Writing in the granular gel medium

Science Advances

1, e1500655

DOI: 10.1126/sciadv.1500655

Citation Report

#	Article	IF	Citations
1	Patterning Vasculature: The Role of Biofabrication to Achieve an Integrated Multicellular Ecosystem. ACS Biomaterials Science and Engineering, 2016, 2, 1694-1709.	2.6	25
2	Three-dimensional printing of alginate: From seaweeds to heart valve scaffolds. QScience Connect, 2016, 2016, .	0.2	10
3	Printing soft matter in three dimensions. Nature, 2016, 540, 371-378.	13.7	1,134
4	Evolution of Bioinks and Additive Manufacturing Technologies for 3D Bioprinting. ACS Biomaterials Science and Engineering, 2016, 2, 1662-1678.	2.6	237
5	3D printed bionic nanodevices. Nano Today, 2016, 11, 330-350.	6.2	116
6	Advanced Bioinks for 3D Printing: A Materials Science Perspective. Annals of Biomedical Engineering, 2016, 44, 2090-2102.	1.3	518
7	Emerging Trends in Biomaterials Research. Annals of Biomedical Engineering, 2016, 44, 1861-1862.	1.3	7
8	3D Printing PDMS Elastomer in a Hydrophilic Support Bath via Freeform Reversible Embedding. ACS Biomaterials Science and Engineering, 2016, 2, 1781-1786.	2.6	346
9	Editorial: Special Issue on 3D Printing of Biomaterials. ACS Biomaterials Science and Engineering, 2016, 2, 1658-1661.	2.6	22
10	A decade of progress in tissue engineering. Nature Protocols, 2016, 11, 1775-1781.	5.5	570
11	Stability of High Speed 3D Printing in Liquid-Like Solids. ACS Biomaterials Science and Engineering, 2016, 2, 1796-1799.	2.6	57
12	Innovation in Layer-by-Layer Assembly. Chemical Reviews, 2016, 116, 14828-14867.	23.0	678
13	The ultimate wearable. , 2016, , .		4
14	Liquid-like Solids Support Cells in 3D. ACS Biomaterials Science and Engineering, 2016, 2, 1787-1795.	2.6	124
15	Bioprinting the Cancer Microenvironment. ACS Biomaterials Science and Engineering, 2016, 2, 1710-1721.	2.6	194
16	Granular gel support-enabled extrusion of three-dimensional alginate and cellular structures. Biofabrication, 2016, 8, 025016.	3.7	123
17	Bio-inspired 3D microenvironments: a new dimension in tissue engineering. Biomedical Materials (Bristol), 2016, 11, 022001.	1.7	82
18	3D Bioprinting for Tissue and Organ Fabrication. Annals of Biomedical Engineering, 2017, 45, 148-163.	1.3	507

#	Article	IF	Citations
19	3D Bioprinting of Vessel-like Structures with Multilevel Fluidic Channels. ACS Biomaterials Science and Engineering, 2017, 3, 399-408.	2.6	181
20	3D bioprinting: improving<i>in vitro</i>models of metastasis with heterogeneous tumor microenvironments. DMM Disease Models and Mechanisms, 2017, 10, 3-14.	1.2	123
21	Spherically capped membrane probes for low contact pressure tribology. Biotribology, 2017, 11, 69-72.	0.9	16
22	Self-Supporting Nanoclay as Internal Scaffold Material for Direct Printing of Soft Hydrogel Composite Structures in Air. ACS Applied Materials & Interfaces, 2017, 9, 17456-17465.	4.0	183
23	Self-assembled micro-organogels for 3D printing silicone structures. Science Advances, 2017, 3, e1602800.	4.7	195
24	Extrusion Bioprinting of Shearâ€Thinning Gelatin Methacryloyl Bioinks. Advanced Healthcare Materials, 2017, 6, 1601451.	3.9	352
25	Advances in engineering hydrogels. Science, 2017, 356, .	6.0	1,836
26	4D bioprinting: the next-generation technology for biofabrication enabled by stimuli-responsive materials. Biofabrication, 2017, 9, 012001.	3.7	271
27	Dynamic Coordination Chemistry Enables Free Directional Printing of Biopolymer Hydrogel. Chemistry of Materials, 2017, 29, 5816-5823.	3.2	119
28	Corneal cell friction: Survival, lubricity, tear films, and mucin production over extended duration in vitro studies. Biotribology, 2017, 11, 77-83.	0.9	32
29	Functional Nanoclay Suspension for Printing-Then-Solidification of Liquid Materials. ACS Applied Materials & Interfaces, 2017, 9, 20057-20066.	4.0	110
30	Experimental characterization of the mechanical properties of 3D-printed ABS and polycarbonate parts. Rapid Prototyping Journal, 2017, 23, 811-824.	1.6	257
31	3D bioprinting from the micrometer to millimeter length scales: Size does matter. Current Opinion in Biomedical Engineering, 2017, 1, 31-37.	1.8	43
32	Dissecting the stem cell niche with organoid models: an engineering-based approach. Development (Cambridge), 2017, 144, 998-1007.	1.2	64
33	3D Bioprinting for Organ Regeneration. Advanced Healthcare Materials, 2017, 6, 1601118.	3.9	385
34	Large-Scale Rapid Liquid Printing. 3D Printing and Additive Manufacturing, 2017, 4, 123-132.	1.4	63
35	Photo-responsive polymer materials for biological applications. Chinese Chemical Letters, 2017, 28, 2085-2091.	4.8	35
36	Microfluidic Bioprinting for Engineering Vascularized Tissues and Organoids. Journal of Visualized Experiments, 2017, , .	0.2	25

#	Article	IF	Citations
37	Design of yield-stress fluids: a rheology-to-structure inverse problem. Soft Matter, 2017, 13, 7578-7594.	1.2	83
38	Suspension 3D Printing of Liquid Metal into Selfâ€Healing Hydrogel. Advanced Materials Technologies, 2017, 2, 1700173.	3.0	93
39	Amyloid Fibrils form Hybrid Colloidal Gels and Aerogels with Dispersed CaCO₃ Nanoparticles. Advanced Functional Materials, 2017, 27, 1700897.	7.8	38
40	Matrix-Assisted Three-Dimensional Printing of Cellulose Nanofibers for Paper Microfluidics. ACS Applied Materials & Interfaces, 2017, 9, 26438-26446.	4.0	52
41	Spatially and temporally controlled hydrogels for tissue engineering. Materials Science and Engineering Reports, 2017, 119, 1-35.	14.8	151
42	High-Resolution Patterned Cellular Constructs by Droplet-Based 3D Printing. Scientific Reports, 2017, 7, 7004.	1.6	154
43	Suspended Liquid Subtractive Lithography: One-step generation of 3D channel geometries in viscous curable polymer matrices. Scientific Reports, 2017, 7, 7387.	1.6	14
44	Three-dimensional printing with sacrificial materials for soft matter manufacturing. MRS Bulletin, 2017, 42, 571-577.	1.7	108
45	Supramolecular Chemistry: A Toolkit for Soft Functional Materials and Organic Particles. CheM, 2017, 3, 764-811.	5.8	132
46	Challenges and opportunities in soft tribology. Tribology - Materials, Surfaces and Interfaces, 2017, 11, 180-186.	0.6	14
47	Rapid Continuous Multimaterial Extrusion Bioprinting. Advanced Materials, 2017, 29, 1604630.	11.1	275
48	Experimental Characterization of the Mechanical Properties of 3D Printed ABS and Polycarbonate Parts. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 89-105.	0.3	57
49	High-resolution 3D printing for healthcare underpinned by small-scale fluidics. , 2017, , 167-206.		18
50	Isogenic Cellular Systems Model the Impact of Genetic Risk Variants in the Pathogenesis of Type 1 Diabetes. Frontiers in Endocrinology, 2017, 8, 276.	1.5	17
51	Experimental Characterization of the Shear Properties of 3Dâ€“Printed ABS and Polycarbonate Parts. Experimental Mechanics, 2018, 58, 871-884.	1.1	51
52	Viscoplastic Matrix Materials for Embedded 3D Printing. ACS Applied Materials & Interfaces, 2018, 10, 23353-23361.	4.0	167
53	Model-guided design and characterization of a high-precision 3D printing process for carbohydrate glass. Additive Manufacturing, 2018, 22, 38-50.	1.7	25
54	Polyelectrolyte scaling laws for microgel yielding near jamming. Soft Matter, 2018, 14, 1559-1570.	1.2	42

