Bioprinting: From Tissue and Organ Development to <i

Chemical Reviews 120, 10547-10607 DOI: 10.1021/acs.chemrev.9b00789

Citation Report

#	Article	IF	Citations
1	Mechanical Considerations of Bioprinted Tissue. Frontiers in Mechanical Engineering, 2020, 6, .	0.8	4
2	Microfluidic bioprinting towards a renal in vitro model. Bioprinting, 2020, 20, e00108.	2.9	20
3	Electrospinning and <scp>3D</scp> bioprinting for intervertebral disc tissue engineering. JOR Spine, 2020, 3, e1117.	1.5	23
4	Fundamentals of light-cell–polymer interactions in photo-cross-linking based bioprinting. APL Bioengineering, 2020, 4, 041502.	3.3	25
5	Thermo-Responsive Methylcellulose Hydrogels: From Design to Applications as Smart Biomaterials. Tissue Engineering - Part B: Reviews, 2021, 27, 486-513.	2.5	47
6	Synthesis and Characterization of Oxidized Polysaccharides for In Situ Forming Hydrogels. Biomolecules, 2020, 10, 1185.	1.8	30
7	4D Printing: Materials, Technologies, and Future Applications in the Biomedical Field. Sustainability, 2020, 12, 10628.	1.6	50
8	Additive manufacturing of nanocellulose based scaffolds for tissue engineering: Beyond a reinforcement filler. Carbohydrate Polymers, 2021, 252, 117159.	5.1	28
9	In Situ 3D Printing: Opportunities with Silk Inks. Trends in Biotechnology, 2021, 39, 719-730.	4.9	54
10	Development of 3D bioprinted GelMA-alginate hydrogels with tunable mechanical properties. Bioprinting, 2021, 21, e00105.	2.9	48
11	Three-dimensional bio-printing of primary human hepatocellular carcinoma for personalized medicine. Biomaterials, 2021, 265, 120416.	5.7	74
12	Toxicity Testing In Vitro. Regulatory Aspects. , 2021, , 1-10.		0
13	Bioprinting of Magnetically Deformable Scaffolds. ACS Biomaterials Science and Engineering, 2021, 7, 648-662.	2.6	30
14	Synthetic polymer-derived single-network inks/bioinks for extrusion-based 3D printing towards bioapplications. Materials Advances, 2021, 2, 6928-6941.	2.6	9
15	3D Bioprinting at the Frontier of Regenerative Medicine, Pharmaceutical, and Food Industries. Frontiers in Medical Technology, 2020, 2, 607648.	1.3	32
16	Buckling-regulated bandgaps of soft metamaterials with chiral hierarchical microstructure. Extreme Mechanics Letters, 2021, 43, 101166.	2.0	10
17	Trends in Double Networks as Bioprintable and Injectable Hydrogel Scaffolds for Tissue Regeneration. ACS Biomaterials Science and Engineering, 2021, 7, 4077-4101.	2.6	37
18	Cell spheroids as a versatile research platform: formation mechanisms, high throughput production, characterization and applications. Biofabrication, 2021, 13, 032002.	3.7	52

