

CITATION REPORT

List of articles citing

Synthesis, properties, and biomedical applications of gelatin methacryloyl (GelMA) hydrogels

DOI: 10.1016/j.biomaterials.2015.08.045
Biomaterials, 2015, 73, 254-71.

Source: <https://exaly.com/paper-pdf/62687509/citation-report.pdf>

Version: 2024-04-10

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
1489	Pluripotent Stem Cells: Differentiation Potential and Therapeutic Efficacy for Cartilage Repair. 2016 ,		
1488	Introductory Chapter: An Overview of Hydrogels. 2016 ,		
1487	Fabrication of gelatin methacrylate/nanohydroxyapatite microgel arrays for periodontal tissue regeneration. 2016 , 11, 4707-4718		28
1486	Synthesis and Characterization of Types A and B Gelatin Methacryloyl for Bioink Applications. 2016 , 9,		98
1485	Cold Water Fish Gelatin Methacryloyl Hydrogel for Tissue Engineering Application. 2016 , 11, e0163902		74
1484	In Vivo Osteogenic Differentiation of Human Dental Pulp Stem Cells Embedded in an Injectable In Vivo-Forming Hydrogel. 2016 , 16, 1158-69		24
1483	Three-dimensional bioprinting speeds up smart regenerative medicine. 2016 , 3, 331-344		11
1482	Skin penetration-inducing gelatin methacryloyl nanogels for transdermal macromolecule delivery. 2016 , 24, 1115-1125		11
1481	Ultrasonic-assisted synthesis of sodium lignosulfonate-grafted poly(acrylic acid-co-poly(vinyl pyrrolidone)) hydrogel for drug delivery. 2016 , 6, 35550-35558		34
1480	Surface functionalization of natural lignin isolated from Aloe barbadensis Miller biomass by atom transfer radical polymerization for enhanced anticancer efficacy. 2016 , 6, 51310-51319		24
1479	Cells Cultured on Core-Shell Photonic Crystal Barcodes for Drug Screening. 2016 , 8, 13840-8		88
1478	Development of UV cross-linked gelatin coated electrospun poly(caprolactone) fibrous scaffolds for tissue engineering. 2016 , 93, 1539-1548		31
1477	Hydrophobic association hydrogels based on N-acryloyl-alanine and stearyl acrylate using gelatin as emulsifier. 2016 , 6, 38957-38963		4
1476	Investigating Glioblastoma Angiogenesis Using A 3D in Vitro GelMA Microwell Platform. 2016 , 15, 289-93		18
1475	A thermoresponsive polydiolcitrate-gelatin scaffold and delivery system mediates effective bone formation from BMP9-transduced mesenchymal stem cells. 2016 , 11, 025021		49
1474	Bioprinting 3D microfibrous scaffolds for engineering endothelialized myocardium and heart-on-a-chip. <i>Biomaterials</i> , 2016 , 110, 45-59	15.6	495
1473	Fabrication of a photo-crosslinked gelatin hydrogel for preventing abdominal adhesion. 2016 , 6, 92449-92453		15

1472	Covalent Bonding of an Electroconductive Hydrogel to Gold-Coated Titanium Surfaces via Thiol-ene Click Chemistry. 2016 , 301, 1423-1429	7
1471	Direct 3D bioprinting of perfusable vascular constructs using a blend bioink. <i>Biomaterials</i> , 2016 , 106, 58-68	15.6 544
1470	Gelatin Methacrylate Hydrogels as Biomimetic Three-Dimensional Matrixes for Modeling Breast Cancer Invasion and Chemoresponse in Vitro. 2016 , 8, 22005-17	40
1469	Dual Stimuli Responsive Gelatin-CNT Hybrid Films as a Versatile Tool for the Delivery of Anionic Drugs. 2016 , 301, 1537-1547	6
1468	Development of highly biocompatible Gelatin & i-Carrageenan based composite hydrogels: In depth physiochemical analysis for biomedical applications. 2016 , 153, 292-301	30
1467	Yield stress determines bioprintability of hydrogels based on gelatin-methacryloyl and gellan gum for cartilage bioprinting. 2016 , 8, 035003	175
1466	Antioxidant N-Acetylcysteine and Glutathione Increase the Viability and Proliferation of MG63 Cells Encapsulated in the Gelatin Methacrylate/VA-086/Blue Light Hydrogel System. 2016 , 22, 792-800	13
1465	Precise Tuning of Facile One-Pot Gelatin Methacryloyl (GelMA) Synthesis. 2016 , 6, 31036	157
1464	3D-engineering of Cellularized Conduits for Peripheral Nerve Regeneration. 2016 , 6, 32184	91
1463	Osteogenic differentiation of preosteoblasts on a hemostatic gelatin sponge. 2016 , 6, 32884	47
1462	Biodegradable polymer scaffolds. 2016 , 4, 7493-7505	45
1461	Gelatin methacrylamide hydrogel with graphene nanoplatelets for neural cell-laden 3D bioprinting. 2016 , 2016, 4185-4188	35
1460	Constructing 3D heterogeneous hydrogels from electrically manipulated prepolymer droplets and crosslinked microgels. 2016 , 2, e1600964	55
1459	3D Bioprinting a Cell-Laden Bone Matrix for Breast Cancer Metastasis Study. 2016 , 8, 30017-30026	176
1458	Advances in printing biomaterials and living cells: implications for islet cell transplantation. 2016 , 21, 467-75	22
1457	Bioprinting the Cancer Microenvironment. 2016 , 2, 1710-1721	148
1456	Fabrication of conductive gelatin methacrylate-polyaniline hydrogels. 2016 , 33, 122-30	64
1455	Nano hydroxyapatite particles promote osteogenesis in a three-dimensional bio-printing construct consisting of alginate/gelatin/hASCs. 2016 , 6, 6832-6842	60

1454	Intra-articular delivery of sinomenium encapsulated by chitosan microspheres and photo-crosslinked GelMA hydrogel ameliorates osteoarthritis by effectively regulating autophagy. <i>Biomaterials</i> , 2016 , 81, 1-13	15.6	73
1453	Functionalization, preparation and use of cell-laden gelatin methacryloyl-based hydrogels as modular tissue culture platforms. 2016 , 11, 727-46		391
1452	Gelatin-Methacryloyl Hydrogels: Towards Biofabrication-Based Tissue Repair. 2016 , 34, 394-407		411
1451	Ultrastrong and Flexible Hybrid Hydrogels based on Solution Self-Assembly of Chitin Nanofibers in Gelatin Methacryloyl (GelMA). 2016 , 4, 2539-2543		51
1450	Multilayered polycaprolactone/gelatin fiber-hydrogel composite for tendon tissue engineering. 2016 , 35, 68-76		130
1449	Biomimetic gelatin methacrylamide hydrogel scaffolds for bone tissue engineering. 2016 , 4, 1070-1080		46
1448	Synthetic hydrogels mimicking basement membrane matrices to promote cell-matrix interactions. 2017 , 57-58, 324-333		65
1447	3D Bioprinting for Tissue and Organ Fabrication. 2017 , 45, 148-163		368
1446	3D Bioprinting: New Directions in Articular Cartilage Tissue Engineering. 2017 , 3, 2657-2668		42
1445	Amino Acids and Peptide-Based Supramolecular Hydrogels for Three-Dimensional Cell Culture. 2017 , 29, 1604062		192
1444	Functional Graphene Nanomaterials Based Architectures: Biointeractions, Fabrications, and Emerging Biological Applications. 2017 , 117, 1826-1914		333
1443	Mussel-Inspired Multifunctional Hydrogel Coating for Prevention of Infections and Enhanced Osteogenesis. 2017 , 9, 11428-11439		132
1442	Cell-laden hydrogels for osteochondral and cartilage tissue engineering. 2017 , 57, 1-25		317
1441	Surface modification of PdlLGA microspheres with gelatine methacrylate: Evaluation of adsorption, entrapment, and oxygen plasma treatment approaches. 2017 , 53, 450-459		17
1440	Gold Nanocomposite Bioink for Printing 3D Cardiac Constructs. 2017 , 27, 1605352		173
1439	3D bioprinted graphene oxide-incorporated matrix for promoting chondrogenic differentiation of human bone marrow mesenchymal stem cells. 2017 , 116, 615-624		109
1438	An overview of hydrogel-based intra-articular drug delivery for the treatment of osteoarthritis. 2017 , 154, 33-39		60
1437	Hydrogel-based three-dimensional cell culture for organ-on-a-chip applications. 2017 , 33, 580-589		35