#	Article	IF	Citations
55	Engineered Tissue Folding by Mechanical Compaction of the Mesenchyme. Developmental Cell, 2018, 44, 165-178.e6.	3.1	145
56	Drops, Jets and High-Resolution 3D Printing: Fundamentals and Applications. Energy, Environment, and Sustainability, 2018, , 123-162.	0.6	3
57	Photoreversible Covalent Hydrogels for Soft-Matter Additive Manufacturing. ACS Applied Materials & Interfaces, 2018, 10, 16793-16801.	4.0	105
58	Biofabrication strategies for 3D in vitro models and regenerative medicine. Nature Reviews Materials, 2018, 3, 21-37.	23.3	502
59	Reconfigurable Printed Liquids. Advanced Materials, 2018, 30, e1707603.	11.1	132
60	Three-Dimensional Bioprinting Strategies for Tissue Engineering. Cold Spring Harbor Perspectives in Medicine, 2018, 8, a025718.	2.9	67
61	Designification of Neurotechnological Devices through 3D Printed Functional Materials. Advanced Functional Materials, 2018, 28, 1703905.	7.8	3
62	Enhancing the mechanical performance of additive manufactured polymer components using atmospheric plasma preâ€treatments. Plasma Processes and Polymers, 2018, 15, 1700141.	1.6	22
63	Biomaterials-based 3D cell printing for next-generation therapeutics and diagnostics. Biomaterials, 2018, 156, 88-106.	5.7	190
64	Full-Field Deformation Measurements in Liquid-like-Solid Granular Microgel Using Digital Image Correlation. Experimental Mechanics, 2018, 58, 137-149.	1.1	9
65	Biofabrication: A Guide to Technology and Terminology. Trends in Biotechnology, 2018, 36, 384-402.	4.9	465
66	Embedded Multimaterial Extrusion Bioprinting. SLAS Technology, 2018, 23, 154-163.	1.0	68
67	Stabilization strategies in extrusion-based 3D bioprinting for tissue engineering. Applied Physics Reviews, 2018, 5, 041112.	5.5	44
68	Evaluation of bioink printability for bioprinting applications. Applied Physics Reviews, 2018, 5, .	5.5	129
69	Recent Progress in Biomimetic Additive Manufacturing Technology: From Materials to Functional Structures. Advanced Materials, 2018, 30, e1706539.	11.1	325
70	Considerations for Biotribometers: Cells, Gels, and Tissues. Tribology Letters, 2018, 66, 1.	1.2	16
71	Commercially available microgels for 3D bioprinting. Bioprinting, 2018, 11, e00037.	2.9	36
72	Vascular Networks Within 3D Printed and Engineered Tissues. , 2018, , 79-105.		1

#	Article	IF	Citations
73	Essential steps in bioprinting: From pre- to post-bioprinting. Biotechnology Advances, 2018, 36, 1481-1504.	6.0	105
74	3D bioprinting blood vessels. , 2018, , 377-391.		1
75	Complex 3Dâ€Printed Microchannels within Cellâ€Degradable Hydrogels. Advanced Functional Materials, 2018, 28, 1801331.	7.8	171
76	Expert-guided optimization for 3D printing of soft and liquid materials. PLoS ONE, 2018, 13, e0194890.	1.1	53
77	How to build a lung: latest advances and emerging themes in lung bioengineering. European Respiratory Journal, 2018, 52, 1601355.	3.1	51
78	Biomimetic cardiovascular platforms for in vitro disease modeling and therapeutic validation. Biomaterials, 2019, 198, 78-94.	5.7	24
79	Bioinks for Three-Dimensional Printing in Regenerative Medicine. , 2019, , 805-830.		5
80	3D Bioprinting Technologies. , 2019, , 1-66.		1
81	Architecture-inspired paradigm for 3D bioprinting of vessel-like structures using extrudable carboxylated agarose hydrogels. Emergent Materials, 2019, 2, 233-243.	3.2	25
82	Bioprinting of a Cell-Laden Conductive Hydrogel Composite. ACS Applied Materials & Interfaces, 2019, 11, 30518-30533.	4.0	117
83	Materials as Bioinks and Bioink Design. , 2019, , 67-100.		7
84	Modular fabrication of intelligent material-tissue interfaces for bioinspired and biomimetic devices. Progress in Materials Science, 2019, 106, 100589.	16.0	72
85	Liquid-phase 3D bioprinting of gelatin alginate hydrogels: influence of printing parameters on hydrogel line width and layer height. Bio-Design and Manufacturing, 2019, 2, 172-180.	3.9	29
86	Quantitative characterization of 3D bioprinted structural elements under cell generated forces. Nature Communications, 2019, 10, 3029.	5.8	73
87	Immersion precipitation 3D printing (<i>ip</i>3DP). Materials Horizons, 2019, 6, 1834-1844.	6.4	31
88	Printing of Hydrophobic Materials in Fumed Silica Nanoparticle Suspension. ACS Applied Materials & Interfaces, 2019, 11, 29207-29217.	4.0	38
89	Polymer Design for 3D Printing Elastomers: Recent Advances in Structure, Properties, and Printing. Progress in Polymer Science, 2019, 97, 101144.	11.8	169
90	In Situ Digital Image Analysis in Direct Ink Writing. ACS Symposium Series, 2019, , 131-149.	0.5	2

#	Article	IF	Citations
91	4D Printing of Multi-Hydrogels Using Direct Ink Writing in a Supporting Viscous Liquid. Micromachines, 2019, 10, 433.	1.4	45
92	Freeform, Reconfigurable Embedded Printing of Allâ€Aqueous 3D Architectures. Advanced Materials, 2019, 31, e1904631.	11.1	83
93	Solid matrix-assisted printing for three-dimensional structuring of a viscoelastic medium surface. Nature Communications, 2019, 10, 4650.	5.8	47
94	Regeneration in the ctenophore Mnemiopsis leidyi occurs in the absence of a blastema, requires cell division, and is temporally separable from wound healing. BMC Biology, 2019, 17, 80.	1.7	29
95	Fabrication of Complex Hydrogel Structures Using Suspended Layer Additive Manufacturing (SLAM). Advanced Functional Materials, 2019, 29, 1904845.	7.8	71
96	Biomanufacturing of organ-specific tissues with high cellular density and embedded vascular channels. Science Advances, 2019, 5, eaaw2459.	4.7	563
97	Getting the measure of living biomaterials. Nature, 2019, 572, 38-39.	13.7	4
98	Printing bone in a gel: using nanocomposite bioink to print functionalised bone scaffolds. Materials Today Bio, 2019, 4, 100028.	2.6	56
99	Layerless Additive Manufacturing of Metal Alloy Lattices Using Immiscible-Interface Assisted Direct Metal Drawing. Procedia Manufacturing, 2019, 34, 647-654.	1.9	0
100	Designing and transforming yield-stress fluids. Current Opinion in Solid State and Materials Science, 2019, 23, 100758.	5.6	66
101	Recent Strategies in Extrusion-Based Three-Dimensional Cell Printing toward Organ Biofabrication. ACS Biomaterials Science and Engineering, 2019, 5, 1150-1169.	2.6	86
102	Additive manufacturing of self-healing elastomers. NPG Asia Materials, 2019, 11, .	3.8	111
103	Use of GelMA for 3D printing of cardiac myocytes and fibroblasts. Journal of 3D Printing in Medicine, 2019, 3, 11-22.	1.0	38
104	Mask Video Projection-Based Stereolithography With Continuous Resin Flow. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	1.3	34
105	Engineering Stem Cell Self-organization to Build Better Organoids. Cell Stem Cell, 2019, 24, 860-876.	5.2	228
106	3D Bioprinting: A Novel Avenue for Manufacturing Tissues and Organs. Engineering, 2019, 5, 777-794.	3.2	133
107	Deswelling of Microgels in Crowded Suspensions Depends on Cross-Link Density and Architecture. Macromolecules, 2019, 52, 3995-4007.	2.2	60
108	Bacterial hopping and trapping in porous media. Nature Communications, 2019, 10, 2075.	5.8	188