TATION REDO

#	Article	IF	CITATIONS
19	A 3D Bioprinted Material That Recapitulates the Perivascular Bone Marrow Structure for Sustained Hematopoietic and Cancer Models. Polymers, 2021, 13, 480.	2.0	14
20	Bioinks—materials used in printing cells in designed 3D forms. Journal of Biomaterials Science, Polymer Edition, 2021, 32, 1072-1106.	1.9	9
21	3D Tissue and Organ Printing—Hope and Reality. Advanced Science, 2021, 8, 2003751.	5.6	54
22	Allâ€inkjetâ€Printed 3D Alveolar Barrier Model with Physiologically Relevant Microarchitecture. Advanced Science, 2021, 8, 2004990.	5.6	58
23	Engineering Hydrogelâ€Based Biomedical Photonics: Design, Fabrication, and Applications. Advanced Materials, 2021, 33, e2006582.	11.1	62
24	Three-dimensional bioprinting of artificial ovaries by an extrusion-based method using gelatin-methacryloyl bioink. Climacteric, 2022, 25, 170-178.	1.1	32
25	Combined Analytical Approaches to Standardize and Characterize Biomaterials Formulations: Application to Chitosan-Gelatin Cross-Linked Hydrogels. Biomolecules, 2021, 11, 683.	1.8	11
26	3D Bioprinting-Based Vascularized Tissue Models Mimicking Tissue-Specific Architecture and Pathophysiology for in vitro Studies. Frontiers in Bioengineering and Biotechnology, 2021, 9, 685507.	2.0	25
27	Recent Advancements in Regenerative Approaches for Thymus Rejuvenation. Advanced Science, 2021, 8, 2100543.	5.6	12
28	Overcoming functional challenges in autologous and engineered fat grafting trends. Trends in Biotechnology, 2022, 40, 77-92.	4.9	14
29	Chips for Biomaterials and Biomaterials for Chips: Recent Advances at the Interface between Microfabrication and Biomaterials Research. Advanced Healthcare Materials, 2021, 10, e2100371.	3.9	11
30	Application of 3D bioprinting in the prevention and the therapy for human diseases. Signal Transduction and Targeted Therapy, 2021, 6, 177.	7.1	55
31	Recent advancements in 3D bioprinting technology of carboxymethyl cellulose-based hydrogels: Utilization in tissue engineering. Advances in Colloid and Interface Science, 2021, 292, 102415.	7.0	52
32	Recent advancements in the bioprinting of vascular grafts. Biofabrication, 2021, 13, 032003.	3.7	38
33	Three-Dimensionally Printed Skin Substitute Using Human Dermal Fibroblasts and Human Epidermal Keratinocytes. Annals of Plastic Surgery, 2021, 86, S628-S631.	0.5	4
34	Additive Manufacturing of Conducting Polymers: Recent Advances, Challenges, and Opportunities. ACS Applied Polymer Materials, 2021, 3, 2865-2883.	2.0	62
35	High-Throughput Routes to Biomaterials Discovery. Chemical Reviews, 2021, 121, 10792-10864.	23.0	26
36	A review of regulated self-organizing approaches for tissue regeneration. Progress in Biophysics and Molecular Biology, 2021, 167, 63-78.	1.4	5

#	Article	IF	CITATIONS
37	Biomimetic bioinks of nanofibrillar polymeric hydrogels for 3D bioprinting. Nano Today, 2021, 39, 101180.	6.2	9
38	Bioprinted Multi-Cell Type Lung Model for the Study of Viral Inhibitors. Viruses, 2021, 13, 1590.	1.5	21
39	Bioprinting of kidney <i>in vitro</i> models: cells, biomaterials, and manufacturing techniques. Essays in Biochemistry, 2021, 65, 587-602.	2.1	23
40	Bioinspired Development of an In Vitro Engineered Fracture Callus for the Treatment of Critical Long Bone Defects. Advanced Functional Materials, 2021, 31, 2104159.	7.8	4
41	3D Bioprinting of Miniaturized Tissues Embedded in Selfâ€Assembled Nanoparticleâ€Based Fibrillar Platforms. Advanced Functional Materials, 2021, 31, .	7.8	21
42	Colonization versus encapsulation in cell-laden materials design: porosity and process biocompatibility determine cellularization pathways. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200344.	1.6	10
43	Invigoration of polymer bioinks for additive manufacturing of human tissues and organs. Emergent Materials, 0, , 1.	3.2	2
44	4D bioprinting of tissues and organs. Bioprinting, 2021, 23, e00161.	2.9	34
45	Design and Fabrication of Sodium Alginate/Carboxymethyl Cellulose Sodium Blend Hydrogel for Artificial Skin. Gels, 2021, 7, 115.	2.1	35
46	Peripheral neurovascular link: an overview of interactions and in vitro models. Trends in Endocrinology and Metabolism, 2021, 32, 623-638.	3.1	6
47	3D-bioprinted cancer-on-a-chip: level-up organotypic in vitro models. Trends in Biotechnology, 2022, 40, 432-447.	4.9	36
48	A comprehensive overview of common conducting polymer-based nanocomposites; Recent advances in design and applications. European Polymer Journal, 2021, 160, 110773.	2.6	31
50	What can biofabrication do for space and what can space do for biofabrication?. Trends in Biotechnology, 2022, 40, 398-411.	4.9	23
51	Biophysics of biofabrication. APL Bioengineering, 2021, 5, 030402.	3.3	1
52	A biomimetic "intestinal microvillus―cell sensor based on 3D bioprinting for the detection of wheat allergen gliadin. Bioelectrochemistry, 2021, 142, 107919.	2.4	21
53	Multimaterial bioprinting approaches and their implementations for vascular and vascularized tissues. Bioprinting, 2021, 24, e00159.	2.9	13
54	Toxicity Testing In Vitro: Regulatory Aspects. , 2021, , 139-148.		0
55	Additive manufacturing of biomaterials. Advances in Chemical Engineering, 2021, , 233-260.	0.5	0