1436	Progress of gelatin-based 3D approaches for bone regeneration. 2017 , 42, 63-74	58
1435	Boronate-functionalized hydrogel as a novel biosensing interface for the glycated hemoglobin A1c (HbA) based on the competitive binding with signaling glycoprotein. 2017 , 77, 1160-1169	4
1434	On the parallelism between the mechanisms behind chromatography and drug delivery: the role of interactions with a stationary phase. 2017 , 19, 11518-11528	7
1433	Interplay between materials and microfluidics. 2017 , 2,	179
1432	Unbiased Analysis of the Impact of Micropatterned Biomaterials on Macrophage Behavior Provides Insights beyond Predefined Polarization States. 2017 , 3, 969-978	26
1431	Engineered 3D Cardiac Fibrotic Tissue to Study Fibrotic Remodeling. 2017 , 6, 1601434	51
1430	Current developments in multifunctional smart materials for 3D/4D bioprinting. 2017 , 2, 67-75	47
1429	Injectable and Tunable Gelatin Hydrogels Enhance Stem Cell Retention and Improve Cutaneous Wound Healing. 2017 , 27, 1606619	154
1428	Extrusion Bioprinting of Shear-Thinning Gelatin Methacryloyl Bioinks. 2017 , 6, 1601451	233
1427	Modeling the Human Scarred Heart In Vitro: Toward New Tissue Engineered Models. 2017 , 6, 1600571	20
1426	Injectable supramolecular hydrogel formed from β -cyclodextrin and PEGylated arginine-functionalized poly(l-lysine) dendron for sustained MMP-9 shRNA plasmid delivery. 2017 , 49, 456-471	58
1425	A Novel Strategy to Engineer Pre-Vascularized Full-Length Dental Pulp-like Tissue Constructs. 2017 , 7, 3323	64
1424	Bioprinted Osteogenic and Vasculogenic Patterns for Engineering 3D Bone Tissue. 2017 , 6, 1700015	222
1423	A highly adhesive and naturally derived sealant. <i>Biomaterials</i> , 2017 , 140, 115-127	15.6 122
1422	Interwoven Aligned Conductive Nanofiber Yarn/Hydrogel Composite Scaffolds for Engineered 3D Cardiac Anisotropy. 2017 , 11, 5646-5659	290
1421	Polymer structure-property requirements for stereolithographic 3D printing of soft tissue engineering scaffolds. <i>Biomaterials</i> , 2017 , 140, 170-188	15.6 226
1420	Engineering a sprayable and elastic hydrogel adhesive with antimicrobial properties for wound healing. <i>Biomaterials</i> , 2017 , 139, 229-243	15.6 273
1419	Modulating the phenotype of host macrophages to enhance osteogenesis in MSC-laden hydrogels: Design of a glucomannan coating material. <i>Biomaterials</i> , 2017 , 139, 39-55	15.6 51

1418	Structural analysis of photocrosslinkable methacryloyl-modified protein derivatives. <i>Biomaterials</i> , 2017 , 139, 163-171	15.6	96
1417	Naturally derived proteins and glycosaminoglycan scaffolds for tissue engineering applications. 2017 , 78, 1277-1299		59
1416	3D Printing of Biosamples: A Concise Review. 2017 , 05, 1740002		
1415	3D high-resolution two-photon crosslinked hydrogel structures for biological studies. 2017 , 55, 373-384		56
1414	A simple 3D cryogel co-culture system used to study the role of CAFs in EMT of MDA-MB-231 cells. 2017 , 7, 17208-17216		10
1413	A 3D-Engineered Conformal Implant Releases DNA Nanocomplexs for Eradicating the Postsurgery Residual Glioblastoma. 2017 , 4, 1600491		25
1412	Synthesis and characterization of a novel cationic hydrogel base on salectan-g-PMAPTAC. 2017 , 101, 474-480		28
1411	In Situ-Forming Polyamidoamine Dendrimer Hydrogels with Tunable Properties Prepared via Aza-Michael Addition Reaction. 2017 , 9, 10494-10503		44
1410	High internal phase emulsions stabilised by supramolecular cellulose nanocrystals and their application as cell-adhesive macroporous hydrogel monoliths. 2017 , 5, 2671-2678		91
1409	Hydrogel based 3D carriers in the application of stem cell therapy by direct injection. 2017 , 6, 435-448		20
1408	Synthesis and Characterization of Photo-Cross-Linkable Keratin Hydrogels for Stem Cell Encapsulation. 2017 , 18, 398-412		25
1407	Sequentially-crosslinked bioactive hydrogels as nano-patterned substrates with customizable stiffness and degradation for corneal tissue engineering applications. <i>Biomaterials</i> , 2017 , 120, 139-154	15.6	136
1406	Nanoreinforced Hydrogels for Tissue Engineering: Biomaterials that are Compatible with Load-Bearing and Electroactive Tissues. 2017 , 29, 1603612		197
1405	3D bioprinting of GelMA scaffolds triggers mineral deposition by primary human osteoblasts. 2017 , 9, 015009		70
1404	Design and fabrication of GelMA/chitosan nanoparticles composite hydrogel for angiogenic growth factor delivery. 2018 , 46, 1799-1808		39
1403	Covalent Incorporation of Heparin Improves Chondrogenesis in Photocurable Gelatin-Methacryloyl Hydrogels. 2017 , 17, 1700158		40
1402	Bioinks for bioprinting functional meniscus and articular cartilage. 2017 , 1, 269-290		20
1401	Effect of isoflurane + NO inhalation and propofol + fentanyl anesthesia on myocardial function as assessed by cardiac troponin, caspase-3, cyclooxygenase-2 and inducible nitric oxide synthase expression. 2017 , 14, 4377-4382		2