#	Article	IF	Citations
109	Zero-Support 3D Printing of Thermoset Silicone Via Simultaneous Control of Both Reaction Kinetics and Transient Rheology. 3D Printing and Additive Manufacturing, 2019, 6, 139-147.	1.4	29
110	Multivascular networks and functional intravascular topologies within biocompatible hydrogels. Science, 2019, 364, 458-464.	6.0	908
111	3D Bioprinting: from Benches to Translational Applications. Small, 2019, 15, e1805510.	5.2	235
112	Extrusion bioprinting of soft materials: An emerging technique for biological model fabrication. Applied Physics Reviews, 2019, 6, .	5.5	163
113	Sustainable Biomass Materials for Biomedical Applications. ACS Biomaterials Science and Engineering, 2019, 5, 2079-2092.	2.6	36
114	Extrusion-based printing of sacrificial Carbopol ink for fabrication of microfluidic devices. Biofabrication, 2019, 11, 034101.	3.7	30
115	Jammed Polyelectrolyte Microgels for 3D Cell Culture Applications: Rheological Behavior with Added Salts. ACS Applied Bio Materials, 2019, 2, 1509-1517.	2.3	35
116	The cell in the ink: Improving biofabrication by printing stem cells for skeletal regenerative medicine. Biomaterials, 2019, 209, 10-24.	5.7	169
117	3D Printing of Personalized Thick and Perfusable Cardiac Patches and Hearts. Advanced Science, 2019, 6, 1900344.	5.6	612
118	Silicone rheological behavior modification for 3D printing: Evaluation of yield stress impact on printed object properties. Additive Manufacturing, 2019, 28, 50-57.	1.7	30
119	Microfluidic bioprinting for organ-on-a-chip models. Drug Discovery Today, 2019, 24, 1248-1257.	3.2	105
120	Agarose Slurry as a Support Medium for Bioprinting and Culturing Freestanding Cell-Laden Hydrogel Constructs. 3D Printing and Additive Manufacturing, 2019, 6, 158-164.	1.4	55
121	A Guiding Framework for Microextrusion Additive Manufacturing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	1.3	26
122	3D bioprinting via an in situ crosslinking technique towards engineering cartilage tissue. Scientific Reports, 2019, 9, 19987.	1.6	107
123	Confinement and activity regulate bacterial motion in porous media. Soft Matter, 2019, 15, 9920-9930.	1.2	52
124	Ultrafast imaging of soft materials during shear flow. Korea Australia Rheology Journal, 2019, 31, 229-240.	0.7	10
125	Universal Nanocarrier Ink Platform for Biomaterials Additive Manufacturing. Small, 2019, 15, e1905421.	5.2	34
126	Various Applications of 3D-Bioprinted Tissues/Organs Using Tissue-Specific Bioinks. , 2019, , 53-108.		1

#	Article	IF	Citations
127	Challenges and Status on Design and Computation for Emerging Additive Manufacturing Technologies. Journal of Computing and Information Science in Engineering, 2019, 19, .	1.7	50
128	3D T cell motility in jammed microgels. Journal Physics D: Applied Physics, 2019, 52, 024006.	1.3	21
129	Rheological evaluation of Laponite/alginate inks for 3D extrusion-based printing. International Journal of Advanced Manufacturing Technology, 2019, 101, 675-686.	1.5	87
130	Gellan Fluid Gel as a Versatile Support Bath Material for Fluid Extrusion Bioprinting. ACS Applied Materials & Interfaces, 2019, 11, 5714-5726.	4.0	94
131	Biofabrication of three-dimensional cellular structures based on gelatin methacrylateâ€"alginate interpenetrating network hydrogel. Journal of Biomaterials Applications, 2019, 33, 1105-1117.	1.2	50
132	Additive manufacturing of soft robots. , 2019, , 335-359.		18
133	Jammed Microgel Inks for 3D Printing Applications. Advanced Science, 2019, 6, 1801076.	5.6	270
134	Freeform Assembly Planning. IEEE Transactions on Automation Science and Engineering, 2019, 16, 1315-1329.	3.4	5
135	Co-axial wet-spinning in 3D bioprinting: state of the art and future perspective of microfluidic integration. Biofabrication, 2019, 11, 012001.	3.7	75
136	3D printing with silk: considerations and applications. Connective Tissue Research, 2020, 61, 163-173.	1.1	28
137	Neural tissue engineering with structured hydrogels in CNS models and therapies. Biotechnology Advances, 2020, 42, 107370.	6.0	78
138	Additive Manufacturing of Precision Biomaterials. Advanced Materials, 2020, 32, e1901994.	11.1	105
139	Hydrogel microparticles for biomedical applications. Nature Reviews Materials, 2020, 5, 20-43.	23.3	646
140	Recent Advances in Enabling Technologies in 3D Printing for Precision Medicine. Advanced Materials, 2020, 32, e1902516.	11.1	126
141	Engineering of Hydrogel Materials with Perfusable Microchannels for Building Vascularized Tissues. Small, 2020, 16, e1902838.	5.2	109
142	The Construction and Application of Threeâ€Dimensional Biomaterials. Advanced Biology, 2020, 4, 1900238.	3.0	16
143	Cascade Pumping Overcomes Hydraulic Resistance and Moderates Shear Conditions for Slow Gelatin Fiber Shaping in Narrow Tubes. IScience, 2020, 23, 101228.	1.9	2
144	Freeform 3D printing of soft matters: recent advances in technology for biomedical engineering. Biomedical Engineering Letters, 2020, 10, 453-479.	2.1	47