#	Article	IF	CITATIONS
56	The Renal Extracellular Matrix as a Supportive Scaffold for Kidney Tissue Engineering: Progress and Future Considerations. Advances in Experimental Medicine and Biology, 2021, 1345, 103-118.	0.8	0
57	Biomimetic double network hydrogels: Combining dynamic and static crosslinks to enable biofabrication and control cellâ€matrix interactions. Journal of Polymer Science, 2021, 59, 2832-2843.	2.0	18
58	Bottomâ€Up versus Topâ€Down Strategies for Morphology Control in Polymerâ€Based Biomedical Materials. Advanced NanoBiomed Research, 2022, 2, 2100087.	1.7	15
59	Parallels between the Developing Vascular and Neural Systems: Signaling Pathways and Future Perspectives for Regenerative Medicine. Advanced Science, 2021, 8, e2101837.	5.6	13
60	3D Printed Dualâ€Porosity Scaffolds: The Combined Effect of Stiffness and Porosity in the Modulation of Macrophage Polarization. Advanced Healthcare Materials, 2022, 11, e2101415.	3.9	23
61	Strategies to Introduce Topographical and Structural Cues in 3Dâ€Printed Scaffolds and Implications in Tissue Regeneration. Advanced NanoBiomed Research, 2021, 1, 2100068.	1.7	14
62	Three-dimensional bioprinted liver tissue for transplantation: hope or hype?. Hepatobiliary Surgery and Nutrition, 2020, 9, 788-790.	0.7	3
63	Biological Response to a Novel Hybrid Polyoligomer: in vitro and in vivo Models. Sovremennye Tehnologii V Medicine, 2020, 12, 36.	0.4	4
64	Clean bioprinting - Fabrication of 3D organ models devoid of animal components. ALTEX: Alternatives To Animal Experimentation, 2021, 38, 269-288.	0.9	11
65	Maturation of <i>in situ</i> bioprinting. Journal of 3D Printing in Medicine, 2020, 4, 181-184.	1.0	2
66	Recent advances on bioengineering approaches for fabrication of functional engineered cardiac pumps: A review. Biomaterials, 2022, 280, 121298.	5.7	26
67	Recent advances on bioprinting of hydrogels containing carbon materials. Materials Today Chemistry, 2022, 23, 100617.	1.7	11
68	Wound healing activities of polyurethane modified chitosan nanofibers loaded with different concentrations of linezolid in an experimental model of diabetes. Journal of Drug Delivery Science and Technology, 2022, 67, 102982.	1.4	16
69	A multicellular bioprinted cell construct for vascularized bone tissue regeneration. Chemical Engineering Journal, 2022, 431, 133882.	6.6	15
70	Four-Dimensional Printing Technology at the Frontier of Advanced Modeling and Applications in Brain Tissue Engineering. Medikal Inovasyon Ve Teknoloji Dergisi, 0, , .	0.0	1
71	Development of a device useful to reproducibly produce large quantities of viable and uniform stem cell spheroids with controlled diameters. Materials Science and Engineering C, 2022, 135, 112685.	3.8	8
72	Embedded bioprinting for designer 3D tissue constructs with complex structural organization. Acta Biomaterialia, 2022, 140, 1-22.	4.1	35
73	Effects on bone regeneration of single-dose treatment with osteogenic small molecules. Drug Discovery Today, 2022, 27, 1538-1544.	3.2	5

