

CITATION REPORT

List of articles citing

3D bioprinting of vascularized, heterogeneous cell-laden tissue constructs

DOI: 10.1002/adma.201305506
Advanced Materials, 2014, 26, 3124-30.

Source: <https://exaly.com/paper-pdf/58813959/citation-report.pdf>

Version: 2024-04-28

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
1554	The billion cell construct: will three-dimensional printing get us there?. 2014 , 12, e1001882		99
1553	Skeletal muscle tissue engineering: strategies for volumetric constructs. 2014 , 5, 362		71
1552	Preparation of a designed poly(trimethylene carbonate) microvascular network by stereolithography. 2014 , 3, 2004-11		33
1551	3D-Printed Hydrogel Technologies for Tissue-Engineered Heart Valves. 2014 , 1, 122-136		26
1550	Manufacturing challenges in regenerative medicine. 2014 , 6, 232fs16		50
1549	Connections matter: channeled hydrogels to improve vascularization. 2014 , 2, 52		26
1548	Modeling human carcinomas: physiologically relevant 3D models to improve anti-cancer drug development. 2014 , 79-80, 50-67		99
1547	Hydrogels to model 3D in vitro microenvironment of tumor vascularization. 2014 , 79-80, 19-29		105
1546	Biofabrication of tissue constructs by 3D bioprinting of cell-laden microcarriers. 2014 , 6, 035020		256
1545	Bioprinting technology and its applications. 2014 , 46, 342-8		215
1544	3D printed modules for integrated microfluidic devices. 2014 , 4, 32876-32880		118
1543	Approaching the in vitro clinical trial: engineering organs on chips. 2014 , 14, 3181-6		82
1542	Cell sheet-based tissue engineering for fabricating 3-dimensional heart tissues. 2014 , 78, 2594-603		32
1541	Design and 3D Printing of Scaffolds and Tissues. 2015 , 1, 261-268		255
1540	3D bioprinting of photocrosslinkable hydrogel constructs. 2015 , 132, n/a-n/a		109
1539	Three-dimensional direct cell patterning in collagen hydrogels with near-infrared femtosecond laser. 2015 , 5, 17203		67
1538	Viability of Bioprinted Cellular Constructs Using a Three Dispenser Cartesian Printer. 2015 ,		5

1537	3D Printed Anatomical Nerve Regeneration Pathways. 2015 , 25, 6205-6217		188
1536	3D-Printable Antimicrobial Composite Resins. 2015 , 25, 6756-6767		83
1535	Rapid 3D Extrusion of Synthetic Tumor Microenvironments. <i>Advanced Materials</i> , 2015 , 27, 5512-7	24	93
1534	3D Printing Fabrication of Amorphous Thermoelectric Materials with Ultralow Thermal Conductivity. 2015 , 11, 5889-94		70
1533	Direct 3D Printing of Shear-Thinning Hydrogels into Self-Healing Hydrogels. <i>Advanced Materials</i> , 2015 , 27, 5075-9	24	648
1532	Adaptable hydrogel networks with reversible linkages for tissue engineering. <i>Advanced Materials</i> , 2015 , 27, 3717-36	24	422
1531	Vascularisation for cardiac tissue engineering: the extracellular matrix. 2015 , 113, 532-47		20
1530	Tissue engineering for human urethral reconstruction: systematic review of recent literature. 2015 , 10, e0118653		59
1529	Customizable 3D Printed 'Plug and Play' Millifluidic Devices for Programmable Fluidics. 2015 , 10, e0141640		51
1528	Towards the design of 3D multiscale instructive tissue engineering constructs: Current approaches and trends. 2015 , 33, 842-55		39
1527	Concentrated gelatin/alginate composites for fabrication of predesigned scaffolds with a favorable cell response by 3D plotting. 2015 , 5, 43480-43488		61
1526	Post-deposition bioink self-assembly: a quantitative study. 2015 , 7, 045005		39
1525	Progress in material design for biomedical applications. 2015 , 112, 14444-51		174
1524	Effects of hydrogel properties and extrusion parameters on 3D bioprinting. 2015 ,		1
1523	A novel bioprinting method and system for forming hybrid tissue engineering constructs. 2015 , 7, 045008		108
1522	A simple and high-resolution stereolithography-based 3D bioprinting system using visible light crosslinkable bioinks. 2015 , 7, 045009		349
1521	Multimaterial and Multiscale Three-Dimensional Bioprinter. 2015 , 6,		18
1520	3D Bioprinting and 3D Imaging for Stem Cell Engineering. 2015 , 33-66		13

1519	3D bioprinting of BMSC-laden methacrylamide gelatin scaffolds with CBD-BMP2-collagen microfibers. 2015 , 7, 044104	103
1518	Monolithic multilayer microfluidics via sacrificial molding of 3D-printed isomalt. 2015 , 15, 1736-41	65
1517	3D Printing and Patterning Vasculature in Engineered Tissues. 2015 , 171-189	
1516	Fabrication of multi-well chips for spheroid cultures and implantable constructs through rapid prototyping techniques. 2015 , 112, 1457-71	15
1515	Engineered in vitro disease models. 2015 , 10, 195-262	373
1514	Interface manipulation for printing three-dimensional microstructures under magnetic guiding. 2015 , 11, 1900-4	27
1513	Tissue vascularization through 3D printing: Will technology bring us flow?. 2015 , 244, 629-40	87
1512	Tissue engineering and regenerative medicine in applied research: a year in review of 2014. 2015 , 21, 177-86	15
1511	Versatile fabrication of vascularizable scaffolds for large tissue engineering in bioreactor. 2015 , 45, 124-31	93
1510	Biochimie 2014. 2015 , 63, 306-314	
1509	3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures. <i>Advanced Materials</i> , 2015 , 27, 4035-40	24 577
1508	Bioprinting for cancer research. 2015 , 33, 504-13	239
1507	Bioprinting a cardiac valve. 2015 , 33, 1503-21	105
1506	Bioprinting of Organoids. 2015 , 271-282	2
1505	Cardiac Tissue Engineering for the Treatment of Heart Failure Post-Infarction. 2015 , 405-418	0
1504	Extrusion Bioprinting. 2015 , 123-152	51
1503	Development of nanotoxicology: implications for drug delivery and medical devices. 2015 , 10, 2289-305	9
1502	Robust fluidic connections to freestanding microfluidic hydrogels. 2015 , 9, 036501	5

1501	Experimental approaches to vascularisation within tissue engineering constructs. 2015 , 26, 683-734		42
1500	Embedded 3D Photopatterning of Hydrogels with Diverse and Complex Architectures for Tissue Engineering and Disease Models. 2015 , 21, 1188-96		23
1499	3D printed microfluidics for biological applications. 2015 , 15, 3627-37		467
1498	Auricular reconstruction using biofabrication-based tissue engineering strategies. 2015 , 7, 032001		30
1497	Cell dispensing in low-volume range with the immediate drop-on-demand technology (I-DOT). 2015 , 20, 154-63		9
1496	Fabrication of 3-dimensional multicellular microvascular structures. 2015 , 29, 3302-14		24
1495	Multi-parametric hydrogels support 3D in vitro bioengineered microenvironment models of tumour angiogenesis. 2015 , 53, 609-20		145
1494	Stem Cells and Liver Regeneration. 2015 , 1429-1437		
1493	Microfluidic Printheads for Multimaterial 3D Printing of Viscoelastic Inks. <i>Advanced Materials</i> , 2015 , 27, 3279-84	24	216
1492	Application of biomaterials to advance induced pluripotent stem cell research and therapy. 2015 , 34, 987-1008		64
1491	3D Bioprinting Human Chondrocytes with Nanocellulose-Alginate Bioink for Cartilage Tissue Engineering Applications. 2015 , 16, 1489-96		960
1490	Biofabricated constructs as tissue models: a short review. 2015 , 26, 156		6
1489	From Skeletal Development to Tissue Engineering: Lessons from the Micromass Assay. 2015 , 21, 427-37		12
1488	Pattern transformation of heat-shrinkable polymer by three-dimensional (3D) printing technique. 2015 , 5, 8936		90
1487	Active mixing of complex fluids at the microscale. 2015 , 112, 12293-8		160
1486	Leaf-inspired artificial microvascular networks (LIAMN) for three-dimensional cell culture. 2015 , 5, 90596-90601		10
1485	Three-dimensional printing of complex biological structures by freeform reversible embedding of suspended hydrogels. 2015 , 1, e1500758		912
1484	Central Nervous System and its Disease Models on a Chip. 2015 , 33, 762-776		55

1483	Polymers for Bioprinting. 2015 , 229-248	44
1482	Bioprinting of Three-Dimensional Tissues and Organ Constructs. 2015 , 283-292	1
1481	Bioprinting: An Industrial Perspective. 2015 , 395-411	4
1480	3D Printing of Medicines: Engineering Novel Oral Devices with Unique Design and Drug Release Characteristics. 2015 , 12, 4077-84	314
1479	Biofabrication of reinforced 3D-scaffolds using two-component hydrogels. 2015 , 3, 9067-9078	42
1478	Dual-Responsive Hydrogels for Direct-Write 3D Printing. 2015 , 48, 6482-6488	114
1477	Bioconjugated Hydrogels for Tissue Engineering and Regenerative Medicine. 2015 , 26, 1984-2001	90
1476	Review: in vitro microvessel models. 2015 , 15, 4242-55	111
1475	Multiphoton crosslinking for biocompatible 3D printing of type I collagen. 2015 , 7, 035007	42
1474	Synthesis, properties, and biomedical applications of gelatin methacryloyl (GelMA) hydrogels. 2015 , 73, 254-71	1167
1473	Review: Polymeric-Based 3D Printing for Tissue Engineering. 2015 , 35, 285-292	131
1472	Regenerative medicine: Current therapies and future directions. 2015 , 112, 14452-9	464
1471	A preliminary model of time-pressure dispensing system for bioprinting based on printing and material parameters. 2015 , 10, 3-8	51
1470	A thermoresponsive and magnetic colloid for 3D cell expansion and reconfiguration. <i>Advanced Materials</i> , 2015 , 27, 662-8	24 16
1469	Freeform inkjet printing of cellular structures with bifurcations. 2015 , 112, 1047-55	215
1468	Endochondral bone formation in gelatin methacrylamide hydrogel with embedded cartilage-derived matrix particles. 2015 , 37, 174-82	124
1467	Tissue-engineered cartilage: the crossroads of biomaterials, cells and stimulating factors. 2015 , 15, 153-82	64
1466	Repopulating Decellularized Kidney Scaffolds: An Avenue for Organ Generation. 2016 , 9,	15

1465	The digital code driven autonomous synthesis of ibuprofen automated in a 3D-printer-based robot. 2016 , 12, 2776-2783	29
1464	A Mathematical Model on the Resolution of Extrusion Bioprinting for the Development of New Bioinks. 2016 , 9,	82
1463	Additive Manufacturing of Biomedical Constructs with Biomimetic Structural Organizations. 2016 , 9,	14
1462	Three-Dimensional Fabrication for Microfluidics by Conventional Techniques and Equipment Used in Mass Production. 2016 , 7,	9
1461	Novel Compound-Forming Technology Using Bioprinting and Electrospinning for Patterning a 3D Scaffold Construct with Multiscale Channels. 2016 , 7,	10
1460	Current Status of Bioinks for Micro-Extrusion-Based 3D Bioprinting. 2016 , 21,	258
1459	Bioprinting and Differentiation of Stem Cells. 2016 , 21,	88
1458	Engineered Polymeric Hydrogels for 3D Tissue Models. 2016 , 8,	26
1457	Small-Scale Fabrication of Biomimetic Structures for Periodontal Regeneration. 2016 , 7, 6	4
1456	Frontal Conversion and Uniformity in 3D Printing by Photopolymerisation. 2016 , 9,	62
1455	The promise of 3D skin and melanoma cell bioprinting. 2016 , 26, 205-6	12
1454	Three-dimensional printing of the retina. 2016 , 27, 262-7	28
1453	Patterning Vasculature: The Role of Biofabrication to Achieve an Integrated Multicellular Ecosystem. 2016 , 2, 1694-1709	21
1452	Multi-Material Tissue Engineering Scaffold with Hierarchical Pore Architecture. 2016 , 26, 5873-5883	21
1451	Nano-Enabled Approaches for Stem Cell-Based Cardiac Tissue Engineering. 2016 , 5, 1533-53	43
1450	Microfluidic Bioprinting of Heterogeneous 3D Tissue Constructs Using Low-Viscosity Bioink. <i>Advanced Materials</i> , 2016 , 28, 677-84	24 530
1449	Effects of electromagnetic field frequencies on chondrocytes in 3D cell-printed composite constructs. 2016 , 104, 1797-804	12
1448	From 3D Bioprinters to a fully integrated Organ Biofabrication Line. 2016 , 705, 012010	8

1447	Textile Technologies and Tissue Engineering: A Path Toward Organ Weaving. 2016 , 5, 751-66		125
1446	Polymer Dielectrics for 3D-Printed RF Devices in the Ka Band. 2016 , 1, 1600027		15
1445	3D-Biodruck von Gewebe- und Organmodellen. 2016 , 128, 4728-4743		2
1444	Three-dimensional bioprinting speeds up smart regenerative medicine. 2016 , 3, 331-344		11
1443	Fabrication of 3D Biomimetic Microfluidic Networks in Hydrogels. 2016 , 5, 2153-60		73
1442	Developments of 3D Printing Microfluidics and Applications in Chemistry and Biology: a Review. 2016 , 28, 1658-1678		179
1441	Directed Assembly and Development of Material-Free Tissues with Complex Architectures. <i>Advanced Materials</i> , 2016 , 28, 4032-9	24	40
1440	Algorithms for Multilayer Conformal Additive Manufacturing. 2016 , 16,		13
1439	Processing and 3D printing of Gradient Heterogeneous Bio-Model Based on Computer Tomography Images. 2016 , 4, 8814-8822		10
1438	Three-dimensional cell-based bioprinting for soft tissue regeneration. 2016 , 13, 647-662		37
1437	Freestanding 3-D microvascular networks made of alginate hydrogel as a universal tool to create microchannels inside hydrogels. 2016 , 10, 044112		9
1436	Printing soft matter in three dimensions. 2016 , 540, 371-378		806
1435	Hybrid microscaffold-based 3D bioprinting of multi-cellular constructs with high compressive strength: A new biofabrication strategy. 2016 , 6, 39140		74
1434	Design and fabrication of bio-hybrid materials using inkjet printing. 2016 , 11, 041002		9
1433	A Step Towards Clinical Translation of Biofabrication. 2016 , 34, 356-357		10
1432	Bio-functionalized silk hydrogel microfluidic systems. 2016 , 93, 60-70		70
1431	4D Bioprinting for Biomedical Applications. 2016 , 34, 746-756		379
1430	3D Printed Bionic Nanodevices. 2016 , 11, 330-350		93

1429	Computational model-informed design and bioprinting of cell-patterned constructs for bone tissue engineering. 2016 , 8, 025009	33
1428	A tailored three-dimensionally printable agarose-collagen blend allows encapsulation, spreading, and attachment of human umbilical artery smooth muscle cells. 2016 , 8, 025011	72
1427	Fabrication of hASCs-laden structures using extrusion-based cell printing supplemented with an electric field. 2016 , 38, 33-43	24
1426	Cross-Linkable Gelatin-CMC Hydrogels Designed for Rapid Engineering of Perfusable Vasculatures. 2016 , 2, 1059-1066	34
1425	Development of a 3D Printed, Bioengineered Placenta Model to Evaluate the Role of Trophoblast Migration in Preeclampsia. 2016 , 2, 1817-1826	46
1424	3D Printing PDMS Elastomer in a Hydrophilic Support Bath via Freeform Reversible Embedding. 2016 , 2, 1781-1786	242
1423	3D printing of functional biomaterials for tissue engineering. 2016 , 40, 103-112	382
1422	Microfluidics and biomaterials to study angiogenesis. 2016 , 11, 114-122	7
1421	3D printing of versatile reactionware for chemical synthesis. 2016 , 11, 920-36	140
1420	Capturing extracellular matrix properties in vitro: Microengineering materials to decipher cell and tissue level processes. 2016 , 241, 930-8	21
1419	Designing Biomaterials for 3D Printing. 2016 , 2, 1679-1693	437
1418	3D-printed fluidic networks as vasculature for engineered tissue. 2016 , 16, 2025-43	93
1417	3D Printed Tissue Models: Present and Future. 2016 , 2, 1722-1731	102
1416	In vitro formation of vascular-like networks using hydrogels. 2016 , 122, 519-527	18
1415	Controllable 3D alginate hydrogel patterning via visible-light induced electrodeposition. 2016 , 8, 025004	18
1414	Bioprinting 3D microfibrinous scaffolds for engineering endothelialized myocardium and heart-on-a-chip. 2016 , 110, 45-59	495
1413	Thermosensitive silica-pluronic-starch model coating dispersion-part I: The effect of Pluronic block copolymer adsorption on the colloidal stability and rheology. 2016 , 506, 245-253	5
1412	A Versatile Method for Fabricating Tissue Engineering Scaffolds with a Three-Dimensional Channel for Prevasculature Networks. 2016 , 8, 25096-103	37

1411	Bioprinted thrombosis-on-a-chip. 2016 , 16, 4097-4105	146
1410	3D bioprinting of human chondrocyte-laden nanocellulose hydrogels for patient-specific auricular cartilage regeneration. 2016 , 1-2, 22-35	172
1409	Engineering design of artificial vascular junctions for 3D printing. 2016 , 8, 025018	15
1408	3D printed structures for delivery of biomolecules and cells: tissue repair and regeneration. 2016 , 4, 7521-7539	49
1407	Direct 3D bioprinting of perfusable vascular constructs using a blend bioink. 2016 , 106, 58-68	544
1406	Three-dimensional bioprinting is not only about cell-laden structures. 2016 , 19, 187-92	21
1405	Thermosensitive Silica-Pluronic-Starch model coating dispersion-Part II: The relationship between rheology and microstructure. 2016 , 509, 415-426	2
1404	Pluronic F127 Hydrogel Characterization and Biofabrication in Cellularized Constructs for Tissue Engineering Applications. 2016 , 49, 125-132	114
1403	Water Touch-and-Bounce from a Soft Viscoelastic Substrate: Wetting, Dewetting, and Rebound on Bitumen. 2016 , 32, 8245-54	10
1402	Cancer drug discovery: recent innovative approaches to tumor modeling. 2016 , 11, 885-94	20
1401	3D Printing in Transplantation: While 3D printing has made significant advances in recent years, the reality of whole organ generation remains a long way off. 2016 , 16, 1339-40	4
1400	Dual-Stage Crosslinking of a Gel-Phase Bioink Improves Cell Viability and Homogeneity for 3D Bioprinting. 2016 , 5, 2488-2492	95
1399	A decade of progress in tissue engineering. 2016 , 11, 1775-81	387
1398	Fabrication of multilayered vascular tissues using microfluidic agarose hydrogel platforms. 2016 , 11, 1415-1423	30
1397	Viscosity-controlled printing of supramolecular-polymeric hydrogels via dual-enzyme catalysis. 2016 , 4, 6302-6306	17
1396	Differences in time-dependent mechanical properties between extruded and molded hydrogels. 2016 , 8, 035012	24
1395	An integrated design and fabrication strategy for entirely soft, autonomous robots. 2016 , 536, 451-5	1073
1394	Cell sheet mechanics: How geometrical constraints induce the detachment of cell sheets from concave surfaces. 2016 , 45, 85-97	24

1393	Electrophoretic hydrogel adhesion for fabrication of three-dimensional materials. 2016 , 48, 1095-1101	10
1392	Solid organ fabrication: comparison of decellularization to 3D bioprinting. 2016 , 20, 27	63
1391	Applications of 3D printing technologies in oceanography. 2016 , 17, 97-117	55
1390	3D Bioprinting of Spatially Heterogeneous Collagen Constructs for Cartilage Tissue Engineering. 2016 , 2, 1800-1805	216
1389	3D Bioprinting Using a Templated Porous Bioink. 2016 , 5, 1724-30	118
1388	Hydrogel-based reinforcement of 3D bioprinted constructs. 2016 , 8, 035004	63
1387	Adding Biomolecular Recognition Capability to 3D Printed Objects. 2016 , 88, 10767-10772	40
1386	3D Printing Variable Stiffness Foams Using Viscous Thread Instability. 2016 , 6, 29996	17
1385	Engineering complex tissue-like microgel arrays for evaluating stem cell differentiation. 2016 , 6, 30445	27
1384	3D Printed Microfluidic Device with Microporous MnO-Modified Screen Printed Electrode for Real-Time Determination of Heavy Metal Ions. 2016 , 8, 32940-32947	57
1383	Computer-aided multiple-head 3D printing system for printing of heterogeneous organ/tissue constructs. 2016 , 6, 21685	70
1382	Stem cell bioprinting for applications in regenerative medicine. 2016 , 1383, 115-124	31
1381	Smart three-dimensional lightweight structure triggered from a thin composite sheet via 3D printing technique. 2016 , 6, 22431	123
1380	Multifunctional 3D printing of heterogeneous hydrogel structures. 2016 , 6, 33178	42
1379	Self-assembling extracellular matrix proteins as materials for the condensation of silica nanostructures. 2016 , 6, 95337-95341	
1378	Bone Tissue Engineering Incorporating Poly(Propylene Fumarate) Composites: A Mini Review. 2016 , 06, 1642011	2
1377	The design of reversible hydrogels to capture extracellular matrix dynamics. 2016 , 1,	406
1376	Recent advances in bioprinting techniques: approaches, applications and future prospects. 2016 , 14, 271	271

1375	Design and Printing Strategies in 3D Bioprinting of Cell-Hydrogels: A Review. 2016 , 5, 2856-2865	194
1374	Skin-inspired hydrogel-elastomer hybrids with robust interfaces and functional microstructures. 2016 , 7, 12028	486
1373	Bioprinting of 3D Convulated Renal Proximal Tubules on Perfusable Chips. 2016 , 6, 34845	371
1372	Three-dimensional printed polymeric system to encapsulate human mesenchymal stem cells differentiated into islet-like insulin-producing aggregates for diabetes treatment. 2016 , 7, 2041731416638198 ³⁰	
1371	Advances in printing biomaterials and living cells: implications for islet cell transplantation. 2016 , 21, 467-75	22
1370	Automated Robotic Dispensing Technique for Surface Guidance and Bioprinting of Cells. 2016 ,	7
1369	LumeNEXT: A Practical Method to Pattern Luminal Structures in ECM Gels. 2016 , 5, 198-204	64
1368	Development of 3D Microvascular Networks Within Gelatin Hydrogels Using Thermoresponsive Sacrificial Microfibers. 2016 , 5, 781-5	68
1367	3D Printed Vascular Networks Enhance Viability in High-Volume Perfusion Bioreactor. 2016 , 44, 3435-3445	25
1366	A simultaneous 3D printing process for the fabrication of bioceramic and cell-laden hydrogel core/shell scaffolds with potential application in bone tissue regeneration. 2016 , 4, 4707-4716	72
1365	Microstructural characterization of additively manufactured multi-directional preforms and composites via X-ray micro-computed tomography. 2016 , 131, 48-60	39
1364	Bioprinting the Cancer Microenvironment. 2016 , 2, 1710-1721	148
1363	One-step fabrication of an organ-on-a-chip with spatial heterogeneity using a 3D bioprinting technology. 2016 , 16, 2618-25	210
1362	Organ-on-a-Chip Systems: Microengineering to Biomimic Living Systems. 2016 , 12, 2253-82	176
1361	The Application of Nanotechnology for Implant Drug Release. 2016 , 311-342	
1360	Programming Mechanical and Physicochemical Properties of 3D Hydrogel Cellular Microcultures via Direct Ink Writing. 2016 , 5, 1025-39	29
1359	Guided Homing of Cells in Multi-Photon Microfabricated Bioscaffolds. 2016 , 5, 1233-43	31
1358	3D Bioprinting of Tissue/Organ Models. 2016 , 55, 4650-65	164

