David J Mooney

List of Publications by Year
in descending order

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396 papers	82,566 citations	383 131 h-index	360 277 g-index
431 all docs	431 docs citations	431 times ranked	57023 citing authors

#	Article	IF	Citations
1	Hydrogels for Tissue Engineering. Chemical Reviews, 2001, 101, 1869-1880.	49.4	4,732
2	Hydrogels for tissue engineering: scaffold design variables and applications. Biomaterials, 2003, 24, 4337-4351.	11.5	4,461
3	Highly stretchable and tough hydrogels. Nature, 2012, 489, 133-136.	35.3	4,297
4	Designing hydrogels for controlled drug delivery. Nature Reviews Materials, 2016, 1, .	39.0	3,098
5	Alginate hydrogels as synthetic extracellular matrix materials. Biomaterials, 1999, 20, 45-53.	11.5	2,053
6	Hydrogels with tunable stress relaxation regulate stem cell fate and activity. Nature Materials, 2016, 15, 326-334.	25.8	1,775
7	Polymeric system for dual growth factor delivery. Nature Biotechnology, 2001, 19, 1029-1034.	20.4	1,654
8	Alginate Hydrogels as Biomaterials. Macromolecular Bioscience, 2006, 6, 623-633.	4.4	1,548
9	Harnessing traction-mediated manipulation of the cell/matrix interface to control stem-cell fate. Nature Materials, 2010, 9, 518-526.	25.8	1,349
10	Effects of extracellular matrix viscoelasticity on cellular behaviour. Nature, 2020, 584, 535-546.	35.3	1,231
11	Growth factor delivery-based tissue engineering: general approaches and a review of recent developments. Journal of the Royal Society Interface, 2011, 8, 153-170.	3.3	1,168
12	Biodegradable synthetic polymers: Preparation, functionalization and biomedical application. Progress in Polymer Science, 2012, 37, 237-280.	25.5	1,134
13	Mechanical forces direct stem cell behaviour in development and regeneration. Nature Reviews Molecular Cell Biology, 2017, 18, 728-742.	36.5	1,132
14	Two-dimensional itinerant ferromagnetism in atomically thin Fe3GeTe2. Nature Materials, 2018, 17, 778-782.	25.8	1,088
15	Novel approach to fabricate porous sponges of poly(d,l-lactic-co-glycolic acid) without the use of organic solvents. Biomaterials, 1996, 17, 1417-1422.	11.5	1,011
16	Development of biocompatible synthetic extracellular matrices for tissue engineering. Trends in Biotechnology, 1998, 16, 224-230.	9.3	859
17	Engineering tumors with 3D scaffolds. Nature Methods, 2007, 4, 855-860.	19.2	792
18	Inspiration and application in the evolution of biomaterials. Nature, 2009, 462, 426-432.	35.3	741

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19	Extracellular matrix stiffness and composition jointly regulate the induction of malignant phenotypes in mammary epithelium. Nature Materials, 2014, 13, 970-978.	25.8	723
20	Open pore biodegradable matrices formed with gas foaming. Journal of Biomedical Materials Research Part B, 1998, 42, 396-402.	0.5	709
21	Regenerative medicine: Current therapies and future directions. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14452-14459.	7.4	683
22	Substrate stress relaxation regulates cell spreading. Nature Communications, 2015, 6, 6364.	12.8	677
23	DNA delivery from polymer matrices for tissue engineering. Nature Biotechnology, 1999, 17, 551-554.	20.4	654
24	Active scaffolds for on-demand drug and cell delivery. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 67-72.	7.4	642
25	Vascular Endothelial Growth Factor (VEGF)-Mediated Angiogenesis Is Associated with Enhanced Endothelial Cell Survival and Induction of Bcl-2 Expression. American Journal of Pathology, 1999, 154, 375-384.	4.0	595
26	Degradation of Partially Oxidized Alginate and Its Potential Application for Tissue Engineering. Biotechnology Progress, 2001, 17, 945-950.	2.6	588
27	Controlling alginate gel degradation utilizing partial oxidation and bimodal molecular weight distribution. Biomaterials, 2005, 26, 2455-2465.	11.5	580
28	The tensile properties of alginate hydrogels. Biomaterials, 2004, 25, 3187-3199.	11.5	485
29	Bioabsorbable polymer scaffolds for tissue engineering capable of sustained growth factor delivery. Journal of Controlled Release, 2000, 64, 91-102.	10.1	483
30	Controlled growth factor release from synthetic extracellular matrices. Nature, 2000, 408, 998-1000.	35.3	466
31	Injectable, spontaneously assembling, inorganic scaffolds modulate immune cells in vivo and increase vaccine efficacy. Nature Biotechnology, 2015, 33, 64-72.	20.4	465
32	An alginate-based hybrid system for growth factor delivery in the functional repair of large bone defects. Biomaterials, 2011, 32, 65-74.	11.5	460
33	Switching from differentiation to growth in hepatocytes: Control by extracellular matrix. Journal of Cellular Physiology, 1992, 151, 497-505.	4.1	450
34	Cyclic mechanical strain regulates the development of engineered smooth muscle tissue. Nature Biotechnology, 1999, 17, 979-983.	20.4	432
35	Injectable preformed scaffolds with shape-memory properties. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19590-19595.	7.4	429
36	Transcriptional profiling of stroma from inflamed and resting lymph nodes defines immunological hallmarks. Nature Immunology, 2012, 13, 499-510.	13.6	423