#	Article	IF	CITATIONS
74	Three-dimensional bioprinting with decellularized extracellular matrix-based bioinks in translational regenerative medicine. MRS Bulletin, 2022, 47, 70-79.	1.7	14
75	Advances in 3D Bioprinting. , 2022, 1, 100011.		12
76	Bioelectricity oupling patches for repairing impaired myocardium. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2022, 14, e1787.	3.3	5
77	Salivary gland function, development, and regeneration. Physiological Reviews, 2022, 102, 1495-1552.	13.1	35
78	Natural Hydrogel-Based Bio-Inks for 3D Bioprinting in Tissue Engineering: A Review. Gels, 2022, 8, 179.	2.1	89
79	Supramolecular Biomaterials in the Netherlands. Tissue Engineering - Part A, 2022, , .	1.6	3
80	Biomimetic Mineralized Hydroxyapatite Nanofiber-Incorporated Methacrylated Gelatin Hydrogel with Improved Mechanical and Osteoinductive Performances for Bone Regeneration. International Journal of Nanomedicine, 2022, Volume 17, 1511-1529.	3.3	24
81	Regenerative therapies for tympanic membrane. Progress in Materials Science, 2022, 127, 100942.	16.0	11
82	3D printing of biocompatible low molecular weight gels: Imbricated structures with sacrificial and persistent N-alkyl-d-galactonamides. Journal of Colloid and Interface Science, 2022, 617, 156-170.	5.0	7
83	A review on four-dimensional (4D) bioprinting in pursuit of advanced tissue engineering applications. Bioprinting, 2022, 27, e00203.	2.9	54
84	Bioprinting and regeneration of auricular cartilage using a bioactive bioink based on microporous photocrosslinkable acellular cartilage matrix. Bioactive Materials, 2022, 16, 66-81.	8.6	35
85	3D bioprinting for meniscus tissue engineering: a review of key components, recent developments and future opportunities. Journal of 3D Printing in Medicine, 2021, 5, 213-233.	1.0	6
86	Bioprinted Cancer Model of Neuroblastoma in a Renal Microenvironment as an Efficiently Applicable Drug Testing Platform. International Journal of Molecular Sciences, 2022, 23, 122.	1.8	12
87	Evaluation of Proton-Induced DNA Damage in 3D-Engineered Glioblastoma Microenvironments. ACS Applied Materials & Interfaces, 2022, 14, 20778-20789.	4.0	21
88	The tendon microenvironment: Engineered in vitro models to study cellular crosstalk. Advanced Drug Delivery Reviews, 2022, 185, 114299.	6.6	19
89	Alginate-Based Hydrogels and Tubes, as Biological Macromolecule-Based Platforms for Peripheral Nerve Tissue Engineering: A Review. Annals of Biomedical Engineering, 2022, 50, 628-653.	1.3	32
90	Shedding light on 3D printing: Printing photo-crosslinkable constructs for tissue engineering. Biomaterials, 2022, 286, 121566.	5.7	34
91	Engineering multiscale structural orders for high-fidelity embryoids and organoids. Cell Stem Cell, 2022, 29, 722-743.	5.2	19