1357	Standardized 3D Bioprinting of Soft Tissue Models with Human Primary Cells. 2016 , 21, 496-509	72
1356	Development of a 3D cell printed construct considering angiogenesis for liver tissue engineering. 2016 , 8, 015007	151
1355	A Role for 3D Printing in Kidney-on-a-Chip Platforms. 2016 , 3, 82-92	30
1354	Advancing the field of 3D biomaterial printing. 2016 , 11, 014102	118
1353	Challenging Regeneration to Transform Medicine. 2016 , 5, 1-7	27
1352	Prevascularization in tissue engineering: Current concepts and future directions. 2016 , 34, 112-21	164
1351	Protein-Based Hydrogels. 2016 , 73-104	5
1350	A Solvent and Initiator Free, Low-Modulus, Degradable Polyester Platform with Modular Functionality for Ambient-Temperature 3D Printing. 2016 , 49, 2429-2437	30
1349	Hierarchically Structured Porous Poly(2-oxazoline) Hydrogels. 2016 , 37, 93-99	27
1348	A Review of Three-Dimensional Printing in Tissue Engineering. 2016 , 22, 298-310	216
1347	Gelatin-Methacryloyl Hydrogels: Towards Biofabrication-Based Tissue Repair. 2016 , 34, 394-407	411
1346	3D Printing for Liver Tissue Engineering: Current Approaches and Future Challenges. 2016 , 3, 100-108	22
1345	Biomaterials for pluripotent stem cell engineering: From fate determination to vascularization. 2016 , 4, 3454-3463	13
1344	Bio-inspired 3D microenvironments: a new dimension in tissue engineering. 2016 , 11, 022001	66
1343	Low temperature additive manufacturing of three dimensional scaffolds for bone-tissue engineering applications: Processing related challenges and property assessment. 2016 , 103, 1-39	142
1342	Biodegradable scaffold with built-in vasculature for organ-on-a-chip engineering and direct surgical anastomosis. 2016 , 15, 669-78	354
1341	Three-dimensional bioprinting of thick vascularized tissues. 2016 , 113, 3179-84	927
1340	Direct 3D-printing of cell-laden constructs in microfluidic architectures. 2016 , 16, 1430-8	40

1339	From clinical imaging to implantation of 3D printed tissues. 2016 , 34, 295-6	15
1338	Centimeter-sized biomimetic bone constructs fabricated via CBD-BMP2-collagen microcarriers and BMSC-gelatin microspheres. 2016 , 4, 461-470	4
1337	Biomaterials and emerging anticancer therapeutics: engineering the microenvironment. 2016 , 16, 56-66	266
1336	Biofabrication of bone tissue: approaches, challenges and translation for bone regeneration. 2016 , 83, 363-82	374
1335	3D bioprinting for engineering complex tissues. 2016 , 34, 422-434	861
1334	3D Bioprinting Technologies for Cellular Engineering. 2016 , 69-89	2
1333	In Vivo Anastomosis and Perfusion of a Three-Dimensionally-Printed Construct Containing Microchannel Networks. 2016 , 22, 1-7	49
1332	A review of hydrogel-based composites for biomedical applications: enhancement of hydrogel properties by addition of rigid inorganic fillers. 2016 , 51, 271-310	173
1331	Stem Cells in Skin Wound Healing: Are We There Yet?. 2016 , 5, 164-175	77
1330	Current state of 3D printing in tissue engineering. 2017 , 1, 77-79	1
1329	Bioprinting of polymer microparticles, cells and a protein at ambient conditions. 2017 , 1, 81-83	1
1328	3D-Printing Technologies for Craniofacial Rehabilitation, Reconstruction, and Regeneration. 2017 , 45, 45-57	96
1327	3D Printing of Tissue Engineered Constructs for In Vitro Modeling of Disease Progression and Drug Screening. 2017 , 45, 164-179	102
1326	3D Bioprinting for Tissue and Organ Fabrication. 2017 , 45, 148-163	368
1325	Bioprinting: an assessment based on manufacturing readiness levels. 2017 , 37, 333-354	23
1324	3D Bioprinting for Vascularized Tissue Fabrication. 2017 , 45, 132-147	130
1323	Current research directions in 3D printing in medicine. 2017 , 1, 5-7	6
1322	State-of-the-Art Review of 3D Bioprinting for Cardiovascular Tissue Engineering. 2017 , 45, 195-209	193

1321	Three-Dimensional Printing of Tissue/Organ Analogues Containing Living Cells. 2017 , 45, 180-194	50
1320	Fabrication of capillary-like structures with Pluronic F127 and Kerria lacca resin (shellac) in biocompatible tissue-engineered constructs. 2017 , 11, 2388-2397	8
1319	(Re)Building a Kidney. 2017 , 28, 1370-1378	42
1318	3D Bioprinting of Vessel-like Structures with Multilevel Fluidic Channels. 2017 , 3, 399-408	132
1317	Tissue engineering by decellularization and 3D bioprinting. 2017 , 20, 166-178	142
1316	Macroporous Hydrogel Scaffolds for Three-Dimensional Cell Culture and Tissue Engineering. 2017 , 23, 451-461	61
1315	From Microscale Devices to 3D Printing: Advances in Fabrication of 3D Cardiovascular Tissues. 2017 , 120, 150-165	61
1314	3D bioprinting: improving in vitro models of metastasis with heterogeneous tumor microenvironments. 2017 , 10, 3-14	98
1313	3D Printing of Transparent and Conductive Heterogeneous Hydrogel-Elastomer Systems. <i>Advanced Materials</i> , 2017 , 29, 1604827	24 280
1312	Bioprinting for vascular and vascularized tissue biofabrication. 2017 , 51, 1-20	240
1311	Current Progress in Bioprinting. 2017 , 227-259	4
1310	Biomaterials Based Strategies for Engineering Tumor Microenvironment. 2017 , 301-361	
1309	Extrusion-based 3D printing of poly(propylene fumarate) scaffolds with hydroxyapatite gradients. 2017 , 28, 532-554	83
1308	A review of 3D-printed sensors. 2017 , 52, 623-652	63
1307	Direct 3D bioprinting of prevascularized tissue constructs with complex microarchitecture. 2017 , 124, 106-115	313
1306	Gold Nanocomposite Bioink for Printing 3D Cardiac Constructs. 2017 , 27, 1605352	173
1305	A computational approach to modeling cellular-scale blood flow in complex geometry. 2017 , 334, 280-307	53
1304	Development of hydrogels for regenerative engineering. 2017 , 12, 1600394	104

1303	Direct Writing of Flexible Barium Titanate/Polydimethylsiloxane 3D Photonic Crystals with Mechanically Tunable Terahertz Properties. 2017 , 5, 1600977	20
1302	Development of Liver Decellularized Extracellular Matrix Bioink for Three-Dimensional Cell Printing-Based Liver Tissue Engineering. 2017 , 18, 1229-1237	172
1301	Thin polymeric films for building biohybrid microrobots. 2017 , 12, 021001	14
1300	Bioinspired vascular structures via 3D printing and suspended microfluidics. 2017 ,	3
1299	Temperature effect on the complex formation between Pluronic F127 and starch. 2017 , 166, 264-270	6
1298	Kidney Organoids: A Translational Journey. 2017 , 23, 246-263	82
1297	Interplay between materials and microfluidics. 2017 , 2,	179
1296	Advanced biomaterials and microengineering technologies to recapitulate the stepwise process of cancer metastasis. 2017 , 133, 176-207	65
1295	Inner Workings: 3D printer innovations tackle complexity of metamaterials, living tissue. 2017 , 114, 4034-4036	2
1294	Microphysiological Human Brain and Neural Systems-on-a-Chip: Potential Alternatives to Small Animal Models and Emerging Platforms for Drug Discovery and Personalized Medicine. 2017 , 13, 381-406	68
1293	Current developments in 3D bioprinting for tissue engineering. 2017 , 2, 76-82	23
1292	A bioprosthetic ovary created using 3D printed microporous scaffolds restores ovarian function in sterilized mice. 2017 , 8, 15261	281
1291	3D bioprinting of soft materials-based regenerative vascular structures and tissues. 2017 , 123, 279-291	46
1290	3D Bioprinting for Cardiovascular Tissue Engineering. 2017 , 167-182	8
1289	Extrusion Bioprinting of Shear-Thinning Gelatin Methacryloyl Bioinks. 2017 , 6, 1601451	233
1288	Building better bone: The weaving of biologic and engineering strategies for managing bone loss. 2017 , 35, 1855-1864	19
1287	Advances in engineering hydrogels. 2017 , 356,	1161
1286	3D Printed Stretchable Tactile Sensors. <i>Advanced Materials</i> , 2017 , 29, 1701218	24 249

1285	Generation and manipulation of hydrogel microcapsules by droplet-based microfluidics for mammalian cell culture. 2017 , 17, 1913-1932	72
1284	Skin integrated with perfusable vascular channels on a chip. 2017 , 116, 48-56	132
1283	4D bioprinting: the next-generation technology for biofabrication enabled by stimuli-responsive materials. 2016 , 9, 012001	190
1282	Stimuli-Responsive Adhesion for 3D Fabrication of Hydrogels. 2017 , 255-267	
1281	Dynamic Coordination Chemistry Enables Free Directional Printing of Biopolymer Hydrogel. 2017 , 29, 5816-5823	87
1280	New Advances Push Engineered Tissues Toward 3-D: Multidisciplinary Collaboration is Key to the Success of Regenerative Medicine. 2017 , 8, 25-30	
1279	Cross-linkable multi-stimuli responsive hydrogel inks for direct-write 3D printing. 2017 , 8, 4199-4206	42
1278	Recent progress in fabrication and application of polydimethylsiloxane sponges. 2017 , 5, 16467-16497	136
1277	Bioprinted Osteogenic and Vasculogenic Patterns for Engineering 3D Bone Tissue. 2017 , 6, 1700015	222
1276	3D printing for the development of in vitro cancer models. 2017 , 2, 35-42	30
1275	Tubulogenesis of co-cultured human iPS-derived endothelial cells and human mesenchymal stem cells in fibrin and gelatin methacrylate gels. 2017 , 5, 1652-1660	30
1274	Engineering the vasculature with additive manufacturing. 2017 , 2, 1-13	36
1273	3D Printing by Multiphase Silicone/Water Capillary Inks. <i>Advanced Materials</i> , 2017 , 29, 1701554	24 109
1272	Organ-on-a-chip devices advance to market. 2017 , 17, 2395-2420	224
1271	Current and emerging applications of 3D printing in medicine. 2017 , 9, 024102	252
1270	'Printability' of Candidate Biomaterials for Extrusion Based 3D Printing: State-of-the-Art. 2017 , 6, 1700264	178
1269	Structural analysis of photocrosslinkable methacryloyl-modified protein derivatives. 2017 , 139, 163-171	96
1268	3D bioprinting for reconstructive surgery: Principles, applications and challenges. 2017 , 70, 1155-1170	62

1267	Comparison of biomaterial-dependent and -independent bioprinting methods for cardiovascular medicine. 2017 , 2, 124-131	14
1266	Emerging Biofabrication Strategies for Engineering Complex Tissue Constructs. <i>Advanced Materials</i> , 2017 , 29, 1606061	24 209
1265	3D Printing of a Double Network Hydrogel with a Compression Strength and Elastic Modulus Greater than those of Cartilage. 2017 , 3, 863-869	82
1264	A large-scale double-stage-screw 3D printer for fused deposition of plastic pellets. 2017 , 134, 45147	36
1263	Assembly of Heterogeneous Materials for Biology and Electronics: From Bio-Inspiration to Bio-Integration. 2017 , 139,	12
1262	3D Printing of Biosamples: A Concise Review. 2017 , 05, 1740002	
1261	3D bioprinting from the micrometer to millimeter length scales: Size does matter. 2017 , 1, 31-37	28
1260	Bioprinters in Use Today. 2017 , 65-80	
1259	Tissue Engineering of Renal Tissue (Kidney). 2017 , 575-602	
1258	Bionics in Tissue Engineering. 2017 , 677-699	1
1257	Printing, folding and assembly methods for forming 3D mesostructures in advanced materials. 2017 , 2,	372
1256	Bone Regenerative Medicine in Oral and Maxillofacial Region Using a Three-Dimensional Printer. 2017 , 23, 515-521	17
1255	Feasibility of fabricating personalized 3D-printed bone grafts guided by high-resolution imaging. 2017 ,	1
1254	Design of a 3D printer head for additive manufacturing of sugar glass for tissue engineering applications. 2017 , 15, 29-39	36
1253	Constructing Tissue-like Complex Structures Using Cell-Laden DNA Hydrogel Bricks. 2017 , 9, 12311-12315	39
1252	Advances in on-chip vascularization. 2017 , 12, 285-302	81
1251	Principles of the Kenzan Method for Robotic Cell Spheroid-Based Three-Dimensional Bioprinting. 2017 , 23, 237-244	164
1250	Direct-Write Fabrication of 4D Active Shape-Changing Structures Based on a Shape Memory Polymer and Its Nanocomposite. 2017 , 9, 876-883	241

1249	Additive Manufacturing of Vascular Grafts and Vascularized Tissue Constructs. 2017 , 23, 436-450	49
1248	3D Bioprinting for Organ Regeneration. 2017 , 6, 1601118	254
1247	Recent advances in cell-laden 3D bioprinting: materials, technologies and applications. 2017 , 1, 245-268	5
1246	Bioprinting and Biofabrication with Peptide and Protein Biomaterials. 2017 , 1030, 95-129	10
1245	Recombinant spider silk-based bioinks. 2017 , 9, 044104	40
1244	Functional and Biomimetic Materials for Engineering of the Three-Dimensional Cell Microenvironment. 2017 , 117, 12764-12850	408
1243	4D Biofabrication Using Shape-Morphing Hydrogels. <i>Advanced Materials</i> , 2017 , 29, 1703443	24 216
1242	Printing@Clinic: From Medical Models to Organ Implants. 2017 , 3, 3083-3097	16
1241	Image-guided, Laser-based Fabrication of Vascular-derived Microfluidic Networks. 2017 ,	6
1240	Concise Review: Bioprinting of Stem Cells for Transplantable Tissue Fabrication. 2017 , 6, 1940-1948	92
1239	3D-Printed Self-Folding Electronics. 2017 , 9, 32290-32298	69
1238	Porous Stimuli-Responsive Self-Folding Electrospun Mats for 4D Biofabrication. 2017 , 18, 3178-3184	40
1237	3D reactive inkjet printing of polydimethylsiloxane. 2017 , 5, 9733-9743	32
1236	Quantitative criteria to benchmark new and existing bio-inks for cell compatibility. 2017 , 9, 044102	76
1235	Three-Dimensional Printing and Angiogenesis: Tailored Agarose-Type I Collagen Blends Comprise Three-Dimensional Printability and Angiogenesis Potential for Tissue-Engineered Substitutes. 2017 , 23, 604-615	71
1234	Microfluidic Bioprinting for Engineering Vascularized Tissues and Organoids. 2017 ,	19
1233	3D Printing for Cell Therapy Applications. 2017 , 227-248	4
1232	The development of cell-initiated degradable hydrogel based on methacrylated alginate applicable to multiple microfabrication technologies. 2017 , 5, 8060-8069	19

1231	Induced Pluripotent Stem Cell Therapy and Safety Concerns in Age-Related Chronic Neurodegenerative Diseases. 2017 , 23-65	
1230	Tissue engineering of urethra: Systematic review of recent literature. 2017 , 242, 1772-1785	4
1229	Visible light-based stereolithography bioprinting of cell-adhesive gelatin hydrogels. 2017 , 2017, 1599-1602	22
1228	Concise Review: Kidney Generation with Human Pluripotent Stem Cells. 2017 , 35, 2209-2217	29
1227	Acoustofluidic waveguides for localized control of acoustic wavefront in microfluidics. 2017 , 21, 1	19
1226	Matrix-Assisted Three-Dimensional Printing of Cellulose Nanofibers for Paper Microfluidics. 2017 , 9, 26438-26446	37
1225	Bioprinting: uncovering the utility layer-by-layer. 2017 , 1, 165-179	8
1224	Chitosan: Application in tissue engineering and skin grafting. 2017 , 24, 1	57
1223	3D Printed Silicones with Shape Memory. 2017 , 7, 4664	34
1222	3D bioprinting and the current applications in tissue engineering. 2017 , 12, 1600734	110
1221	Spatially and Temporally Controlled Hydrogels for Tissue Engineering. 2017 , 119, 1-35	115
1220	High-Resolution Patterned Cellular Constructs by Droplet-Based 3D Printing. 2017 , 7, 7004	105
1219	Microfluidic modeling of the biophysical microenvironment in tumor cell invasion. 2017 , 17, 3221-3233	36
1218	Engineering-derived approaches for iPSC preparation, expansion, differentiation and applications. 2017 , 9, 032001	16
1217	Methodology for Image-driven High-resolution Additive Manufacturing Using Discretized Data Set. 2017 , 65, 139-144	
1216	High-resolution 3D Bioprinting System for Fabricating Cell-laden Hydrogel Scaffolds with High Cellular Activities. 2017 , 65, 219-224	15
1215	Bioprinting Complex 3D Tissue and Organs. 2017 , 957-971	7
1214	Bioprinting of three-dimensional culture models and organ-on-a-chip systems. 2017 , 42, 593-599	9

1213	Three-dimensional printing with sacrificial materials for soft matter manufacturing. 2017 , 42, 571-577	77
1212	Hydrogel scaffolds for differentiation of adipose-derived stem cells. 2017 , 46, 6255-6275	156
1211	Spatiotemporal hydrogel biomaterials for regenerative medicine. 2017 , 46, 6532-6552	235
1210	GelMA-collagen blends enable drop-on-demand 3D printability and promote angiogenesis. 2017 , 9, 045002	96
1209	Toward next-generation bioinks: Tuning material properties pre- and post-printing to optimize cell viability. 2017 , 42, 563-570	25
1208	Advances in bioprinted cell-laden hydrogels for skin tissue engineering. 2017 , 2, 1	50
1207	3D Bioprinting for Cartilage and Osteochondral Tissue Engineering. 2017 , 6, 1700298	158
1206	The bio in the ink: cartilage regeneration with bioprintable hydrogels and articular cartilage-derived progenitor cells. 2017 , 61, 41-53	176
1205	Fabrication of arbitrary 3D components in cardiac surgery: from macro-, micro- to nanoscale. 2017 , 9, 032002	49
1204	Comparative study of gelatin methacrylate hydrogels from different sources for biofabrication applications. 2017 , 9, 044101	54
1203	A highly printable and biocompatible hydrogel composite for direct printing of soft and perfusable vasculature-like structures. 2017 , 7, 16902	98
1202	A Review on the 3D Printing of Functional Structures for Medical Phantoms and Regenerated Tissue and Organ Applications. 2017 , 3, 653-662	58
1201	Monomer diffusion into static and evolving polymer networks during frontal photopolymerisation. 2017 , 13, 9199-9210	10
1200	Hybrid Protein-Glycosaminoglycan Hydrogels Promote Chondrogenic Stem Cell Differentiation. 2017 , 2, 7609-7620	26
1199	Stereolithographic hydrogel printing of 3D culture chips with biofunctionalized complex 3D perfusion networks. 2017 , 17, 4273-4282	80
1198	Magnetically-guided assembly of microfluidic fibers for ordered construction of diverse netlike modules. 2017 , 27, 125014	4
1197	Freeform micropatterning of living cells into cell culture medium using direct inkjet printing. 2017 , 7, 14610	56
1196	3D Printed Photoresponsive Devices Based on Shape Memory Composites. <i>Advanced Materials</i> , 2017 , 29, 1701627	24 257

1195	Hyperactive FOXO1 results in lack of tip stalk identity and deficient microvascular regeneration during kidney injury. 2017 , 141, 314-329	21
1194	Bio-inks for 3D bioprinting: recent advances and future prospects. 2017 , 8, 4451-4471	189
1193	Effect of layer thickness on irreversible thermal expansion and interlayer strength in fused deposition modeling. 2017 , 23, 943-953	38
1192	Coculture of mesenchymal stem cells and endothelial cells enhances host tissue integration and epidermis maturation through AKT activation in gelatin methacryloyl hydrogel-based skin model. 2017 , 59, 317-326	42
1191	Study of Layer Formation During Droplet-Based Three-Dimensional Printing of Gel Structures. 2017 , 139,	2
1190	Biodegradable Strain-Promoted Click Hydrogels for Encapsulation of Drug-Loaded Nanoparticles and Sustained Release of Therapeutics. 2017 , 18, 2277-2285	25
1189	Current progresses of 3D bioprinting based tissue engineering. 2017 , 5, 136-142	8
1188	A Thermogelling Supramolecular Hydrogel with Sponge-Like Morphology as a Cytocompatible Bioink. 2017 , 18, 2161-2171	69
1187	Fundamentals of Scaffolds Fabrication Using Low Temperature Additive Manufacturing. 2017 , 127-173	2
1186	Bioprinting of Thermoresponsive Hydrogels for Next Generation Tissue Engineering: A Review. 2017 , 302, 1600266	109
1185	Rapid Continuous Multimaterial Extrusion Bioprinting. <i>Advanced Materials</i> , 2017 , 29, 1604630	24 205
1184	Challenges in engineering large customized bone constructs. 2017 , 114, 1129-1139	32
1183	Bioinks for biofabrication: current state and future perspectives. 2017 , 1, 49-62	20
1182	The Replicator: Maybe You Can Have Everything. 2017 , 67-101	
1181	Bioresorbable polymers for bioprinting applications. 2017 , 331-362	1
1180	Contextual Control of Adipose-Derived Stem Cell Function: Implications for Engineered Tumor Models. 2017 , 3, 1483-1493	6
1179	Direct Production of Human Cardiac Tissues by Pluripotent Stem Cell Encapsulation in Gelatin Methacryloyl. 2017 , 3, 1499-1509	27
1178	Biotechnological Management of Skin Burn Injuries: Challenges and Perspectives in Wound Healing and Sensory Recovery. 2017 , 23, 59-82	28