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37	Controlling Mechanical and Swelling Properties of Alginate Hydrogels Independently by Cross-Linker Type and Cross-Linking Density. Macromolecules, 2000, 33, 4291-4294.	4.9	422
38	Matrix elasticity of void-forming hydrogels controls transplanted-stem-cell-mediated boneÂformation. Nature Materials, 2015, 14, 1269-1277.	25.8	420
39	Cell volume change through water efflux impacts cell stiffness and stem cell fate. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8618-E8627.	7.4	395
40	Infection-mimicking materials to program dendritic cells in situ. Nature Materials, 2009, 8, 151-158.	25.8	392
41	Sustained release of vascular endothelial growth factor from mineralized poly(lactide-co-glycolide) scaffolds for tissue engineering. Biomaterials, 2000, 21, 2521-2527.	11.5	390
42	Ultrasound-triggered disruption and self-healing of reversibly cross-linked hydrogels for drug delivery and enhanced chemotherapy. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9762-9767.	7.4	386
43	Functional muscle regeneration with combined delivery of angiogenesis and myogenesis factors. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3287-3292.	7.4	384
44	Polymeric Tissue Adhesives. Chemical Reviews, 2021, 121, 11336-11384.	49.4	384
45	Biomaterial-assisted targeted modulation of immune cells in cancer treatment. Nature Materials, 2018, 17, 761-772.	25.8	381
46	Dual growth factor delivery and controlled scaffold degradation enhance in vivo bone formation by transplanted bone marrow stromal cells. Bone, 2004, 35, 562-569.	3.0	380
47	Mechanical confinement regulates cartilage matrix formation by chondrocytes. Nature Materials, 2017, 16, 1243-1251.	25.8	379
48	Controlled Growth Factor Delivery for Tissue Engineering. Advanced Materials, 2009, 21, 3269-3285.	23.6	372
49	Bioinspired mechanically active adhesive dressings to accelerate wound closure. Science Advances, 2019, 5, eaaw3963.	10.7	369
50	Spatioâ€"temporal VEGF and PDGF Delivery Patterns Blood Vessel Formation and Maturation. Pharmaceutical Research, 2007, 24, 258-264.	3.5	366
51	Biomaterials based strategies for skeletal muscle tissue engineering: Existing technologies and future trends. Biomaterials, 2015, 53, 502-521.	11.5	363
52	Engineering growing tissues. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 12025-12030.	7.4	361
53	Alginate type and RGD density control myoblast phenotype. Journal of Biomedical Materials Research Part B, 2002, 60, 217-223.	0.5	361
54	Stabilized polyglycolic acid fibre-based tubes for tissue engineering. Biomaterials, 1996, 17, 115-124.	11.5	358

