel composite scaffold for cardiac tissue engineering. *In Vitro Cellular and Developmental Biology - Animal*, **2005**, 41, 188-96	2.6	106
151	A photolithographic method to create cellular micropatterns. *Biomaterials*, **2006**, 27, 4755-64	15.6	103
150	Photocrosslinkable hydrogel for myocyte cell culture and injection. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2007**, 81, 312-22	3.5	99
149	Microfabricated perfusable cardiac biowire: a platform that mimics native cardiac bundle. *Lab on A Chip*, **2014**, 14, 869-82	7.2	98
148	Mosaic hydrogels: one-step formation of multiscale soft materials. *Advanced Materials*, **2012**, 24, 3650-8	24	96
147	Micro- and nanotechnology in cell separation. *International Journal of Nanomedicine*, **2006**, 1, 3-14	7.3	94
146	Moldable elastomeric polyester-carbon nanotube scaffolds for cardiac tissue engineering. *Acta Biomaterialia*, **2017**, 52, 81-91	10.8	91
145	Can We Engineer a Human Cardiac Patch for Therapy?. *Circulation Research*, **2018**, 123, 244-265	15.7	90
144	Effects of electrical stimulation in C2C12 muscle constructs. *Journal of Tissue Engineering and Regenerative Medicine*, **2008**, 2, 279-87	4.4	88
143	Cardiovascular disease models: A game changing paradigm in drug discovery and screening. *Biomaterials*, **2019**, 198, 3-26	15.6	88
142	Pulsatile perfusion bioreactor for cardiac tissue engineering. *Biotechnology Progress*, **2008**, 24, 907-20	2.8	86
141	Materials science and tissue engineering: repairing the heart. *Mayo Clinic Proceedings*, **2013**, 88, 884-98	6.4	85
140	Diabetic wound regeneration using peptide-modified hydrogels to target re-epithelialization. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E5792-E5801	11.5	77
139	Controlled release of thymosin □4 using collagen-chitosan composite hydrogels promotes epicardial cell migration and angiogenesis. *Journal of Controlled Release*, **2011**, 155, 376-85	11.7	77
138	Microfabricated poly(ethylene glycol) templates enable rapid screening of triculture conditions for cardiac tissue engineering. *Journal of Biomedical Materials Research - Part A*, **2009**, 89, 616-31	5.4	77
137	Biphasic electrical field stimulation aids in tissue engineering of multicell-type cardiac organoids. *Tissue Engineering - Part A*, **2011**, 17, 1465-77	3.9	76
136	Deterministic lateral displacement as a means to enrich large cells for tissue engineering. *Analytical Chemistry*, **2009**, 81, 9178-82	7.8	76

135	Interrogating functional integration between injected pluripotent stem cell-derived cells and surrogate cardiac tissue. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 3329-34	11.5	74
134	Endothelial cells guided by immobilized gradients of vascular endothelial growth factor on porous collagen scaffolds. *Acta Biomaterialia*, **2011**, 7, 3027-35	10.8	67
133	Biomaterial based cardiac tissue engineering and its applications. *Biomedical Materials (Bristol)*, **2015**, 10, 034004	3.5	66
132	Defining conditions for covalent immobilization of angiogenic growth factors onto scaffolds for tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine*, **2011**, 5, 69-84	4.4	65
131	Microfluidic depletion of endothelial cells, smooth muscle cells, and fibroblasts from heterogeneous suspensions. *Lab on A Chip*, **2008**, 8, 462-72	7.2	61
130	Highly Elastic and Moldable Polyester Biomaterial for Cardiac Tissue Engineering Applications. *ACS Biomaterials Science and Engineering*, **2016**, 2, 780-788	5.5	58
129	Engineered cardiac tissues. *Current Opinion in Biotechnology*, **2011**, 22, 706-14	11.4	57
128	Size-based microfluidic enrichment of neonatal rat cardiac cell populations. *Biomedical Microdevices* , **2006**, 8, 231-7	3.7	54