#	Article	IF	Citations
145	Recyclable and biocompatible microgel-based supporting system for positive 3D freeform printing of silicone rubber. Biomedical Engineering Letters, 2020, 10, 517-532.	2.1	11
146	Embedded 3D Bioprinting of Gelatin Methacryloyl-Based Constructs with Highly Tunable Structural Fidelity. ACS Applied Materials & Interfaces, 2020, 12, 44563-44577.	4.0	89
147	3D Bioprinting of Macroporous Materials Based on Entangled Hydrogel Microstrands. Advanced Science, 2020, 7, 2001419.	5.6	92
148	Guiding Lights: Tissue Bioprinting Using Photoactivated Materials. Chemical Reviews, 2020, 120, 10950-11027.	23.0	120
149	Granular hydrogels for 3D bioprinting applications. View, 2020, 1, 20200060.	2.7	39
150	Three-Dimensional Bioprinted Hyaluronic Acid Hydrogel Test Beds for Assessing Neural Cell Responses to Competitive Growth Stimuli. ACS Biomaterials Science and Engineering, 2020, 6, 6819-6830.	2.6	28
151	Aspiration-assisted freeform bioprinting of pre-fabricated tissue spheroids in a yield-stress gel. Communications Physics, 2020, 3, .	2.0	62
152	A mini-review of embedded 3D printing: supporting media and strategies. Journal of Materials Chemistry B, 2020, 8, 10474-10486.	2.9	47
153	Everything in its right place: controlling the local composition of hydrogels using microfluidic traps. Lab on A Chip, 2020, 20, 4572-4581.	3.1	4
154	Recent advances and challenges in materials for 3D bioprinting. Progress in Natural Science: Materials International, 2020, 30, 618-634.	1.8	77
155	Biomaterials for Bioprinting Microvasculature. Chemical Reviews, 2020, 120, 10887-10949.	23.0	51
156	Tunable polymer microgel particles and their study using microscopy and realâ€time deformability cytometry. Journal of Polymer Science, 2020, 58, 2317-2326.	2.0	3
157	Development of a new additive manufacturing platform for direct freeform 3D printing of intrinsically curved flexible membranes. Additive Manufacturing, 2020, 36, 101563.	1.7	13
158	Mini-review: advances in 3D bioprinting of vascularized constructs. Biology Direct, 2020, 15, 22.	1.9	18
159	UV-Resistant Self-Healing Emulsion Glass as a New Liquid-like Solid Material for 3D Printing. ACS Applied Materials & Interfaces, 2020, 12, 24450-24457.	4.0	17
160	Aqueous surface gels as low friction interfaces to mitigate implant-associated inflammation. Journal of Materials Chemistry B, 2020, 8, 6782-6791.	2.9	8
161	Changes in Filament Microstructures During Direct Ink Writing with a Yield Stress Fluid Support. ACS Applied Polymer Materials, 2020, 2, 2528-2540.	2.0	12
162	Nanoparticles as Versatile Tools for Mechanotransduction in Tissues and Organoids. Frontiers in Bioengineering and Biotechnology, 2020, 8, 240.	2.0	19

#	Article	IF	Citations
163	Bioprinting of <i>in vitro</i> tumor models for personalized cancer treatment: a review. Biofabrication, 2020, 12, 042001.	3.7	61
164	Extrusion and Microfluidicâ€Based Bioprinting to Fabricate Biomimetic Tissues and Organs. Advanced Materials Technologies, 2020, 5, 1901044.	3.0	110
165	Polymeric Systems for Bioprinting. Chemical Reviews, 2020, 120, 10744-10792.	23.0	161
166	From Arteries to Capillaries: Approaches to Engineering Human Vasculature. Advanced Functional Materials, 2020, 30, 1910811.	7.8	74
167	3D Printing Silicone Elastomer for Patientâ€Specific Wearable Pulse Oximeter. Advanced Healthcare Materials, 2020, 9, e1901735.	3.9	41
168	Three-Dimensional Printing of Ceramics through â€œCarvingâ€•a Gel and â€œFilling inâ€•the Precursor Polymer. ACS Applied Materials & Interfaces, 2020, 12, 31984-31991.	4.0	25
169	Corner accuracy in direct ink writing with support material. Bioprinting, 2020, 19, e00086.	2.9	13
170	Transparent support media for high resolution 3D printing of volumetric cell-containing ECM structures. Biomedical Materials (Bristol), 2020, 15, 045018.	1.7	33
171	Why choose 3D bioprinting? Part II: methods and bioprinters. Bio-Design and Manufacturing, 2020, 3, 1-4.	3.9	39
172	Aspiration-assisted bioprinting for precise positioning of biologics. Science Advances, 2020, 6, eaaw5111.	4.7	170
173	Materials and technical innovations in 3D printing in biomedical applications. Journal of Materials Chemistry B, 2020, 8, 2930-2950.	2.9	124
174	Preparation and characterization of nanoclay-hydrogel composite support-bath for bioprinting of complex structures. Scientific Reports, 2020, 10, 5257.	1.6	84
175	Nanomaterial Patterning in 3D Printing. Advanced Materials, 2020, 32, e1907142.	11.1	144
176	Perspective: Ferromagnetic Liquids. Materials, 2020, 13, 2712.	1.3	8
177	A facile approach to patterning pollen microparticles for in situ imaging. Applied Materials Today, 2020, 20, 100702.	2.3	2
178	3D aggregation of cells in packed microgel media. Soft Matter, 2020, 16, 6572-6581.	1.2	16
179	Biofabrication Strategies and Engineered In Vitro Systems for Vascular Mechanobiology. Advanced Healthcare Materials, 2020, 9, e1901255.	3.9	35
180	From Silk Spinning to 3D Printing: Polymer Manufacturing using Directed Hierarchical Molecular Assembly. Advanced Healthcare Materials, 2020, 9, e1901552.	3.9	53

#	Article	IF	Citations
181	Grand challenges in the design and manufacture of vascular self-healing. Multifunctional Materials, 2020, 3, 013001.	2.4	21
182	From Shape to Function: The Next Step in Bioprinting. Advanced Materials, 2020, 32, e1906423.	11.1	298
183	Cellâ€Instructive Multiphasic Gelâ€inâ€Gel Materials. Advanced Functional Materials, 2020, 30, 1908857.	7.8	34
184	3D Printing in Suspension Baths: Keeping the Promises of Bioprinting Afloat. Trends in Biotechnology, 2020, 38, 584-593.	4.9	183
185	3D Printing of Vascular Tubes Using Bioelastomer Prepolymers by Freeform Reversible Embedding. ACS Biomaterials Science and Engineering, 2020, 6, 1333-1343.	2.6	40
186	Freeze-FRESH: A 3D Printing Technique to Produce Biomaterial Scaffolds with Hierarchical Porosity. Materials, 2020, 13, 354.	1.3	26
187	The bioprinting roadmap. Biofabrication, 2020, 12, 022002.	3.7	291
188	Microfluidic Synthesis of Injectable Angiogenic Microgels. Cell Reports Physical Science, 2020, 1, 100047.	2.8	10
189	Advances in Extrusion 3D Bioprinting: A Focus on Multicomponent Hydrogelâ€Based Bioinks. Advanced Healthcare Materials, 2020, 9, e1901648.	3.9	190
190	Freeform 3D printing using a continuous viscoelastic supporting matrix. Biofabrication, 2020, 12, 035017.	3.7	49
191	Embedded Ink Writing (EIW) of Polysiloxane Inks. ACS Applied Materials & Interfaces, 2020, 12, 23565-23575.	4.0	20
192	Fundamentals and Applications of Photo-Cross-Linking in Bioprinting. Chemical Reviews, 2020, 120, 10662-10694.	23.0	222
193	3D Bioprinting of Carbohydrazide-Modified Gelatin into Microparticle-Suspended Oxidized Alginate for the Fabrication of Complex-Shaped Tissue Constructs. ACS Applied Materials & Interfaces, 2020, 12, 20295-20306.	4.0	65
194	The effect of rod orientation on the strength of highly porous filament printed 3D SiC ceramic architectures. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2021, 60, 119-127.	0.9	6
195	3D printing low-stiffness silicone within a curable support matrix. Additive Manufacturing, 2021, 37, 101681.	1.7	15
196	Functional 3D printing: Approaches and bioapplications. Biosensors and Bioelectronics, 2021, 175, 112849.	5.3	83
197	Fabrication of centimeter-sized 3D constructs with patterned endothelial cells through assembly of cell-laden microbeads as a potential bone graft. Acta Biomaterialia, 2021, 121, 204-213.	4.1	11
198	3D Bioprinting using UNIversal Orthogonal Network (UNION) Bioinks. Advanced Functional Materials, 2021, 31, 2007983.	7.8	55