1400	Functional and Biomimetic Materials for Engineering of the Three-Dimensional Cell Microenvironment. 2017 , 117, 12764-12850	408
1399	Bioprinting-Based PDLSC-ECM Screening for in Vivo Repair of Alveolar Bone Defect Using Cell-Laden, Injectable and Photocrosslinkable Hydrogels. 2017 , 3, 3534-3545	54
1398	Thiol-Ene Clickable Gelatin: A Platform Bioink for Multiple 3D Biofabrication Technologies. 2017 , 29, 1703404	164
1397	Gelatin based dynamic hydrogels via thiolborbornene reactions. 2017 , 8, 6741-6749	19
1396	Microfluidic Bioprinting for Engineering Vascularized Tissues and Organoids. 2017 ,	19
1395	Reinforcing the inner phase of the filled hydrogels with CNTs alters drug release properties and human keratinocyte morphology: A study on the gelatin- tamarind gum filled hydrogels. 2017 , 75, 538-548	18
1394	Cross-Linkable Gelatins with Superior Mechanical Properties Through Carboxylic Acid Modification: Increasing the Two-Photon Polymerization Potential. 2017 , 18, 3260-3272	66
1393	Degradation regulated bioactive hydrogel as the bioink with desirable moldability for microfluidic biofabrication. 2017 , 178, 8-17	16
1392	Visible light-based stereolithography bioprinting of cell-adhesive gelatin hydrogels. 2017 , 2017, 1599-1602	22
1391	Comprehensive Examination of Mechanical and Diffusional Effects on Cell Behavior Using a Decoupled 3D Hydrogel System. 2017 , 17, 1700162	15
1390	Colloidal templating of highly ordered gelatin methacryloyl-based hydrogel platforms for three-dimensional tissue analogues. 2017 , 9, e412-e412	32
1389	Handheld Co-Axial Bioprinting: Application to in situ surgical cartilage repair. 2017 , 7, 5837	109
1388	Controlling Adult Stem Cell Behavior Using Nanodiamond-Reinforced Hydrogel: Implication in Bone Regeneration Therapy. 2017 , 7, 6577	56
1387	Contribution of bioactive hyaluronic acid and gelatin to regenerative medicine. Methodologies of gels preparation and advanced applications. 2017 , 95, 11-26	13
1386	GelMA-collagen blends enable drop-on-demand 3D printability and promote angiogenesis. 2017 , 9, 045002	96
1385	Comparative study of gelatin methacrylate hydrogels from different sources for biofabrication applications. 2017 , 9, 044101	54
1384	Engineering of cell-laden gelatin-based microgels for cell delivery and immobilization in regenerative therapies. 2017 , 67, 251-259	5
1383	A highly printable and biocompatible hydrogel composite for direct printing of soft and perfusable vasculature-like structures. 2017 , 7, 16902	98

1382	Microfibers as Physiologically Relevant Platforms for Creation of 3D Cell Cultures. 2017 , 17, 1700279	23
1381	Inorganic Strengthened Hydrogel Membrane as Regenerative Periosteum. 2017 , 9, 41168-41180	92
1380	Clinically Amendable, Defined, and Rapid Induction of Human Brain Organoids from Induced Pluripotent Stem Cells. 2019 , 1576, 13-22	4
1379	High performances of dual network PVA hydrogel modified by PVP using borax as the structure-forming accelerator. 2017 , 20, 505-513	26
1378	Carbon nanodot impregnated fluorescent nanofibers for in vivo monitoring and accelerating full-thickness wound healing. 2017 , 5, 6645-6656	16
1377	Biophysical stimulation for engineering of functional cardiac tissues. 2017 , 131, 1393-1404	16
1376	UV-crosslinkable and thermo-responsive chitosan hybrid hydrogel for NIR-triggered localized on-demand drug delivery. 2017 , 174, 904-914	49
1375	In vitro and in vivo analysis of visible light crosslinkable gelatin methacryloyl (GelMA) hydrogels. 2017 , 5, 2093-2105	152
1374	Bioinspired Hydrogels to Engineer Cancer Microenvironments. 2017 , 19, 109-133	47
1373	Engineering Biodegradable and Biocompatible Bio-ionic Liquid Conjugated Hydrogels with Tunable Conductivity and Mechanical Properties. 2017 , 7, 4345	70
1372	Electrospun Photocrosslinkable Hydrogel Fibrous Scaffolds for Rapid In Vivo Vascularized Skin Flap Regeneration. 2017 , 27, 1604617	107
1371	Biomaterials for Musculoskeletal Regeneration. 2017 ,	5
1370	Rapid Continuous Multimaterial Extrusion Bioprinting. 2017 , 29, 1604630	205
1369	Comparative study of visible light polymerized gelatin hydrogels for 3D culture of hepatic progenitor cells. 2017 , 134,	26
1368	Synthesis and processing of hydrogels for medical applications. 2017 , 205-228	5
1367	Electrically conductive graphene/polyacrylamide hydrogels produced by mild chemical reduction for enhanced myoblast growth and differentiation. 2017 , 48, 100-109	104
1366	Cell Microencapsulation by Droplet Microfluidic Templating. 2017 , 218, 1600380	26
1365	Case Study: 3D Printed Cartilage. 2017 , 173-189	

1364	Synthesis and Characterization of Nanofunctionalized Gelatin Methacrylate Hydrogels. 2017 , 18,	42
1363	Synthesis and Characterization of Gelatin-Based Crosslinkers for the Fabrication of Superabsorbent Hydrogels. 2017 , 10,	17
1362	Preparation of Pendant Group-Functionalized Diblock Copolymers with Adjustable Thermogelling Behavior. 2017 , 9,	4
1361	Fabrication of Highly Crosslinked Gelatin Hydrogel and Its Influence on Chondrocyte Proliferation and Phenotype. 2017 , 9,	37
1360	Thermoresponsive Gels. 2017 , 3,	87
1359	3D Cell Printed Tissue Analogues: A New Platform for Theranostics. 2017 , 7, 3118-3137	81
1358	2.11 Polymers of Biological Origin ?. 2017 , 228-252	14
1357	Pentoxifylline exerts anti-inflammatory effects on cerebral ischemia reperfusion-induced injury in a rat model via the p38 mitogen-activated protein kinase signaling pathway. 2018 , 17, 1141-1147	6
1356	3D printed Polycaprolactone scaffolds with dual macro-microporosity for applications in local delivery of antibiotics. 2018 , 87, 78-89	64
1355	Three-Dimensional-Bioprinted Dopamine-Based Matrix for Promoting Neural Regeneration. 2018 , 10, 8993-9001	72
1354	Nanoengineered Ionic-Covalent Entanglement (NICE) Bioinks for 3D Bioprinting. 2018 , 10, 9957-9968	134
1353	Tailoring the mechanical properties of gelatin methacryloyl hydrogels through manipulation of the photocrosslinking conditions. 2018 , 14, 2142-2151	76
1352	Bioinks for 3D bioprinting: an overview. 2018 , 6, 915-946	488
1351	Highly deformable hydrogels constructed by pH-triggered polyacid nanoparticle disassembly in aqueous dispersions. 2018 , 14, 3510-3520	5
1350	Biopolymers and polymers in the search of alternative treatments for meniscal regeneration: State of the art and future trends. 2018 , 12, 51-71	65
1349	Precisely printable and biocompatible silk fibroin bioink for digital light processing 3D printing. 2018 , 9, 1620	295
1348	The potential role of bioengineering and three-dimensional printing in curing global corneal blindness. 2018 , 9, 2041731418769863	28
1347	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. <i>Biomaterials</i> , 2018 , 171, 83-96	15.6 140