127	Controlled capture and release of cardiac fibroblasts using peptide-functionalized alginate gels in microfluidic channels. *Lab on A Chip*, **2009**, 9, 1507-10	7.2	52
126	Biophysical regulation during cardiac development and application to tissue engineering. *International Journal of Developmental Biology*, **2006**, 50, 233-43	1.9	52
125	Beyond Polydimethylsiloxane: Alternative Materials for Fabrication of Organ-on-a-Chip Devices and Microphysiological Systems. *ACS Biomaterials Science and Engineering*, **2021**, 7, 2880-2899	5.5	50
124	Micro-and nanotechnology in cardiovascular tissue engineering. *Nanotechnology*, **2011**, 22, 494003	3.4	49
123	Bioreactor for modulation of cardiac microtissue phenotype by combined static stretch and electrical stimulation. *Biofabrication*, **2014**, 6, 024113	10.5	47
122	Optical mapping of impulse propagation in engineered cardiac tissue. *Tissue Engineering - Part A*, **2009**, 15, 851-60	3.9	47
121	High-Content Assessment of Cardiac Function Using Heart-on-a-Chip Devices as Drug Screening Model. *Stem Cell Reviews and Reports*, **2017**, 13, 335-346	6.4	44
120	Biowire Model of Interstitial and Focal Cardiac Fibrosis. *ACS Central Science*, **2019**, 5, 1146-1158	16.8	43
119	The role of tissue engineering and biomaterials in cardiac regenerative medicine. *Canadian Journal of Cardiology*, **2014**, 30, 1307-22	3.8	42
118	Cardiac tissue engineering: current state and perspectives. *Frontiers in Bioscience - Landmark*, **2012**, 17, 1533-50	2.8	41

117	Stem cell-based cardiac tissue engineering. *Journal of Cardiovascular Translational Research*, **2011**, 4, 592-602	3.3	39
116	Feasibility study of a novel urinary bladder bioreactor. *Tissue Engineering - Part A*, **2008**, 14, 339-48	3.9	39
115	Collagen scaffold enhances the regenerative properties of mesenchymal stromal cells. *PLoS ONE*, **2017**, 12, e0187348	3.7	38
114	Microfabrication of AngioChip, a biodegradable polymer scaffold with microfluidic vasculature. *Nature Protocols*, **2018**, 13, 1793-1813	18.8	38
113	Aged human cells rejuvenated by cytokine enhancement of biomaterials for surgical ventricular restoration. *Journal of the American College of Cardiology*, **2012**, 60, 2237-49	15.1	38
112	Label-free enrichment of functional cardiomyocytes using microfluidic deterministic lateral flow displacement. *PLoS ONE*, **2012**, 7, e37619	3.7	38
111	InVADE: Integrated Vasculature for Assessing Dynamic Events. *Advanced Functional Materials*, **2017** , 27, 1703524	15.6	37
110	Generation of tissue constructs for cardiovascular regenerative medicine: from cell procurement to scaffold design. *Biotechnology Advances*, **2013**, 31, 722-35	17.8	37
109	Photocrosslinkable chitosan modified with angiopoietin-1 peptide, QHREDGS, promotes survival of neonatal rat heart cells. *Journal of Biomedical Materials Research - Part A*, **2010**, 95, 105-17	5.4	37
108	Bioactive scaffolds for engineering vascularized cardiac tissues. *Macromolecular Bioscience*, **2010**, 10, 1286-301	5.5	37
107	Platform technology for scalable assembly of instantaneously functional mosaic tissues. *Science Advances*, **2015**, 1, e1500423	14.3	36
106	Engineering microenvironment for human cardiac tissue assembly in heart-on-a-chip platform. *Matrix Biology*, **2020**, 85-86, 189-204	11.4	36
105	Resolving Myocardial Activation With Novel Omnipolar Electrograms. *Circulation: Arrhythmia and Electrophysiology*, **2016**, 9, e004107	6.4	35
104	Engineering of oriented myocardium on three-dimensional micropatterned collagen-chitosan hydrogel. *International Journal of Artificial Organs*, **2012**, 35, 237-50	1.9	35