#	Article	IF	Citations
199	3D printed collagen structures at low concentrations supported by jammed microgels. Bioprinting, 2021, 21, e00121.	2.9	32
200	Guiding tissue-scale self-organization. Nature Materials, 2021, 20, 2-3.	13.3	6
201	Composable microfluidic spinning platforms for facile production of biomimetic perfusable hydrogel microtubes. Nature Protocols, 2021, 16, 937-964.	5.5	35
202	Recapitulating macro-scale tissue self-organization through organoid bioprinting. Nature Materials, 2021, 20, 22-29.	13.3	279
203	Capillary forces drive buckling, plastic deformation, and break-up of 3D printed beams. Soft Matter, 2021, 17, 3886-3894.	1.2	18
204	Hydrogel-derived luminescent scaffolds for biomedical applications. Materials Chemistry Frontiers, 2021, 5, 3524-3548.	3.2	12
205	3D printing biomimetic materials and structures for biomedical applications. Bio-Design and Manufacturing, 2021, 4, 405-428.	3.9	66
206	Use of FDM Technology in Healthcare Applications: Recent Advances. Materials Forming, Machining and Tribology, 2021, , 277-297.	0.7	3
207	Simulated filament shapes in embedded 3D printing. Soft Matter, 2021, 17, 8027-8046.	1.2	18
208	Additive-Free and Support-Free 3D Printing of Thermosetting Polymers with Isotropic Mechanical Properties. ACS Applied Materials & Interfaces, 2021, 13, 5529-5538.	4.0	33
209	Bioprinting for the Biologist. Cell, 2021, 184, 18-32.	13.5	152
210	3D bioprinting in cardiac tissue engineering. Theranostics, 2021, 11, 7948-7969.	4.6	56
211	Extracellular scaffold design for ultra-soft microtissue engineering. Light Advanced Manufacturing, 2021, 2, 1-13.	2.2	3
212	Current researches on design and manufacture of biopolymer-based osteochondral biomimetic scaffolds. Bio-Design and Manufacturing, 2021, 4, 541-567.	3.9	15
213	3D Patterning within Hydrogels for the Recreation of Functional Biological Environments. Advanced Functional Materials, 2021, 31, 2009574.	7.8	35
214	Freeform Polymer Precipitation in Microparticulate Gels. ACS Applied Polymer Materials, 2021, 3, 908-919.	2.0	12
215	Engineering Three-Dimensional Vascularized Cardiac Tissues. Tissue Engineering - Part B: Reviews, 2022, 28, 336-350.	2.5	12
216	Poloxamer/Poly(ethylene glycol) Self-Healing Hydrogel for High-Precision Freeform Reversible Embedding of Suspended Hydrogel. Langmuir, 2021, 37, 4154-4162.	1.6	17

#	Article	IF	Citations
217	The rheology of direct and suspended extrusion bioprinting. APL Bioengineering, 2021, 5, 011502.	3.3	129
218	Complex 3D bioprinting methods. APL Bioengineering, 2021, 5, 011508.	3.3	47
219	Emergence of FRESH 3D printing as a platform for advanced tissue biofabrication. APL Bioengineering, 2021, 5, 010904.	3.3	115
220	3D Tissue and Organ Printingâ€"Hope and Reality. Advanced Science, 2021, 8, 2003751.	5.6	54
221	Applications of Engineering Techniques in Microvasculature Design. Frontiers in Cardiovascular Medicine, 2021, 8, 660958.	1.1	1
222	Dynamic Subsurface Deformation and Strain of Soft Hydrogel Interfaces Using an Embedded Speckle Pattern With 2D Digital Image Correlation. Experimental Mechanics, 2021, 61, 1017-1027.	1.1	7
223	Multiscale porosity in a 3D printed gellanâ€"gelatin composite for bone tissue engineering. Biomedical Materials (Bristol), 2021, 16, 034103.	1.7	13
224	The Technique of Thyroid Cartilage Scaffold Support Formation for Extrusion-Based Bioprinting. International Journal of Bioprinting, 2021, 7, 348.	1.7	10
225	A review of vascular networks for self-healing applications. Smart Materials and Structures, 2021, 30, 063001.	1.8	42
226	Microvascular Tissue Engineeringâ€"A Review. Biomedicines, 2021, 9, 589.	1.4	16
227	Demonstrating Freeform Fabrication of Fluidic Edible Materials. , 2021, , .		1
228	Application of 3D Bioprinters for Dental Pulp Regeneration and Tissue Engineering (Porous) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	1.2	29
229	Freeform Fabrication of Fluidic Edible Materials. , 2021, , .		7
230	Covalent adaptable networks of polydimethylsiloxane elastomer for selective laser sintering 3D printing. Chemical Engineering Journal, 2021, 412, 128675.	6.6	50
231	Three-dimensional printing in hydrogel for a complex waveguiding photothermal microactuator. OSA Continuum, 2021, 4, 1555.	1.8	2
232	Embedded 3D printing of multi-layer, self-oscillating vocal fold models. Journal of Biomechanics, 2021, 121, 110388.	0.9	7
233	Embedded direct ink writing of freeform ceramic components. Applied Materials Today, 2021, 23, 101005.	2.3	13
234	3D biomaterial models of human brain disease. Neurochemistry International, 2021, 147, 105043.	1.9	31

#	Article	IF	Citations
235	Microgel assembly: Fabrication, characteristics and application in tissue engineering and regenerative medicine. Bioactive Materials, 2022, 9, 105-119.	8.6	73
236	Rheological properties of cellulose nanofiber hydrogel for high-fidelity 3D printing. Carbohydrate Polymers, 2021, 263, 117976.	5.1	40
237	Engineering Natural Pollen Grains as Multifunctional 3D Printing Materials. Advanced Functional Materials, 2021, 31, 2106276.	7.8	15
238	Engineered Vasculature for Organ-on-a-Chip Systems. Engineering, 2022, 9, 131-147.	3.2	22
240	Chemotactic migration of bacteria in porous media. Biophysical Journal, 2021, 120, 3483-3497.	0.2	41
241	An image analysis-based workflow for 3D bioprinting of anatomically realistic retinal vascular patterns. Bioprinting, 2021, 23, e00152.	2.9	4
242	3D Bioprinting of Miniaturized Tissues Embedded in Selfâ€Assembled Nanoparticleâ€Based Fibrillar Platforms. Advanced Functional Materials, 2021, 31, .	7.8	21
243	Enhancing Peptide Biomaterials for Biofabrication. Polymers, 2021, 13, 2590.	2.0	11
244	Review of Fiber-Based Three-Dimensional Printing for Applications Ranging from Nanoscale Nanoparticle Alignment to Macroscale Patterning. ACS Applied Nano Materials, 2021, 4, 7538-7562.	2.4	21
245	Engineered whole cut meat-like tissue by the assembly of cell fibers using tendon-gel integrated bioprinting. Nature Communications, 2021, 12, 5059.	5.8	141
246	A super low-cost bioprinter based on DVD-drive components and a raspberry pi as controller. Bioprinting, 2021, 23, e00142.	2.9	9
248	A fluid-supported 3D hydrogel bioprinting method. Biomaterials, 2021, 276, 121034.	5.7	18
249	Fluid Bath-Assisted 3D Printing for Biomedical Applications: From Pre- to Postprinting Stages. ACS Biomaterials Science and Engineering, 2021, 7, 4736-4756.	2.6	28
250	Multistage Responsive Materials for Realâ€time, Reversible, and Sustainable Lightâ€Writing. Advanced Functional Materials, 2021, 31, 2106673.	7.8	32
251	Dynamic changes in epithelial cell packing during tissue morphogenesis. Current Biology, 2021, 31, R1098-R1110.	1.8	30
252	3D Printing of Hydrogels for Stretchable Ionotronic Devices. Advanced Functional Materials, 2021, 31, 2107437.	7.8	70
253	Fabricating Robust Constructs with Internal Phase Nanostructures via Liquidâ€inâ€Liquid 3D Printing. Macromolecular Rapid Communications, 2021, 42, e2100445.	2.0	9
254	Soft Magnetostrictive Actuator String with Cellulose Nanofiber Skin. ACS Applied Materials & Interfaces, 2021, 13, 43904-43913.	4.0	10