1346	Sequentially-crosslinked biomimetic bioactive glass/gelatin methacryloyl composites hydrogels for bone regeneration. 2018 , 89, 119-127		37
1345	Emerging properties of hydrogels in tissue engineering. 2018 , 9, 2041731418768285		110
1344	Enhanced Chromium Sorption and Quick Separation of Magnetic Hydroxylapatite Anchored Biopolymeric Composites Using the Hydrothermal Method. 2018 , 63, 1286-1299		14
1343	Non-contact tensile viscoelastic characterization of microscale biological materials. 2018 , 34, 589-599		11
1342	3D printed microchannel networks to direct vascularisation during endochondral bone repair. <i>Biomaterials</i> , 2018 , 162, 34-46	15.6	124
1341	3D Bioprinting of Low-Concentration Cell-Laden Gelatin Methacrylate (GelMA) Bioinks with a Two-Step Cross-linking Strategy. 2018 , 10, 6849-6857		259
1340	Preparation and Characterization of Acid Resistant Double Cross-Linked Hydrogel for Potential Biomedical Applications. 2018 , 4, 872-883		35
1339	Photo-crosslinkable, injectable sericin hydrogel as 3D biomimetic extracellular matrix for minimally invasive repairing cartilage. <i>Biomaterials</i> , 2018 , 163, 89-104	15.6	106
1338	Synergistic interplay between the two major bone minerals, hydroxyapatite and whitlockite nanoparticles, for osteogenic differentiation of mesenchymal stem cells. 2018 , 69, 342-351		57
1337	Semicrystalline Hydrophobically Associated Hydrogels with Integrated High Performances. 2018 , 10, 2946-2956		36
1336	Gelatin methacryloyl hydrogel for glucose biosensing using Ni nanoparticles-reduced graphene oxide: An experimental and modeling study. 2018 , 261, 275-283		28
1335	Effect of solution viscosity on retardation of cell sedimentation in DLP 3D printing of gelatin methacrylate/silk fibroin bioink. 2018 , 61, 340-347		63
1334	A novel personalized 3D injectable protein scaffold for regenerative medicine. 2017 , 29, 7		16
1333	Three-Dimensional Microstructured Azobenzene-Containing Gelatin as a Photoactuable Cell Confining System. 2018 , 10, 91-97		30
1332	Biomimetic and enzyme-responsive dynamic hydrogels for studying cell-matrix interactions in pancreatic ductal adenocarcinoma. <i>Biomaterials</i> , 2018 , 160, 24-36	15.6	64
1331	Integration of antifouling and antibacterial properties in salt-responsive hydrogels with surface regeneration capacity. 2018 , 6, 950-960		64
1330	Inkjet-Spray Hybrid Printing for 3D Freeform Fabrication of Multilayered Hydrogel Structures. 2018 , 7, e1800050		34
1329	Electroconductive Gelatin Methacryloyl-PEDOT:PSS Composite Hydrogels: Design, Synthesis, and Properties. 2018 , 4, 1558-1567		60

1328	PCL-TCP wet spun scaffolds carrying antibiotic-loaded microspheres for bone tissue engineering. 2018 , 29, 805-824	18
1327	Emerging tumor spheroids technologies for 3D in vitro cancer modeling. 2018 , 184, 201-211	90
1326	Bioprinting and its applications in tissue engineering and regenerative medicine. 2018 , 107, 261-275	172
1325	Conductive gelatin methacrylate-poly(aniline) hydrogel for cell encapsulation. 2018 , 4, 015005	11
1324	Organ-On-A-Chip Platforms: A Convergence of Advanced Materials, Cells, and Microscale Technologies. 2018 , 7, 1700506	155
1323	Visible light crosslinkable human hair keratin hydrogels. 2018 , 3, 37-48	38
1322	A Dual-layered Microfluidic System for Long-term Controlled In Situ Delivery of Multiple Anti-inflammatory Factors for Chronic Neural Applications. 2018 , 28, 1702009	16
1321	Gelatin methacrylate scaffold for bone tissue engineering: The influence of polymer concentration. 2018 , 106, 201-209	76
1320	Cardiac Cell Culture Technologies. 2018 ,	2
1319	Lab-on-a-chip Systems for CellomicsMaterials and Technology. 2018 , 23-53	0
1318	Quantification of Substitution of Gelatin Methacryloyl: Best Practice and Current Pitfalls. 2018 , 19, 42-52	59
1317	Enhanced cell adhesion on a bio-inspired hierarchically structured polyester modified with gelatin-methacrylate. 2018 , 6, 785-792	18
1316	Bioprinting for Neural Tissue Engineering. 2018 , 41, 31-46	100
1315	Photopolymerization of cell-laden gelatin methacryloyl hydrogels using a dental curing light for regenerative dentistry. 2018 , 34, 389-399	84
1314	Cell-laden composite suture threads for repairing damaged tendons. 2018 , 12, 1039-1048	20
1313	Tailored biomimetic hydrogel based on a photopolymerised DMP1/MCF/gelatin hybrid system for calvarial bone regeneration. 2018 , 6, 414-427	7
1312	Biopolymer gelatin-coated zinc oxide nanoparticles showed high antibacterial, antibiofilm and anti-angiogenic activity. 2018 , 178, 211-218	91
1311	Gut-microbiota-on-a-chip: an enabling field for physiological research. 2018 , 2,	10

1310	Methacrylamide-modified collagen hydrogel with improved anti-actin-mediated matrix contraction behavior. 2018 , 6, 7543-7555	19
1309	An Introduction to 3D Bioprinting: Possibilities, Challenges and Future Aspects. 2018 , 11,	147
1308	Three-dimensional bioprinting of gelatin methacryloyl (GelMA). 2018 , 1, 215-224	85
1307	Electrospun nanofiber blend with improved mechanical and biological performance. 2018 , 13, 7891-7903	42
1306	Synthesis and Properties of Gelatin Methacryloyl (GelMA) Hydrogels and Their Recent Applications in Load-Bearing Tissue. 2018 , 10,	109
1305	3D Printing Applied to Tissue Engineered Vascular Grafts. 2018 , 8, 2631	15
1304	Stabilization strategies in extrusion-based 3D bioprinting for tissue engineering. 2018 , 5, 041112	27
1303	Understanding the impact of crosslinked PCL/PEG/GelMA electrospun nanofibers on bactericidal activity. 2018 , 13, e0209386	23
1302	3D Printing of Scaffolds for Tissue Engineering. 2018 ,	4
1301	Beyond the Modification Degree: Impact of Raw Material on Physicochemical Properties of Gelatin Type A and Type B Methacryloyls. 2018 , 18, e1800168	23
1300	Biomimetic GelMPC Micropatterns on Titanium and Their Effects on Platelets and Endothelialization. 2018 , 20, 1800624	2
1299	Bioengineered peptide-functionalized hydrogels for tissue regeneration and repair. 2018 , 101-125	9
1298	Phytochemical Characterization of L. Under Differential Dried-Conditions and Associated Nephrotoxicity Screening of Main Compound With Organ-on-a-Chip. 2018 , 9, 1067	8
1297	Efficient in situ gene delivery via PEG diacrylate matrices. 2018 , 6, 3241-3250	7
1296	Peroxidase-immobilized porous silica particles for in situ formation of peroxidase-free hydrogels with attenuated immune responses. 2018 , 81, 103-114	6
1295	Reversible physical crosslinking strategy with optimal temperature for 3D bioprinting of human chondrocyte-laden gelatin methacryloyl bioink. 2018 , 33, 609-618	24
1294	Non-UV Patterning of Gelatin Methacryloyl Hydrogel by Optically Induced Electropolymerization. 2018 ,	
1293	Radical polymerization-crosslinking method for improving extracellular matrix stability in bioprosthetic heart valves with reduced potential for calcification and inflammatory response. 2018 , 82, 44-55	45