103	Vascular endothelial growth factor secretion by nonmyocytes modulates Connexin-43 levels in cardiac organoids. *Tissue Engineering - Part A*, **2012**, 18, 1771-83	3.9	35
102	Integrin-linked kinase mediates force transduction in cardiomyocytes by modulating SERCA2a/PLN function. *Nature Communications*, **2014**, 5, 4533	17.4	34
101	Practical aspects of cardiac tissue engineering with electrical stimulation. *Methods in Molecular Medicine*, **2007**, 140, 291-307		34
100	The role of Wnt regulation in heart development, cardiac repair and disease: A tissue engineering perspective. *Biochemical and Biophysical Research Communications*, **2016**, 473, 698-703	3.4	33

99	Controlled release of thymosin β4 from injected collagen-chitosan hydrogels promotes angiogenesis and prevents tissue loss after myocardial infarction. *Regenerative Medicine*, **2012**, 7, 523-33	2.5	33
98	Cardiac Tissue Vascularization: From Angiogenesis to Microfluidic Blood Vessels. *Journal of Cardiovascular Pharmacology and Therapeutics*, **2014**, 19, 382-393	2.6	32
97	Hydrogel substrate stiffness and topography interact to induce contact guidance in cardiac fibroblasts. *Macromolecular Bioscience*, **2012**, 12, 1342-53	5.5	32
96	Cardiac tissue engineering: effects of bioreactor flow environment on tissue constructs. *Journal of Chemical Technology and Biotechnology*, **2006**, 81, 485-490	3.5	32
95	h-FIBER: Microfluidic Topographical Hollow Fiber for Studies of Glomerular Filtration Barrier. *ACS Central Science*, **2020**, 6, 903-912	16.8	30
94	Advanced Strategies for Modulation of the Material‐Macrophage Interface. *Advanced Functional Materials*, **2020**, 30, 1909331	15.6	30
93	Mitochondrial hyperfusion during oxidative stress is coupled to a dysregulation in calcium handling within a C2C12 cell model. *PLoS ONE*, **2013**, 8, e69165	3.7	30
92	Spatiotemporal tracking of cells in tissue-engineered cardiac organoids. *Journal of Tissue Engineering and Regenerative Medicine*, **2009**, 3, 196-207	4.4	30
91	Cardiac tissue engineering. *Journal of the Serbian Chemical Society*, **2005**, 70, 541-556	0.9	30
90	Strategies and Challenges to Myocardial Replacement Therapy. *Stem Cells Translational Medicine*, **2016**, 5, 410-6	6.9	30
89	Hydrogels with integrin-binding angiopoietin-1-derived peptide, QHREDGS, for treatment of acute myocardial infarction. *Circulation: Heart Failure*, **2015**, 8, 333-41	7.6	29
88	Topological and electrical control of cardiac differentiation and assembly. *Stem Cell Research and Therapy*, **2013**, 4, 14	8.3	29
87	QHREDGS enhances tube formation, metabolism and survival of endothelial cells in collagen-chitosan hydrogels. *PLoS ONE*, **2013**, 8, e72956	3.7	29
86	A standalone perfusion platform for drug testing and target validation in micro-vessel networks. *Biomicrofluidics*, **2013**, 7, 44125	3.2	28
85	Cell seeding of polymer scaffolds. *Methods in Molecular Biology*, **2004**, 238, 131-46	1.4	28
84	Hydrogels modified with QHREDGS peptide support cardiomyocyte survival in vitro and after sub-cutaneous implantation. *Soft Matter*, **2010**, 6, 5089	3.6	27
83	Biofabrication enables efficient interrogation and optimization of sequential culture of endothelial cells, fibroblasts and cardiomyocytes for formation of vascular cords in cardiac tissue engineering. *Biofabrication*, **2012**, 4, 035002	10.5	27
82	Review: Multimodal bioactive material approaches for wound healing. *APL Bioengineering*, **2018**, 2, 021503	6.6	26

81	Organs-on-a-chip models for biological research. *Cell*, **2021**, 184, 4597-4611	56.2	26
80	Facile Method for Fabrication of Meter-Long Multifunctional Hydrogel Fibers with Controllable Biophysical and Biochemical Features. *ACS Applied Materials & Interfaces*, **2020**, 12, 9080-9089	9.5	25