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55	Biomaterials and emerging anticancer therapeutics: engineering the microenvironment. Nature Reviews Cancer, 2016, 16, 56-66.	28.2	353
56	A facile approach to enhance antigen response for personalized cancer vaccination. Nature Materials, 2018, 17, 528-534.	25.8	338
57	Angiogenic effects of sequential release of VEGF-A165 and PDGF-BB with alginate hydrogels after myocardial infarction. Cardiovascular Research, 2007, 75, 178-185.	3.6	334
58	Injectable cryogel-based whole-cell cancer vaccines. Nature Communications, 2015, 6, 7556.	12.8	333
59	Designing alginate hydrogels to maintain viability of immobilized cells. Biomaterials, 2003, 24, 4023-4029.	11.5	330
60	Cell Delivery Mechanisms for Tissue Repair. Cell Stem Cell, 2008, 2, 205-213.	10.7	319
61	Controlling Rigidity and Degradation of Alginate Hydrogels via Molecular Weight Distribution. Biomacromolecules, 2004, 5, 1720-1727.	5.5	311
62	Porous carriers for biomedical applications based on alginate hydrogels. Biomaterials, 2000, 21, 1921-1927.	11.5	310
63	Soft robotic sleeve supports heart function. Science Translational Medicine, 2017, 9, .	13.2	310
64	In vivo time-gated fluorescence imaging with biodegradable luminescent porous silicon nanoparticles. Nature Communications, 2013, 4, 2326.	12.8	309
65	Deterministic encapsulation of single cells in thin tunable microgels for niche modelling and therapeutic delivery. Nature Materials, 2017, 16, 236-243.	25.8	303
66	Stress-relaxation behavior in gels with ionic and covalent crosslinks. Journal of Applied Physics, 2010, 107, 63509.	2.3	297
67	Scaffolds that mimic antigen-presenting cells enable ex vivo expansion of primary T cells. Nature Biotechnology, 2018, 36, 160-169.	20.4	296
68	Performance and biocompatibility of extremely tough alginate/polyacrylamide hydrogels. Biomaterials, 2013, 34, 8042-8048.	11.5	295
69	Spatiotemporal control of vascular endothelial growth factor delivery from injectable hydrogels enhances angiogenesis. Journal of Thrombosis and Haemostasis, 2007, 5, 590-598.	4.0	294
70	Self-Healing Injectable Hydrogels for Tissue Regeneration. Chemical Reviews, 2023, 123, 834-873.	49.4	287
71	Cancer cell angiogenic capability is regulated by 3D culture and integrin engagement. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 399-404.	7.4	286
72	Microfluidic Generation of Monodisperse, Structurally Homogeneous Alginate Microgels for Cell Encapsulation and 3D Cell Culture. Advanced Healthcare Materials, 2015, 4, 1628-1633.	8.3	285

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73	Cyclic strain enhances matrix mineralization by adult human mesenchymal stem cells via the extracellular signal-regulated kinase (ERK1/2) signaling pathway. Journal of Biomechanics, 2003, 36, 1087-1096.	2.0	277
74	Injectable, porous, and cell-responsive gelatin cryogels. Biomaterials, 2014, 35, 2477-2487.	11.5	272
75	An Integrated Microrobotic Platform for Onâ€Demand, Targeted Therapeutic Interventions. Advanced Materials, 2014, 26, 952-957.	23.6	269
76	Growth of continuous bonelike mineral within porous poly(lactide-co-glycolide) scaffoldsin vitro. Journal of Biomedical Materials Research Part B, 2000, 50, 50-58.	0.5	264
77	Injection molding of chondrocyte/alginate constructs in the shape of facial implants. Journal of Biomedical Materials Research Part B, 2001, 55, 503-511.	0.5	259
78	Macroscale delivery systems for molecular and cellular payloads. Nature Materials, 2013, 12, 1004-1017.	25.8	257
79	Obstacles and opportunities in a forward vision for cancer nanomedicine. Nature Materials, 2021, 20, 1469-1479.	25.8	249
80	Versatile click alginate hydrogels crosslinked via tetrazineâ€“norbornene chemistry. Biomaterials, 2015, 50, 30-37.	11.5	244
81	The CLEC-2â€“podoplanin axis controls the contractility of fibroblastic reticular cells and lymph node microarchitecture. Nature Immunology, 2015, 16, 75-84.	13.6	242
82	Biomaterials that promote cell-cell interactions enhance the paracrine function of MSCs. Biomaterials, 2017, 140, 103-114.	11.5	236
83	Influence of the stiffness of three-dimensional alginate/collagen-I interpenetrating networks on fibroblast biology. Biomaterials, 2014, 35, 8927-8936.	11.5	235
84	Optimizing seeding and culture methods to engineer smooth muscle tissue on biodegradable polymer matrices. Biotechnology and Bioengineering, 1998, 57, 46-54.	3.5	234
85	Biomaterials Functionalized with MSC Secreted Extracellular Vesicles and Soluble Factors for Tissue Regeneration. Advanced Functional Materials, 2020, 30, 1909125.	16.0	233
86	Advanced bandages for diabetic wound healing. Science Translational Medicine, 2021, 13, .	13.2	230
87	Rigidity of Two-Component Hydrogels Prepared from Alginate and Poly(ethylene glycol)â^'Diamines. Macromolecules, 1999, 32, 5561-5566.	4.9	223
88	Long-term engraftment of hepatocytes transplanted on biodegradable polymer sponges. Journal of Biomedical Materials Research Part B, 1997, 37, 413-420.	0.5	218
89	Engineered Bone Development from a Pre-Osteoblast Cell Line on Three-Dimensional Scaffolds. Tissue Engineering, 2000, 6, 605-617.	4.9	218
90	A Bioinspired Soft Actuated Material. Advanced Materials, 2014, 26, 1200-1206.	23.6	218