1292	Bioactive Hydrogel Marbles. 2018 , 8, 15215	6
1291	Functional Hydrogels With Tunable Structures and Properties for Tissue Engineering Applications. 2018 , 6, 499	110
1290	Aqueous Two-Phase Emulsion Bioink-Enabled 3D Bioprinting of Porous Hydrogels. 2018 , 30, e1805460	135
1289	Photo Processing for Biomedical Hydrogels Design and Functionality: A Review. 2017 , 10,	44
1288	Bottom-up biofabrication using microfluidic techniques. 2018 , 10, 044103	19
1287	Interpenetrating network gelatin methacryloyl (GelMA) and pectin-g-PCL hydrogels with tunable properties for tissue engineering. 2018 , 6, 2938-2950	51
1286	Hydrogels. 2018 ,	14
1285	Three-Dimensionally Printed Silk-Sericin-Based Hydrogel Scaffold: A Promising Visualized Dressing Material for Real-Time Monitoring of Wounds. 2018 , 10, 33879-33890	53
1284	Multi-length scale bioprinting towards simulating microenvironmental cues. 2018 , 1, 77-88	22
1283	Gelatin Hydrogel Combined with Polydopamine Coating to Enhance Tissue Integration of Medical Implants. 2018 , 4, 3471-3477	26
1282	Structural and molecular response in cyclodextrin-based pH-sensitive hydrogels by the joint use of Brillouin, UV Raman and Small Angle Neutron Scattering techniques. 2018 , 271, 738-746	3
1281	Injectable Hydrogels for Cartilage Regeneration. 2018 , 315-337	3
1280	The crossing and integration between microfluidic technology and 3D printing for organ-on-chips. 2018 , 6, 6191-6206	23
1279	Gelatin-Based Hydrogels. 2018 , 1-41	3
1278	In Situ Cross-Linkable Hydrogels as a Dynamic Matrix for Tissue Regenerative Medicine. 2018 , 15, 547-557	22
1277	Elastomeric and pH-responsive hydrogels based on direct crosslinking of the poly(glycerol sebacate) pre-polymer and gelatin. 2018 , 9, 3727-3740	19
1276	Programmed Shape-Morphing Scaffolds Enabling Facile 3D Endothelialization. 2018 , 28, 1801027	85
1275	A Method for Prostate and Breast Cancer Cell Spheroid Cultures Using Gelatin Methacryloyl-Based Hydrogels. 2018 , 1786, 175-194	11

1274	Prostate Cancer. 2018 ,	2
1273	Fabrication and In Vitro Characterization of a Tissue Engineered PCL-PLLA Heart Valve. 2018 , 8, 8187	35
1272	Photopolymerizable Materials for Cell Encapsulation. 2018 , 353-396	4
1271	Generation of cell-laden hydrogel microspheres using 3D printing-enabled microfluidics. 2018 , 33, 2012-2018	14
1270	Fabrication of a Double-Cross-Linked Interpenetrating Polymeric Network (IPN) Hydrogel Surface Modified with Polydopamine to Modulate the Osteogenic Differentiation of Adipose-Derived Stem Cells. 2018 , 10, 24955-24962	29
1269	Novel synergistic transparent k-Carrageenan/Xanthan gum/Gellan gum hydrogel film: Mechanical, thermal and water barrier properties. 2018 , 118, 561-568	53
1268	Injectable alendronate-functionalized GelMA hydrogels for mineralization and osteogenesis.. 2018 , 8, 22764-22776	18
1267	Antibiofilm, anti cancer and ecotoxicity properties of collagen based ZnO nanoparticles. 2018 , 29, 2331-2345	42
1266	Regulation Effects of Biomimetic Hybrid Scaffolds on Vascular Endothelium Remodeling. 2018 , 10, 23583-23594	35
1265	Fabrication and characterization of silk microfiber-reinforced methacrylated gelatin hydrogel with turnable properties. 2018 , 29, 2068-2082	5
1264	Fabrication and assembly of porous micropatterned scaffolds for modular tissue engineering. 2018 , 228, 360-364	7
1263	Permeability mapping of gelatin methacryloyl hydrogels. 2018 , 77, 38-47	40
1262	Wet electrospun alginate/gelatin hydrogel nanofibers for 3D cell culture. 2018 , 118, 1648-1654	38
1261	Silk-Based Hydrogels for Biomedical Applications. 2018 , 1-26	1
1260	Injectable hydrogels: a new paradigm for osteochondral tissue engineering. 2018 , 6, 5499-5529	51
1259	Decellularized Hydrogels in Bone Tissue Engineering: A Topical Review. 2018 , 15, 492-497	20
1258	Electrospun gelatin-based scaffolds as a novel 3D platform to study the function of contractile smooth muscle cells in vitro. 2018 , 4, 045039	8
1257	Stiffness modification of photopolymerizable gelatin-methacrylate hydrogels influences endothelial differentiation of human mesenchymal stem cells. 2018 , 12, 2099-2111	27

1256	3D bioprinting of polysaccharides and their derivatives: From characterization to application. 2018 , 105-141	12
1255	Biopolymer hydrogel bioinks. 2018 , 125-136	12
1254	Chaotic printing: using chaos to fabricate densely packed micro- and nanostructures at high resolution and speed. 2018 , 5, 813-822	20
1253	Collagen/Gelatin/Hydroxyethyl Cellulose Composites Containing Microspheres Based on Collagen and Gelatin: Design and Evaluation. 2018 , 10,	21
1252	Thermoresponsive Hydrogels and Their Biomedical Applications: Special Insight into Their Applications in Textile Based Transdermal Therapy. 2018 , 10,	66
1251	3D Printing of Thermoresponsive Polyisocyanide (PIC) Hydrogels as Bioink and Fugitive Material for Tissue Engineering. 2018 , 10,	28
1250	Mechanically enhanced lipo-hydrogel with controlled release of multi-type drugs for bone regeneration. 2018 , 12, 294-308	57
1249	Visible Light Photoinitiation of Cell-Adhesive Gelatin Methacryloyl Hydrogels for Stereolithography 3D Bioprinting. 2018 , 10, 26859-26869	113
1248	Gelatin-Methacryloyl (GelMA) Hydrogels with Defined Degree of Functionalization as a Versatile Toolkit for 3D Cell Culture and Extrusion Bioprinting. 2018 , 5,	137
1247	Photocurable Hydrogels Containing Spidroin or Fibroin. 2018 , 73, 24-27	2
1246	Light-Guiding Biomaterials for Biomedical Applications. 2018 , 28, 1706635	50
1245	Injectable Hydrogels for Cardiac Tissue Engineering. 2018 , 18, e1800079	110
1244	Digitally Tunable Microfluidic Bioprinting of Multilayered Cannular Tissues. 2018 , 30, e1706913	134
1243	Preparation of micro/nanopatterned gelatins crosslinked with genipin for biocompatible dental implants. 2018 , 9, 1735-1754	7
1242	Microcylinder-laden gelatin-based bioink engineered for 3D bioprinting. 2018 , 233, 24-27	7
1241	Local release of gemcitabine via in situ UV-crosslinked lipid-strengthened hydrogel for inhibiting osteosarcoma. 2018 , 25, 1642-1651	20
1240	Design Principles and Multifunctionality in Cell Encapsulation Systems for Tissue Regeneration. 2018 , 7, e1701444	12
1239	Pre-Conditioning Stem Cells in a Biomimetic Environment for Enhanced Cardiac Tissue Repair: and Analysis. 2018 , 11, 321-336	4