		CITATION REPORT		
#	Article		IF	Citations
92	Conjugated polymers for biomedical applications. Chemical Communications, 2022, 5	8, 7232-7244.	2.2	35
93	Deep Learning-Assisted Nephrotoxicity Testing with Bioprinted Renal Spheroids. Interr of Bioprinting, 2022, 8, 528.	ational Journal	1.7	5
94	Crosslinked alginateâ€xanthan gum blends as effective hydrogels for <scp>3D</scp> biological tissues. Journal of Applied Polymer Science, 2022, 139, .	bioprinting of	1.3	6
95	Bioengineered 3D Living Fibers as In Vitro Human Tissue Models of Tendon Physiology Advanced Healthcare Materials, 2022, 11, .	and Pathology.	3.9	13
96	Avant-garde Approach to Life: Reviewing the Current Applications of 3D Bioprinting. M Medicine, 2022, 20, .	IcGill Journal of	0.1	0
97	Molecularly cleavable bioinks facilitate high-performance digital light processing-based of functional volumetric soft tissues. Nature Communications, 2022, 13, .	l bioprinting	5.8	43
98	Advances in 3D bioprinting of tissues/organs for regenerative medicine and in-vitro mo Biomaterials, 2022, 287, 121639.	odels.	5.7	67
99	Functionalizing multi-component bioink with platelet-rich plasma for customized in-sit bioprinting for wound healing. Materials Today Bio, 2022, 16, 100334.	u bilayer	2.6	24
100	A focused review on three-dimensional bioprinting technology for artificial organ fabric Biomaterials Science, 2022, 10, 5054-5080.	cation.	2.6	20
101	Three-Dimensional Culture for <i>In Vitro</i> Folliculogenesis in the Aspect of Method Materials. Tissue Engineering - Part B: Reviews, 2022, 28, 1242-1257.	s and	2.5	6
102	3D Bioprinted Scaffolds for Tissue Repair and Regeneration. Frontiers in Materials, 0, 9	', .	1.2	9
103	3D printing of jammed self-supporting microgels with alternative mechanism for shape crosslinking and conductivity. Additive Manufacturing, 2022, 58, 102997.	e fidelity,	1.7	8
105	Avant-garde Approach to Life: Reviewing the Current Applications of 3D Bioprinting. M Medicine, 2022, 20, .	IcGill Journal of	0.1	0
106	Self-Healing Injectable Hydrogels for Tissue Regeneration. Chemical Reviews, 2023, 12	.3, 834-873.	23.0	190
107	Macroporous Aligned Hydrogel Microstrands for 3D Cell Guidance. ACS Biomaterials S Engineering, 2022, 8, 3871-3882.	cience and	2.6	10
108	Dot extrusion bioprinting of spatially controlled heterogenous tumor models. Material 2022, 223, 111152.	s and Design,	3.3	8
109	An easy and robust method of preparation of capsules for delivering probiotic bacteria bioprinting. Food Hydrocolloids for Health, 2022, 2, 100088.	by a 3D	1.6	4
111	Rheological characterization of cell-laden alginate-gelatin hydrogels for 3D biofabricat of the Mechanical Behavior of Biomedical Materials, 2022, 136, 105474.	on. Journal	1.5	4

#	Article	IF	CITATIONS
112	Engineering bone-forming biohybrid sheets through the integration of melt electrowritten membranes and cartilaginous microspheroids. Acta Biomaterialia, 2023, 165, 111-124.	4.1	1
113	Insights of 3D bioprinting and focusing the paradigm shift towards 4D printing for biomedical applications. Journal of Materials Research, 2023, 38, 112-141.	1.2	8
114	Application of 3D-bioprinted nanocellulose and cellulose derivative-based bio-inks in bone and cartilage tissue engineering. International Journal of Bioprinting, 2022, 9, 637.	1.7	12
115	3D bioprinted colorectal cancer models based on hyaluronic acid and signalling glycans. Carbohydrate Polymers, 2023, 302, 120395.	5.1	10
116	Gum Arabic Mitigates AlCl3-Induced Nephrotoxicity by Upregulating the XRCC1 Gene and Downregulating Ki67 and P53 Expressions. Clinical Cancer Investigation Journal, 2022, 11, 44-51.	0.2	1
117	Functionalized alginate-based bioinks for microscale electrohydrodynamic bioprinting of living tissue constructs with improved cellular spreading and alignment. Bio-Design and Manufacturing, 2023, 6, 136-149.	3.9	6
118	Advances in 3D bioprinting technology for functional corneal reconstruction and regeneration. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	12
119	A vertical additive-lathe printing system for the fabrication of tubular constructs using gelatin methacryloyl hydrogel. Journal of the Mechanical Behavior of Biomedical Materials, 2023, 139, 105665.	1.5	3
120	Clamping strategies for organ-on-a-chip devices. Nature Reviews Materials, 2023, 8, 147-164.	23.3	9
121	Design of Functional RGD Peptide-Based Biomaterials for Tissue Engineering. Pharmaceutics, 2023, 15, 345.	2.0	16
122	Biofabrication of engineered dento-alveolar tissue. , 2023, 148, 213371.		4
123	Stereolithography apparatus and digital light processing-based 3D bioprinting for tissue fabrication. IScience, 2023, 26, 106039.	1.9	30
124	Classification, processing, and applications of bioink and 3D bioprinting: A detailed review. International Journal of Biological Macromolecules, 2023, 232, 123476.	3.6	27
125	In Vitro Synovial Membrane 3D Model Developed by Volumetric Extrusion Bioprinting. Applied Sciences (Switzerland), 2023, 13, 1889.	1.3	2
126	Collagen-based bioinks for regenerative medicine: Fabrication, application and prospective. Medicine in Novel Technology and Devices, 2023, 17, 100211.	0.9	8
127	Printability assessment workflow of a thermosensitive photocurable biomaterial ink for microextrusion bioprinting. Bioprinting, 2023, 30, e00262.	2.9	2
128	Design of a novel bioink suitable for the 3D printing of lymphoid cells. , 0, 2, .		5
129	Extrusion-based 3D co-printing: Printing material design and novel workflow for fabricating patterned heterogeneous tissue structures. Materials and Design, 2023, 227, 111737.	3.3	8