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91	Effects of substrate stiffness and cell-cell contact on mesenchymal stem cell differentiation. Biomaterials, 2016, 98, 184-191.	11.5	217
92	In Situ Regulation of DC Subsets and T Cells Mediates Tumor Regression in Mice. Science Translational Medicine, 2009, 1, 8ra19.	13.2	215
93	Tissue engineering using synthetic extracellular matrices. Nature Medicine, 1996, 2, 824-826.	29.5	214
94	Synthesis of cross-linked poly(aldehyde guluronate) hydrogels. Polymer, 1999, 40, 3575-3584.	3.8	214
95	Biomaterial delivery of morphogens to mimic the natural healing cascade in bone. Advanced Drug Delivery Reviews, 2012, 64, 1257-1276.	14.0	214
96	Photoactivation of Endogenous Latent Transforming Growth Factorâ€"Î²1 Directs Dental Stem Cell Differentiation for Regeneration. Science Translational Medicine, 2014, 6, 238ra69.	13.2	212
97	Engineering vascular networks in porous polymer matrices. Journal of Biomedical Materials Research Part B, 2002, 60, 668-678.	0.5	209
98	Regulating Myoblast Phenotype Through Controlled Gel Stiffness and Degradation. Tissue Engineering, 2007, 13, 1431-1442.	4.9	203
99	Material-based deployment enhances efficacy of endothelial progenitor cells. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 14347-14352.	7.4	202
100	Engineering smooth muscle tissue with a predefined structure. Journal of Biomedical Materials Research Part B, 1998, 41, 322-332.	0.5	197
101	3D Printed Microtransporters: Compound Micromachines for Spatiotemporally Controlled Delivery of Therapeutic Agents. Advanced Materials, 2015, 27, 6644-6650.	23.6	197
102	Independent Control of Rigidity and Toughness of Polymeric Hydrogels. Macromolecules, 2003, 36, 4582-4588.	4.9	196
103	Degradation Behavior of Covalently Cross-Linked Poly(aldehyde guluronate) Hydrogels. Macromolecules, 2000, 33, 97-101.	4.9	195
104	Cartilage Engineered in Predetermined Shapes Employing Cell Transplantation on Synthetic Biodegradable Polymers. Plastic and Reconstructive Surgery, 1994, 94, 233-237.	1.6	192
105	Macroscale biomaterials strategies for local immunomodulation. Nature Reviews Materials, 2019, 4, 379-397.	39.0	191
106	Engineered Smooth Muscle Tissues: Regulating Cell Phenotype with the Scaffold. Experimental Cell Research, 1999, 251, 318-328.	2.6	190
107	Liposomal Delivery Enhances Immune Activation by STING Agonists for Cancer Immunotherapy. Advanced Biology, 2017, 1, 1600013.	3.4	188
108	Biodegradable sponges for hepatocyte transplantation. Journal of Biomedical Materials Research Part B, 1995, 29, 959-965.	0.5	183