1238	Hydrolytic Stability of Methacrylamide and Methacrylate in Gelatin Methacryloyl and Decoupling of Gelatin Methacrylamide from Gelatin Methacryloyl through Hydrolysis. 2018 , 219, 1800266	16
1237	Hyperbaric oxygen-generating hydrogels. <i>Biomaterials</i> , 2018 , 182, 234-244	15.6 37
1236	Development of a Photo-Crosslinking, Biodegradable GelMA/PEGDA Hydrogel for Guided Bone Regeneration Materials. 2018 , 11,	68
1235	A novel thixotropic magnesium phosphate-based bioink with excellent printability for application in 3D printing. 2018 , 6, 4502-4513	19
1234	Perfusion directed 3D mineral formation within cell-laden hydrogels. 2018 , 10, 035013	16
1233	Highly Reactive Thiol-Norbornene Photo-Click Hydrogels: Toward Improved Processability. 2018 , 39, e1800181	48
1232	Engineering Microvascular Networks in LED Light-Cured Cell-Laden Hydrogels. 2018 , 4, 2563-2570	27
1231	Interactions of methacryloylated gelatin and heparin modulate physico-chemical properties of hydrogels and release of vascular endothelial growth factor. 2018 , 13, 055008	8
1230	3D bioprinting of scaffolds with living Schwann cells for potential nerve tissue engineering applications. 2018 , 10, 035014	78
1229	Bioinks for Three-Dimensional Printing in Regenerative Medicine. 2019 , 805-830	3
1228	CellSubstrate Interactions. 2019 , 437-468	3
1227	Cell-laden four-dimensional bioprinting using near-infrared-triggered shape-morphing alginate/polydopamine bioinks. 2019 , 11, 045019	47
1226	Study on Microextrusion-based 3D Bioprinting and Bioink Crosslinking Mechanisms. 2019 ,	4
1225	Soft-Nanoparticle Functionalization of Natural Hydrogels for Tissue Engineering Applications. 2019 , 8, e1900506	62
1224	Double-Network Polyurethane-Gelatin Hydrogel with Tunable Modulus for High-Resolution 3D Bioprinting. 2019 , 11, 32746-32757	39
1223	3D Bioprinting and Bioink: Background. 2019 , 7-23	1
1222	Bioprinting of a Cell-Laden Conductive Hydrogel Composite. 2019 , 11, 30518-30533	66
1221	Biomaterial approaches for cardiovascular tissue engineering. 2019 , 2, 193-207	19

1220	Graphene-based advanced nanoplatforms and biocomposites from environmentally friendly and biomimetic approaches. 2019 , 21, 4887-4918	27
1219	Long-Term Bone Regeneration Enabled by a Polyhedral Oligomeric Silsesquioxane (POSS)-Enhanced Biodegradable Hydrogel. 2019 , 5, 4612-4623	18
1218	3D Printable Non-Isocyanate Polyurethanes with Tunable Material Properties. 2019 , 10, 4665-4674	12
1217	High-strength hydrogel-based bioinks. 2019 , 3, 1736-1746	27
1216	Advances in Hydrogels in Organoids and Organs-on-a-Chip. 2019 , 31, e1902042	130
1215	(Photo-)crosslinkable gelatin derivatives for biofabrication applications. 2019 , 97, 46-73	53
1214	A microfluidic strategy to fabricate ultra-thin polyelectrolyte hollow microfibers as 3D cellular carriers. 2019 , 104, 109705	12
1213	Interfacing cells with microengineered scaffolds for neural tissue reconstruction. 2019 , 152, 202-211	15
1212	Injectable PLCL/gelatin core-shell nanofibers support noninvasive 3D delivery of stem cells. 2019 , 568, 118566	8
1211	Aligned conductive core-shell biomimetic scaffolds based on nanofiber yarns/hydrogel for enhanced 3D neurite outgrowth alignment and elongation. 2019 , 96, 175-187	93
1210	Dual Crosslinked Gelatin Methacryloyl Hydrogels for Photolithography and 3D Printing. 2019 , 5,	13
1209	Synthesis and characterization of gelatin-PVP polymer composite scaffold for potential application in bone tissue engineering. 2019 , 119, 155-168	43
1208	Using 3-D Printing and Bioprinting Technologies for Personalized Implants. 2019 , 269-286	1
1207	Mussel-Inspired Tough Hydrogel with In Situ Nanohydroxyapatite Mineralization for Osteochondral Defect Repair. 2019 , 8, e1901103	41
1206	Effects of Encapsulated Cells on the Physical-Mechanical Properties and Microstructure of Gelatin Methacrylate Hydrogels. 2019 , 20,	19
1205	Structure establishment of three-dimensional (3D) cell culture printing model for bladder cancer. 2019 , 14, e0223689	23
1204	Biomedical Applications of Nanoparticles. 2019 , 113-132	10
1203	Controlled Release of Naringin in GelMA-Incorporated Rutile Nanorod Films to Regulate Osteogenic Differentiation of Mesenchymal Stem Cells. 2019 , 4, 19350-19357	12

1202	3D bioprinting for active drug delivery. 2019 , 61-72		5
1201	Embedding Non-Local Mean in Squeeze-and-Excitation Network for Single Image Deraining. 2019 ,		3
1200	Bioprinting Vasculature: Materials, Cells and Emergent Techniques. 2019 , 12,		50
1199	Catalysis of Au nano-pyramids formed across the surfaces of ordered Au nano-ring arrays. 2019 , 377, 389-399		4
1198	Photoresponsive Delivery Microcarriers for Tissue Defects Repair. 2019 , 6, 1901280		30
1197	Addressing Patient Specificity in the Engineering of Tumor Models. 2019 , 7, 217		30
1196	Applications of Hydrogels with Special Physical Properties in Biomedicine. 2019 , 11,		27
1195	Chitosan hydrogel micro-bio-devices with complex capillary patterns via reactive-diffusive self-assembly. 2019 , 99, 211-219		6
1194	Simultaneous nano- and microscale structural control of injectable hydrogels via the assembly of nanofibrous protein microparticles for tissue regeneration. <i>Biomaterials</i> , 2019 , 223, 119458	15.6	23
1193	Egg-White-/Eggshell-Based Biomimetic Hybrid Hydrogels for Bone Regeneration. 2019 , 5, 5384-5391		25
1192	A gelatin hydrogel to study endometrial angiogenesis and trophoblast invasion. 2019 , 9, 20190016		29
1191	Radical free crosslinking of direct-write 3D printed hydrogels through a base catalyzed thiol-Michael reaction. 2019 , 10, 5979-5984		7
1190	Material-based therapy for bone nonunion. 2019 , 183, 108161		11
1189	Synthesis and characterization of gold/silica hybrid nanoparticles incorporated gelatin methacrylate conductive hydrogels for H9C2 cardiac cell compatibility study. 2019 , 177, 107415		31
1188	Numerical Investigations of Hepatic Spheroids Metabolic Reactions in a Perfusion Bioreactor. 2019 , 7, 221		5
1187	The Tumor-on-Chip: Recent Advances in the Development of Microfluidic Systems to Recapitulate the Physiology of Solid Tumors. 2019 , 12,		65
1186	The use of bacterial polysaccharides in bioprinting. 2019 , 37, 107448		52
1185	Bioionic Liquid Conjugation as Universal Approach To Engineer Hemostatic Bioadhesives. 2019 , 11, 38373-38384		26