79	Inhibition of apoptosis in human induced pluripotent stem cells during expansion in a defined culture using angiopoietin-1 derived peptide QHREDGS. *Biomaterials*, **2014**, 35, 7786-99	15.6	25
78	Cardiac tissue engineering. *Current Opinion in Chemical Engineering*, **2013**, 2, 41-52	5.4	25
77	Towards chamber specific heart-on-a-chip for drug testing applications. *Advanced Drug Delivery Reviews*, **2020**, 165-166, 60-76	18.5	25
76	Recapitulating pancreatic tumor microenvironment through synergistic use of patient organoids and organ-on-a-chip vasculature. *Advanced Functional Materials*, **2020**, 30, 2000545	15.6	24
75	Engineering surfaces for site-specific vascular differentiation of mouse embryonic stem cells. *Acta Biomaterialia*, **2010**, 6, 1904-16	10.8	23
74	Synthetic oxygen carriers in cardiac tissue engineering. *Artificial Cells, Blood Substitutes, and Biotechnology*, **2007**, 35, 135-48		23
73	Kinase inhibitor screening using artificial neural networks and engineered cardiac biowires. *Scientific Reports*, **2017**, 7, 11807	4.9	22
72	Engineered heart tissue model of diabetic myocardium. *Tissue Engineering - Part A*, **2011**, 17, 1869-78	3.9	22
71	Biomaterials and Culture Systems for Development of Organoid and Organ-on-a-Chip Models. *Annals of Biomedical Engineering*, **2020**, 48, 2002-2027	4.7	22
70	Modifications of collagen-based biomaterials with immobilized growth factors or peptides. *Methods*, **2015**, 84, 44-52	4.6	21
69	New Frontiers for Biofabrication and Bioreactor Design in Microphysiological System Development. *Trends in Biotechnology*, **2019**, 37, 1327-1343	15.1	20
68	Engineered heart tissue enables study of residual undifferentiated embryonic stem cell activity in a cardiac environment. *Biotechnology and Bioengineering*, **2011**, 108, 704-19	4.9	20
67	3D Printing of Vascular Tubes Using Bioelastomer Prepolymers by Freeform Reversible Embedding. *ACS Biomaterials Science and Engineering*, **2020**, 6, 1333-1343	5.5	19
66	A healthy dose of chaos: Using fractal frameworks for engineering higher-fidelity biomedical systems. *Biomaterials*, **2019**, 219, 119363	15.6	19
65	Biochemical and Biophysical Cues in Matrix Design for Chronic and Diabetic Wound Treatment. *Tissue Engineering - Part B: Reviews*, **2017**, 23, 9-26	7.9	19
64	Human Stem Cell-Derived Cardiac Model of Chronic Drug Exposure. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1911-1921	5.5	18

63	Enrichment of live unlabelled cardiomyocytes from heterogeneous cell populations using manipulation of cell settling velocity by magnetic field. *Biomicrofluidics*, **2013**, 7, 14110	3.2	18
62	A Multimaterial Microphysiological Platform Enabled by Rapid Casting of Elastic Microwires. *Advanced Healthcare Materials*, **2019**, 8, e1801187	10.1	17
61	Angiopoietin-1 peptide QHREDGS promotes osteoblast differentiation, bone matrix deposition and mineralization on biomedical materials. *Biomaterials Science*, **2014**, 2, 1384-1398	7.4	16
60	Biophysical stimulation for engineering of functional cardiac tissues. *Clinical Science*, **2017**, 131, 1393-1404	6.5	16
59	Controlled delivery of thymosin □4 for tissue engineering and cardiac regenerative medicine. *Annals of the New York Academy of Sciences*, **2012**, 1269, 16-25	6.5	16
58	Organ-on-a-chip platforms for evaluation of environmental nanoparticle toxicity. *Bioactive Materials*, **2021**, 6, 2801-2819	16.7	15
57	Functional arrays of human pluripotent stem cell-derived cardiac microtissues. *Scientific Reports*, **2020**, 10, 6919	4.9	14