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109	Viscoelastic surface electrode arrays to interface with viscoelastic tissues. Nature Nanotechnology, 2021, 16, 1019-1029.	29.6	180
110	Substance P Promotes Wound Healing in Diabetes by Modulating Inflammation and Macrophage Phenotype. American Journal of Pathology, 2015, 185, 1638-1648.	4.0	177
111	Release from alginate enhances the biological activity of vascular endothelial growth factor. Journal of Biomaterials Science, Polymer Edition, 1998, 9, 1267-1278.	3.5	171
112	Enhancing microvascular formation and vessel maturation through temporal control over multiple pro-angiogenic and pro-maturation factors. Biomaterials, 2013, 34, 9201-9209.	11.5	168
113	Protein-based signaling systems in tissue engineering. Current Opinion in Biotechnology, 2003, 14, 559-565.	6.7	167
114	Nanoscale Adhesion Ligand Organization Regulates Osteoblast Proliferation and Differentiation. Nano Letters, 2004, 4, 1501-1506.	9.2	165
115	Comparison of vascular endothelial growth factor and basic fibroblast growth factor on angiogenesis in SCID mice. Journal of Controlled Release, 2003, 87, 49-56.	10.1	164
116	Decoupling the dependence of rheological/mechanical properties of hydrogels from solids concentration. Polymer, 2002, 43, 6239-6246.	3.8	162
117	Degradable and injectable poly(aldehyde guluronate) hydrogels for bone tissue engineering. Journal of Biomedical Materials Research Part B, 2001, 56, 228-233.	0.5	161
118	Biomaterials for skeletal muscle tissue engineering. Current Opinion in Biotechnology, 2017, 47, 16-22.	6.7	161
119	Controlled degradation of hydrogels using multi-functional cross-linking molecules. Biomaterials, 2004, 25, 2461-2466.	11.5	157
120	Scaffolds for Engineering Smooth Muscle Under Cyclic Mechanical Strain Conditions. Journal of Biomechanical Engineering, 2000, 122, 210-215.	1.3	154
121	Hydrogels for combination delivery of antineoplastic agents. Biomaterials, 2001, 22, 2625-2633.	11.5	151
122	Biologic-free mechanically induced muscle regeneration. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1534-1539.	7.4	149
123	Biomaterials to Mimic and Heal Connective Tissues. Advanced Materials, 2019, 31, e1806695.	23.6	147
124	Root-specific camalexin biosynthesis controls the plant growth-promoting effects of multiple bacterial strains. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15735-15744.	7.4	146
125	Upregulation of bone cell differentiation through immobilization within a synthetic extracellular matrix. Biomaterials, 2007, 28, 3644-3655.	11.5	141
126	Injectable nanocomposite cryogels for versatile protein drug delivery. Acta Biomaterialia, 2018, 65, 36-43.	8.5	139

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127	Spatiotemporal delivery of bone morphogenetic protein enhances functional repair of segmental bone defects. Bone, 2011, 49, 485-492.	3.0	136
128	Targeted Delivery of Nanoparticles to Ischemic Muscle for Imaging and Therapeutic Angiogenesis. Nano Letters, 2011, 11, 694-700.	9.2	136
129	Dynamic Seeding and in Vitro Culture of Hepatocytes in a Flow Perfusion System. Tissue Engineering, 2000, 6, 39-44.	4.9	135
130	Clickâ€Crosslinked Injectable Gelatin Hydrogels. Advanced Healthcare Materials, 2016, 5, 541-547.	8.3	135
131	Microfluidic Templated Multicompartment Microgels for 3D Encapsulation and Pairing of Single Cells. Small, 2018, 14, 1702955.	10.9	135
132	Engineering Dental Pulp-like Tissue in Vitro. Biotechnology Progress, 1996, 12, 865-868.	2.6	134
133	Smooth muscle cell adhesion to tissue engineering scaffolds. Biomaterials, 2000, 21, 2025-2032.	11.5	134
134	Vaccines Combined with Immune Checkpoint Antibodies Promote Cytotoxic T-cell Activity and Tumor Eradication. Cancer Immunology Research, 2016, 4, 95-100.	3.2	130
135	Hydrogel substrate stress-relaxation regulates the spreading and proliferation of mouse myoblasts. Acta Biomaterialia, 2017, 62, 82-90.	8.5	129
136	A nanoparticleâ€™s pathway into tumours. Nature Materials, 2020, 19, 486-487.	25.8	129
137	Biphasic Ferrogels for Triggered Drug and Cell Delivery. Advanced Healthcare Materials, 2014, 3, 1869-1876.	8.3	128
138	On-demand drug delivery from local depots. Journal of Controlled Release, 2015, 219, 8-17.	10.1	126
139	The role of multifunctional delivery scaffold in the ability of cultured myoblasts to promote muscle regeneration. Biomaterials, 2011, 32, 8905-8914.	11.5	125
140	Extracellular matrix stiffness causes systematic variations in proliferation and chemosensitivity in myeloid leukemias. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12126-12131.	7.4	125
141	Functional muscle recovery with nanoparticle-directed M2 macrophage polarization in mice. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10648-10653.	7.4	124
142	Enhanced tendon healing by a tough hydrogel with an adhesive side and high drug-loading capacity. Nature Biomedical Engineering, 2022, 6, 1167-1179.	21.9	124
143	One-step generation of cell-laden microgels using double emulsion drops with a sacrificial ultra-thin oil shell. Lab on A Chip, 2016, 16, 1549-1555.	5.9	123
144	Reprogrammed Stomach Tissue as a Renewable Source of Functional Î² Cells for Blood Glucose Regulation. Cell Stem Cell, 2016, 18, 410-421.	10.7	123