#	Article	IF	Citations
255	Predicting interfacial layer adhesion strength in 3D printable silicone. Additive Manufacturing, 2021, 47, 102320.	1.7	9
256	Multimaterial bioprinting approaches and their implementations for vascular and vascularized tissues. Bioprinting, 2021, 24, e00159.	2.9	13
257	3D bioprinting technology to mimic the tumor microenvironment: tumor-on-a-chip concept. Materials Today Advances, 2021, 12, 100160.	2.5	13
258	Heterotypic tumor models through freeform printing into photostabilized granular microgels. Biomaterials Science, 2021, 9, 4496-4509.	2.6	23
259	Synthetic Boneâ€Like Structures Through Omnidirectional Ceramic Bioprinting in Cell Suspensions. Advanced Functional Materials, 2021, 31, 2008216.	7.8	43
260	Resolution of 3D bioprinting inside bulk gel and granular gel baths. Soft Matter, 2021, 17, 8769-8785.	1.2	23
261	Vascular Tissue Engineering: The Role of 3D Bioprinting. , 2020, , 321-338.		6
262	Embedded 3D printing of multi-internal surfaces of hydrogels. Additive Manufacturing, 2020, 32, 101097.	1.7	25
263	Printability study of hydrogel solution extrusion in nanoclay yield-stress bath during printing-then-gelation biofabrication. Materials Science and Engineering C, 2017, 80, 313-325.	3.8	114
264	Biomechanical factors in three-dimensional tissue bioprinting. Applied Physics Reviews, 2020, 7, 041319.	5.5	30
265	Toward a neurospheroid niche model: optimizing embedded 3D bioprinting for fabrication of neurospheroid brain-like co-culture constructs. Biofabrication, 2021, 13, 015014.	3.7	32
267	Molecular simulation of silica gels: Formation, dilution, and drying. Physical Review Materials, 2019, 3, .	0.9	8
268	Additive manufacturing of arterial phantoms with integrated electroactive polymer actuators: effect of stenosis and dilation on flow characteristics. , 2019, , .		2
270	Current understanding concerning intestinal stem cells. World Journal of Gastroenterology, 2016, 22, 7099.	1.4	24
271	3D Bioprinting of Cellâ€Laden Hydrogels for Improved Biological Functionality. Advanced Materials, 2022, 34, e2103691.	11.1	88
272	Digital Assembly of Spherical Viscoelastic Bioâ€Ink Particles. Advanced Functional Materials, 2022, 32, 2109004.	7.8	6
273	Cell-laden injectable microgels: Current status and future prospects for cartilage regeneration. Biomaterials, 2021, 279, 121214.	5.7	30
274	Emerging Technologies in Multiâ€Material Bioprinting. Advanced Materials, 2021, 33, e2104730.	11.1	100

#	Article	IF	Citations
275	Recent advances in the extrusion methods for ceramics. IOP Conference Series: Materials Science and Engineering, 2021, 1193, 012030.	0.3	2
276	Recent Trends in Biofabrication Technologies for Studying Skeletal Muscle Tissue-Related Diseases. Frontiers in Bioengineering and Biotechnology, 2021, 9, 782333.	2.0	9
277	Understanding and improving cellular immunotherapies against cancer: From cell-manufacturing to tumor-immune models. Advanced Drug Delivery Reviews, 2021, 179, 114003.	6.6	20
278	Bioink design for extrusion-based bioprinting. Applied Materials Today, 2021, 25, 101227.	2.3	15
279	Vascular Networks Within 3D Printed and Engineered Tissues. , 2017, , 1-27.		0
281	Suspended liquid subtractive lithography: printing three dimensional channels directly into uncured PDMS. , 2018, , .		0
283	Polymers in Biofabrication and 3D Tissue Modelling. Biomaterials Science Series, 2019, , 119-147.	0.1	0
284	Vascularization in Oral and Maxillofacial Tissue Engineering. , 2019, , 97-122.		2
285	Suspended liquid subtractive lithography: printing three dimensional channels directly into uncured polymeric matrices. , 2019, , .		0
286	Vascular Tissue Engineering: The Role of 3D Bioprinting. , 2020, , 1-18.		0
289	Biomedical Manufacturing: A Review of the Emerging Research and Applications. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	1.3	8
290	Advances in polymers for bio-additive manufacturing: A state of art review. Journal of Manufacturing Processes, 2021, 72, 439-457.	2.8	19
291	Selective Laser Sintering of Polydimethylsiloxane Composites. 3D Printing and Additive Manufacturing, 2023, 10, 684-696.	1.4	7
292	Bioprinting of Complex Multicellular Organs with Advanced Functionalityâ€"Recent Progress and Challenges Ahead. Advanced Materials, 2022, 34, e2101321.	11.1	31
293	3D Freeform Printing of Nanocomposite Hydrogels through Precipitation in Reactive Viscous Fluid. International Journal of Bioprinting, 2020, 6, 258.	1.7	17
294	3D extrusion bioprinting. Nature Reviews Methods Primers, 2021, 1, .	11.8	127
295	3D Bioprinting Strategies, Challenges, and Opportunities to Model the Lung Tissue Microenvironment and Its Function. Frontiers in Bioengineering and Biotechnology, 2021, 9, 773511.	2.0	32
298	Integrated genome and tissue engineering enables screening of cancer vulnerabilities in physiologically relevant perfusable ex vivo cultures. Biomaterials, 2022, 280, 121276.	5.7	5

#	Article	IF	Citations
300	Long-Fiber Embedded Hydrogel 3D Printing for Structural Reinforcement. ACS Biomaterials Science and Engineering, 2022, 8, 303-313.	2.6	10
302	Freeform 3D printing of vascularized tissues: Challenges and strategies. Journal of Tissue Engineering, 2021, 12, 204173142110572.	2.3	23
303	Freestanding vascular scaffolds engineered by direct 3D printing with Gt-Alg-MMT bioinks. Materials Science and Engineering C, 2022, 133, 112658.	3.8	9
305	Fabrication of Biomaterials and Biostructures Based On Microfluidic Manipulation. Small, 2022, 18, e2105867.	5.2	16
306	Bisulfite-initiated crosslinking of gelatin methacryloyl hydrogels for embedded 3D bioprinting. Biofabrication, 2022, 14, 025011.	3.7	12
307	Fabrication of channeled scaffolds through polyelectrolyte complex (PEC) printed sacrificial templates for tissue formation. Bioactive Materials, 2022, 17, 261-275.	8.6	12
308	A thermogelling organic-inorganic hybrid hydrogel with excellent printability, shape fidelity and cytocompatibility for 3D bioprinting. Biofabrication, 2022, 14, 025005.	3.7	5
309	Responsive biomaterials for 3D bioprinting: A review. Materials Today, 2022, 52, 112-132.	8.3	64
310	Bioprinted microvasculature: progressing from structure to function. Biofabrication, 2022, 14, 022002.	3.7	21
311	Freeform Fabrication of Pneumatic Soft Robots via Multiâ€Material Jointed Direct Ink Writing. Macromolecular Materials and Engineering, 2022, 307, .	1.7	6
312	Freeform cell-laden cryobioprinting for shelf-ready tissue fabrication and storage. Matter, 2022, 5, 573-593.	5.0	36
313	Clay-based nanocomposite hydrogels with microstructures and sustained ozone release for antibacterial activity. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 641, 128497.	2.3	7
314	2D Nanosilicate for additive manufacturing: Rheological modifier, sacrificial ink and support bath. Bioprinting, 2022, 25, e00187.	2.9	7
315	Embedded bioprinting for designer 3D tissue constructs with complex structural organization. Acta Biomaterialia, 2022, 140, 1-22.	4.1	35
316	Hydrogels for 3D embedded bioprinting: a focused review on bioinks and support baths. Journal of Materials Chemistry B, 2022, 10, 1897-1907.	2.9	28
317	Fabrication of 3D GelMA Scaffolds Using Agarose Microgel Embedded Printing. Micromachines, 2022, 13, 469.	1.4	15
318	Assembling Microgels via Dynamic Cross-Linking Reaction Improves Printability, Microporosity, Tissue-Adhesion, and Self-Healing of Microgel Bioink for Extrusion Bioprinting. ACS Applied Materials & Interfaces, 2022, 14, 15653-15666.	4.0	32
319	Freeform printing of thermoresponsive poly(2-cyclopropyl-oxazoline) as cytocompatible and on-demand dissolving template of hollow channel networks in cell-laden hydrogels. Biofabrication, 2022, 14, 025019.	3.7	5