1177	Adsorption of poly(ethylene oxide)-containing amphiphilic polymers on solid-liquid interfaces: Fundamentals and applications. 2017 , 244, 132-163	51
1176	Combining mechanical foaming and thermally induced phase separation to generate chitosan scaffolds for soft tissue engineering. 2017 , 28, 207-226	23
1175	In situ functionalization of scaffolds during extrusion-based 3D plotting using a piezoelectric nanoliter pipette. 2017 , 1, 25-29	6
1174	Three-Dimensional Printing and Its Applications in Otorhinolaryngology-Head and Neck Surgery. 2017 , 156, 999-1010	88
1173	Concise Review: Organ Engineering: Design, Technology, and Integration. 2017 , 35, 51-60	43
1172	LuBan. 2017 ,	5
1171	3D Printed, Microgroove Pattern-Driven Generation of Oriented Ligamentous Architectures. 2017 , 18,	24
1170	Gelatin-Based Hydrogels for Organ 3D Bioprinting. 2017 , 9,	108
1169	Patient specific in situ 3D printing. 2017 , 91-113	6
1168	Engineering Niches for Blood Vessel Regeneration. 2017 , 479-497	
1167	Metallic Biomaterials: Current Challenges and Opportunities. 2017 , 10,	258
1166	The Emerging Frontiers and Applications of High-Resolution 3D Printing. 2017 , 8, 113	102
1165	3D Printing of Artificial Blood Vessel: Study on Multi-Parameter Optimization Design for Vascular Molding Effect in Alginate and Gelatin. 2017 , 8,	22
1164	Roadmap to Organ Printing. 2017 , 243-269	1
1163	3D Printing of Organs-On-Chips. 2017 , 4,	100
1162	5.14 Biofabrication in Tissue Engineering. 2017 , 236-266	22
1161	Materials for Use in Bioprinting. 2017 , 81-94	
1160	Vascularization. 2017 , 367-383	1

1159	3D Cell Printed Tissue Analogues: A New Platform for Theranostics. 2017 , 7, 3118-3137	81
1158	2.9 Materials as Artificial Stem Cell Microenvironments ?. 2017 , 179-201	
1157	The recent development and applications of fluidic channels by 3D printing. 2017 , 24, 80	25
1156	3D Bioprinting in Transplantation. 2017 , 261-276	0
1155	Three-dimensional bio-printing: A new frontier in oncology research. 2017 , 8, 21-36	41
1154	A Comprehensive Systematic Study on Thermoresponsive Gels: Beyond the Common Architectures of Linear Terpolymers. 2017 , 9,	17
1153	Bioengineered models of thrombosis: methods and techniques. 2017 , 7, S329-S335	15
1152	Nanoengineered Ionic-Covalent Entanglement (NICE) Bioinks for 3D Bioprinting. 2018 , 10, 9957-9968	134
1151	3D bioprinting: an emerging technology full of opportunities and challenges. 2018 , 1, 2-13	78
1150	3D bioprinting for biomedical devices and tissue engineering: A review of recent trends and advances. 2018 , 3, 144-156	510
1149	Tissue and Organ 3D Bioprinting. 2018 , 23, 301-314	51
1148	Soft Somatosensitive Actuators via Embedded 3D Printing. <i>Advanced Materials</i> , 2018 , 30, e1706383	24 248
1147	Bioinks for 3D bioprinting: an overview. 2018 , 6, 915-946	488
1146	Powder bed binder jetting additive manufacturing of silicone structures. 2018 , 21, 112-124	13
1145	Vascular Tissue Engineering: Progress, Challenges, and Clinical Promise. 2018 , 22, 340-354	185
1144	3D bio-printing technology for body tissues and organs regeneration. 2018 , 42, 187-202	20
1143	3D printing for cardiovascular tissue engineering: a review. 2018 , 33, 433-442	19
1142	Biopolymers and polymers in the search of alternative treatments for meniscal regeneration: State of the art and future trends. 2018 , 12, 51-71	65

1141	Model-guided design and characterization of a high-precision 3D printing process for carbohydrate glass. 2018 , 22, 38-50	20
1140	Construction of Multilayer Porous Scaffold Based on Magnetically Guided Assembly of Microfiber. 2018 , 31, 581-595	1
1139	Hydrogen bonds autonomously powered gelatin methacrylate hydrogels with super-elasticity, self-heal and underwater self-adhesion for sutureless skin and stomach surgery and E-skin. 2018 , 171, 83-96	140
1138	Surgical perspectives regarding application of biomaterials for the management of large congenital diaphragmatic hernia defects. 2018 , 34, 475-489	12
1137	Highly stretchable hydrogels for UV curing based high-resolution multimaterial 3D printing. 2018 , 6, 3246-3253	96
1136	Biopolymer-based strategies in the design of smart medical devices and artificial organs. 2018 , 41, 337-359	29
1135	Principles of three-dimensional printing and clinical applications within the abdomen and pelvis. 2018 , 43, 2809-2822	13
1134	Handheld skin printer: in situ formation of planar biomaterials and tissues. 2018 , 18, 1440-1451	118
1133	Research and development of 3D printed vasculature constructs. 2018 , 10, 032002	22
1132	Iterative feedback bio-printing-derived cell-laden hydrogel scaffolds with optimal geometrical fidelity and cellular controllability. 2018 , 8, 2802	28
1131	3D bioprinting mesenchymal stem cell-laden construct with core-shell nanospheres for cartilage tissue engineering. 2018 , 29, 185101	92
1130	Advanced Microengineered Lung Models for Translational Drug Discovery. 2018 , 23, 777-789	11
1129	Micro and nanotechnologies for bone regeneration: Recent advances and emerging designs. 2018 , 274, 35-55	44
1128	Fabrication of high-performance Al ₂ O ₃ -ZrO ₂ composite by a novel approach that integrates stereolithography-based 3D printing and liquid precursor infiltration. 2018 , 209, 31-37	15
1127	A Novel, Well-Resolved Direct Laser Bioprinting System for Rapid Cell Encapsulation and Microwell Fabrication. 2018 , 7, e1701249	26
1126	Pore Size Manipulation in 3D Printed Cryogels Enables Selective Cell Seeding. 2018 , 3, 1700340	19
1125	Flourishing Bioinspired Antifogging Materials with Superwettability: Progresses and Challenges. <i>Advanced Materials</i> , 2018 , 30, e1704652	24 110
1124	Micro- and Macrobioprinting: Current Trends in Tissue Modeling and Organ Fabrication. 2018 , 2, 1700318	7

1123	Engineering 3D Hydrogels for Personalized In Vitro Human Tissue Models. 2018 , 7, 1701165	57
1122	Hierarchical Design of Tissue Regenerative Constructs. 2018 , 7, e1701067	52
1121	Three-Dimensional Microfibrous Bundle Structure Fabricated Using an Electric Field-Assisted/Cell Printing Process for Muscle Tissue Regeneration. 2018 , 4, 728-738	22
1120	Recent Advances in Extrusion-Based 3D Printing for Biomedical Applications. 2018 , 7, e1701161	164
1119	3D Micropatterned All-Flexible Microfluidic Platform for Microwave-Assisted Flow Organic Synthesis. 2018 , 83, 42-46	16
1118	3D printing technologies for 3D scaffold engineering. 2018 , 203-234	12
1117	3D Bioprinting of Self-Standing Silk-Based Bioink. 2018 , 7, e1701026	140
1116	3D-Printing of Functional Biomedical Microdevices via Light- and Extrusion-Based Approaches. 2018 , 2, 1700277	54
1115	3D printed microfluidics and microelectronics. 2018 , 189, 52-68	124
1114	3D Printing of PDMS Improves Its Mechanical and Cell Adhesion Properties. 2018 , 4, 682-693	75
1113	Breaking the In Vitro Barrier in Respiratory Medicine. Engineered Microphysiological Systems for Chronic Obstructive Pulmonary Disease and Beyond. 2018 , 197, 869-875	13
1112	3D-printing of dynamic self-healing cryogels with tuneable properties. 2018 , 9, 1684-1692	37
1111	Identification of Novel "Inks" for 3D Printing Using High-Throughput Screening: Bioresorbable Photocurable Polymers for Controlled Drug Delivery. 2018 , 10, 6841-6848	36
1110	Three-dimensional extrusion bioprinting of single- and double-network hydrogels containing dynamic covalent crosslinks. 2018 , 106, 865-875	152
1109	Bioprinting of Cartilage and Skin Tissue Analogs Utilizing a Novel Passive Mixing Unit Technique for Bioink Precellularization. 2018 ,	12
1108	Exploiting Advanced Hydrogel Technologies to Address Key Challenges in Regenerative Medicine. 2018 , 7, e1700939	66
1107	Structural, microrheological and kinetic properties of a ternary silica-Pluronic F127-starch thermosensitive system. 2018 , 514, 459-467	2
1106	Bio-printing Technologies. 2018 , 103-168	

1105	Photoreversible Covalent Hydrogels for Soft-Matter Additive Manufacturing. 2018 , 10, 16793-16801	71
1104	3D Bioprinting of Artificial Tissues: Construction of Biomimetic Microstructures. 2018 , 18, e1800034	18
1103	Biofabrication strategies for 3D in vitro models and regenerative medicine. 2018 , 3, 21-37	317
1102	Laser bioprinting of human induced pluripotent stem cells-the effect of printing and biomaterials on cell survival, pluripotency, and differentiation. 2018 , 10, 035005	61
1101	Three-dimensional Printing of Multilayered Tissue Engineering Scaffolds. 2018 , 21, 861-874	93
1100	Generating vascular channels within hydrogel constructs using an economical open-source 3D bioprinter and thermoreversible gels. 2018 , 9, 7-18	23
1099	Toward Immunocompetent 3D Skin Models. 2018 , 7, e1701405	25
1098	3D printing: prospects and challenges. 2018 , 299-379	6
1097	A perspective on the physical, mechanical and biological specifications of bioinks and the development of functional tissues in 3D bioprinting. 2018 , 9, 19-36	68
1096	Tissue Engineering Biomaterials. 2018 , 1-47	1
1095	Three-Dimensional Bioprinting Strategies for Tissue Engineering. 2018 , 8,	43
1094	Endothelial Progenitor Cells for the Vascularization of Engineered Tissues. 2018 , 24, 1-24	91
1093	Bioprinted chitosan-gelatin thermosensitive hydrogels using an inexpensive 3D printer. 2017 , 10, 015002	62
1092	Bioprinting and its applications in tissue engineering and regenerative medicine. 2018 , 107, 261-275	172
1091	Deformation Compensation During Buoyancy-Enabled Inkjet Printing of Three-Dimensional Soft Tubular Structures. 2018 , 140,	3
1090	Assessing bioink shape fidelity to aid material development in 3D bioprinting. 2017 , 10, 014102	153
1089	Printing Polymer Nanocomposites and Composites in Three Dimensions. 2018 , 20, 1700539	41
1088	3D Bioprinting for Tissue Engineering. 2018 , 105-123	4

1087	3D-Bioprinted Osteoblast-Laden Nanocomposite Hydrogel Constructs with Induced Microenvironments Promote Cell Viability, Differentiation, and Osteogenesis both In Vitro and In Vivo. 2018 , 5, 1700550		101
1086	Soft chitosan microbeads scaffold for 3D functional neuronal networks. 2018 , 156, 159-171		40
1085	Mimicking corneal stroma using keratocyte-loaded photopolymerizable methacrylated gelatin hydrogels. 2018 , 12, e1899-e1910		48
1084	Coaxial extrusion bioprinting of 3D microfibrillar constructs with cell-favorable gelatin methacryloyl microenvironments. 2018 , 10, 024102		147
1083	Spatial Patterning of Hydrogels via 3D Covalent Transfer Stamping from a Fugitive Ink. 2018 , 39, 1700564		1
1082	Structured Macroporous Hydrogels: Progress, Challenges, and Opportunities. 2018 , 7, 1700927		84
1081	A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks. <i>Advanced Materials</i> , 2018 , 30, 1704028	24	137
1080	3D bioprinting of liver-mimetic construct with alginate/cellulose nanocrystal hybrid bioink. 2018 , 9, 1-6		104
1079	Inspired by Nature: Hydrogels as Versatile Tools for Vascular Engineering. 2018 , 7, 232-246		28
1078	3D Printing of Living Responsive Materials and Devices. <i>Advanced Materials</i> , 2018 , 30, 1704821	24	182
1077	Bioprinting for Neural Tissue Engineering. 2018 , 41, 31-46		100
1076	3D neural tissue models: From spheroids to bioprinting. 2018 , 154, 113-133		154
1075	Biomaterials-based 3D cell printing for next-generation therapeutics and diagnostics. 2018 , 156, 88-106		150
1074	Embedded Multimaterial Extrusion Bioprinting. 2018 , 23, 154-163		46
1073	In vitro human tissues via multi-material 3-D bioprinting. 2018 , 46, 209-215		10
1072	3D bioprinting for modelling vasculature. 2018 , 2,		30
1071	A vascular fabrication method based on sacrificial material and spraying process. 2018 , 394, 022061		
1070	Engineered circulatory scaffolds for building cardiac tissue. 2018 , 10, S2312-S2328		18

1069	Managing Collaborative Strategy in 3D Bioprinting Technology. 2018,	
1068	Indirect fabrication of versatile 3D microfluidic device by a rotating plate combined 3D printing system.. 2018, 8, 37693-37699	2
1067	Additive manufacturing with stimuli-responsive materials. 2018, 6, 20621-20645	50
1066	Three-dimensional bioprinting for organ bioengineering: promise and pitfalls. 2018, 23, 649-656	7
1065	Rapid Prototyping Method for 3D Printed Biomaterial Constructs with Vascular Structures. 2018, 2018, 5729-5732	
1064	3D Printing Technology for Vascularization. 2018, 121-139	
1063	3D Bioprinting of Breast Cancer Models for Drug Resistance Study. 2018, 4, 4401-4411	56
1062	Microfluidic-Based 3D Engineered Microvascular Networks and Their Applications in Vascularized Microtumor Models. 2018, 9,	52
1061	Effects of extrusion pressure and printing speed of 3D bioprinted construct on the fibroblast cells viability. 2018, 440, 012042	8
1060	Freeform Perfusable Microfluidics Embedded in Hydrogel Matrices. 2018, 11,	13
1059	Stabilization strategies in extrusion-based 3D bioprinting for tissue engineering. 2018, 5, 041112	27
1058	3D printing in cell culture systems and medical applications. 2018, 5, 041109	20
1057	A path for lignin valorization via additive manufacturing of high-performance sustainable composites with enhanced 3D printability. 2018, 4, eaat4967	74
1056	3D and 4D Scaffold-Free Bioprinting. 2018, 317-342	
1055	4D Printing and Its Biomedical Applications. 2018, 343-372	1
1054	Manufacturing of Biomaterials via a 3D Printing Platform. 2018, 81-111	
1053	3D Printing of Scaffolds for Tissue Engineering. 2018,	4
1052	Evaluation of bioink printability for bioprinting applications. 2018, 5, 041304	83

1051	Modulating physical, chemical, and biological properties in 3D printing for tissue engineering applications. 2018 , 5,	17
1050	Water/ice as sprayable sacrificial materials in low-temperature 3D printing for biomedical applications. 2018 , 160, 624-635	4
1049	Biomimetic GelMPC Micropatterns on Titanium and Their Effects on Platelets and Endothelialization. 2018 , 20, 1800624	2
1048	3D bioprinting composite tissue. 2018 , 393-412	2
1047	Applications of Cardiac Extracellular Matrix in Tissue Engineering and Regenerative Medicine. 2018 , 1098, 59-83	9
1046	4D Printing of Complex Structures with a Fast Response Time to Magnetic Stimulus. 2018 , 10, 36435-36442	65
1045	Bio-Based Polymers for 3D Printing of Bioscaffolds. 2018 , 58, 668-687	43
1044	Additive manufacturing of silicone structures: A review and prospective. 2018 , 24, 232-242	57
1043	A Review of Bio-Processing of Blood Vessels Using Natural and Synthetic Materials. 2018 ,	1
1042	3D Bioprinting Technologies for Tissue Engineering Applications. 2018 , 1078, 15-28	28
1041	Review Article: Capturing the physiological complexity of the brain's neuro-vascular unit. 2018 , 12, 051502	10
1040	3D Bioprinting of Adipose-Derived Stem Cells for Organ Manufacturing. 2018 , 1078, 3-14	17
1039	Vessel-on-a-chip with Hydrogel-based Microfluidics. 2018 , 14, e1802368	81
1038	Advances in the Biofabrication of 3D Skin : Healthy and Pathological Models. 2018 , 6, 154	61
1037	From microchannels to microphysiological systems: Development of application specific devices. 2018 , 202, 9-18	6
1036	Recent Progress in Biomimetic Additive Manufacturing Technology: From Materials to Functional Structures. <i>Advanced Materials</i> , 2018 , 30, e1706539	24 194
1035	A Novel Strategy for Creating Tissue-Engineered Biomimetic Blood Vessels Using 3D Bioprinting Technology. 2018 , 11,	41
1034	Bottom-up biofabrication using microfluidic techniques. 2018 , 10, 044103	19

1033	Bioinspired Multi-Activities 4D Printing Objects: A New Approach Toward Complex Tissue Engineering. 2018 , 13, e1800098	23
1032	Multi-length scale bioprinting towards simulating microenvironmental cues. 2018 , 1, 77-88	22
1031	A Methylcellulose Hydrogel as Support for 3D Plotting of Complex Shaped Calcium Phosphate Scaffolds. 2018 , 4,	27
1030	3D biofabrication of vascular networks for tissue regeneration: A report on recent advances. 2018 , 8, 277-296	86
1029	Projection-Based 3D Printing of Cell Patterning Scaffolds with Multiscale Channels. 2018 , 10, 19428-19435	50
1028	Electrochemical printing of calcium alginate/gelatin hydrogel. 2018 , 281, 429-436	31
1027	Solvent-cast 3D printing of polysulfone and polyaniline composites. 2018 , 152, 18-24	18
1026	Pre-set extrusion bioprinting for multiscale heterogeneous tissue structure fabrication. 2018 , 10, 035008	36
1025	3D biofabrication for tubular tissue engineering. 2018 , 1, 89-100	44
1024	Fabrication and Printing of Multi-material Hydrogels. 2018 , 397-430	
1023	Translation and Applications of Biofabrication. 2018 , 451-484	1
1022	Additive Manufacturing for Tissue Engineering. 2018 , 3-54	5
1021	Vascular Networks Within 3D Printed and Engineered Tissues. 2018 , 79-105	1
1020	3D Bioprinting Stem Cell Derived Tissues. 2018 , 11, 219-240	34
1019	4D Biofabrication: Materials, Methods, and Applications. 2018 , 7, e1800412	53
1018	Thermoresponsive Multiblock Copolymers: Chemistry, Properties and Applications. 2018 , 35-65	3
1017	Vascularized microfluidic platforms to mimic the tumor microenvironment. 2018 , 115, 2793-2806	34
1016	Bioprinting of 3D tissues/organs combined with microfluidics.. 2018 , 8, 21712-21727	46

1015	Pharmaceutical Additive Manufacturing: a Novel Tool for Complex and Personalized Drug Delivery Systems. 2018 , 19, 3388-3402		44
1014	Tunable, Flexible Composite Magnets for Marine Monitoring Applications. 2018 , 20, 1800229		11
1013	3D-printed titanium alloys for orthopedic applications. 2018 , 251-275		3
1012	Inorganic-Organic Hybrids for Biomedical Applications. 2018 , 3619-3703		2
1011	Drug delivery for cardiac regeneration. 2018 , 283-321		2
1010	Solution Mask Liquid Lithography (SMaLL) for One-Step, Multimaterial 3D Printing. <i>Advanced Materials</i> , 2018 , 30, e1800364	24	95
1009	3D bioprinting of functional tissue models for personalized drug screening and in vitro disease modeling. 2018 , 132, 235-251		201
1008	Recent advances in inorganic material thermoelectrics. 2018 , 5, 2380-2398		42
1007	A Normalized Trace Geometry Modeling Method with Bulge-Free Analysis for Direct Ink Writing Process Planning. 2018 , 5, 301-310		6
1006	Assessing printability of bioinks. 2018 , 173-189		7
1005	Advances in organ-on-a-chip engineering. 2018 , 3, 257-278		426
1004	Microfabrication of AngioChip, a biodegradable polymer scaffold with microfluidic vasculature. 2018 , 13, 1793-1813		38
1003	A Review of 3D Printing Technology for Medical Applications. 2018 , 4, 729-742		257
1002	Bioprinting of glioma stem cells improves their endotheliogenic potential. 2018 , 171, 629-637		22
1001	Organoids for modeling kidney disease. 2018 , 227-245		2
1000	Fabrication of Stand-Alone Cell-Laden Collagen Vascular Network Scaffolds Using Fugitive Pattern-Based Printing-Then-Casting Approach. 2018 , 10, 28361-28371		14
999	Recent Advances in Biomaterials for 3D Printing and Tissue Engineering. 2018 , 9,		244
998	Multimaterial Cardiovascular Printing. 2018 , 189-210		

997	Mechanical and biological performance of printed alginate/methylcellulose/halloysite nanotube/polyvinylidene fluoride bio-scaffolds. 2018 , 92, 779-789	26
996	Bioprinting of Stem Cells: Interplay of Bioprinting Process, Bioinks, and Stem Cell Properties. 2018 , 4, 3108-3124	23
995	3D bioprinting for scaffold fabrication. 2018 , 89-123	2
994	Introduction to Science and Engineering Principles for the Development of Bioinspired Materials. 2018 , 1-16	
993	Simulating image-guided in situ bioprinting of a skin graft onto a phantom burn wound bed. 2018 , 22, 708-719	16
992	PEO-PPO-PEO Tri-Block Copolymers for Gene Delivery Applications in Human Regenerative Medicine-An Overview. 2018 , 19,	32
991	Novel Biomaterials Used in Medical 3D Printing Techniques. 2018 , 9,	197
990	Additive Manufacturing of Overhang Structures Using Moisture-Cured Silicone with Support Material. 2018 , 2, 24	8
989	Nanogels for Pharmaceutical and Biomedical Applications and Their Fabrication Using 3D Printing Technologies. 2018 , 11,	28
988	3D Printing of Thermoresponsive Polyisocyanide (PIC) Hydrogels as Bioink and Fugitive Material for Tissue Engineering. 2018 , 10,	28
987	Practical laboratory methods for 3D bioprinting. 2018 , 7-32	2
986	3D bioprinting blood vessels. 2018 , 377-391	1
985	Candidate bioinks for 3D bioprinting soft tissue. 2018 , 145-172	6
984	Spider-Inspired Multicomponent 3D Printing Technique for Next-Generation Complex Biofabrication.. 2018 , 1, 502-510	9
983	Preparation and Endothelialization of Multi-level Vessel-like Network in Enzymated Gelatin Scaffolds. 2018 , 15, 673-681	4
982	Sugar glass fugitive ink loaded with calcium chloride for the rapid casting of alginate scaffold designs. 2018 , 4, e00680	6
981	Effect of the pore size in a 3D bioprinted gelatin scaffold on fibroblast proliferation. 2018 , 67, 388-395	25
980	Directed differentiation of human induced pluripotent stem cells into mature kidney podocytes and establishment of a Glomerulus Chip. 2018 , 13, 1662-1685	72