1184	Characterization and Testing of a Novel Sprayable Crosslinked Edible Coating Based on Salmon Gelatin. 2019 , 9, 595	8
1183	Layer-By-Layer: The Case for 3D Bioprinting Neurons to Create Patient-Specific Epilepsy Models. 2019 , 12,	21
1182	Biocompatible and degradable Bletilla striata polysaccharide hemostasis sponges constructed from natural medicinal herb Bletilla striata. 2019 , 226, 115304	18
1181	Reduced graphene oxide-reinforced gellan gum thermoresponsive hydrogels as a myocardial tissue engineering scaffold. 2019 , 34, 331-345	11
1180	A miniaturized optical tomography platform for volumetric imaging of engineered living systems. 2019 , 19, 550-561	7
1179	Mussel-inspired dopamine oligomer intercalated tough and resilient gelatin methacryloyl (GelMA) hydrogels for cartilage regeneration. 2019 , 7, 1716-1725	60
1178	Development of functional hydrogels for heart failure. 2019 , 7, 1563-1580	15
1177	Cell-laden interpenetrating network hydrogels formed from methacrylated gelatin and silk fibroin via a combination of sonication and photocrosslinking approaches. 2019 , 99, 57-67	30
1176	Combined effect of Laponite and polymer molecular weight on the cell-interactive properties of synthetic PEO-based hydrogels. 2019 , 136, 95-106	12
1175	Effect of gelatin source and photoinitiator type on chondrocyte redifferentiation in gelatin methacryloyl-based tissue-engineered cartilage constructs. 2019 , 7, 1761-1772	56
1174	Combining Stem Cells and Biomaterial Scaffolds for Constructing Tissues and Cell Delivery. 2019 , 1, 1-25	39
1173	Mechanics of composite hydrogels approaching phase separation. 2019 , 14, e0211059	8
1172	Physical Interactions Strengthen Chemical Gelatin Methacryloyl Gels. 2019 , 5,	17
1171	Recent advances in photo-crosslinkable hydrogels for biomedical applications. 2019 , 66, 40-53	120
1170	3D Printing Technology of Polymer Composites and Hydrogels for Artificial Skin Tissue Implementations. 2019 , 205-233	9
1169	Plant seed-inspired cell protection, dormancy, and growth for large-scale biofabrication. 2019 , 11, 025008	12
1168	Gelatin-based micro-hydrogel carrying genetically engineered human endothelial cells for neovascularization. 2019 , 95, 285-296	22
1167	Polymer Nanocomposites in Biomedical Engineering. 2019 ,	7

1166	Dual-degradable and injectable hyaluronic acid hydrogel mimicking extracellular matrix for 3D culture of breast cancer MCF-7 cells. 2019 , 211, 336-348	32
1165	ESC Working Group on Cellular Biology of the Heart: position paper for Cardiovascular Research: tissue engineering strategies combined with cell therapies for cardiac repair in ischaemic heart disease and heart failure. 2019 , 115, 488-500	51
1164	3D-printable self-healing and mechanically reinforced hydrogels with host-guest non-covalent interactions integrated into covalently linked networks. 2019 , 6, 733-742	90
1163	Dual effective core-shell electrospun scaffolds: Promoting osteoblast maturation and reducing bacteria activity. 2019 , 103, 109778	13
1162	Fiber Density Modulates Cell Spreading in 3D Interstitial Matrix Mimetics. 2019 , 5, 2965-2975	39
1161	Bioinks and bioprinting technologies to make heterogeneous and biomimetic tissue constructs. 2019 , 1, 100008	198
1160	Advancements and frontiers in nano-based 3D and 4D scaffolds for bone and cartilage tissue engineering. 2019 , 14, 4333-4351	60
1159	Scaffolds for gingival tissues. 2019 , 521-543	
1158	Alginate-based hydrogels prepared via ionic gelation: An experimental design approach to predict the crosslinking degree. 2019 , 118, 586-594	52
1157	A Microfluidic System for One-Chip Harvesting of Single-Cell-Laden Hydrogels in Culture Medium. 2019 , 3, e1900076	9
1156	Development of a visible light, cross-linked GelMA hydrogel containing decellularized human amniotic particles as a soft tissue replacement for oral mucosa repair.. 2019 , 9, 18344-18352	15
1155	Growth factor delivery: Defining the next generation platforms for tissue engineering. 2019 , 306, 40-58	77
1154	Microparticles for Suspension Culture of Mammalian Cells.. 2019 , 2, 2791-2801	9
1153	Gelatin Methacrylate (GelMA)-Based Hydrogels for Cell Transplantation: an Effective Strategy for Tissue Engineering. 2019 , 15, 664-679	88
1152	Multipotency expression of human adipose stem cells in filament-like alginate and gelatin derivative hydrogel fabricated through visible light-initiated crosslinking. 2019 , 103, 109808	20
1151	Perforated and Endothelialized Elastomeric Tubes for Vascular Modeling. 2019 , 4, 1800741	3
1150	Gelatin methacryloyl (GelMA)-based biomaterials for bone regeneration.. 2019 , 9, 17737-17744	24
1149	Layer-by-layer ultraviolet assisted extrusion-based (UAE) bioprinting of hydrogel constructs with high aspect ratio for soft tissue engineering applications. 2019 , 14, e0216776	56

1148	3D printing of nerve conduits with nanoparticle-encapsulated RGFP966. 2019 , 16, 247-256	21
1147	Expanding the Range of Available Isoelectric Points of Highly Methacryloylated Gelatin. 2019 , 220, 1900097	0
1146	Mechanically Biomimetic Gelatin-Gellan Gum Hydrogels for 3D Culture of Beating Human Cardiomyocytes. 2019 , 11, 20589-20602	39
1145	Optimization of photocrosslinked gelatin/hyaluronic acid hybrid scaffold for the repair of cartilage defect. 2019 , 13, 1418-1429	30
1144	Polydiacetylene-Nanoparticle-Functionalized Microgels for Topical Bacterial Infection Treatment. 2019 , 563-568	13
1143	Current research trends and challenges in tissue engineering for mending broken hearts. 2019 , 229, 233-250	20
1142	Gelatin methacryloyl and its hydrogels with an exceptional degree of controllability and batch-to-batch consistency. 2019 , 9, 6863	87
1141	Development of an Injectable Tissue Adhesive Hybrid Hydrogel for Growth Factor-Free Tissue Integration in Advanced Wound Regeneration.. 2019 , 2, 2500-2510	14
1140	Multicellular Co-Culture in Three-Dimensional Gelatin Methacryloyl Hydrogels for Liver Tissue Engineering. 2019 , 24,	21
1139	Mechanically robust photodegradable gelatin hydrogels for 3D cell culture and in situ mechanical modification. 2019 , 10, 3180-3193	18
1138	Integrated cancer tissue engineering models for precision medicine. 2019 , 14, e0216564	43
1137	Fabrication of bi-layer photocrosslinked GelMA/PEGDA fibrous membrane for guided bone regeneration materials. 2019 , 249, 112-115	9
1136	One-Step Formation of Microporous Hydrogel Sponges Encapsulating Living Cells by Utilizing Bicontinuous Dispersion of Aqueous Polymer Solutions.. 2019 , 2, 2237-2245	6
1135	Supermacroporous Composite Cryogels in Biomedical Applications. 2019 , 5,	43
1134	Printability of Methacrylated Gelatin upon Inclusion of a Chloride Salt and Hydroxyapatite Nano-Particles. 2019 , 304, 1900142	7
1133	Eggshell particle-reinforced hydrogels for bone tissue engineering: an orthogonal approach. 2019 , 7, 2675-2685	37
1132	Microfluidics tubing as a synthesizer for ordered microgel networks. 2019 , 15, 3848-3853	4
1131	Co-culture of human umbilical vein endothelial cells and human bone marrow stromal cells into a micro-cavitary gelatin-methacrylate hydrogel system to enhance angiogenesis. 2019 , 102, 906-916	18