#	Article	IF	Citations
320	Chemotactic smoothing of collective migration. ELife, 2022, 11, .	2.8	24
321	General Suspended Printing Strategy toward Programmatically Spatial Kevlar Aerogels. ACS Nano, 2022, 16, 4905-4916.	7.3	19
322	Methods to Characterize Granular Hydrogel Rheological Properties, Porosity, and Cell Invasion. ACS Biomaterials Science and Engineering, 2022, 8, 1427-1442.	2.6	39
324	Direct sound printing. Nature Communications, 2022, 13, 1800.	5.8	26
325	Freeform Liquid 3D Printing of Soft Functional Components for Soft Robotics. ACS Applied Materials & Interfaces, 2022, 14, 2301-2315.	4.0	17
326	Freeform 3D Bioprinting Involving Ink Gelation by Cascade Reaction of Oxidase and Peroxidase: A Feasibility Study Using Hyaluronic Acid-Based Ink. Biomolecules, 2021, 11, 1908.	1.8	7
327	Bioinspired 3D Printing of Functional Materials by Harnessing Enzymeâ€Induced Biomineralization. Advanced Functional Materials, 2022, 32, .	7.8	32
328	3D printing topographic cues for cell contact guidance: a review. Materials and Design, 2022, , 110663.	3.3	9
329	Programming hydrogels to probe spatiotemporal cell biology. Cell Stem Cell, 2022, 29, 678-691.	5.2	28
331	Emerging strategies in 3D printed tissue models for inÂvitro biomedical research. , 2022, , 207-246.		1
332	Engineered assistive materials for 3D bioprinting: support baths and sacrificial inks. Biofabrication, 2022, 14, 032001.	3.7	23
333	Design and Implementation of Anatomically Inspired Mesenteric and Intestinal Vascular Patterns for Personalized 3D Bioprinting. Applied Sciences (Switzerland), 2022, 12, 4430.	1.3	2
334	Engineering multiscale structural orders for high-fidelity embryoids and organoids. Cell Stem Cell, 2022, 29, 722-743.	5.2	19
335	Bioprinting technologies: an overview. , 2022, , 19-49.		4
337	Hydrogels for Tissue Engineering: Addressing Key Design Needs Toward Clinical Translation. Frontiers in Bioengineering and Biotechnology, 2022, 10, .	2.0	25
338	Application Status of Sacrificial Biomaterials in 3D Bioprinting. Polymers, 2022, 14, 2182.	2.0	15
339	How Softness Matters in Soft Nanogels and Nanogel Assemblies. Chemical Reviews, 2022, 122, 11675-11700.	23.0	48
340	Embedded 3D Printing in Selfâ€Healing Annealable Composites for Precise Patterning of Functionally Mature Human Neural Constructs. Advanced Science, 2022, 9, .	5.6	21

#	Article	IF	Citations
341	A versatile embedding medium for freeform bioprinting with multi-crosslinking methods. Biofabrication, 2022, 14, 035022.	3.7	12
342	Molecularly cleavable bioinks facilitate high-performance digital light processing-based bioprinting of functional volumetric soft tissues. Nature Communications, 2022, 13, .	5.8	43
343	Traction of 3D and 4D Printing in the Healthcare Industry: From Drug Delivery and Analysis to Regenerative Medicine. ACS Biomaterials Science and Engineering, 2022, 8, 2764-2797.	2.6	34
344	A Mathematical Model Coupled with Interstitial Flow Predicting the Evolution of Vascular Network. Lecture Notes in Electrical Engineering, 2022, , 2123-2136.	0.3	1
345	Suppression of Filament Defects in Embedded 3D Printing. ACS Applied Materials & Interfaces, 2022, 14, 32561-32578.	4.0	13
346	Cellâ€Laden Gradient Microgel Suspensions for Spatial Control of Differentiation During Biofabrication. Advanced Healthcare Materials, 2022, 11, .	3.9	7
347	Biomimetic Vasculatures by 3Dâ€Printed Porous Molds. Small, 2022, 18, .	5.2	8
348	A hackable, multi-functional, and modular extrusion 3D printer for soft materials. Scientific Reports, 2022, 12, .	1.6	11
349	Simulated stress mitigation strategies in embedded bioprinting. Physics of Fluids, 2022, 34, .	1.6	5
350	Three-Dimensional Printing in Stimuli-Responsive Yield-Stress Fluid with an Interactive Dual Microstructure. ACS Applied Materials & Interfaces, 2022, 14, 39420-39431.	4.0	9
351	Embedded 3D Printing of PDMS-Based Microfluidic Chips for Biomedical Applications. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2023, 145, .	1.3	8
352	Self-Healing Injectable Hydrogels for Tissue Regeneration. Chemical Reviews, 2023, 123, 834-873.	23.0	190
353	Bioprinted anisotropic scaffolds with fast stress relaxation bioink for engineering 3D skeletal muscle and repairing volumetric muscle loss. Acta Biomaterialia, 2023, 156, 21-36.	4.1	20
354	Living materials made by 3D printing cellulose-producing bacteria in granular gels. , 2022, 141, 213095.		9
355	Freeform embedded printing of vasculature in cementitious materials for healing-agent transport. Additive Manufacturing, 2022, 59, 103140.	1.7	1
356	Classification of the emerging freeform three-dimensional printing techniques. MRS Bulletin, 2023, 48, 69-92.	1.7	6
357	Freeform liquid 3D printing of hydraulically enhanced dielectric actuators. Materials Today: Proceedings, 2022, 70, 83-89.	0.9	2
358	Leveraging ultra-low interfacial tension and liquidâ€"liquid phase separation in embedded 3D bioprinting. Biophysics Reviews, 2022, 3, .	1.0	3