979	Microfluidic fabrication of microparticles for biomedical applications. 2018 , 47, 5646-5683	251
978	Addressing Unmet Clinical Needs with 3D Printing Technologies. 2018 , 7, e1800417	49
977	Materials for 3D Printing Cardiovascular Devices. 2018 , 33-59	
976	4D Printing of Actuating Cardiac Tissue. 2018 , 153-162	16
975	Assessing Perfusion Using 3D Bioprinting. 2018 , 211-226	
974	Hydrogels as a New Platform to Recapitulate the Tumor Microenvironment. 2018 , 463-494	6
973	Visible Light Photoinitiation of Cell-Adhesive Gelatin Methacryloyl Hydrogels for Stereolithography 3D Bioprinting. 2018 , 10, 26859-26869	113
972	Organ-on-Chip Devices Toward Applications in Drug Development and Screening. 2018 , 12,	3
971	3D Printing of Silk Particle-Reinforced Chitosan Hydrogel Structures and Their Properties. 2018 , 4, 3036-3046	60
970	Modeling Neurovascular Disorders and Therapeutic Outcomes with Human-Induced Pluripotent Stem Cells. 2017 , 5, 87	12
969	Current Strategies for the Manufacture of Small Size Tissue Engineering Vascular Grafts. 2018 , 6, 41	93
968	Engineering Breast Cancer Microenvironments and 3D Bioprinting. 2018 , 6, 66	56
967	A review on fabricating tissue scaffolds using vat photopolymerization. 2018 , 74, 90-111	106
966	Functional Polymers and Nanocomposites for 3D Printing of Smart Structures and Devices. 2018 , 10, 17489-17507	113
965	It's All in the Delivery: Designing Hydrogels for Cell and Non-viral Gene Therapies. 2018 , 26, 2087-2106	48
964	Printability Study of Bioprinted Tubular Structures Using Liquid Hydrogel Precursors in a Support Bath. 2018 , 8, 403	57
963	Digitally Tunable Microfluidic Bioprinting of Multilayered Cannular Tissues. <i>Advanced Materials</i> , 2018 , 30, e1706913	24 134
962	3D Bioprinting and its application to organ-on-a-chip. 2018 , 200, 1-11	32

961	Design Principles and Multifunctionality in Cell Encapsulation Systems for Tissue Regeneration. 2018 , 7, e1701444	12
960	Review of 3D printable hydrogels and constructs. 2018 , 159, 20-38	99
959	Reprogrammable 3D Mesostructures Through Compressive Buckling of Thin Films with Prestrained Shape Memory Polymer. 2018 , 31, 589-598	9
958	3D Printed Stem-Cell Derived Neural Progenitors Generate Spinal Cord Scaffolds. 2018 , 28, 1801850	112
957	Engineering cardiac microphysiological systems to model pathological extracellular matrix remodeling. 2018 , 315, H771-H789	15
956	Additive manufacturing for biofabricated medical device applications. 2018 , 311-344	4
955	A New Approach to Design Artificial 3D Microniches with Combined Chemical, Topographical, and Rheological Cues. 2018 , 2, 1700237	9
954	Complex 3D-Printed Microchannels within Cell-Degradable Hydrogels. 2018 , 28, 1801331	111
953	Osteogenic and angiogenic potentials of the cell-laden hydrogel/mussel-inspired calcium silicate complex hierarchical porous scaffold fabricated by 3D bioprinting. 2018 , 91, 679-687	72
952	Simultaneous Micropatterning of Fibrous Meshes and Bioinks for the Fabrication of Living Tissue Constructs. 2019 , 8, e1800418	66
951	Multiscale bioprinting of vascularized models. 2019 , 198, 204-216	118
950	Emerging trends in multiscale modeling of vascular pathophysiology: Organ-on-a-chip and 3D printing. 2019 , 196, 2-17	39
949	Current advances for bone regeneration based on tissue engineering strategies. 2019 , 13, 160-188	22
948	Current Challenges of Bioprinted Tissues Toward Clinical Translation. 2019 , 25, 1-13	18
947	Bioinks for Three-Dimensional Printing in Regenerative Medicine. 2019 , 805-830	3
946	Three-Dimensional Tissue and Organ Printing in Regenerative Medicine. 2019 , 831-852	8
945	Bioengineering Scaffolds for Regenerative Engineering. 2019 , 444-461	1
944	Hydrogel Bioink with Multilayered Interfaces Improves Dispersibility of Encapsulated Cells in Extrusion Bioprinting. 2019 , 11, 30585-30595	21

943	3D Bioprinting Technologies. 2019 , 1-66	1
942	Bioprinting Vasculature. 2019 , 127-148	
941	Architecture-inspired paradigm for 3D bioprinting of vessel-like structures using extrudable carboxylated agarose hydrogels. 2019 , 2, 233-243	9
940	A mechanically robust thixotropic collagen and hyaluronic acid bioink supplemented with gelatin nanoparticles. 2019 , 16, e00058	21
939	Programmed Release of Multimodal, Cross-Linked Vascular Endothelial Growth Factor and Heparin Layers on Electrospun Polycaprolactone Vascular Grafts. 2019 , 11, 32533-32542	25
938	Double-Network Polyurethane-Gelatin Hydrogel with Tunable Modulus for High-Resolution 3D Bioprinting. 2019 , 11, 32746-32757	39
937	Fabrication Techniques for Vascular and Vascularized Tissue Engineering. 2019 , 8, e1900742	35
936	Recent Progress of Direct Ink Writing of Electronic Components for Advanced Wearable Devices. 2019 , 1, 1718-1734	54
935	Potential Clinical Applications of Three-Dimensional Bioprinting. 2019 , 101-125	2
934	3D bioprinted endometrial stem cells on melt electrospun poly ϵ -caprolactone mesh for pelvic floor application promote anti-inflammatory responses in mice. 2019 , 97, 162-176	51
933	Print Me An Organ! Why We Are Not There Yet. 2019 , 97, 101145	109
932	Modular Fabrication of Intelligent Material-Tissue Interfaces for Bioinspired and Biomimetic Devices. 2019 , 106,	48
931	Bioprinting of high cell-density constructs leads to controlled lumen formation with self-assembly of endothelial cells. 2019 , 13, 1883-1895	6
930	Oxygen and nutrient delivery in tissue engineering: Approaches to graft vascularization. 2019 , 13, 1815-1829	45
929	Microrheological characterization of covalent adaptable hydrogels for applications in oral delivery. 2019 , 15, 5921-5932	9
928	Transformable, Freestanding 3D Mesostructures Based on Transient Materials and Mechanical Interlocking. 2019 , 29, 1903181	13
927	High density cell seeding affects the rheology and printability of collagen bioinks. 2019 , 11, 045016	46
926	Polymer Design for 3D Printing Elastomers: Recent Advances in Structure, Properties, and Printing. 2019 , 97, 101144	81

925	Review on biofabrication and applications of heterogeneous tumor models. 2019 , 13, 2101-2120		2
924	3D Bioprinting of Cardiovascular Tissue Constructs: Cardiac Bioinks. 2019 , 63-77		9
923	Improved Resolution and Fidelity of Droplet-Based Bioprinting by Upward Ejection. 2019 , 5, 4112-4121		14
922	Cardiac tissue engineering: state-of-the-art methods and outlook. 2019 , 13, 57		51
921	3D and 4D Printing of Polymers for Tissue Engineering Applications. 2019 , 7, 164		162
920	Bioprinting an Artificial Pancreas for Type 1 Diabetes. 2019 , 19, 53		15
919	Chemical insights into bioinks for 3D printing. 2019 , 48, 4049-4086		84
918	Direct-write and sacrifice-based techniques for vasculatures. 2019 , 104, 109936		9
917	Self-Contained Three-Dimensional Bioprinter for Applications in Cardiovascular Research. 2019 , 13,		1
916	Bioprinting functional tissues. 2019 , 95, 32-49		63
915	Multifunctional Micro/Nanoscale Fibers Based on Microfluidic Spinning Technology. <i>Advanced Materials</i> , 2019 , 31, e1903733	24	73
914	Freeform, Reconfigurable Embedded Printing of All-Aqueous 3D Architectures. <i>Advanced Materials</i> , 2019 , 31, e1904631	24	49
913	Engineering transferrable microvascular meshes for subcutaneous islet transplantation. 2019 , 10, 4602		26
912	Solid matrix-assisted printing for three-dimensional structuring of a viscoelastic medium surface. 2019 , 10, 4650		26
911	A Bifurcated Vascular Channel Construction Method based on Diploic Vein Characteristics. 2019 , 16, 814-827		2
910	Recent advances in biomaterials for 3D scaffolds: A review. 2019 , 4, 271-292		289
909	An unbounded approach to microfluidics using the Rayleigh-Plateau instability of viscous threads directly drawn in a bath. 2019 , 116, 22966-22971		11
908	Design of highly stabilized nanocomposite inks based on biodegradable polymer-matrix and gold nanoparticles for Inkjet Printing. 2019 , 9, 16097		24

907	Micro-/nano-voids guided two-stage film cracking on bioinspired assemblies for high-performance electronics. 2019 , 10, 3862	27
906	Bioprinting Vasculature: Materials, Cells and Emergent Techniques. 2019 , 12,	50
905	Stimuli-responsive hydrogels for manipulation of cell microenvironment: From chemistry to biofabrication technology. 2019 , 98, 101147	80
904	3D-printed nerve conduit with vascular networks to promote peripheral nerve regeneration. 2019 , 133, 109395	0
903	Employing PEG crosslinkers to optimize cell viability in gel phase bioinks and tailor post printing mechanical properties. 2019 , 99, 121-132	20
902	High-speed material jetting additive manufacturing of silicone structures: mechanical characterization. 2019 , 4, 479-495	6
901	The use of bacterial polysaccharides in bioprinting. 2019 , 37, 107448	52
900	3D printing of silk fibroin-based hybrid scaffold treated with platelet rich plasma for bone tissue engineering. 2019 , 4, 256-260	42
899	Precision Printing of Customized Cylindrical Capsules with Multifunctional Layers for Oral Drug Delivery. 2019 , 11, 39179-39191	12
898	Recent Trends in Decellularized Extracellular Matrix Bioinks for 3D Printing: An Updated Review. 2019 , 20,	92
897	3D-printability of aqueous poly(ethylene oxide) gels. 2019 , 120, 109206	4
896	A miniaturized optical tomography platform for volumetric imaging of engineered living systems. 2019 , 19, 550-561	7
895	Medical Applications. 2019 , 215-302	
894	3D Bioprinted In Vitro Metastatic Models via Reconstruction of Tumor Microenvironments. <i>Advanced Materials</i> , 2019 , 31, e1806899	24 105
893	Spatial Regulation of Valve Interstitial Cell Phenotypes within Three-Dimensional Micropatterned Hydrogels. 2019 , 5, 1416-1425	7
892	Polyester-based ink platform with tunable bioactivity for 3D printing of tissue engineering scaffolds. 2019 , 7, 560-570	17
891	Sticky ends in a self-assembling ABA triblock copolymer: the role of ureas in stimuli-responsive hydrogels. 2019 , 4, 91-102	7
890	Molecular Origin of the Induction Period in Photoinitiated Cationic Polymerization of Epoxies and Oxetanes. 2019 , 52, 1158-1165	15

889	Spatiotemporal quantification of acoustic cell patterning using Voronoï tessellation. 2019 , 19, 562-573	20
888	Development and characterization of a low-cost 3D bioprinter. 2019 , 13, e00044	15
887	Mechanics of buckled serpentine structures formed via mechanics-guided, deterministic three-dimensional assembly. 2019 , 125, 736-748	20
886	Direct Writing of Tunable Living Inks for Bioprocess Intensification. 2019 , 19, 5829-5835	50
885	Self-Healing Polymeric Hydrogel Formed by Metal-Ligand Coordination Assembly: Design, Fabrication, and Biomedical Applications. 2019 , 40, e1800837	106
884	Geometric Determinants of In-Situ Direct Laser Writing. 2019 , 9, 394	31
883	Brain Organoids-A Bottom-Up Approach for Studying Human Neurodevelopment. 2019 , 6,	19
882	Recent Strategies in Extrusion-Based Three-Dimensional Cell Printing toward Organ Biofabrication. 2019 , 5, 1150-1169	56
881	Evaluation of Rheological Properties and Cytotoxicity of Bioinks. 2019 , 4, 1275-1283	
880	Gelatin-based micro-hydrogel carrying genetically engineered human endothelial cells for neovascularization. 2019 , 95, 285-296	22
879	Hydrogel bioelectronics. 2019 , 48, 1642-1667	742
878	3D-printable self-healing and mechanically reinforced hydrogels with host-guest non-covalent interactions integrated into covalently linked networks. 2019 , 6, 733-742	90
877	Accurate flow in augmented networks (AFAN): an approach to generating three-dimensional biomimetic microfluidic networks with controlled flow. 2019 , 11, 8-16	6
876	Hectorite: Synthesis, modification, assembly and applications. 2019 , 177, 114-138	30
875	Biofabrication of thick vascularized neo-pedicle flaps for reconstructive surgery. 2019 , 211, 84-122	0
874	Light-Controlled, High-Resolution Patterning of Living Engineered Bacteria Onto Textiles, Ceramics, and Plastic. 2019 , 29, 1901788	44
873	Bioinks and bioprinting technologies to make heterogeneous and biomimetic tissue constructs. 2019 , 1, 100008	198
872	The regenerated silk fibroin hydrogel with designed architecture bioprinted by its microhydrogel. 2019 , 7, 4328-4337	21

871	Dynamic Photomask-Assisted Direct Ink Writing Multimaterial for Multilevel Triboelectric Nanogenerator. 2019 , 29, 1903568	42
870	Highly concentrated graphene oxide ink for facile 3D printing of supercapacitors. 2019 , 1, 142-148	15
869	3D printed coaxial nozzles for the extrusion of hydrogel tubes toward modeling vascular endothelium. 2019 , 11, 045009	30
868	Biofabrication of bacterial nanocellulose scaffolds with complex vascular structure. 2019 , 11, 045010	25
867	Enhanced rheological behaviors of alginate hydrogels with carrageenan for extrusion-based bioprinting. 2019 , 98, 187-194	66
866	Bioprinting of three-dimensional dentin-pulp complex with local differentiation of human dental pulp stem cells. 2019 , 10, 2041731419845849	38
865	Bioprinting of freestanding vascular grafts and the regulatory considerations for additively manufactured vascular prostheses. 2019 , 211, 123-138	9
864	Direct Cryo Writing of Aerogels Via 3D Printing of Aligned Cellulose Nanocrystals Inspired by the Plant Cell Wall. 2019 , 3, 46	28
863	Coupling synthetic biology and programmable materials to construct complex tissue ecosystems. 2019 , 9, 421-432	2
862	3D bioprinting of hepatoma cells and application with microfluidics for pharmacodynamic test of Metuzumab. 2019 , 11, 034102	22
861	Using Sacrificial Cell Spheroids for the Bioprinting of Perfusable 3D Tissue and Organ Constructs: A Computational Study. 2019 , 2019, 7853586	7
860	Engineering stem cell cardiac patch with microvascular features representative of native myocardium. 2019 , 9, 2143-2157	26
859	3D Bioprinting: A Novel Avenue for Manufacturing Tissues and Organs. 2019 , 5, 777-794	74
858	Tissue Engineering of the Microvasculature. 2019 , 9, 1155-1212	9
857	Recent advances in microfluidic technologies for organ-on-a-chip. 2019 , 117, 146-156	40
856	In Operando Monitoring of Dynamic Recovery in 3D-Printed Thermoset Nanocomposites by XPCS. 2019 , 35, 8758-8768	23
855	Scaffolding Strategies for Tissue Engineering and Regenerative Medicine Applications. 2019 , 12,	192
854	Hierarchical cellular scaffolds fabricated via direct foam writing using gelled colloidal particle-stabilized foams as the ink. 2019 , 102, 6498-6506	11

853	A Review of Biological Fluid Power Systems and Their Potential Bionic Applications. 2019 , 16, 367-399	16
852	Engineering the vasculature for islet transplantation. 2019 , 95, 131-151	30
851	Channeled ECM-Based Nanofibrous Hydrogel for Engineering Vascularized Cardiac Tissues. 2019 , 9,	8
850	Dynamic Hydrogels and Polymers as Inks for Three-Dimensional Printing. 2019 , 5, 2688-2707	42
849	OpenLH. 2019 ,	13
848	Programmable Granular Metamaterials for Reusable Energy Absorption. 2019 , 29, 1901258	23
847	Microchannels in Development, Survival, and Vascularisation of Tissue Analogues for Regenerative Medicine. 2019 , 37, 1189-1201	38
846	Microfluidic blood vasculature replicas using backside lithography. 2019 , 19, 2096-2106	33
845	A critical review of current progress in 3D kidney biomanufacturing: advances, challenges, and recommendations. 2019 , 5,	18
844	Generation of Cost-Effective Paper-Based Tissue Models through Matrix-Assisted Sacrificial 3D Printing. 2019 , 19, 3603-3611	30
843	Zero-Support 3D Printing of Thermoset Silicone Via Simultaneous Control of Both Reaction Kinetics and Transient Rheology. 2019 , 6, 139-147	16
842	Techniques and Software Used in 3D Printing for Nanomedicine Applications. 2019 , 23-41	3
841	3D Print Technology for Cell Culturing. 2019 , 83-114	0
840	3D Bioprinting of cardiac tissue and cardiac stem cell therapy. 2019 , 211, 64-83	50
839	De novo lung biofabrication: clinical need, construction methods, and design strategy. 2019 , 211, 1-18	5
838	Engineering complex muscle-tissue interfaces through microfabrication. 2019 , 11, 032004	10
837	3D Bioprinting: from Benches to Translational Applications. 2019 , 15, e1805510	137
836	In Vitro Tissue Construction for Organ-on-a-Chip Applications. 2019 , 247-274	

835	Empowering Mesenchymal Stem Cells for Ocular Degenerative Disorders. 2019 , 20,		11
834	3D Bioprinting for Organs, Skin, and Engineered Tissues. 2019 , 115-128		
833	Artificial Microbial Arenas: Materials for Observing and Manipulating Microbial Consortia. <i>Advanced Materials</i> , 2019 , 31, e1900284	24	18
832	Light-mediated thermoset polymers. 2019 , 57-103		2
831	Chemistry from 3D printed objects. 2019 , 3, 305-314		61
830	Chitosan-based hydrogel to support the paracrine activity of mesenchymal stem cells in spinal cord injury treatment. 2019 , 9, 6402		53
829	A Novel Biodegradable Multilayered Bioengineered Vascular Construct with a Curved Structure and Multi-Branches. 2019 , 10,		7
828	Micro-injection molded, poly(vinyl alcohol)-calcium salt templates for precise customization of 3D hydrogel internal architecture. 2019 , 95, 258-268		12
827	Extrusion bioprinting of soft materials: An emerging technique for biological model fabrication. 2019 , 6, 011310		82
826	3D Printing/Bioprinting Based Tailoring of Tissue Models: Recent Advances and Challenges.. 2019 , 2, 1385-1405		36
825	Applied Bioengineering in Tissue Reconstruction, Replacement, and Regeneration. 2019 , 25, 259-290		9
824	Recent Advances in Additive Manufacturing of Bio-inspired Materials. 2019 , 35-68		13
823	Sustainable Biomass Materials for Biomedical Applications. 2019 , 5, 2079-2092		15
822	3D Printing of Multifunctional Hydrogels. 2019 , 29, 1900971		114
821	Stimuli-responsive materials in additive manufacturing. 2019 , 93, 36-67		96
820	Microparticles in Contact with Cells: From Carriers to Multifunctional Tissue Modulators. 2019 , 37, 1011-1028		51
819	Renal reabsorption in 3D vascularized proximal tubule models. 2019 , 116, 5399-5404		155
818	Engineering biological gradients. 2019 , 17, 2280800019829023		14

817	3D Plotted Biphasic Bone Scaffolds for Growth Factor Delivery: Biological Characterization In Vitro and In Vivo. 2019 , 8, e1801512	30
816	Collagen-based bioinks for hard tissue engineering applications: a comprehensive review. 2019 , 30, 32	81
815	Engineered Tissue Development in Biofabricated 3D Geometrical Confinement-A Review. 2019 , 5, 3688-3702	10
814	3D printing of complex GelMA-based scaffolds with nanoclay. 2019 , 11, 035006	95
813	3D bioprinting of complex channels within cell-laden hydrogels. 2019 , 95, 214-224	55
812	A Facile Strategy for Fabricating Tissue Engineering Scaffolds with Sophisticated Prevascularized Networks for Bulk Tissue Regeneration. 2019 , 304, 1800642	5
811	Resolution and shape in bioprinting: Strategizing towards complex tissue and organ printing. 2019 , 6, 011307	56
810	3D-Printed Microrobotic Transporters with Recapitulated Stem Cell Niche for Programmable and Active Cell Delivery. 2019 , 29, 1808992	66
809	Upgrading prevascularization in tissue engineering: A review of strategies for promoting highly organized microvascular network formation. 2019 , 95, 112-130	40
808	Biomimetic design and fabrication of scaffolds integrating oriented micro-pores with branched channel networks for myocardial tissue engineering. 2019 , 11, 035004	32
807	Emerging Trends in Information-Driven Engineering of Complex Biological Systems. <i>Advanced Materials</i> , 2019 , 31, e1806898	24 6
806	Sacrificial Bioprinting of a Mammary Ductal Carcinoma Model. 2019 , 14, e1700703	12
805	The cell in the ink: Improving biofabrication by printing stem cells for skeletal regenerative medicine. 2019 , 209, 10-24	99
804	Bioprinting of Vascularized Tissue Scaffolds: Influence of Biopolymer, Cells, Growth Factors, and Gene Delivery. 2019 , 2019, 9156921	24
803	Three-Dimensional Printed Polylactic Acid Scaffolds Promote Bone-like Matrix Deposition in Vitro. 2019 , 11, 15306-15315	46
802	Microfluidic bioprinting for organ-on-a-chip models. 2019 , 24, 1248-1257	68
801	Multifunctional Biomedical Adhesives. 2019 , 8, e1801568	64
800	Rapid multi-material 3D printing with projection micro-stereolithography using dynamic fluidic control. 2019 , 27, 606-615	64

799	Smart Polymer Gels: Properties, Synthesis, and Applications. 2019 , 279-321	4
798	3D Printed High-Performance Lithium Metal Microbatteries Enabled by Nanocellulose. <i>Advanced Materials</i> , 2019 , 31, e1807313	24 135
797	Biofabrication: From Additive Manufacturing to Bioprinting. 2019 , 41-41	1
796	Mechanical Metamaterials and Their Engineering Applications. 2019 , 21, 1800864	234
795	Microphysiological Systems as Enabling Tools for Modeling Complexity in the Tumor Microenvironment and Accelerating Cancer Drug Development. 2019 , 29, 1807553	18
794	Advancing Frontiers in Bone Bioprinting. 2019 , 8, e1801048	113
793	Direct writing alginate bioink inside pre-polymers of hydrogels to create patterned vascular networks. 2019 , 54, 7883-7892	16
792	Directed Collective Cell Migration Using Three-Dimensional Bioprinted Micropatterns on Thermoresponsive Surfaces for Myotube Formation. 2019 , 5, 3935-3943	11
791	Organoids - Preclinical Models of Human Disease. 2019 , 380, 569-579	120
790	Applications of stem cells and bioprinting for potential treatment of diabetes. 2019 , 11, 13-32	16
789	Topography-Induced Cell Self-Organization from Simple to Complex Aggregates. 2019 , 15, e1900030	9
788	Flow-enhanced vascularization and maturation of kidney organoids in vitro. 2019 , 16, 255-262	294
787	Microbial transglutaminase induced controlled crosslinking of gelatin methacryloyl to tailor rheological properties for 3D printing. 2019 , 11, 025011	42
786	Multi-step exposure method for improving structure flatness in digital light processing-based printing. 2019 , 39, 106-113	12
785	Bioinspired Self-Healing Liquid Films for Ultradurable Electronics. 2019 , 13, 3225-3231	24
784	Scaling Printable ZnAg ₂ O Batteries for Integrated Electronics. 2019 , 9, 1803645	19
783	Harnessing neurovascular interaction to guide axon growth. 2019 , 9, 2190	10
782	Skin bioprinting: the future of burn wound reconstruction?. 2019 , 7, 4	51