#	Article	IF	CITATIONS
130	Emerging Advancement of 3D Bioprinting Technology in Modern Medical Science and Vascular Tissue Engineering Education. Advances in Medical Education, Research, and Ethics, 2023, , 153-175.	0.1	18
131	Realizations of vascularized tissues: From <i>in vitro</i> platforms to <i>in vivo</i> grafts. Biophysics Reviews, 2023, 4, 011308.	1.0	2
132	Vascularized organ bioprinting: From strategy to paradigm. Cell Proliferation, 2023, 56, .	2.4	7
133	Writing 3D <i>In Vitro</i> Models of Human Tendon within a Biomimetic Fibrillar Support Platform. ACS Applied Materials & Interfaces, 2023, 15, 50598-50611.	4.0	2
134	Bioprinting of Stem Cell Spheroids Followed by Postâ€Printing Chondrogenic Differentiation for Cartilage Tissue Engineering. Advanced Healthcare Materials, 2023, 12, .	3.9	4
135	Interfacial Polyelectrolyte Complexation-Inspired Bioprinting of Vascular Constructs. ACS Applied Materials & Interfaces, 2023, 15, 20712-20725.	4.0	1
136	Biodegradable and biocompatible polymer nanocomposites for tissue engineering applications. , 2023, , 271-309.		0
137	Synergy and Coordination Between Biomimetic Nanoparticles and Biological Cells/Tissues/Organs/Systems: Applications in Nanomedicine and Prospect. , 2024, 2, 1-33.		5
147	Advanced strategies in the application of gelatin-based bioink for extrusion bioprinting. Bio-Design and Manufacturing, 2023, 6, 586-608.	3.9	5
153	Prospects of artificial intelligence in regeneration and repair of organs. , 2023, , 117-132.		0
155	A dive into the bath: embedded 3D bioprinting of freeform <i>in vitro</i> models. Biomaterials Science, 2023, 11, 5462-5473.	2.6	1
161	Hydrogels for three-dimensional tissue engineering models. , 2024, , 569-590.		0
162	Three Dimensional Bioprinting for Hepatic Tissue Engineering: From In Vitro Models to Clinical Applications. Tissue Engineering and Regenerative Medicine, 2024, 21, 21-52.	1.6	1
172	Silk for cardiac tissue engineering. , 2024, , 567-600.		0
175	Bioprinting strategy toward realization of structural and functional tissue engineering scaffolds. , 2024, , 303-333.		0
180	3D Printing in Modern Healthcare. Advances in Healthcare Information Systems and Administration Book Series, 2024, , 132-152.	0.2	13