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145	Controlled delivery of inductive proteins, plasmid DNA and cells from tissue engineering matrices. Journal of Periodontal Research, 1999, 34, 413-419.	2.7	122
146	Degradable and Removable Tough Adhesive Hydrogels. Advanced Materials, 2021, 33, e2008553.	23.6	121
147	Sustained Vascular Endothelial Growth Factor Delivery Enhances Angiogenesis and Perfusion in Ischemic Hind Limb. Pharmaceutical Research, 2005, 22, 1110-1116.	3.5	120
148	Biomaterials for enhancing anti-cancer immunity. Current Opinion in Biotechnology, 2016, 40, 1-8.	6.7	119
149	Comparative study of seeding methods for three-dimensional polymeric scaffolds. Journal of Biomedical Materials Research Part B, 2000, 51, 642-649.	0.5	118
150	Chemical strategies to engineer hydrogels for cell culture. Nature Reviews Chemistry, 2022, 6, 726-744.	21.7	116
151	Role of synthetic extracellular matrix in development of engineered dental pulp. Journal of Biomaterials Science, Polymer Edition, 1998, 9, 749-764.	3.5	115
152	Controlling Degradation of Hydrogels via the Size of Crosslinked Junctions. Advanced Materials, 2004, 16, 1917-1921.	23.6	114
153	Metabolic labeling and targeted modulation of dendritic cells. Nature Materials, 2020, 19, 1244-1252.	25.8	114
154	Metabolic glycan labelling for cancer-targeted therapy. Nature Chemistry, 2020, 12, 1102-1114.	13.7	113
155	Spatiotemporal control over growth factor signaling for therapeutic neovascularizationâ˜†. Advanced Drug Delivery Reviews, 2007, 59, 1340-1350.	14.0	112
156	Biomaterial-based scaffold for in situ chemo-immunotherapy to treat poorly immunogenic tumors. Nature Communications, 2020, 11, 5696.	12.8	112
157	Substrate Stressâ€Relaxation Regulates Scaffold Remodeling and Bone Formation In Vivo. Advanced Healthcare Materials, 2017, 6, 1601185.	8.3	110
158	Biomaterial-based delivery for skeletal muscle repair. Advanced Drug Delivery Reviews, 2015, 84, 188-197.	14.0	109
159	Emerging Trends in Micro- and Nanoscale Technologies in Medicine: From Basic Discoveries to Translation. ACS Nano, 2017, 11, 5195-5214.	14.9	109
160	Matrix viscoelasticity controls spatiotemporal tissue organization. Nature Materials, 2023, 22, 117-127.	25.8	108
161	Bone tissue response to biodegradable polymers used for intra medullary fracture fixation: A long-term in vivo study in sheep femora. Biomaterials, 1999, 20, 121-128.	11.5	107
162	Shearâ€reversibly Crosslinked Alginate Hydrogels for Tissue Engineering. Macromolecular Bioscience, 2009, 9, 895-901.	4.4	104