781	Temperature-Mediated Microfluidic Extrusion of Structurally Anisotropic Hydrogels. 2019 , 4, 1800627	11
780	iPSC-Derived Brain Endothelium Exhibits Stable, Long-Term Barrier Function in Perfused Hydrogel Scaffolds. 2019 , 12, 474-487	46
779	Multimaterial actinic spatial control 3D and 4D printing. 2019 , 10, 791	139
778	Emergence of Three Dimensional Printed Cardiac Tissue: Opportunities and Challenges in Cardiovascular Diseases. 2019 , 15, 188-204	6
777	Neural microphysiological systems for in vitro modeling of peripheral nervous system disorders. 2019 , 2, 101-117	6
776	Recent advances in lithographic fabrication of micro-/nanostructured polydimethylsiloxanes and their soft electronic applications. 2019 , 40, 111605	18
775	Cell alignment and accumulation using acoustic nozzle for bioprinting. 2019 , 9, 17774	32
774	Universal Nanocarrier Ink Platform for Biomaterials Additive Manufacturing. 2019 , 15, e1905421	22
773	Voxelated soft matter via multimaterial multinozzle 3D printing. 2019 , 575, 330-335	356
772	Ploxamer Hydrogels for Biomedical Applications. 2019 , 11,	98
771	In Vitro Modeling 3D Tissues and Organs. 2019 , 5-12	
770	A Facile Method to Fabricate Anisotropic Extracellular Matrix with 3D Printing Topological Microfibers. 2019 , 12,	1
769	Microfluidic systems for controlling stem cell microenvironments. 2019 , 31-63	6
768	Design principles for dynamic microphysiological systems. 2019 , 1-29	3
767	Directing the growth and alignment of biliary epithelium within extracellular matrix hydrogels. 2019 , 85, 84-93	21
766	Additive Manufacturing of Biomaterials The Evolution of Rapid Prototyping. 2019 , 21, 1800511	64
765	Controllable fabrication of hydroxybutyl chitosan/oxidized chondroitin sulfate hydrogels by 3D bioprinting technique for cartilage tissue engineering. 2019 , 14, 025006	57
764	Controlled dissolution of freeform 3D printed carbohydrate glass scaffolds in hydrogels using a hydrophobic spray coating. 2019 , 26, 193-201	6

763	Bioartificial Organ Manufacturing Technologies. 2019 , 28, 5-17	24
762	DNA Hybridization to Control Cellular Interactions. 2019 , 44, 342-350	11
761	Challenges and Status on Design and Computation for Emerging Additive Manufacturing Technologies. 2019 , 19,	29
760	Hydrocolloid Inks for 3D Printing of Porous Hydrogels. 2019 , 4, 1800343	11
759	3D Printing of Anisotropic Hydrogels with Bioinspired Motion. 2019 , 6, 1800703	51
758	Cardiac Tissue Engineering. 2019 , 3-33	2
757	Bioprinting in ophthalmology: current advances and future pathways. 2019 , 25, 496-514	32
756	Tissue-informed engineering strategies for modeling human pulmonary diseases. 2019 , 316, L303-L320	14
755	Tissue-mimicking gelatin scaffolds by alginate sacrificial templates for adipose tissue engineering. 2019 , 87, 61-75	46
754	Poly(vinyl alcohol) Nanocrystal-Assisted Hydrogels with High Toughness and Elastic Modulus for Three-Dimensional Printing. 2019 , 2, 707-715	20
753	Additive manufacturing of soft robots. 2019 , 335-359	12
752	Fabrication of centimeter-scale and geometrically arbitrary vascular networks using in vitro self-assembly. 2019 , 189, 37-47	14
751	Gallol-derived ECM-mimetic adhesive bioinks exhibiting temporal shear-thinning and stabilization behavior. 2019 , 95, 165-175	53
750	3D Cell Printing of Perfusable Vascularized Human Skin Equivalent Composed of Epidermis, Dermis, and Hypodermis for Better Structural Recapitulation of Native Skin. 2019 , 8, e1801019	93
749	Engineering Precision Medicine. 2019 , 6, 1801039	38
748	Freestanding 3D Mesostructures, Functional Devices, and Shape-Programmable Systems Based on Mechanically Induced Assembly with Shape Memory Polymers. <i>Advanced Materials</i> , 2019 , 31, e1805615 ²⁴	72
747	Modeling organ-specific vasculature with organ-on-a-chip devices. 2019 , 30, 024002	24
746	Tunable temperature- and shear-responsive hydrogels based on poly(alkyl glycidyl ether)s. 2019 , 68, 1238-1246	14

745	3D-Printed Hydrogel Composites for Predictive Temporal (4D) Cellular Organizations and Patterned Biogenic Mineralization. 2019 , 8, e1800788		17
744	Crushing resistance and energy absorption of pomelo peel inspired hierarchical honeycomb. 2019 , 125, 163-172		69
743	Advances in 4D Printing: Materials and Applications. 2019 , 29, 1805290		354
742	Current Progress in 3D Bioprinting of Tissue Analogs. 2019 , 24, 70-78		27
741	Cardiovascular disease models: A game changing paradigm in drug discovery and screening. 2019 , 198, 3-26		88
740	Smart materials in additive manufacturing: state of the art and trends. 2019 , 14, 1-18		67
739	Perfusive and osmotic capabilities of 3D printed hollow tube for fabricating large-scaled muscle scaffold. 2020 , 26, 1-10		1
738	Hydrogel Adhesion: A Supramolecular Synergy of Chemistry, Topology, and Mechanics. 2020 , 30, 1901693		255
737	4D printing of materials for the future: Opportunities and challenges. 2020 , 18, 100490		81
736	Biomaterials for Personalized Cell Therapy. <i>Advanced Materials</i> , 2020 , 32, e1902005	24	39
735	In vitro and in vivo evaluation of 3D bioprinted small-diameter vasculature with smooth muscle and endothelium. 2019 , 12, 015004		44
734	3D and 4D printing of pH-responsive and functional polymers and their composites. 2020 , 85-117		11
733	Progress in 3D bioprinting technology for tissue/organ regenerative engineering. 2020 , 226, 119536		292
732	Additive Manufacturing of Precision Biomaterials. <i>Advanced Materials</i> , 2020 , 32, e1901994	24	62
731	3D-printable thermochromic acrylic resin with excellent mechanical performance. 2020 , 137, 48277		2
730	Key components of engineering vascularized 3-dimensional bioprinted bone constructs. 2020 , 216, 57-76		47
729	Outlooks on Three-Dimensional Printing for Ocular Biomaterials Research. 2020 , 36, 7-17		11
728	Construction of multi-scale vascular chips and modelling of the interaction between tumours and blood vessels. 2020 , 7, 82-92		29

727	Void-free 3D Bioprinting for In-situ Endothelialization and Microfluidic Perfusion. 2020 , 30, 1908349	50
726	Brain-on-a-chip systems for modeling disease pathogenesis. 2020 , 215-232	5
725	3D Printed Neural Regeneration Devices. 2020 , 30, 1906237	34
724	Rapid Biofabrication of Printable Dense Collagen Bioinks of Tunable Properties. 2020 , 30, 1903874	21
723	Biofabrication for 3D tissue test systems. 2020 , 243-267	2
722	Biomaterial-assisted scalable cell production for cell therapy. 2020 , 230, 119627	12
721	3D Printable Vascular Networks Generated by Accelerated Constrained Constructive Optimization for Tissue Engineering. 2020 , 67, 1650-1663	4
720	Engineering of Hydrogel Materials with Perfusable Microchannels for Building Vascularized Tissues. 2020 , 16, e1902838	63
719	3D and 4D printing of biomaterials and biocomposites, bioinspired composites, and related transformers. 2020 , 467-504	2
718	Endothelialized microrods for minimally invasive in situ neovascularization. 2019 , 12, 015011	5
717	Tissue engineering of retina through high resolution 3-dimensional inkjet bioprinting. 2020 , 12, 025006	33
716	3D-printing of shape-controllable thermoelectric devices with enhanced output performance. 2020 , 195, 116892	13
715	Plasma-digital nexus: plasma nanotechnology for the digital manufacturing age. 2020 , 4, 1	9
714	Multiphasic microgel-in-gel materials to recapitulate cellular mesoenvironments in vitro. 2019 , 8, 101-108	12
713	Cell loaded 3D bioprinted GelMA hydrogels for corneal stroma engineering. 2019 , 8, 438-449	40
712	3D printed tissue and organ using additive manufacturing: An overview. 2020 , 8, 586-594	19
711	Vascularization of tissue-engineered skeletal muscle constructs. 2020 , 235, 119708	31
710	Uniaxial Stretching of Cell-Laden Microfibers for Promoting C2C12 Myoblasts Alignment and Myofibers Formation. 2020 , 12, 2162-2170	16

709	Recent innovations in artificial skin. 2020 , 8, 776-797	22
708	Investigation of gelatin methacrylate working curves in dynamic optical projection stereolithography of vascular-like constructs. 2020 , 124, 109487	14
707	Synchronous 3D Bioprinting of Large-Scale Cell-Laden Constructs with Nutrient Networks. 2020 , 9, e1901142	30
706	Materials and manufacturing perspectives in engineering heart valves: a review. 2020 , 5, 100038	27
705	Enhancement and orchestration of osteogenesis and angiogenesis by a dual-modular design of growth factors delivery scaffolds and 26SCS decoration. 2020 , 232, 119645	29
704	Vascularized Polymers Spatially Control Bacterial Cells on Surfaces. 2020 , 4, e1900216	2
703	Opportunities and challenges of translational 3D bioprinting. 2020 , 4, 370-380	144
702	Advances in Pluripotent Stem Cells: History, Mechanisms, Technologies, and Applications. 2020 , 16, 3-32	151
701	Vascularization in tissue engineering: fundamentals and state-of-art. 2020 , 2,	40
700	3D Bioprinting. 2020 , 177-194	
699	Decellularized extracellular matrix-based bio-ink with enhanced 3D printability and mechanical properties. 2020 , 12, 025003	40
698	Hybrid Cornea: Cell Laden Hydrogel Incorporated Decellularized Matrix. 2020 , 6, 122-133	6
697	3D printing of very soft elastomer and sacrificial carbohydrate glass/elastomer structures for robotic applications. 2020 , 187, 108324	28
696	A 3D printing strategy for fabricating in situ topographical scaffolds using pluronic F-127. 2020 , 32, 101023	9
695	Mechanical structural design based on additive manufacturing and internal reinforcement. 2020 , 234, 417-426	3
694	3D Printed Hydrogel Multiassay Platforms for Robust Generation of Engineered Contractile Tissues. 2020 , 21, 356-365	13
693	Rapid printing of bio-inspired 3D tissue constructs for skin regeneration. 2020 , 258, 120287	48
692	Advances on Bone Substitutes through 3D Bioprinting. 2020 , 21,	42

691	Regulating Dynamics of Polyether-Based Triblock Copolymer Hydrogels by End-Block Hydrophobicity. 2020 , 53, 10339-10348	9
690	Could 3D printing be the future for oral soft tissue regeneration?. 2020 , 20, e00100	9
689	Embedded 3D Bioprinting of Gelatin Methacryloyl-Based Constructs with Highly Tunable Structural Fidelity. 2020 , 12, 44563-44577	29
688	Designing Decellularized Extracellular Matrix-Based Bioinks for 3D Bioprinting. 2020 , 9, e2000734	39
687	Advanced Strategies for the Regeneration of Lumbar Disc Annulus Fibrosus. 2020 , 21,	12
686	3D biofabrication for soft tissue and cartilage engineering. 2020 , 82, 13-39	7
685	Recent progress in the fabrication techniques of 3D scaffolds for tissue engineering. 2020 , 110, 110716	52
684	Ultrastable Plasmonic Bioink for Printable Point-Of-Care Biosensors. 2020 , 12, 35977-35985	9
683	Self-healing biomaterials based on polymeric systems. 2020 , 167-207	1
682	Biofabrication strategies for engineering heterogeneous artificial tissues. 2020 , 36, 101459	6
681	Bioprinting stem cells: building physiological tissues one cell at a time. 2020 , 319, C465-C480	7
680	Hydrogels with Cell Adhesion Peptide-Decorated Channel Walls for Cell Guidance. 2020 , 41, e2000295	4
679	Biomedical Applications of Additive Manufacturing. 2020 , 623-639	3
678	Biomaterials-Based Model Systems to Study Tumor Microenvironment Interactions. 2020 , 1217-1236	1
677	Tissue Engineering Scaffolds. 2020 , 1317-1334	1
676	3D Biofabrication Using Living Cells for Applications in Biohybrid Sensors and Actuators.. 2020 , 3, 8121-8126	1
675	Coaxial 3D bioprinting of organ prototypes from nutrients delivery to vascularization. 2020 , 21, 859-875	4
674	Engineering breast cancer models in vitro with 3D bioprinting. 2020 , 399-425	

673	3D Bioprinting in Tissue Engineering for Medical Applications: The Classic and the Hybrid. 2020 , 12,	36
672	Microfluidic lumen-based systems for advancing tubular organ modeling. 2020 , 49, 6402-6442	28
671	3D Bioprinting of Tumor Models for Cancer Research.. 2020 , 3, 5552-5573	22
670	Integrated design and fabrication strategies for biomechanically and biologically functional PLA/βTCP nanofiber reinforced GelMA scaffold for tissue engineering applications. 2020 , 164, 976-985	9
669	Crosslinking Strategies for 3D Bioprinting of Polymeric Hydrogels. 2020 , 16, e2002931	67
668	Recent progresses of 3D printing technologies for structural energy storage devices. 2020 , 12, 100094	25
667	3D Printing for Bone Regeneration. 2020 , 18, 505-514	15
666	Assessment of coaxial printability for extrusion-based bioprinting of alginate-based tubular constructs. 2020 , 20, e00092	9
665	3D bioprinting for reconstituting the cancer microenvironment. 2020 , 4, 18	70
664	Printed elastic membranes for multimodal pacing and recording of human stem-cell-derived cardiomyocytes. 2020 , 4,	5
663	Optimizing Bifurcated Channels within an Anisotropic Scaffold for Engineering Vascularized Oriented Tissues. 2020 , 9, e2000782	9
662	An approach for mechanical property optimization of cell-laden alginate-gelatin composite bioink with bioactive glass nanoparticles. 2020 , 31, 103	12
661	Hydrogels: The Next Generation Body Materials for Microfluidic Chips?. 2020 , 16, e2003797	22
660	3D Cell Printing of Tissue/Organ-Mimicking Constructs for Therapeutic and Drug Testing Applications. 2020 , 21,	11
659	Freeform Three-Dimensionally Printed Microchannels via Surface-Initiated Photopolymerization Combined with Sacrificial Molding. 2020 , 12, 50105-50112	4
658	A mini-review of embedded 3D printing: supporting media and strategies. 2020 , 8, 10474-10486	12
657	Recent advances and challenges in materials for 3D bioprinting. 2020 , 30, 618-634	26
656	Biomaterials for Bioprinting Microvasculature. 2020 , 120, 10887-10949	25

655	Biotechnological Valorization of Marine Collagens. 2020 , 855-883	3
654	Solid Organ Bioprinting: Strategies to Achieve Organ Function. 2020 , 120, 11093-11127	22
653	Self-Adaptive Magnetic Photonic Nanochain Cilia Arrays. 2020 , 30, 2005243	14
652	Bone-Marrow-Derived Mesenchymal Stromal Cells: From Basic Biology to Applications in Bone Tissue Engineering and Bone Regeneration. 2020 , 139-192	2
651	Printability and Shape Fidelity of Bioinks in 3D Bioprinting. 2020 , 120, 11028-11055	178
650	Self-Folding 3D Silk Biomaterial Rolls to Facilitate Axon and Bone Regeneration. 2020 , 9, e2000530	8
649	Rapid harvesting of stem cell sheets by thermoresponsive bulk poly(-isopropylacrylamide) (PNIPAAm) nanotopography. 2020 , 8, 5260-5270	4
648	Emulating Human Tissues and Organs: A Bioprinting Perspective Toward Personalized Medicine. 2020 , 120, 11128-11174	24
647	3D-Printed Biocompatible Scaffolds with Built-In Nanoplasmonic Sensors. 2020 , 30, 2005407	10
646	Functional inks and extrusion-based 3D printing of 2D materials: a review of current research and applications. 2020 , 12, 19007-19042	38
645	3D Bioprinting and Translation of Beta Cell Replacement Therapies for Type 1 Diabetes. 2021 , 27, 238-252	4
644	Where We Stand: Lung Organotypic Living Systems That Emulate Human-Relevant Host-Environment/Pathogen Interactions. 2020 , 8, 989	10
643	Tailoring Gelation Mechanisms for Advanced Hydrogel Applications. 2020 , 30, 2002759	60
642	Additive Manufacturing Applications for Industry 4.0: A Systematic Critical Review. 2020 , 10, 231	35
641	Current Advances in 3D Bioprinting Technology and Its Applications for Tissue Engineering. 2020 , 12,	19
640	Creating Three-Dimensional Tumor Models: A Guide for the Biofabrication of a Primary Osteosarcoma Model. 2021 , 27, 514-529	5
639	Mini-review: advances in 3D bioprinting of vascularized constructs. 2020 , 15, 22	11
638	Regenerative Approaches for the Treatment of Large Bone Defects. 2020 ,	15

637	A Versatile Open-Source Printhead for Low-Cost 3D Microextrusion-Based Bioprinting. 2020 , 12,	5
636	Disclosing Main authors and Organisations collaborations in bioprinting through network maps analysis. 2020 , 11, 3	1
635	Polymer Hydrogels to Guide Organotypic and Organoid Cultures. 2020 , 30, 2000097	28
634	Development of a Disposable Single-Nozzle Printhead for 3D Bioprinting of Continuous Multi-Material Constructs. 2020 , 11,	7
633	3D Bioprinting for Vascularized Tissue-Engineered Bone Fabrication. 2020 , 13,	28
632	The construction of in vitro tumor models based on 3D bioprinting. 2020 , 3, 227-236	7
631	TGF- β -Induced Endothelial to Mesenchymal Transition in Disease and Tissue Engineering. 2020 , 8, 260	50
630	Bioprinting: From Tissue and Organ Development to Models. 2020 , 120, 10547-10607	86
629	Electronic biopolymers: From molecular engineering to functional devices. 2020 , 397, 125499	31
628	Bioprinting of in vitro tumor models for personalized cancer treatment: a review. 2020 , 12, 042001	33
627	4D Printing of Hydrogels: A Review. 2020 , 30, 1910606	97
626	Extrusion and Microfluidic-based Bioprinting to Fabricate Biomimetic Tissues and Organs. 2020 , 5, 1901044	57
625	Polymeric Systems for Bioprinting. 2020 , 120, 10744-10792	68
624	From arteries to capillaries: approaches to engineering human vasculature. 2020 , 30, 1910811	28
623	Angiogenic biomaterials to promote therapeutic regeneration and investigate disease progression. 2020 , 255, 120207	17
622	Microfluidic Printing of Slippery Textiles for Medical Drainage around Wounds. 2020 , 7, 2000789	32
621	3D printing of Fe ₃ O ₄ functionalized graphene-polymer (FGP) composite microarchitectures. 2020 , 167, 278-284	28
620	Human-scale tissues with patterned vascular networks by additive manufacturing of sacrificial sugar-protein composites. 2020 , 113, 339-349	12

619	Quantifying Oxygen Levels in 3D Bioprinted Cell-Laden Thick Constructs with Perfusable Microchannel Networks. 2020 , 12,	3
618	Temperature-programmable and enzymatically solidifiable gelatin-based bioinks enable facile extrusion bioprinting. 2020 , 12, 045003	11
617	Biodegradable Polymers for Biomedical Additive Manufacturing. 2020 , 20, 100700	37
616	Spatiotemporally Controlled Photoresponsive Hydrogels: Design and Predictive Modeling from Processing through Application. 2020 , 30, 2000639	21
615	Emerging Nano/Micro-Structured Degradable Polymeric Meshes for Pelvic Floor Reconstruction. 2020 , 10,	8
614	Preliminary 3D printing of large inclined-shaped alumina ceramic parts by direct ink writing. 2020 , 9, 312-319	28
613	Polymer scaffolds as drug delivery systems. 2020 , 129, 109621	77
612	Preliminary investigation on a new natural based poly(gamma-glutamic acid)/Chitosan bioink. 2020 , 108, 2718-2732	10
611	Printing on liquid elastomers. 2020 , 16, 3137-3142	2
610	Directly coaxial 3D bioprinting of large-scale vascularized tissue constructs. 2020 , 12, 035014	45
609	Laser-assisted 3D bioprinting of exocrine pancreas spheroid models for cancer initiation study. 2020 , 12, 035001	31
608	Bioprinting predifferentiated adipose-derived mesenchymal stem cell spheroids with methacrylated gelatin ink for adipose tissue engineering. 2020 , 31, 36	19
607	Materials and technical innovations in 3D printing in biomedical applications. 2020 , 8, 2930-2950	52
606	A universal self-eroding sacrificial bioink that enables bioprinting at room temperature. 2020 , 31, 1634-1647	4
605	Preparation and characterization of nanoclay-hydrogel composite support-bath for bioprinting of complex structures. 2020 , 10, 5257	34
604	3D printing of conducting polymers. 2020 , 11, 1604	263
603	3D Extracellular Matrix Mimics: Fundamental Concepts and Role of Materials Chemistry to Influence Stem Cell Fate. 2020 , 21, 1968-1994	122
602	Nanomaterial Patterning in 3D Printing. <i>Advanced Materials</i> , 2020 , 32, e1907142	24 72

601	Grafting of 3D Bioprinting to In Vitro Drug Screening: A Review. 2020 , 9, e1901773	36
600	Generation of model tissues with dendritic vascular networks via sacrificial laser-sintered carbohydrate templates. 2020 , 4, 916-932	42
599	Smart polymers and nanocomposites for 3D and 4D printing. 2020 , 40, 215-245	59
598	Biological and mechanical characterization of biodegradable carbonyl iron powder/polycaprolactone composite material fabricated using three-dimensional printing for cardiovascular stent application. 2020 , 234, 975-987	8
597	Natural polymers-based light-induced hydrogels: Promising biomaterials for biomedical applications. 2020 , 420, 213432	51
596	Pixel-based drug release system: Achieving accurate dosage and prolonged activity for personalized medicine. 2020 , 3, e10104	1
595	Naturally derived 3D printed hydrogel scaffolds for agroecosystem and biomedical applications. 2020 , 537-554	
594	Recent advances in multi-material additive manufacturing: methods and applications. 2020 , 28, 158-166	47
593	Bioprinting small diameter blood vessel constructs with an endothelial and smooth muscle cell bilayer in a single step. 2020 , 12, 045012	28
592	Patient-specific Scaffolds with a Biomimetic Gradient Environment for Articular Cartilage-Subchondral Bone Regeneration.. 2020 , 3, 4820-4831	6
591	Preparation of 3D-printed (Cs/PLA/PU) scaffolds modified with plasma and hybridization by Fe@PEG-CA for treatment of cardiovascular disease. 2020 , 44, 12090-12098	4
590	3D printing for the future of medicine. 2020 , 4, 45-67	3
589	Thermal control of SZ2080 photopolymerization in four-beam interference lithography. 2020 , 22, 5038-5045	1
588	An Engineered Infected Epidermis Model for In Vitro Study of the Skin's Pro-Inflammatory Response. 2020 , 11,	8
587	Biofabrication Strategies and Engineered In Vitro Systems for Vascular Mechanobiology. 2020 , 9, e1901255	21
586	The Research on Multi-material 3D Vascularized Network Integrated Printing Technology. 2020 , 11,	7
585	Grand challenges in the design and manufacture of vascular self-healing. 2020 , 3, 013001	11
584	Designing Scaffolds for Corneal Regeneration. 2020 , 30, 1908996	46