#	Article	IF	Citations
359	All-aqueous printing of viscoelastic droplets in yield-stress fluids. Acta Biomaterialia, 2023, 165, 60-71.	4.1	6
360	Regulable Supporting Baths for Embedded Printing of Soft Biomaterials with Variable Stiffness. ACS Applied Materials & Interfaces, 2022, 14, 41695-41711.	4.0	16
361	Embedded Coreâ€"Shell 3D Printing (eCS3DP) with Low-Viscosity Polysiloxanes. ACS Applied Materials & Interfaces, 2022, 14, 41520-41530.	4.0	4
362	Complex architectural control of ice-templated collagen scaffolds using a predictive model. Acta Biomaterialia, 2022, 153, 260-272.	4.1	3
363	Reversible Tissue Sticker Inspired by Chemistry in Plant-Pathogen Relationship. Acta Biomaterialia, 2022, , .	4.1	0
364	FRESH Bioprinting of Dynamic Hydrazone-Cross-Linked Synthetic Hydrogels. Biomacromolecules, 2022, 23, 4883-4895.	2.6	10
365	Non-planar embedded 3D printing for complex hydrogel manufacturing. Bioprinting, 2022, 28, e00242.	2.9	2
366	Biomedical Applications. , 2022, , 155-189.		0
367	Cellular micromasonry: biofabrication with single cell precision. Soft Matter, 2022, 18, 8554-8560.	1.2	6
368	3D Bioprinting of Hydrogels Using Hydrophobic Sands and Calcium Chloride as Structural Support. IFMBE Proceedings, 2023, , 729-738.	0.2	0
369	Embedded 3D Printing of Thermallyâ€Cured Thermoset Elastomers and the Interdependence of Rheology and Machine Pathing. Advanced Materials Technologies, 2023, 8, .	3.0	6
370	Morphological instability and roughening of growing 3D bacterial colonies. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	24
371	3D-bioprinted human tissue and the path toward clinical translation. Science Translational Medicine, 2022, 14, .	5.8	13
372	3D Printing of Human Ossicle Models for the Biofabrication of Personalized Middle Ear Prostheses. Applied Sciences (Switzerland), 2022, 12, 11015.	1.3	6
373	Viral and nonâ€viral gene therapy using 3D (bio)printing. Journal of Gene Medicine, 2022, 24, .	1.4	4
374	Printâ€andâ€Grow within a Novel Support Material for 3D Bioprinting and Postâ€Printing Tissue Growth. Advanced Science, 2022, 9, .	5.6	11
375	Embedded extrusion printing in yield-stress-fluid baths. Matter, 2022, 5, 3775-3806.	5.0	20
376	Multi-material freeform 3D printing of flexible piezoelectric composite sensors using a supporting fluid. Additive Manufacturing, 2022, 60, 103243.	1.7	1

#	Article	IF	Citations
377	Embedded 3D printing of dilute particle suspensions into dense complex tissue fibers using shear thinning xanthan baths. Biofabrication, 2023, 15, 015014.	3.7	3
378	In situ 3D spatiotemporal measurement of soluble biomarkers in spheroid culture. In Vitro Models, 2022, 1, 309-321.	1.0	2
379	Tunable and Compartmentalized Multimaterial Bioprinting for Complex Living Tissue Constructs. ACS Applied Materials & Interfaces, 2022, 14, 51602-51618.	4.0	11
380	Embedded 3D Printing of Multimaterial Polymer Lattices via Graphâ€Based Print Path Planning. Advanced Materials, 2023, 35, .	11.1	20
381	Quantifying epithelial cell proliferation on curved surfaces. Frontiers in Physics, 0, 10, .	1.0	1
382	Freeform Etching of Microchannels in Hydrogels by Ultrasonic Cavitation. Advanced Engineering Materials, 0, , 2200932.	1.6	2
383	Three-dimensional printing of soft hydrogel electronics. Nature Electronics, 2022, 5, 893-903.	13.1	51
384	Building block properties govern granular hydrogel mechanics through contact deformations. Science Advances, 2022, 8, .	4.7	15
385	Review on Porous Scaffolds Generation Process: A Tissue Engineering Approach. ACS Applied Bio Materials, 2023, 6, 1-23.	2.3	13
386	A dual osteoconductive-osteoprotective implantable device for vertical alveolar ridge augmentation. Frontiers in Dental Medicine, 0, 3, .	0.5	2
388	3D bioprinting vascular networks in suspension baths. Applied Materials Today, 2023, 30, 101729.	2.3	3
389	Aqueous Twoâ€Phase Enabled Low Viscosity 3D (LoV3D) Bioprinting of Living Matter. Advanced Science, 2023, 10, .	5.6	8
390	Considerations of bioprinting. , 2023, , 13-67.		0
391	High-resolution 3D printing for healthcare. , 2023, , 225-271.		1
392	(Bio)fabrication of microfluidic devices and organs-on-a-chip. , 2023, , 273-336.		2
393	Integrated data-driven modeling and experimental optimization of granular hydrogel matrices. Matter, 2023, 6, 1015-1036.	5.0	9
394	Hydrogel-Based Tissue-Mimics for Vascular Regeneration and Tumor Angiogenesis. , 2023, , 143-180.		0
395	3D Bioprinting techniques. , 2023, , 91-145.		2

#	Article	IF	Citations
397	Associative Liquidâ€Inâ€Liquid 3D Printing Techniques for Freeform Fabrication of Soft Matter. Small, 2023, 19, .	5.2	13
398	A silicone-based support material eliminates interfacial instabilities in 3D silicone printing. Science, 2023, 379, 1248-1252.	6.0	21
399	Expanding Embedded 3D Bioprinting Capability for Engineering Complex Organs with Freeform Vascular Networks. Advanced Materials, 2023, 35, .	11.1	23
400	Vat photopolymerization bioprinting with a dynamic support bath. Additive Manufacturing, 2023, 69, 103533.	1.7	3
401	Visible light-crosslinkable tyramine-conjugated alginate-based microgel bioink for multiple cell-laden 3D artificial organ. Carbohydrate Polymers, 2023, 313, 120895.	5.1	4
402	Nonplanar 3D Printing of Epoxy Using Freeform Reversible Embedding. Advanced Materials Technologies, 2023, 8, .	3.0	5
403	3D Printingâ€Assisted Selfâ€Assembly to Bioâ€Inspired Bouligand Nanostructures. Small, 2023, 19, .	5.2	8
404	Liquid-embedded (bio)printing of alginate-free, standalone, ultrafine, and ultrathin-walled cannular structures. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	11
406	â€œOutâ€ofâ€theâ€boxâ€• Granular Gel Bath Based on Cationic Polyvinyl Alcohol Microgels for Embedded Extrusion Printing. Macromolecular Rapid Communications, 2023, 44, .	2.0	5
407	Bioconjugation of COL1 protein on liquid-like solid surfaces to study tumor invasion dynamics. Biointerphases, 2023, 18, .	0.6	4
409	Vascularized organ bioprinting: From strategy to paradigm. Cell Proliferation, 2023, 56, .	2.4	7
411	Multimaterial Embedded 3D Printing of Composite Reinforced Soft Actuators. Research, 2023, 6, .	2.8	4
412	3D bioprinting of dynamic hydrogel bioinks enabled by small molecule modulators. Science Advances, 2023, 9, .	4.7	12
413	3D printingâ€based fullâ€scale human brain for diverse applications. , 2023, 1, .		2
414	Soft Hydrogel Shapeability via Supportive Bath Matching in Embedded 3D Printing. Advanced Materials Technologies, 2023, 8, .	3.0	7
415	Comparative analysis of the residues of granular support bath materials on printed structures in embedded extrusion printing. Biofabrication, 2023, 15, 035013.	3.7	4
416	The Additive Manufacturing Approach to Polydimethylsiloxane (PDMS) Microfluidic Devices: Review and Future Directions. Polymers, 2023, 15, 1926.	2.0	18
417	3D embedded printing of microfluidic devices using a functional silicone composite support bath. Additive Manufacturing, 2023, 70, 103566.	1.7	5

#	Article	IF	Citations
420	Supramolecular assemblies of multifunctional microgels for biomedical applications. Journal of Materials Chemistry B, 2023, 11, 6265-6289.	2.9	3
432	3D Printing of Multicomponent Hydrogels for Biomedical Applications. , 2023, , 231-287.		0
448	Hybrid Printing of Liquid Metal. , 2024, , 1-52.		0
461	3D printing of polyvinyl alcohol hydrogels enabled by aqueous two-phase system. Materials Horizons, 0, , .	6.4	0
464	Fueling Biologically Relevant Next-Generation Microvasculature-on-a-Chip Platforms with Mechanobiology. Springer Series in Biophysics, 2024, , 35-65.	0.4	0