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163	Development of Technologies Aiding Large-Tissue Engineering. Biotechnology Progress, 1998, 14, 134-140.	2.6	103
164	Leveraging advances in biology to design biomaterials. Nature Materials, 2017, 16, 1178-1185.	25.8	103
165	Injectable, Tough Alginate Cryogels as Cancer Vaccines. Advanced Healthcare Materials, 2018, 7, e1701469.	8.3	103
166	Enzymatically-degradable alginate hydrogels promote cell spreading and in vivo tissue infiltration. Biomaterials, 2019, 217, 119294.	11.5	103
167	Design and Fabrication of a Biodegradable, Covalently Crosslinked Shape-Memory Alginate Scaffold for Cell and Growth Factor Delivery. Tissue Engineering - Part A, 2012, 18, 2000-2007.	3.2	101
168	Material microenvironmental properties couple to induce distinct transcriptional programs in mammalian stem cells. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8368-E8377.	7.4	101
169	Sequential modes of crosslinking tune viscoelasticity of cell-instructive hydrogels. Biomaterials, 2019, 188, 187-197.	11.5	100
170	Engineered materials for cancer immunotherapy. Nano Today, 2015, 10, 511-531.	12.0	99
171	Oneâ€Step Microfluidic Fabrication of Polyelectrolyte Microcapsules in Aqueous Conditions for Protein Release. Angewandte Chemie - International Edition, 2016, 55, 13470-13474.	14.2	98
172	Injectable, Poreâ€Forming Hydrogels for In Vivo Enrichment of Immature Dendritic Cells. Advanced Healthcare Materials, 2015, 4, 2677-2687.	8.3	97
173	Controlled Drug Delivery from Polymers by Mechanical Signals. Advanced Materials, 2001, 13, 837-839.	23.6	93
174	The effect of surface modification of mesoporous silica micro-rod scaffold on immune cell activation and infiltration. Biomaterials, 2016, 83, 249-256.	11.5	93
175	Identification of Immune Factors Regulating Antitumor Immunity Using Polymeric Vaccines with Multiple Adjuvants. Cancer Research, 2014, 74, 1670-1681.	0.9	91
176	A biomaterial-based vaccine eliciting durable tumour-specific responses against acute myeloid leukaemia. Nature Biomedical Engineering, 2020, 4, 40-51.	21.9	91
177	Synthetic niche to modulate regenerative potential of MSCs and enhance skeletal muscle regeneration. Biomaterials, 2016, 99, 95-108.	11.5	90
178	Biomaterials as Local Niches for Immunomodulation. Accounts of Chemical Research, 2020, 53, 1749-1760.	15.7	90
179	Altered ECM deposition by diabetic foot ulcerâ€derived fibroblasts implicates fibronectin in chronic wound repair. Wound Repair and Regeneration, 2016, 24, 630-643.	3.1	89
180	Advances in Therapeutic Cancer Vaccines. Advances in Immunology, 2016, 130, 191-249.	8.0	89

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181	Localized delivery of epidermal growth factor improves the survival of transplanted hepatocytes. Biotechnology and Bioengineering, 1996, 50, 422-429.	3.5	88
182	Refilling drug delivery depots through the blood. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12722-12727.	7.4	87
183	An injectable bone marrowâ€"like scaffold enhances T cell immunity after hematopoietic stem cell transplantation. Nature Biotechnology, 2019, 37, 293-302.	20.4	87
184	Polymers for pro- and anti-angiogenic therapy. Biomaterials, 2007, 28, 2069-2076.	11.5	86
185	Soft extracellular matrix enhances inflammatory activation of mesenchymal stromal cells to induce monocyte production and trafficking. Science Advances, 2020, 6, eaaw0158.	10.7	85
186	Morphogenesis of 3D vascular networks is regulated by tensile forces. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3215-3220.	7.4	84
187	Hydrolytically-degradable click-crosslinked alginate hydrogels. Biomaterials, 2018, 181, 189-198.	11.5	84
188	Breakthrough treatments for accelerated wound healing. Science Advances, 2023, 9, .	10.7	84
189	Multicomponent Injectable Hydrogels for Antigenâ€Specific Tolerogenic Immune Modulation. Advanced Healthcare Materials, 2017, 6, 1600773.	8.3	83
190	A vaccine targeting resistant tumours by dual T cell plus NK cell attack. Nature, 2022, 606, 992-998.	35.3	83
191	Fabricating Tubular Devices from Polymers of Lactic and Glycolic Acid for Tissue Engineering. Tissue Engineering, 1995, 1, 107-118.	4.9	82
192	SHAPE-DEFINING SCAFFOLDS FOR MINIMALLY INVASIVE TISSUE ENGINEERING. Transplantation, 2004, 77, 1798-1803.	1.0	82
193	Ca2+ released from calcium alginate gels can promote inflammatory responses in vitro and in vivo. Acta Biomaterialia, 2013, 9, 9281-9291.	8.5	82
194	Minimally Invasive Approach to the Repair of Injured Skeletal Muscle With a Shape-memory Scaffold. Molecular Therapy, 2014, 22, 1441-1449.	8.0	82
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