583	A three-dimensional model for analysis and control of phase change phenomena during 3D printing of biological tissue. 2020 , 18, e00077	4
582	Functional Biomaterials for Bone Regeneration: A Lesson in Complex Biology. 2020 , 30, 1909874	46
581	3D printing of hydrogels: Rational design strategies and emerging biomedical applications. 2020 , 140, 100543	241
580	3D Bioprinting of Methylcellulose/Gelatin-Methacryloyl (MC/GelMA) Bioink with High Shape Integrity.. 2020 , 3, 1815-1826	42
579	Bioprinting 101: Design, Fabrication, and Evaluation of Cell-Laden 3D Bioprinted Scaffolds. 2020 , 26, 318-338	55
578	Advanced Manufacturing of Patient-Specific Occluders for the Left Atrial Appendage with Minimally Invasive Delivery. 2020 , 22, 1901074	1
577	Adapting the 14-day rule for embryo research to encompass evolving technologies. 2020 , 10, 1-9	13
576	Microchannels Are an Architectural Cue That Promotes Integration and Vascularization of Silk Biomaterials in Vivo. 2020 , 6, 1476-1486	17
575	Evolving Cell-Based and Cell-Free Clinical Strategies for Treating Severe Human Liver Diseases. 2020 , 9,	12
574	Cell-Instructive Multiphasic Gel-in-Gel Materials. 2020 , 30, 1908857	16
573	Bioinspired Zoom Compound Eyes Enable Variable-Focus Imaging. 2020 , 12, 10107-10117	19
572	Reconstruction of Large Skeletal Defects: Current Clinical Therapeutic Strategies and Future Directions Using 3D Printing. 2020 , 8, 61	47
571	Bioinks and bioprinting: A focused review. 2020 , 18, e00080	66
570	Endothelial cells support osteogenesis in an in vitro vascularized bone model developed by 3D bioprinting. 2020 , 12, 025013	46
569	3D Printing in Suspension Baths: Keeping the Promises of Bioprinting Afloat. 2020 , 38, 584-593	93
568	3D Printing of Vascular Tubes Using Bioelastomer Prepolymers by Freeform Reversible Embedding. 2020 , 6, 1333-1343	19
567	Engineering approaches to control and design the in vitro environment towards the reconstruction of organs. 2020 , 62, 158-166	3
566	Repair and regeneration of small intestine: A review of current engineering approaches. 2020 , 240, 119832	18

565	Integrated Technologies for Liver Tissue Engineering. 2020 , 1028-1035	
564	Ultrafast 3D printing with submicrometer features using electrostatic jet deflection. 2020 , 11, 753	59
563	Tumor-on-a-chip for integrating a 3D tumor microenvironment: chemical and mechanical factors. 2020 , 20, 873-888	32
562	Cell Encapsulation Systems Toward Modular Tissue Regeneration: From Immunoisolation to Multifunctional Devices. 2020 , 30, 1908061	16
561	Tricomponent thermoresponsive polymers based on an amine-containing monomer with tuneable hydrophobicity: Effect of composition. 2020 , 130, 109655	8
560	Advances in Extrusion 3D Bioprinting: A Focus on Multicomponent Hydrogel-Based Bioinks. 2020 , 9, e1901648	85
559	Bioprintable tough hydrogels for tissue engineering applications. 2020 , 281, 102163	39
558	Multi-Material 3D and 4D Printing: A Survey. 2020 , 7, 1902307	113
557	Advances in Hybrid Fabrication toward Hierarchical Tissue Constructs. 2020 , 7, 1902953	52
556	Polymer scaffold fabrication. 2020 , 295-315	1
555	Hepatic tissue engineering. 2020 , 737-753	0
554	Three-dimensional bioprinting for tissue engineering. 2020 , 1391-1415	2
553	Biofabricated three-dimensional tissue models. 2020 , 1417-1441	
552	Porous nanocellulose gels and foams: Breakthrough status in the development of scaffolds for tissue engineering. 2020 , 37, 126-141	76
551	Using chaotic advection for facile high-throughput fabrication of ordered multilayer micro- and nanostructures: continuous chaotic printing. 2020 , 12, 035023	24
550	Human-on-Leaf-Chip: A Biomimetic Vascular System Integrated with Chamber-Specific Organs. 2020 , 16, e2000546	19
549	Three-dimensional, printed water-filtration system for economical, on-site arsenic removal. 2020 , 15, e0231475	5
548	3D Printing of Bioinspired Biomaterials for Tissue Regeneration. 2020 , 9, e2000208	16

547	Transcribing In Vivo Blood Vessel Networks into In Vitro Perfusable Microfluidic Devices. 2020 , 5, 2000103	8
546	A Review of 3D Printing Technologies for Soft Polymer Materials. 2020 , 30, 2000187	148
545	Bioprinting Neural Systems to Model Central Nervous System Diseases. 2020 , 30, 1910250	15
544	Embedded Ink Writing (EIW) of Polysiloxane Inks. 2020 , 12, 23565-23575	9
543	Novel bioinks from UV-responsive norbornene-functionalized carboxymethyl cellulose macromers. 2020 , 18, e00083	11
542	Fundamentals and Applications of Photo-Cross-Linking in Bioprinting. 2020 , 120, 10662-10694	105
541	Fabrication of Perfusable Vascular Channels and Capillaries in 3D Liver-like Tissue. 2020 , 10, 5646	11
540	The utility of 3-dimensional-printed models for skull base meningioma surgery. 2020 , 8, 370	6
539	Angiogenesis in Tissue Engineering: As Nature Intended?. 2020 , 8, 188	56
538	3D Bioprinting Strategies for the Regeneration of Functional Tubular Tissues and Organs. 2020 , 7,	36
537	A new microfluidic model that allows monitoring of complex vascular structures and cell interactions in a 3D biological matrix. 2020 , 20, 1827-1844	19
536	High throughput direct 3D bioprinting in multiwell plates. 2020 ,	19
535	Investigating lymphangiogenesis in a sacrificially bioprinted volumetric model of breast tumor tissue. 2021 , 190, 72-79	9
534	3D bioprinting of oligo(poly[ethylene glycol] fumarate) for bone and nerve tissue engineering. 2021 , 109, 6-17	12
533	3D bioprinting of mechanically tuned bioinks derived from cardiac decellularized extracellular matrix. 2021 , 119, 75-88	45
532	Modeling the printability of photocuring and strength adjustable hydrogel bioink during projection-based 3D bioprinting. 2021 , 13,	19
531	A modular polymer microbead angiogenesis scaffold to characterize the effects of adhesion ligand density on angiogenic sprouting. 2021 , 264, 120231	5
530	Material Extrusion Additive Manufacturing of Metal Powder-Based Inks Enabled by Carrageenan Rheology Modifier. 2021 , 23, 2000880	3

529	Effects of Processing Parameters of 3D Bioprinting on the Cellular Activity of Bioinks. 2021 , 21, e2000179	17
528	Nano-biomaterials for designing functional bioinks towards complex tissue and organ regeneration in 3D bioprinting. 2021 , 37, 101639	9
527	A 3D-Bioprinted dual growth factor-releasing intervertebral disc scaffold induces nucleus pulposus and annulus fibrosus reconstruction. 2021 , 6, 179-190	18
526	Bioprinting of Small-Diameter Blood Vessels. 2021 , 7, 832-844	7
525	Impact of compound drops: a perspective. 2021 , 51, 101389	18
524	3D kidney organoids for bench-to-bedside translation. 2021 , 99, 477-487	9
523	Engineered Microsystems for Spheroid and Organoid Studies. 2021 , 10, e2001284	18
522	Extracellular-Matrix-Reinforced Bioinks for 3D Bioprinting Human Tissue. <i>Advanced Materials</i> , 2021 , 33, e2005476	24 47
521	Polymers Exhibiting Lower Critical Solution Temperatures as a Route to Thermoreversible Gelators for Healthcare. 2021 , 31, 2008123	37
520	Digitally Fabricated and Naturally Augmented In Vitro Tissues. 2021 , 10, e2001253	1
519	3D Bioprinting using UNiversal Orthogonal Network (UNION) Bioinks. 2021 , 31, 2007983	13
518	Recent advances in 3D bioprinting of vascularized tissues. 2021 , 199, 109398	25
517	3D culture of HepaRG cells in GelMa and its application to bioprinting of a multicellular hepatic model. 2021 , 269, 120611	20
516	Composable microfluidic spinning platforms for facile production of biomimetic perfusable hydrogel microtubes. 2021 , 16, 937-964	13
515	An Overview on Materials and Techniques in 3D Bioprinting Toward Biomedical Application. 2021 , 2, 1-18	36
514	Reversible Design of Dynamic Assemblies at Small Scales. 2021 , 3, 2000193	3
513	Printing perfusable and permeable vascular structure by controlled cross-linking. 2021 , 61, 167-172	1
512	Recent progress in extrusion 3D bioprinting of hydrogel biomaterials for tissue regeneration: a comprehensive review with focus on advanced fabrication techniques. 2021 , 9, 535-573	89

511	Optimised Vascular Network for Skin Tissue Engineering by Additive Manufacturing. 2021 , 1-20	
510	Microfluidic Biomaterials. 2021 , 10, e2001028	5
509	A bioinspired and hierarchically structured shape-memory material. 2021 , 20, 242-249	45
508	Advances in Engineering Human Tissue Models. 2020 , 8, 620962	17
507	Biomimetic strategies for fabricating musculoskeletal tissue scaffolds: a review. 2021 , 112, 1211-1229	2
506	Introduction to 4D printing. 2021 , 303-342	2
505	Organ bioprinting. 2021 , 105-136	
504	A hybrid additive manufacturing platform to create bulk and surface composition gradients on scaffolds for tissue regeneration. 2021 , 12, 500	12
503	A Tailored Biomimetic Hydrogel as Potential Bioink to Print a Cell Scaffold for Tissue Engineering Applications: Printability and Cell Viability Evaluation. 2021 , 11, 829	1
502	Strategies of 3D bioprinting and parameters that determine cell interaction with the scaffold - A review. 2021 , 81-95	
501	3D printing in regenerative medicine. 2021 , 305-330	
500	Multifunctional materials based on smart hydrogels for biomedical and 4D applications. 2021 , 407-467	0
499	Recent advances in bionanomaterials for liver cancer diagnosis and treatment. 2021 , 9, 4821-4842	5
498	Living Materials for Regenerative Medicine. 2021 , 2, 96-104	11
497	Synthetic Polymers Derived Single-Network Inks/Bioinks for Extrusion-Based 3D Printing Towards Bioapplications.	2
496	3D printed microfluidic devices: a review focused on four fundamental manufacturing approaches and implications on the field of healthcare. 2021 , 4, 311-343	23
495	Different Approaches Used for Conversion of Biomaterials to Feedstock. 2021 , 21-43	1
494	3D bioprinting of tissue systems. 2021 , 171-197	

493 3D Bioprinting in Oral and Maxillofacial Surgery. **2021**, 61-79

492 Co-culture Systems for Vasculogenesis. **2021**, 385-413

491 The acoustic droplet printing of functional tumor microenvironments. **2021**, 21, 1604-1612 12

490 Mechanical properties of cell- and microgel bead-laden oxidized alginate-gelatin hydrogels. **2021**, 9, 3051-30687

489 SARS-CoV-2-related vascular injury: mechanisms, imaging and models. **2021**, 5, 0

488 Applications of 3D bioprinting in tissue engineering: advantages, deficiencies, improvements, and future perspectives. **2021**, 9, 5385-5413 12

487 Biomimetic Soft Polymer Microstructures and Piezoresistive Graphene MEMS Sensors Using Sacrificial Metal 3D Printing. **2021**, 13, 1094-1104 14

486 Surface and biological characterization of biomaterials. **2021**, 33-66 1

485 Microvascular Networks and Models: In Vitro Formation. **2021**, 345-383 0

484 3D Bioprinting of In Vitro Models Using Hydrogel-Based Bioinks. **2021**, 13, 12

483 Biomanufacturing. **2021**, 137-170 0

482 3D printing of highly flexible, cytocompatible nanocomposites for thermal management. **2021**, 56, 6385-6400 4

481 Biohybrid robotics: From the nanoscale to the macroscale. **2021**, 13, e1703 6

480 Development, characterization, and applications of multi-material stereolithography bioprinting. **2021**, 11, 3171 27

479 3D Patterning within Hydrogels for the Recreation of Functional Biological Environments. **2021**, 31, 2009574 9

478 Assessment of fibrin-collagen co-gels for generating microvessels using endothelial cell-lined microfluidics and multipotent stromal cell (MSC)-induced capillary morphogenesis. **2020**, 2

477 Thermoelectrics. **2021**, 327-350 0

476 Engineering Human Cardiac Muscle Patch Constructs for Prevention of Post-infarction LV Remodeling. **2021**, 8, 621781 6

475	Bioresorbable Polymers: Advanced Materials and 4D Printing for Tissue Engineering. 2021 , 13,	24
474	Rapid High-Resolution 3D Printing and Surface Functionalization via Type I Photoinitiated RAFT Polymerization. 2021 , 133, 8921-8932	5
473	Chemomechanically voxelated niches for programmable histogenesis.	
472	Rapid High-Resolution 3D Printing and Surface Functionalization via Type I Photoinitiated RAFT Polymerization. 2021 , 60, 8839-8850	31
471	A 3D Bioprinted Material That Recapitulates the Perivascular Bone Marrow Structure for Sustained Hematopoietic and Cancer Models. 2021 , 13,	2
470	Tuning the Gelation of Thermoresponsive Gels Based on Triblock Terpolymers. 2021 , 54, 1943-1960	15
469	One-Step Formation of Protein-Based Tubular Structures for Functional Devices and Tissues. 2021 , 10, e2001746	2
468	Human Induced Pluripotent Stem Cells as a Screening Platform for Drug-Induced Vascular Toxicity. 2021 , 12, 613837	1
467	Three-Dimensional Printable, Extremely Soft, Stretchable, and Reversible Elastomers from Molecular Architecture-Directed Assembly. 2021 , 33, 2436-2445	7
466	3D Printing Method for Tough Multifunctional Particle-Based Double-Network Hydrogels. 2021 , 13, 13714-13723	
465	A novel method for generating 3D constructs with branched vascular networks using multi-materials bioprinting and direct surgical anastomosis.	0
464	3D Collagen Vascular Tumor-on-a-Chip Mimetics for Dynamic Combinatorial Drug Screening. 2021 , 20, 1210-1219	1
463	3D bioprinting for lung and tracheal tissue engineering: Criteria, advances, challenges, and future directions. 2021 , 21, e00124	17
462	Three-dimensional printing of high-mass loading electrodes for energy storage applications. 2021 , 3, 631-647	12
461	Complex 3D bioprinting methods. 2021 , 5, 011508	13
460	Fabrication of PDMS microfluidic devices using nanoclay-reinforced Pluronic F-127 as a sacrificial ink. 2021 ,	4
459	Microfluidic-assisted bioprinting of tissues and organoids at high cell concentrations. 2020 ,	6
458	Emergence of FRESH 3D printing as a platform for advanced tissue biofabrication. 2021 , 5, 010904	30

457	Recent advances in 3D bioprinting of musculoskeletal tissues. 2020,	17
456	Culture and analysis of kidney tubuloids and perfused tubuloid cells-on-a-chip. 2021, 16, 2023-2050	14
455	Valve-based consecutive bioprinting method for multimaterial tissue-like constructs with controllable interfaces. 2021,	6
454	Supramolecular tools for polymer additive manufacturing. 2021, 11, 146-156	2
453	Fabrication of microvascular constructs using high resolution electrohydrodynamic inkjet printing. 2020,	11
452	3D Bioprinting of Human Tissues: Biofabrication, Bioinks, and Bioreactors. 2021, 22,	13
451	Applications of Engineering Techniques in Microvasculature Design. 2021, 8, 660958	1
450	Vascularisation of pluripotent stem cell-derived myocardium: biomechanical insights for physiological relevance in cardiac tissue engineering. 2021, 473, 1117-1136	1
449	Biomaterials and 3D printing techniques used in the medical field. 2021, 45, 290-302	7
448	BoneMA-synthesis and characterization of a methacrylated bone-derived hydrogel for bioprinting ofvascularized tissue constructs.. 2021, 13,	4
447	Bioengineering the Bone Marrow Vascular Niche. 2021, 9, 645496	2
446	Triblock Copolymer Bioinks in Hydrogel Three-Dimensional Printing for Regenerative Medicine: A Focus on Pluronic F127. 2021,	5
445	A dual-ink 3D printing strategy to engineer pre-vascularized bone scaffolds in-vitro. 2021, 123, 111976	9
444	Materials for creating tissue-engineered constructs using 3D bioprinting: cartilaginous and soft tissue restoration. 2021, 23, 60-74	1
443	Tissue engineering and regenerative therapeutics: The nexus of chemical engineering and translational medicine. 2021, 99, 2069-2086	1
442	Hybrid 3D Printing of Advanced Hydrogel-Based Wound Dressings with Tailorable Properties. 2021, 13,	11
441	PolyChemPrint: A hardware and software framework for benchtop additive manufacturing of functional polymeric materials.	1
440	The Technique of Thyroid Cartilage Scaffold Support Formation for Extrusion-Based Bioprinting. 2021, 7, 348	4

439	Three-Dimensional Engineered Peripheral Nerve: Toward a New Era of Patient-Specific Nerve Repair Solutions. 2021 ,	3
438	Review of Bioprinting in Regenerative Medicine: Naturally Derived Bioinks and Stem Cells.. 2021 , 4, 4049-4070	2
437	3D Printing for Cardiovascular Applications: From End-to-End Processes to Emerging Developments. 2021 , 49, 1598-1618	0
436	Combinations of photoinitiator and UV absorber for cell-based digital light processing (DLP) bioprinting. 2021 , 13,	11
435	Microvascular Tissue Engineering-A Review. 2021 , 9,	6
434	Fabrication of Microfluidic Devices for Emulsion Formation by Microstereolithography. 2021 , 26,	3
433	3D Bioprinting Human-Induced Pluripotent Stem Cells and Drug-Releasing Microspheres to Produce Responsive Neural Tissues. 2021 , 1, 2000077	5
432	3D Bioprinting-Based Vascularized Tissue Models Mimicking Tissue-Specific Architecture and Pathophysiology for Studies. 2021 , 9, 685507	7
431	Extrusion bioprinting of hydroxyethylcellulose-based bioink for cervical tumor model. 2021 , 260, 117793	6
430	Application of 3D Bioprinters for Dental Pulp Regeneration and Tissue Engineering (Porous architecture). 1	4
429	Covalent adaptable networks of polydimethylsiloxane elastomer for selective laser sintering 3D printing. 2021 , 412, 128675	15
428	3D bioprinting of prevascularised implants for the repair of critically-sized bone defects. 2021 , 126, 154-169	20
427	Bioengineered 3D Microvessels for Investigating Plasmodium falciparum Pathogenesis. 2021 , 37, 401-413	1
426	Light-Activated Decellularized Extracellular Matrix-Based Bioinks for Volumetric Tissue Analogs at the Centimeter Scale. 2021 , 31, 2011252	23
425	Optimization of Polysaccharide Hydrocolloid for the Development of Bioink with High Printability/Biocompatibility for Coextrusion 3D Bioprinting. 2021 , 13,	3
424	3D Printing of Strontium Silicate Microcylinder-Containing Multicellular Biomaterial Inks for Vascularized Skin Regeneration. 2021 , 10, e2100523	9
423	Eklemeli İhlat Teknolojilerinin Tıbbi Ekipmanlarda Kullanımında Kullanım	1
422	Perfusion and endothelialization of engineered tissues with patterned vascular networks. 2021 , 16, 3089-3113	7

421	Biofabrication of tissue engineering vascular systems. 2021 , 5, 021507	8
420	3D bioprinting of cell-laden carbopol bioinks. 2021 , 22, e00135	4
419	3D Bioprinting for Models of Oral Cancer: Toward Development and Validation. 2021 , 22, e00132-e00132	2
418	3D printing in biomedical engineering: Processes, materials, and applications. 2021 , 8, 021322	9
417	Fluidic Infiltrative Assembly of 3D Hydrogel with Heterogeneous Composition and Function. 2021 , 31, 2103288	2
416	3D bioprinting and microscale organization of vascularized tissue constructs using collagen-based bioink. 2021 , 118, 3150-3163	7
415	Current Applications and Future Directions of Bioengineering Approaches for Bladder Augmentation and Reconstruction. 2021 , 8, 664404	2
414	Voxelated Bioprinting of Mechanically Robust Multiscale Porous Scaffolds for Pancreatic Islets.	
413	Advances in tissue engineering of vasculature through three-dimensional bioprinting. 2021 , 250, 1717-1738	2
412	Bioinstructive Layer-by-Layer-Coated Customizable 3D Printed Perfusible Microchannels Embedded in Photocrosslinkable Hydrogels for Vascular Tissue Engineering. 2021 , 11,	9
411	A Bubble-Assisted Approach for Patterning Nanoscale Molecular Aggregates. 2021 , 60, 16547-16553	4
410	An open-source technology platform to increase reproducibility and enable high-throughput production of tailorable gelatin methacryloyl (GelMA) - based hydrogels. 2021 , 204, 109619	3
409	A Bubble-Assisted Approach for Patterning Nanoscale Molecular Aggregates. 2021 , 133, 16683-16689	
408	Coaxial Electrohydrodynamic Bioprinting of Pre-vascularized Cell-laden Constructs for Tissue Engineering. 2021 , 7, 362	4
407	Extracellular matrix (ECM)-derived bioinks designed to foster vasculogenesis and neurite outgrowth: Characterization and bioprinting. 2021 , 22, e00134	0
406	Long-term stabilized amorphous calcium carbonate-an ink for bio-inspired 3D printing. 2021 , 11, 100120	1
405	Conductive Nanomaterials used in Bioinks for 3D Bioprinting. 2021 , 11, 2130005	
404	A bibliometric indicators analysis of additive manufacturing research trends from 2010 to 2020. 2021 , ahead-of-print,	5