56	Human pluripotent stem cell-derived cardiomyocyte based models for cardiotoxicity and drug discovery. *Expert Opinion on Drug Safety*, **2016**, 15, 1455-1458	4.1	14
55	A well plate-based multiplexed platform for incorporation of organoids into an organ-on-a-chip system with a perfusable vasculature. *Nature Protocols*, **2021**, 16, 2158-2189	18.8	14
54	One-Pot Synthesis of Unsaturated Polyester Bioelastomer with Controllable Material Curing for Microscale Designs. *Advanced Healthcare Materials*, **2019**, 8, e1900245	10.1	13
53	Curvature facilitates podocyte culture in a biomimetic platform. *Lab on A Chip*, **2018**, 18, 3112-3128	7.2	12
52	Engineered Muscle Tissues for Disease Modeling and Drug Screening Applications. *Current Pharmaceutical Design*, **2017**, 23, 2991-3004	3.3	11
51	Extracellular Vesicles in Cardiac Regeneration: Potential Applications for Tissues-on-a-Chip. *Trends in Biotechnology*, **2021**, 39, 755-773	15.1	10
50	Everolimus Rescues the Phenotype of Elastin Insufficiency in Patient Induced Pluripotent Stem Cell-Derived Vascular Smooth Muscle Cells. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2020**, 40, 1325-1339	9.4	9
49	Combined hypoxia and sodium nitrite pretreatment for cardiomyocyte protection in vitro. *Biotechnology Progress*, **2015**, 31, 482-92	2.8	8
48	Method for the Fabrication of Elastomeric Polyester Scaffolds for Tissue Engineering and Minimally Invasive Delivery. *ACS Biomaterials Science and Engineering*, **2018**, 4, 3691-3703	5.5	8
47	Tissue engineering approaches for the development of a contractile cardiac patch. *Future Cardiology*, **2007**, 3, 425-34	1.3	8
46	An optimal gel patch for the injured heart. *Nature Biomedical Engineering*, **2019**, 3, 592-593	19	7

45	PI3K Phosphorylation Is Linked to Improved Electrical Excitability in an In Vitro Engineered Heart Tissue Disease Model System. *Tissue Engineering - Part A*, **2015**, 21, 2379-89	3.9	6
44	Macrophage Polarization with Angiopoietin-1 Peptide QHREDGS. *ACS Biomaterials Science and Engineering*, **2019**, 5, 4542-4550	5.5	6
43	Mapping signalling perturbations in myocardial fibrosis via the integrative phosphoproteomic profiling of tissue from diverse sources. *Nature Biomedical Engineering*, **2020**, 4, 889-900	19	6
42	Heart-on-a-Chip Platform for Assessing Toxicity of Air Pollution Related Nanoparticles. *Advanced Materials Technologies*, **2021**, 6, 2000726	6.8	6
41	Cardiac Tissue Engineering **2011**, 421-456		5
40	Cell nutrition **2008**, 327-362		5
39	A framework for developing sex-specific engineered heart models. *Nature Reviews Materials*, **2021**, 1-19	73.3	5
38	Cardiac Tissue Engineering **2014**, 771-792		4
37	Fusible core molding for the fabrication of branched, perfusable, three-dimensional microvessels for vascular tissue engineering. *International Journal of Artificial Organs*, **2013**, 36, 159-65	1.9	4
36	Vasculature-on-a-chip platform with innate immunity enables identification of angiopoietin-1 derived peptide as a therapeutic for SARS-CoV-2 induced inflammation.. *Lab on A Chip*, **2022**,	7.2	4
35	Toward Renewable and Functional Biomedical Polymers with Tunable Degradation Rates Based on Itaconic Acid and 1,8-Octanediol. *ACS Applied Polymer Materials*, **2021**, 3, 1943-1955	4.3	4
34	Biomechanics of Wound Healing in an Equine Limb Model: Effect of Location and Treatment with a Peptide-Modified Collagen-Chitosan Hydrogel. *ACS Biomaterials Science and Engineering*, **2021**, 7, 265-278	5.5	4
33	An organ-on-a-chip model for pre-clinical drug evaluation in progressive non-genetic cardiomyopathy. *Journal of Molecular and Cellular Cardiology*, **2021**, 160, 97-110	5.8	4
32	Engagement of the medical-technology sector with society. *Science Translational Medicine*, **2017**, 9,	17.5	3