403	From Thermogelling Hydrogels toward Functional Bioinks: Controlled Modification and Cytocompatible Crosslinking. 2021 , 21, e2100122	0
402	Microfluidic models of the human circulatory system: versatile platforms for exploring mechanobiology and disease modeling. 2021 , 13, 769-786	9
401	A review of regulated self-organizing approaches for tissue regeneration. 2021 ,	0
400	Advances in hydrogel-based vascularized tissues for tissue repair and drug screening. 2022 , 9, 198-220	7
399	Vascularization Strategies in Bone Tissue Engineering. 2021 , 10,	9
398	3D Bioprinting of Nature-Inspired Hydrogel Inks Based on Synthetic Polymers. 2021 , 3, 3685-3701	6
397	Tissue-Specific Decellularized Extracellular Matrix Bioinks for Musculoskeletal Tissue Regeneration and Modeling Using 3D Bioprinting Technology. 2021 , 22,	4
396	Recent Advances in Microfluidic Platforms for Programming Cell-Based Living Materials. <i>Advanced Materials</i> , 2021 , 33, e2005944	24 4
395	3D Bioprinted Multicellular Vascular Models. 2021 , 10, e2101141	4
394	Rheological properties of cellulose nanofiber hydrogel for high-fidelity 3D printing. 2021 , 263, 117976	12
393	3D Bioprinting for fabrication of tissue models of COVID-19 infection. 2021 , 65, 503-518	2
392	3D microfluidics in PDMS: manufacturing with 3D molding. 2021 , 25, 1	0
391	A review on biomaterials for ovarian tissue engineering. 2021 , 135, 48-63	5
390	Endometrial SUSD2 Mesenchymal Stem/Stromal Cells in Tissue Engineering: Advances in Novel Cellular Constructs for Pelvic Organ Prolapse. 2021 , 11,	1
389	Real-time imaging and analysis of cell-hydrogel interplay within an extrusion-bioprinting capillary. 2021 , 23, e00144	3
388	Key parameters and applications of extrusion-based bioprinting. 2021 , 23, e00156	9
387	3D Bioprinting Constructs to Facilitate Skin Regeneration. 2105080	6
386	3D Microphysiological System-Inspired Scalable Vascularized Tissue Constructs for Regenerative Medicine. 2105475	1

385	Review of Fiber-Based Three-Dimensional Printing for Applications Ranging from Nanoscale Nanoparticle Alignment to Macroscale Patterning. 2021 , 4, 7538-7562	6
384	The effect of neural cell integrated into 3D co-axial bioprinted BMMSC structures during osteogenesis. 2021 , 8, rbab041	2
383	3D bioprinting of an electroactive and self-healing polysaccharide hydrogels. 2021 ,	4
382	3D Printable Soy/Silk Hybrid Hydrogels for Tissue Engineering Applications. 2021 , 22, 3668-3678	2
381	Invigoration of polymer bioinks for additive manufacturing of human tissues and organs. 1	
380	Manufacturing of animal products by the assembly of microfabricated tissues. 2021 , 65, 611-623	2
379	Multimaterial bioprinting and combination of processing techniques towards the fabrication of biomimetic tissues and organs. 2021 , 13,	14
378	Three-dimensional printing of cell-laden microporous constructs using blended bioinks. 2021 ,	1
377	Biofabrication Strategies for Musculoskeletal Disorders: Evolution towards Clinical Applications. 2021 , 8,	1
376	Reconstructing the tumor architecture into organoids. 2021 , 176, 113839	1
375	A fluid-supported 3D hydrogel bioprinting method. 2021 , 276, 121034	1
374	Recapitulating the Cancer Microenvironment Using Bioprinting Technology for Precision Medicine. 2021 , 12,	1
373	3D Printing-Assisted Skull Base Tumor Surgeries: An Institutional Experience. 2021 , 12, 630-634	1
372	Ternary phase-field simplified multiphase lattice Boltzmann method and its application to compound droplet dynamics on solid surface in shear flow. 2021 , 6,	1
371	Fluid Bath-Assisted 3D Printing for Biomedical Applications: From Pre- to Postprinting Stages. 2021 , 7, 4736-4756	6
370	3D printing technology; methods, biomedical applications, future opportunities and trends. 2021 , 14, 1430-1450	19
369	3D printing of sacrificial thioester elastomers using digital light processing for templating 3D organoid structures in soft biomatrices. 2021 , 13,	3
368	Tackling Current Biomedical Challenges With Frontier Biofabrication and Organ-On-A-Chip Technologies. 2021 , 9, 732130	4

367	Academic Insights and Perspectives in 3D Printing: A Bibliometric Review. 2021 , 11, 8298	1
366	Converging functionality: Strategies for 3D hybrid-construct biofabrication and the role of composite biomaterials for skeletal regeneration. 2021 , 132, 188-216	7
365	Progress of 3D Bioprinting in Organ Manufacturing. 2021 , 13,	5
364	Porous tantalum-composited gelatin nanoparticles hydrogel integrated with mesenchymal stem cell-derived endothelial cells to construct vascularized tissue. 2021 , 8, rbab051	3
363	Construction of nanofibrous scaffolds with interconnected perfusable microchannel networks for engineering of vascularized bone tissue. 2021 , 6, 3254-3268	21
362	The dynamic viscoelastic characterisation and magnetic resonance imaging of poly(vinyl alcohol) cryogel: Identifying new attributes and opportunities. 2021 , 129, 112383	1
361	Bone physiological microenvironment and healing mechanism: Basis for future bone-tissue engineering scaffolds. 2021 , 6, 4110-4140	48
360	Tailoring of functionally graded hyperelastic materials via grayscale mask stereolithography 3D printing. 2021 , 47, 102108	3
359	The promising rise of bioprinting in revolutionizing medical science: Advances and possibilities. 2021 , 18, 133-145	5
358	Tissue engineering, 3D-Bioprinting, morphogenesis modelling and simulation of biostructures: Relevance, underpinning biological principles and future trends. 2021 , 24, e00171	3
357	Multimaterial bioprinting approaches and their implementations for vascular and vascularized tissues. 2021 , 24, e00159	3
356	Three dimensional printed nanostructure biomaterials for bone tissue engineering. 2021 , 18, 102-111	10
355	3D models of dilated cardiomyopathy: Shaping the chemical, physical and topographical properties of biomaterials to mimic the cardiac extracellular matrix. 2022 , 7, 275-291	1
354	Tumor-on-a-chip devices for cancer immunotherapy. 2022 , 155-195	1
353	Integration of three-dimensional printing and microfluidics. 2022 , 385-406	0
352	State-of-the-art strategies and future interventions in bone and cartilage repair for personalized regenerative therapy. 2021 , 203-248	0
351	Heterotypic tumor models through freeform printing into photostabilized granular microgels. 2021 , 9, 4496-4509	5
350	Prospects for 3D bioprinting of organoids. 2021 , 4, 627-640	11

349	Mechanics of hydrogel-based bioprinting: From 3D to 4D. 2021 , 54, 285-285	1
348	Additive manufacturing of biomaterials. 2021 , 233-260	
347	3D bioprinting for skin tissue engineering: Current status and perspectives. 2021 , 12, 20417314211028574	18
346	Transplantable scaffolds. 2021 , 199-222	
345	3D Printed Hydrogels with Aligned Microchannels to Guide Neural Stem Cell Migration. 2021 , 7, 690-700	6
344	A modular microfluidic system based on a multilayered configuration to generate large-scale perfusable microvascular networks. 2021 , 7, 4	8
343	Resolution of 3D bioprinting inside bulk gel and granular gel baths. 2021 , 17, 8769-8785	4
342	3D printing of functional microrobots. 2021 , 50, 2794-2838	73
341	Extrusion-Based Bioprinting: Current Standards and Relevancy for Human-Sized Tissue Fabrication. 2020 , 2140, 65-92	8
340	Characterizing Bioinks for Extrusion Bioprinting: Printability and Rheology. 2020 , 2140, 111-133	15
339	Bioprinting of Complex Vascularized Tissues. 2021 , 2147, 163-173	0
338	Vascular Tissue Engineering: The Role of 3D Bioprinting. 2020 , 321-338	5
337	Bioinks and Their Applications in Tissue Engineering. 2019 , 187-218	4
336	Biofabrication in Tissue Engineering. 2020 , 289-312	4
335	Organs-on-a-Chip. 2020 , 1230, 27-42	12
334	Co-Culture Systems for Vasculogenesis. 2017 , 1-29	4
333	Fabrication and Printing of Multi-material Hydrogels. 2016 , 1-34	2
332	Additive Manufacturing for Tissue Engineering. 2018 , 1-52	1

331	3D Bioprinting of a Tissue Engineered Human Heart. 2020 , 243-259	2
330	Cutting-edge platforms in cardiac tissue engineering. 2017 , 47, 23-29	24
329	Printability study of hydrogel solution extrusion in nanoclay yield-stress bath during printing-then-gelation biofabrication. 2017 , 80, 313-325	70
328	Hydrogels in Emerging Technologies for Type 1 Diabetes. 2021 , 121, 11458-11526	13
327	Chapter 2:Extrusion-based Bioprinting. 2019 , 22-48	2
326	Effects of Irgacure 2959 and lithium phenyl-2,4,6-trimethylbenzoylphosphinate on cell viability, physical properties, and microstructure in 3D bioprinting of vascular-like constructs. 2020 , 15, 055021	21
325	Expanding sacrificially printed microfluidic channel-embedded paper devices for construction of volumetric tissue models in vitro. 2020 , 12, 045027	10
324	Toward a neurospheroid niche model: optimizing embedded 3D bioprinting for fabrication of neurospheroid brain-like co-culture constructs. 2020 ,	16
323	Interdisciplinary approaches to advanced cardiovascular tissue engineering: ECM-based biomaterials, 3D bioprinting, and its assessment. 2020 , 2, 042003	10
322	Hydrogel biomaterials to support and guide vascularization. 2021 , 3, 012002	1
321	Additive manufacturing of polymer-based structures by extrusion technologies. 2020 , 1,	9
320	Synthetic Photosynthetic Consortia Define Interactions Leading to Robustness and Photoproduction.	2
319	A hybrid additive manufacturing platform to create bulk and surface composition gradients on scaffolds for tissue regeneration.	3
318	An orthogonal differentiation platform for genomically programming stem cells, organoids, and bioprinted tissues.	1
317	Controllability Over Wall Thickness of Tubular Structures and Encapsulation During Co-Axial Extrusion of a Thermal-Crosslinking Hydrogel. 2020 , 142,	3
316	Metasilicone. 2017 , 36, 1-13	26
315	Wearable piezoresistive strain sensor based on graphene-coated three-dimensional micro-porous PDMS sponge. 2019 , 7,	15
314	Unraveling pathogenesis: from functional genomics to experimental models. 2017 , 6, 1228	6

313	Recent advances in renal regeneration. 2019 , 8,	1
312	Preparation and performance of ultraviolet curable silicone resins used for ultraviolet cured coating and ultraviolet-assisted 3D printing materials. 2018 , 1, 542	4
311	Open-Source Selective Laser Sintering (OpenSLS) of Nylon and Biocompatible Polycaprolactone. 2016 , 11, e0147399	54
310	Additive manufacturing of PLA-based scaffolds intended for bone regeneration and strategies to improve their biological properties. 2020 , 20, 571-599	22
309	3D Nanophotonic device fabrication using discrete components. 2020 , 9, 1373-1390	6
308	Emergence of Bioprinting in Tissue Engineering: A Mini Review. 2016 , 1,	2
307	3D Bioprinting: An attractive alternative to traditional organ transplantation. 2019 , 5, 007-018	9
306	Roles of support materials in 3D bioprinting - Present and future. 2017 , 3, 006	29
305	Progress in organ 3D bioprinting. 2018 , 4, 128	29
304	Formation of cell spheroids using Standing Surface Acoustic Wave (SSAW). 2018 , 4, 130	10
303	Optimized vascular network by stereolithography for tissue engineered skin. 2018 , 4, 134	14
302	Bioprinting of artificial blood vessels. 2018 , 4, 140	17
301	Uncovering 3D bioprinting research trends: A keyword network mapping analysis. 2018 , 4, 147	6
300	Biofabrication offers future hope for tackling various obstacles and challenges in tissue engineering and regenerative medicine: A Perspective. 2019 , 5, 153	9
299	Bioprinting with human stem cell-laden alginate-gelatin bioink and bioactive glass for tissue engineering. 2019 , 5, 204	23
298	Multicomponent bioprinting of heterogeneous hydrogel constructs based on microfluidic printheads. 2019 , 5, 202	9
297	Bioprinting of Multimaterials with Computer-aided Design/Computer-aided Manufacturing. 2020 , 6, 245	11
296	Bio-ink Materials for 3D Bio-printing. 2016 , 3, 49-59	5

295	Bioengineered in vitro Vascular Models for Applications in Interventional Radiology. 2018 , 24, 5367-5374		2
294	Application of Bioprinting to Cancer Research. 2018 , 16, 52-57		1
293	Bioprinting in Vascularization Strategies. 2019 , 23, 9-20		6
292	Emerging polymeric materials in additive manufacturing for use in biomedical applications. 2019 , 6, 1-20		8
291	Perfusion-based co-culture model system for bone tissue engineering. 2020 , 7, 91-105		3
290	3D bioprinting of the kidneyType or hope?. 2018 , 2, 119-162		10
289	Vascularization in 3D printed tissues: emerging technologies to overcome longstanding obstacles. 2018 , 2, 163-184		6
288	Addressing the ethical issues raised by synthetic human entities with embryo-like features. 2017 , 6,		55
287	3D Bioprinting of Cell-Laden Hydrogels for Improved Biological Functionality. <i>Advanced Materials</i> , 2021 , e2103691	24	16
286	Digital Assembly of Spherical Viscoelastic Bio-Ink Particles. 2109004		2
285	Emerging Technologies in Multi-Material Bioprinting. <i>Advanced Materials</i> , 2021 , e2104730	24	23
284	3D Liver Tissue Model with Branched Vascular Networks by Multimaterial Bioprinting. 2021 , 10, e2101405		5
283	Modelling Human Physiology on-Chip: Historical Perspectives and Future Directions. 2021 , 12,		1
282	Mussel-Inspired Chemistry: A Promising Strategy for Natural Polysaccharides in Biomedical Applications. 2021 , 101472		7
281	PLA/HA Multiscale Nano-/Micro-Hybrid 3D Scaffolds Provide Inductive Cues to Stems Cells to Differentiate into an Osteogenic Lineage. 2021 , 73, 3787		0
280	Strand-Morphology-Based Process Optimization for Extrusion-Based Silicone Additive Manufacturing. 2021 , 13,		0
279	Bioink design for extrusion-based bioprinting. 2021 , 25, 101227		4
278	A Review of the Fabrication of Soft Structures with Three-dimensional Printing Technology. 2015 , 14, 142-148		7

- 277 Tissue Engineering through Additive Manufacturing: Hope for a Bioengineered Kidney?. **2016**, 555-568 2
- 276 Inorganic-Organic Hybrids for Biomedical Applications. **2016**, 1-86
- 275 Pluripotent Stem Cells for Kidney Diseases. **2016**, 69-84
- 274 Translation and Applications of Biofabrication. **2016**, 1-34 1
- 273 Vascular Networks Within 3D Printed and Engineered Tissues. **2017**, 1-27
- 272 Microvascular Networks and Models, In vitro Formation. **2018**, 1-40
- 271 The Present and Future of the Cancer Microenvironment Bioprinting. **2017**, 15, 103-110
- 270 CRISPR engineering cardiometabolic disease models using human iPSC. **2018**, 2, 185-202
- 269 Deri Doku Mendisli Ama Boyutlu Biyobaskıve Keratinosit Kütüğü-14 0
- 268 A new approach to design artificial 3D micro-niches with combined chemical, topographical and rheological cues.
- 267 Chapter 6:Polymers in Biofabrication and 3D Tissue Modelling. **2019**, 119-147
- 266 Chapter 5. Shear Thinning Hydrogel-based 3D Tissue Modelling. **2019**, 94-118 0
- 265 3D Printing in Dentistry. **2020**, 195-221
- 264 Bionic 3D printed corals. 0
- 263 Using Chaos for Facile High-throughput Fabrication of Ordered Multilayer Micro- and Nanostructures.
- 262 Vascular Tissue Engineering: The Role of 3D Bioprinting. **2020**, 1-18
- 261 Freeform printing of heterotypic tumor models within cell-laden microgel matrices.
- 260 Microvalve bioprinting as a biofabrication tool to decipher tumor and endothelial cell crosstalk: Application to a simplified glioblastoma model. **2021**, 24, e00178 0

259	Development and Characterization of Gelatin-Norbornene Bioink to Understand the Interplay between Physical Architecture and Micro-Capillary Formation in Biofabricated Vascularized Constructs. 2021 , e2101873	4
258	Printable Electrode Materials for Supercapacitors. 2021 , 1, 17-17	3
257	3D printed biomimetic cochleae and machine learning co-modelling provides clinical informatics for cochlear implant patients. 2021 , 12, 6260	2
256	Hylozoic by Design: Converging Material and Biological Complexities for Cell-Driven Living Materials with 4D Behaviors. 2108057	0
255	High-Resolution 3D Printing of Mechanically Tough Hydrogels Prepared by Thermo-Responsive Poloxamer Ink Platform. 2021 , e2100579	1
254	Additive Manufacturing Processes. 2022 , 7-17	1
253	3D bioprinting of proangiogenic constructs with induced immunomodulatory microenvironments through a dual cross-linking procedure using laponite incorporated bioink. 2021 , 229, 109399	3
252	Advances in polymers for bio-additive manufacturing: A state of art review. 2021 , 72, 439-457	2
251	An Overview of Laser Engineered Net Shaping of Ceramics. 2020 , 25,	0
250	Visible Light-Curable Hydrogel Systems for Tissue Engineering and Drug Delivery. 2020 , 1249, 85-93	2
249	Bioinks for 3D printing of artificial extracellular matrices. 2020 , 1-37	1
248	Bone-Marrow-Derived Mesenchymal Stromal Cells: From Basic Biology to Applications in Bone Tissue Engineering and Bone Regeneration. 2020 , 1-55	
247	Materials Chemistry of Neural Interface Technologies and Recent Advances in Three-Dimensional Systems. 2021 ,	0
246	Adjusting the accuracy of PEGDA-GelMA vascular network by dark pigments via digital light processing printing. 2021 , 8853282211053081	1
245	A Bioprinted Tubular Intestine Model Using a Colon-Specific Extracellular Matrix Bioink. 2021 , e2101768	2
244	Bioprinting of Complex Multicellular Organs with Advanced Functionality-Recent Progress and Challenges Ahead.. <i>Advanced Materials</i> , 2022 , 34, e2101321	24 2
243	3D-Bioprinting in der regenerativen Therapie von Herz- und Gefäßkrankungen. 2021 , 35, 364	
242	Bioprinting Scaffolds for Vascular Tissues and Tissue Vascularization. 2021 , 8,	1

241	Selection of Cardiovascular 3D Printing Materials. 2021 , 15-21	
240	Direct laser writing of a titanium dioxide-laden retinal cone phantom for adaptive optics-optical coherence tomography. 2020 , 10, 2757	3
239	3D printed biomimetic cochleae and machine learning co-modelling provides clinical informatics for cochlear implant patients.	0
238	Information and Scientific Impact of Advanced Therapies in the Age of Mass Media: Altmetrics-Based Analysis of Tissue Engineering. 2021 , 23, e25394	
237	Regenerative Medicine, Disease Modeling, and Drug Discovery in Human Pluripotent Stem Cell-derived Kidney Tissue. 2017 , 3, 57-67	2
236	pre-vascularization strategies for tissue engineered constructs-Bioprinting and others. 2017 , 3, 008	3
235	Bio-assembling and Bioprinting for Engineering Microvessels from the Bottom Up. 2021 , 7, 366	
234	Fabrication and Biomedical Applications of Heart-on-a-chip. 2021 , 7, 370	
233	Recent advances on bioengineering approaches for fabrication of functional engineered cardiac pumps: A review. 2021 , 280, 121298	7
232	High-resolution lithographic biofabrication of hydrogels with complex microchannels from low-temperature-soluble gelatin bioresins. 2021 , 12, 100162	9
231	Evaluation of Printing Parameters on 3D Extrusion Printing of Pluronic Hydrogels and Machine Learning Guided Parameter Recommendation. 2021 , 7, 434	3
230	3D extrusion bioprinting. 2021 , 1,	17
229	Automated biofabrication of anisotropic dense fibrin gels accelerate osteoblastic differentiation of seeded mesenchymal stem cells.	2
228	The Regeneration of Large-Sized and Vascularized Adipose Tissue Using a Tailored Elastic Scaffold and dECM Hydrogels. 2021 , 22,	1
227	3D Bioprinting Strategies, Challenges, and Opportunities to Model the Lung Tissue Microenvironment and Its Function.. 2021 , 9, 773511	3
226	Designing highly customizable human based platforms for cell culture using proteins from the amniotic membrane.. 2021 , 112574	0
225	3D bioprinting: current status and trends— guide to the literature and industrial practice. 1	8
224	Large Scale Tissues Bioprinting. 2022 , 257-280	

223	3D Printing of In Vitro Models. 2022 , 311-337	
222	Biobridge: An Outlook on Translational Bioinks for 3D Bioprinting. 2021 , e2103469	6
221	Liquid Support Bath-Assisted 3 D Bioprinting. 2022 , 149-178	
220	Micropatterning of acoustic droplet vaporization in acoustically-responsive scaffolds using extrusion-based bioprinting.. 2022 , 25,	0
219	Recent Progress on Additive Manufacturing of Piezoelectric Ceramics. 2021 , 358	
218	Bio-assembling and Bioprinting for Engineering Microvessels from the Bottom Up. 2021 , 7, 366	1
217	Sacrificial Biomaterials for Vascularized/Neuralized Organ 3D Printing.	
216	Template-Enabled Biofabrication of Thick Three-Dimensional Tissues with Patterned Perfusable Macro-Channels.. 2021 , e2102123	2
215	Review on novel biomaterials and innovative 3D printing techniques in biomedical applications. 2022 ,	2
214	Three-dimensional bioprinting of tissues and organs. 2022 , 135-150	
213	Biomimetic models of the glomerulus.. 2022 ,	4
212	Pluronic F127-co-poly (2 acrylamido-2-methylpropane sulphonic acid) crosslinked matrices as potential controlled release carrier for an anti-depressant drug: in vitro and in vivo attributes. 1	0
211	3D Culture Platform for Enabling Large-Scale Imaging and Control of Cell Distribution into Complex Shapes by Combining 3D Printing with a Cube Device.. 2022 , 13,	0
210	A thermogelling organic-inorganic hybrid hydrogel with excellent printability, shape fidelity and cytocompatibility for 3D bioprinting. 2021 ,	1
209	Applications of Three-dimensional Printing in Ophthalmology.. 2022 ,	1
208	Responsive biomaterials for 3D bioprinting: A review. 2022 ,	8
207	Development of a Hybrid Nanoink for 3D Bioprinting of Heterogeneous Tumor Models.. 2022 ,	1
206	Direct-Ink Write 3D Printing Multistimuli-Responsive Hydrogels and Post-Functionalization Via Disulfide Exchange.	2

205	3D printing of a tough double-network hydrogel and its use as a scaffold to construct a tissue-like hydrogel composite.. 2022,	3
204	Bioprinted microvasculature: progressing from structure to function.. 2022,	2
203	Endothelialized microvessels fabricated by microfluidics facilitate osteogenic differentiation and promote bone repair.. 2022,	3
202	Additive Manufacturing Approaches toward the Fabrication of Biomaterials. 2100670	2
201	A voyage from 3D to 4D printing in nanomedicine and healthcare: part II.. 2022,	1
200	Freeform cell-laden cryobioprinting for shelf-ready tissue fabrication and storage. 2022, 5, 573-593	6
199	Evolution of 3D bioprinting-from the perspectives of bioprinting companies. 2022, 25, e00193	1
198	Study of sacrificial ink-assisted embedded printing for 3D perfusable channel creation for biomedical applications.. 2022, 9, 011408	2
197	Developing advanced polymer films based on microfluidic laminar flow. 2022, 9, 100091	0
196	Perfusable vascular tree like construction in 3D cell-dense tissues using artificial vascular bed.. 2022, 104321	0
195	Microfabricated Systems for Cardiovascular Tissue Modeling. 2022, 193-232	
194	3D Bio-printing For Skin Tissue Regeneration: Hopes and Hurdles.. 2022,	0
193	Colloidal multiscale porous adhesive (bio)inks facilitate scaffold integration.. 2021, 8, 041415	4
192	Review on Additive Manufacturing of Multi-Material Parts: Progress and Challenges. 2022, 6, 4	5
191	Trends in hydrogel-based encapsulation technologies for advanced cell therapies applied to limb ischemia.. 2022, 13, 100221	0
190	Bioprinting of Biomimetic Tissue Models for Disease Modeling and Drug Screening. 2022, 33-70	0
189	Strategies for 3D Printing of Vascularized Bone. 2022, 249-265	
188	Blood Vessel Regeneration. 2022, 241-265	

187	Hydrogels for Bioprinting. 2022 , 185-211		1
186	Multiplexed Anodic Stripping Voltammetry Detection of Heavy Metals in Water Using Nanocomposites Modified Screen-Printed Electrodes Integrated With a 3D-Printed Flow Cell.. 2022 , 10, 815805		0
185	Bioink materials for translational applications. 2022 , 47, 80		1
184	3D Printed Personalized Nerve Guide Conduits for Precision Repair of Peripheral Nerve Defects.. 2022 , e2103875		9
183	Engineering Hydrogels for the Development of Three-Dimensional In Vitro Models.. 2022 , 23,		1
182	Three-dimensional bioprinting with decellularized extracellular matrix-based bioinks in translational regenerative medicine. 2022 , 47, 70		3
181	Advances in 3D Bioprinting. 2022 , 1, 100011		0
180	Microfluidic Tissue Engineering and Bio-actuation.. <i>Advanced Materials</i> , 2022 , e2108427	24	4
179	A Heating-Assisted Direct Ink Writing Method for Preparation of PDMS Cellular Structure with High Manufacturing Fidelity.. 2022 , 14,		0
178	Direct Ink Writing: A 3D Printing Technology for Diverse Materials.. <i>Advanced Materials</i> , 2022 , e2108855	24	35
177	Orthogonally induced differentiation of stem cells for the programmatic patterning of vascularized organoids and bioprinted tissues.. 2022 ,		5
176	Microfluidic Printheads for Highly Switchable Multimaterial 3D Printing of Soft Materials. 2101709		
175	Biomimetic and Biologically Compliant Soft Architectures via 3D and 4D Assembly Methods: A Perspective.. <i>Advanced Materials</i> , 2022 , e2108391	24	5
174	Bioprinting small-diameter vascular vessel with endothelium and smooth muscle by the approach of two-step crosslinking process.. 2022 ,		0
173	3D bioprinted, vascularized neuroblastoma tumor environment in fluidic chip devices for precision medicine drug testing.. 2022 ,		1
172	Bioactive inorganic particles-based biomaterials for skin tissue engineering. 20210083		5
171	Multimaterial Multinozzle Adaptive 3D Printing of Soft Materials. 2101710		3
170	An Investigation of Integrated Multi-Scale 3D Printing for Hierarchical Structures Fabrication. 2022 ,		1

169	An Injectable Hydrogel for Treatment of Chronic Neuropathic Pain.. 2022 , e2100529	0
168	Hybprinting for musculoskeletal tissue engineering.. 2022 , 25, 104229	0
167	Medical 3D Printing: Tools and Techniques, Today and Tomorrow.. 2022 ,	1
166	Design of interfaces to promote the bonding strength between dissimilar materials. 2022 , 76, 786-795	0
165	Materials for Dentoalveolar Bioprinting: Current State of the Art.. 2021 , 10,	3
164	Bonding of Flexible Membranes for Perfusable Vascularized Networks Patch. 2021 , 19, 363	0
163	Advanced Strategies for 3D Bioprinting of Tissue and Organ Analogs Using Alginate Hydrogel Bioinks.. 2021 , 19,	2
162	Direct foam writing in microgravity.. 2021 , 7, 55	0
161	3D Printing of Cell-Laden Microgel-Based Biphasic Bioink with Heterogeneous Microenvironment for Biomedical Applications. 2022 , 32, 2109810	4
160	Direct Microextrusion Printing of a Low Viscosity Hydrogel on a Supportive Microstructured Bioprinting Substrate for the Vasculogenesis of Endothelial Cells. 2101326	1
159	Fabrication and characterization of 3D printing scaffold technology by extract oils from plant and its applications in the cardiovascular blood.. 2021 , 11, 24409	0
158	3D-Bioprinting in der regenerativen Therapie von Herz- und Gefarkrankungen.	
157	The Tendon Microenvironment: Engineered In Vitro Models to Study Cellular Crosstalk.. 2022 , 114299	3
156	Liquid-solid co-printing of multi-material 3D fluidic devices via material jetting. 2022 , 102785	
155	A Comprehensive Assessment on the Pivotal Role of Hydrogels in Scaffold-Based Bioprinting.. 2022 , 8,	0
154	Programming hydrogels to probe spatiotemporal cell biology.. 2022 ,	2
153	Data_Sheet_1.DOCX. 2018 ,	
152	Biodegradable Inks in Indirect Three-Dimensional Bioprinting for Tissue Vascularization.. 2022 , 10, 856398	0

151	Bioprinting and plastic compression of large pigmented and vascularized human dermo-epidermal skin substitutes by means of a new robotic platform.. 2022 , 13, 20417314221088513	1
150	Emerging strategies in 3D printed tissue models for in vitro biomedical research. 2022 , 207-246	1
149	Engineered assistive materials for 3D bioprinting: support baths and sacrificial inks.. 2022 , 14,	1
148	Selective Laser Sintering 4D Printing of Dynamic Cross-linked Polyurethane Containing Diels-Alder Bonds. 2022 , 4, 4035-4046	2
147	Biomanufacturing human tissues via organ building blocks.. 2022 , 29, 667-677	2
146	An Overview of Extracellular Matrix-Based Bioinks for 3D Bioprinting. 2022 , 10,	2
145	Mimicking Tumor Microenvironment by 3D Bioprinting: 3D Cancer Modeling.. 2022 ,	0
144	Potential Strategies for Kidney Regeneration With Stem Cells: An Overview.. 2022 , 10, 892356	1
143	Patients Stem Cells Differentiation in a 3D Environment as a Promising Experimental Tool for the Study of Amyotrophic Lateral Sclerosis. 2022 , 23, 5344	0
142	Role of nanostructured materials in hard tissue engineering.. 2022 , 304, 102682	0
141	Engineering the Human Blood-Brain Barrier at the Capillary Scale using a Double-Templating Technique. 2110289	0
140	Bioprinting technologies: an overview. 2022 , 19-49	0
139	Direct 3D printing of thermosensitive AOP127-oxidized dextran hydrogel with dual dynamic crosslinking and high toughness. 2022 , 119616	1
138	3D-Printed Superhydrophobic and Magnetic Device That Can Self-Powered Sense A Tiny Droplet Impact. 2022 ,	8
137	3D Printing and Patterning Vasculature in Engineered Tissues. 2015 , 267-285	
136	Three-Dimensional-Bioprinted Liver Chips and Challenges. 2022 , 12, 5029	2
135	Emerging tissue engineering strategies for the corneal regeneration.. 2022 ,	0
134	Polyurethane-Gelatin Methacryloyl Hybrid Ink for 3D Printing of Biocompatible and Tough Vascular Networks.	0

133	Computer-Assisted Manufacturing of Medicines. 2022 , 153-187	
132	Engineering the multiscale complexity of vascular networks.	0
131	The role of viscosity ratio in Janus drop impact on macro-ridge structure. 2022 , 34, 052115	1
130	A print-and-fuse Strategy for Sacrificial Filaments Enables Biomimetically Structured Perfusable Microvascular Networks with Functional Endothelium Inside 3D Hydrogels. <i>Advanced Materials</i> , 2200653 ²⁴	2
129	Application Status of Sacrificial Biomaterials in 3D Bioprinting. 2022 , 14, 2182	0
128	3d Printing Sacrificial Templates for Manufacturing Hydrogel Constructs with Channel Networks.	
127	3D Bioprinting of Prevascularized Full-Thickness Gelatin-Alginate Structures with Embedded Co-Cultures. 2022 , 9, 242	0
126	Advantages of self-assembled nano peptide hydrogels in biological tissue engineering. 2022 , 23,	0
125	3D Printing of PLLA/Biomineral Composite Bone Tissue Engineering Scaffolds. 2022 , 15, 4280	1
124	A versatile embedding medium for freeform bioprinting with multi-crosslinking methods.	1
123	Traction of 3D and 4D Printing in the Healthcare Industry: From Drug Delivery and Analysis to Regenerative Medicine.	2
122	Strategies to Promote Vascularization in 3D Printed Tissue Scaffolds: Trends and Challenges.	2
121	In vitro long term differentiation and functionality of three-dimensional bioprinted primary human hepatocytes: application for in vivo engraftment.	1
120	Advances in 3D bioprinting of tissues/organs for regenerative medicine and in-vitro models. 2022 , 121639	6
119	Multi-Scale Analysis of the Composition, Structure, and Function of Decellularized Extracellular Matrix for Human Skin and Wound Healing Models. 2022 , 12, 837	1
118	Additive manufacturing of self-healing polymers and composites. 2022 , 433-456	
117	Electrospinning and Three-Dimensional (3D) Printing for Biofabrication. 2022 , 555-604	0
116	A versatile strategy to construct free-standing multi-furcated vessels and a complicated vascular network in heterogeneous porous scaffolds via combination of 3D printing and stimuli-responsive hydrogels.	1

115	4D bioprinting: Fabrication approaches and biomedical applications. 2022 , 193-229	
114	Perspectives for 3D-Bioprinting in Modeling of Tumor Immune Evasion. 2022 , 14, 3126	1
113	Suppression of Filament Defects in Embedded 3D Printing.	2
112	Generation of an Adequate Perfusion Network within Dense Collagen Hydrogels Using Thermoplastic Polymers as Sacrificial Matrix to Promote Cell Viability. 2022 , 9, 313	0
111	Mechanical properties assessment of a 3D printed composite under torsional and perpendicular stress.	0
110	Improving the 3D Printability of Sugar Glass to Engineer Sacrificial Vascular Templates.	
109	Progress and challenges on extrusion based three dimensional (3D) printing of biomaterials. 2022 , 27, e00223	0
108	Recent advances in organoid engineering: A comprehensive review. 2022 , 29, 101582	0
107	Low-density PDMS foams by controlled destabilization of thixotropic emulsions. 2022 , 626, 265-275	1
106	Gelatin Methacryloyl Hydrogels for Musculoskeletal Tissue Regeneration. 2022 , 9, 332	0
105	Engineering A Hierarchical Biphasic Gel For Subcutaneous Vascularization. 2200922	
104	Combinatorial approaches for novel cardiovascular drug discovery: a review of the literature. 1-19	0
103	Biomaterial-based 3D bioprinting strategy for orthopedic tissue engineering. 2022 ,	2
102	Low temperature hybrid 3D printing of hierarchically porous bone tissue engineering scaffolds with in situ delivery of osteogenic peptide and mesenchymal stem cells. 2022 , 14, 045006	0
101	Tissue engineering approaches and generation of insulin-producing cells to treat type 1 diabetes. 1-18	
100	The road ahead for application of mechanics in drug delivery. 2022 , 103956	
99	Embedded 3D Printing of PDMS-based Microfluidic Chips for Biomedical Applications. 1-34	1
98	Self-Healing Injectable Hydrogels for Tissue Regeneration.	9

97	Components, mechanisms and applications of stimuli-responsive polymer gels. 2022 , 177, 111473	1
96	Design of soft matter for additive processing. 2022 , 1, 592-600	0
95	The effect of the synthetic route on the biophysiochemical properties of methacrylated gelatin (GelMA) based hydrogel for development of GelMA-based bioinks for 3D bioprinting applications. 2022 , 25, 101542	0
94	Micro/Nanoscale Plotting of Biomaterials. 2022 , 1-16	
93	3D printing sacrificial templates for manufacturing hydrogel constructs with channel networks. 2022 , 222, 111012	0
92	Application of mesenchymal stem cells combined with nano-polypeptide hydrogel in tissue engineering blood vessel. 2022 , 21, 277-281	1
91	Extrusion-based additive manufacturing technologies: State of the art and future perspectives. 2022 , 83, 607-636	2
90	Freeform embedded printing of vasculature in cementitious materials for healing-agent transport. 2022 , 59, 103140	0
89	Cryoprinting of nanoparticle-enhanced injectable hydrogel with shape-memory properties. 2022 , 223, 111120	2
88	3D bioprinting: Materials, processes, and applications. 2022 , 71, 577-597	0
87	3D Bioprinting for Tumor Metastasis Research.	0
86	Preventing Biofilm Formation and Encrustation on Urinary Implants: (Bio)coatings and Tissue Engineering. 2022 , 427-435	0
85	Techniques for Biofabrication of Vascular and Vascularized Tissue. 2022 , 461-479	0
84	High Throughput Omnidirectional Printing of Tubular Microstructures from Elastomeric Polymers. 2201346	0
83	Tissues and organ printing: An evolution of technology and materials. 095441192211250	1
82	Embedded Core-shell 3D Printing (eCS3DP) with Low-Viscosity Polysiloxanes. 2022 , 14, 41520-41530	1
81	Current Progress and Technological Challenges in Translational 3D Bioprinting. 2022 , 1-23	0
80	Discussion on the possibility of multi-layer intelligent technologies to achieve the best recover of musculoskeletal injuries: Smart materials, variable structures, and intelligent therapeutic planning. 10,	0

- 79 Wireless charging-mediated angiogenesis and nerve repair by adaptable microporous hydrogels from conductive building blocks. **2022**, 13, 1
- 78 Implementation of printability for magneto-active soft materials based on programmed 3D printing technique. 0
- 77 Non-planar embedded 3D printing for complex hydrogel manufacturing. **2022**, 28, e00242 0
- 76 Hierarchical porous metalorganic gels and derived materials: from fundamentals to potential applications. **2022**, 51, 9068-9126 0
- 75 Recent advances and future prospects of functional organ-on-a-chip systems. 0
- 74 Engineering Spatiotemporal Control in Vascularized Tissues. **2022**, 9, 555 0
- 73 Vascularization strategies for bioprinting. **2022**, 0
- 72 Flow Simulation and Gradient Printing of Fluorapatite- and Cell-Loaded Recombinant Spider Silk Hydrogels. **2022**, 12, 1413 0
- 71 Novel structural designs of 3D-printed osteogenic graft for rapid angiogenesis. 1
- 70 Therapeutic Effect of Biomimetic Scaffold Loaded with Human Amniotic Epithelial Cell-Derived Neural-like Cells for Spinal Cord Injury. **2022**, 9, 535 0
- 69 Emerging Magnetic Fabrication Technologies Provide Controllable Hierarchically-Structured Biomaterials and Stimulus Response for Biomedical Applications. 2202278 0
- 68 Indirect 3D Bioprinting of a Robust Trilobular Hepatic Construct with Decellularized Liver Matrix Hydrogel. **2022**, 9, 603 0
- 67 High-Resolution, Transparent, and Flexible Printing of Polydimethylsiloxane via Electrohydrodynamic Jet Printing for Conductive Electronic Device Applications. **2022**, 14, 4373 1
- 66 Embedded extrusion printing in yield-stress-fluid baths. **2022**, 5, 3775-3806 0
- 65 3D printing applications for healthcare research and development. **2022**, 0
- 64 Engineering Vascular Self-Assembly by Controlled 3D-Printed Cell Placement. 2208325 0
- 63 Preparation and Use of Decellularized Extracellular Matrix for Tissue Engineering. **2022**, 13, 240 0
- 62 Bioengineering for vascularization: Trends and directions of photocrosslinkable gelatin methacrylate hydrogels. 10, 1

61	Use of ozone on regeneration of 3D critical size bone defects. 94-100	0
60	Antibacterial smart hydrogels: New hope for infectious wound management. 2022 , 100499	0
59	3D printed microfluidics for cell biological applications. 2023 , 158, 116864	0
58	Global perspective and African outlook on additive manufacturing research: An overview. 2022 , 9, 35	0
57	Printable Multi-Stage Variable Stiffness Material Enabled by Low Melting Point Particles Additives.	0
56	3D bioprinting of emulating homeostasis regulation for regenerative medicine applications. 2023 , 353, 147-165	2
55	Biomaterials based on hyaluronic acid, collagen and peptides for three-dimensional cell culture and their application in stem cell differentiation. 2023 , 226, 14-36	0
54	Multiplexed fluidic circuit board for controlled perfusion of 3D blood vessels-on-a-chip. 2022 , 23, 168-181	1
53	Chapter 9. Advanced Scaffold Fabrication using Additive Manufacturing. 2022 , 226-251	0
52	Three-Dimensional Bio-Printed Cardiac Patch for Sustained Delivery of Extracellular Vesicles from the Interface. 2022 , 8, 769	0
51	4D Printing in Biomedical Engineering: a State-of-the-Art Review of Technologies, Biomaterials, and Application.	0
50	Development and Characterization of Functional Polylactic Acid/Chitosan Porous Scaffolds for Bone Tissue Engineering. 2022 , 14, 5079	0
49	In Situ Endothelialization of Free-Form 3D Network of Interconnected Tubular Channels via Interfacial Coacervation by Aqueous-in-Aqueous Embedded Bioprinting. 2209263	0
48	The Influence of Mixing Conditions on the Morphology of Poly-3-hydroxybutyrate and Nitrile-Butadiene Rubber Polymer Compositions. 2022 , 15, 628-632	0
47	Advances in the development of tubular structures using extrusion-based 3D cell-printing technology for vascular tissue regenerative applications. 2022 , 26,	2
46	Fabrication and characterization of electrospun GelMA/PCL/CS nanofiber composites for wound dressing applications. 2023 , 38, 3-24	1
45	Bioengineering of High Cell Density Tissues with Hierarchical Vascular Networks for ex vivo Whole Organs. 2209149	0
44	Emerging 3D bioprinting applications in plastic surgery. 2023 , 27,	2

43	Constructing 3D In Vitro Models of Heterocellular Solid Tumors and Stromal Tissues Using Extrusion-Based Bioprinting.	1
42	Bioprinting Technologies and Bioinks for Vascular Model Establishment. 2023 , 24, 891	1
41	Design, Printing, and Engineering of Regenerative Biomaterials for Personalized Bone Healthcare. 2023 , 101072	1
40	Programming Delayed Dissolution Into Sacrificial Bioinks For Dynamic Temporal Control of Architecture within 3D-Bioprinted Constructs. 2210521	1
39	3D Printing of Self-assembling Nanofibrous Multidomain Peptide Hydrogels. 2210378	1
38	Application of 4D printing and AI to cardiovascular devices. 2023 , 80, 104162	1
37	Role of 3D printing in biomechanics. 2023 , 1-33	0
36	A review of 4D printing of hydrogel in biomedical implant applications. 2023 ,	0
35	Recent advances in tumors-on-chips. 2023 , 79-117	0
34	(Bio)fabrication of microfluidic devices and organs-on-a-chip. 2023 , 273-336	0
33	Bioprinting of vascularized tissues. 2023 , 173-213	0
32	Closed-loop vasculature network design for bioprinting large, solid tissue scaffolds.	0
31	3D Bioprinting techniques. 2023 , 91-145	1
30	3D bioprinting: An innovative technique for biofabrication applied to regenerative medicine and tissue engineering. 2023 , 195-232	0
29	Patient-specific 3D bioprinting for in situ tissue engineering and regenerative medicine. 2023 , 149-178	0
28	In situ 3D-bioprinting MoS ₂ accelerated gelling hydrogel scaffold for promoting chronic diabetic wound healing. 2023 ,	0
27	Eye-on-a-chip. 2023 , 315-369	0
26	Advances in 3D Printing Technology for Tissue Engineering. 2023 , 181-206	0

25	Optical Properties of Biopolymers. 2023 , 1-29	0
24	A Processing Model toward Printing High-Flatness Layers for Direct-Ink-Writing Printed Self-Leveling Inks. 2023 , 13, 4950	0
23	Recent advances in biofabrication strategies based on bioprinting for vascularized tissue repair and regeneration. 2023 , 229, 111885	0
22	Instructional materials that control cellular activity through synthetic Notch receptors. 2023 , 297, 122099	0
21	Visible light-crosslinkable tyramine-conjugated alginate-based microgel bioink for multiple cell-laden 3D artificial organ. 2023 , 313, 120895	0
20	Current and Future Applications of 3D Bioprinting in Endodontic Regeneration [A Short Review]. 2019 , 47, 645-652	0
19	Growth of spiral ganglion neurons induced by graphene oxide/oxidized bacterial cellulose composite hydrogel. 2023 , 311, 120749	0
18	Regenerative Medicine, Disease Modelling, and Drug Discovery in Human Pluripotent Stem Cell-Derived Kidney Tissue. 57-67	0
17	3D bioprinting and the revolution in experimental cancer model systems[A review of developing new models and experiences with in vitro 3D bioprinted breast cancer tissue-mimetic structures. 29,	1
16	Printability assessment workflow of a thermosensitive photocurable biomaterial ink for microextrusion bioprinting. 2023 , 30, e00262	0
15	Process control of electrospinning artificial fenestrated capillary vessels. 2023 , 227, 111708	0
14	Advances in Gelatin Bioinks to Optimize Bioprinted Cell Functions. 2203148	0
13	Tissue-Engineering Bladder Augmentation. 2022 , 1-14	0
12	High cell density and high-resolution 3D bioprinting for fabricating vascularized tissues. 2023 , 9,	2
11	3D Printable Hydrogel with Tunable Degradability and Mechanical Properties as a Tissue Scaffold for Pelvic Organ Prolapse Treatment. 2201421	0
10	Development of stimuli-responsive nanogels as drug carriers and their biomedical application in 3D printing. 2023 , 29, 101372	0
9	Vascularized organ bioprinting: From strategy to paradigm.	1
8	Polysaccharide-based biomaterials in a journey from 3D to 4D printing.	0

- 7 3D Bioprinting for Next-Generation Personalized Medicine. **2023**, 24, 6357 ○
- 6 Biofunctionalized 3D printed structures for biomedical applications: A critical review of recent advances and future prospects. **2023**, 137, 101124 ○
- 5 Advances in tissue engineering of cancer microenvironment-from three-dimensional culture to three-dimensional printing. **2023**, ○
- 4 Gelation of Uniform Interfacial Diffusant in Embedded 3D Printing. ○
- 3 Information encrypted heterogeneous hydrogel with programmable mechanical properties enabled by 3D patterning. ○
- 2 Procedural technique development. **2023**, 81-86 ○
- 1 Encapsulation in artificial organs. **2023**, 253-282 ○