31	Biomaterials for cardiac tissue engineering. *Biomedical Materials (Bristol)*, **2015**, 10, 030301	3.5	3
30	The use of microfabrication technology to address the challenges of building physiologically relevant vasculature. *Current Opinion in Biomedical Engineering*, **2018**, 6, 8-16	4.4	3
29	Cardiac Tissue **2019**, 1073-1099		3
28	Tissue Engineering of Cartilage and Myocardium **2005**, 99-133		3

27	Spatial and Electrical Factors Regulating Cardiac Regeneration and Assembly **2015**, 71-92		3
26	Functional arrays of human pluripotent stem cell-derived cardiac microtissues		3
25	Tissue engineering: Signals from within. *Nature Materials*, **2016**, 15, 596-7	27	3
24	Macrophage immunomodulation through new polymers that recapitulate functional effects of itaconate as a power house of innate immunity. *Advanced Functional Materials*, **2021**, 31, 2003341	15.6	3
23	Functional Tissue Engineering of Cartilage and Myocardium **2005**, 501-530		2
22	Building a better model of the retina. *ELife*, **2019**, 8,	8.9	2
21	A New Role for Extracellular Vesicles in Cardiac Tissue Engineering and Regenerative Medicine.. *Advanced NanoBiomed Research*, **2021**, 1, 2100047	0	2
20	Cardiovascular signatures of COVID-19 predict mortality and identify barrier stabilizing therapies.. *EBioMedicine*, **2022**, 78, 103982	8.8	2
19	Elastic Biomaterial Scaffold with Spatially Varying Adhesive Design. *Advanced Biology*, **2020**, 4, e2000046	3.5	1
18	Cardiac tissue engineering **2020**, 593-616		1
17	Organs-on-a-Chip: InVADE: Integrated Vasculature for Assessing Dynamic Events (Adv. Funct. Mater. 46/2017). *Advanced Functional Materials*, **2017**, 27,	15.6	1
16	Cardiac tissue regeneration in bioreactors640-668		1
15	Hydrogels: Mosaic Hydrogels: One-Step Formation of Multiscale Soft Materials (Adv. Mater. 27/2012). *Advanced Materials*, **2012**, 24, 3582-3582	24	1
14	Engineering Cardiac Tissues from Pluripotent Stem Cells for Drug Screening and Studies of Cell Maturation. *Israel Journal of Chemistry*, **2013**, 53, n/a-n/a	3.4	1
13	Design and fabrication of biological wires. *Methods in Molecular Biology*, **2014**, 1181, 157-65	1.4	1
12	Microfluidic Cell Culture Techniques **2013**, 303-321		0
11	Drawing Inspiration from Developmental Biology for Cardiac Tissue Engineers. *Advanced Biology*, **2021**, 5, e2000190		0
10	Bioengineering strategies to control epithelial-to-mesenchymal transition for studies of cardiac development and disease. *APL Bioengineering*, **2021**, 5, 021504	6.6	0

9	Design and Fabrication of Biological Wires for Cardiac Fibrosis Disease Modeling. *Methods in Molecular Biology*, **2022**, 175-190	1.4	0
8	Rapid Wire Casting: A Multimaterial Microphysiological Platform Enabled by Rapid Casting of Elastic Microwires (Adv. Healthcare Mater. 5/2019). *Advanced Healthcare Materials*, **2019**, 8, 1970019	10.1	
7	Cardiac Tissue **2011**, 877-909		
6	Surface Engineering in Microfluidic Devices for the Isolation of Smooth Muscle Cells and Endothelial Cells. *Materials Research Society Symposia Proceedings*, **2007**, 1004, 1		
5	Microfabricated Systems for Cardiovascular Tissue Modeling **2022**, 193-232		
4	Biomimetic Approach to Cardiac Tissue Engineering: Oxygen Carriers and Channeled Scaffolds. *Tissue Engineering*, **2006**, 060913044658032		
3	Cardiac Tissue **2008**, 1038-1059		
2	Biomimetic Approaches to Design of Tissue Engineering Bioreactors. *NATO Science for Peace and Security Series A: Chemistry and Biology*, **2010**, 115-129	0.1	
1	An Organ-on-a-Chip System to Study Anaerobic Bacteria in Intestinal Health and Disease.. *Med*, **2021**, 2, 16-18	31.7	