1130	Synthesis and characterization of photocrosslinkable hydrogels from bovine skin gelatin.. 2019 , 9, 13016-13025	19
1129	Rotation-assisted wet-spinning of UV-cured gelatin fibres and nonwovens. 2019 , 54, 10529-10547	6
1128	3D Bioprinting: from Benches to Translational Applications. 2019 , 15, e1805510	137
1127	Photo-crosslinkable recombinant collagen mimics for tissue engineering applications. 2019 , 7, 3100-3108	18
1126	Cold-adaptation of a methacrylamide gelatin towards the expansion of the biomaterial toolbox for specialized functionalities in tissue engineering. 2019 , 102, 373-390	10
1125	Mechanical and Biochemical Stimulation of 3D Multilayered Scaffolds for Tendon Tissue Engineering. 2019 , 5, 2953-2964	41
1124	Osteogenic and angiogenic tissue formation in high fidelity nanocomposite Laponite-gelatin bioinks. 2019 , 11, 035027	85
1123	Light-mediated thermoset polymers. 2019 , 57-103	2
1122	Preparation and properties of gelatin hydrolysate modified with polysiloxane quaternary ammonium salts. 2019 , 30, 593-607	3
1121	Collagen-based bioinks for hard tissue engineering applications: a comprehensive review. 2019 , 30, 32	81
1120	Engineered Tissue Development in Biofabricated 3D Geometrical Confinement-A Review. 2019 , 5, 3688-3702	10
1119	3D printing of complex GelMA-based scaffolds with nanoclay. 2019 , 11, 035006	95
1118	Evaluation of sterilisation methods for bio-ink components: gelatin, gelatin methacryloyl, hyaluronic acid and hyaluronic acid methacryloyl. 2019 , 11, 035003	24
1117	Niosomes encapsulated in biohydrogels for tunable delivery of phytoalexin resveratrol.. 2019 , 9, 7601-7609	16
1116	3D-Printed Microrobotic Transporters with Recapitulated Stem Cell Niche for Programmable and Active Cell Delivery. 2019 , 29, 1808992	66
1115	Bioprinting of Cell-Laden Microfiber: Can It Become a Standard Product?. 2019 , 8, e1900014	31
1114	Enzymatic crosslinked gelatin 3D scaffolds for bone tissue engineering. 2019 , 562, 151-161	33
1113	Methacrylated gelatin-embedded fabrication of 3D graphene-supported CoO nanoparticles for water splitting. 2019 , 11, 6866-6875	11

1112	An integrated microfluidic flow-focusing platform for on-chip fabrication and filtration of cell-laden microgels. 2019 , 19, 1621-1632	30
1111	Upgrading prevascularization in tissue engineering: A review of strategies for promoting highly organized microvascular network formation. 2019 , 95, 112-130	40
1110	Enhancing X-ray Attenuation of 3D Printed Gelatin Methacrylate (GelMA) Hydrogels Utilizing Gold Nanoparticles for Bone Tissue Engineering Applications. 2019 , 11,	23
1109	Bioengineering Tooth Bud Constructs Using GelMA Hydrogel. 2019 , 1922, 139-150	7
1108	Pectin Methacrylate (PEMA) and Gelatin-Based Hydrogels for Cell Delivery: Converting Waste Materials into Biomaterials. 2019 , 11, 12283-12297	39
1107	Sacrificial Bioprinting of a Mammary Ductal Carcinoma Model. 2019 , 14, e1700703	12
1106	Silver-Nanoparticle-Entrapped Soft GelMA Gels as Prospective Scaffolds for Wound Healing.. 2019 , 2, 1802-1814	21
1105	Redox Polyion Complex Micelle-Based Injectable Hydrogel as Local Reactive Oxygen Species Scavenging Therapeutics. 2019 , 287-307	1
1104	Hydroxyapatite nanowire composited gelatin cryogel with improved mechanical properties and cell migration for bone regeneration. 2019 , 14, 045001	23
1103	Developments in Hydrogel-based Scaffolds and Bioceramics for Bone Regeneration. 2019 , 39-56	2
1102	Smart Instructive Polymer Substrates for Tissue Engineering. 2019 , 411-438	6
1101	A simple layer-stacking technique to generate biomolecular and mechanical gradients in photocrosslinkable hydrogels. 2019 , 11, 025014	12
1100	Biofabrication: From Additive Manufacturing to Bioprinting. 2019 , 41-41	1
1099	Nanostructured Polymeric Hydrogels. 2019 , 193-226	1
1098	Advancing Frontiers in Bone Bioprinting. 2019 , 8, e1801048	113
1097	Conduits harnessing spatially controlled cell-secreted neurotrophic factors improve peripheral nerve regeneration. <i>Biomaterials</i> , 2019 , 203, 86-95	15.6 24
1096	Tendon Tissue Engineering: Effects of Mechanical and Biochemical Stimulation on Stem Cell Alignment on Cell-Laden Hydrogel Yarns. 2019 , 8, e1801218	56
1095	Fabrication of hydrogel scaffolds via photocrosslinking of methacrylated silk fibroin. 2019 , 14, 034102	14

1094	Evaluating CAR-T Cell Therapy in a Hypoxic 3D Tumor Model. 2019 , 8, e1900001	36
1093	Chasing the Paradigm: Clinical Translation of 25 Years of Tissue Engineering. 2019 , 25, 679-687	58
1092	Cardiovascular engineering materials in translational medicine. 2019 , 57-91	
1091	Injectable biodegradable gelatin-methacrylate/tricalcium phosphate composite for the repair of bone defects. 2019 , 365, 30-39	28
1090	On Low-Concentration Inks Formulated by Nanocellulose Assisted with Gelatin Methacrylate (GelMA) for 3D Printing toward Wound Healing Application. 2019 , 11, 8838-8848	115
1089	3D-Printed Biodegradable Microswimmer for Theranostic Cargo Delivery and Release. 2019 , 13, 3353-3362	187
1088	Microbial transglutaminase induced controlled crosslinking of gelatin methacryloyl to tailor rheological properties for 3D printing. 2019 , 11, 025011	42
1087	Rational Design of Microfabricated Electroconductive Hydrogels for Biomedical Applications. 2019 , 92, 135-157	75
1086	Dynamic and Cell-Infiltratable Hydrogels as Injectable Carrier of Therapeutic Cells and Drugs for Treating Challenging Bone Defects. 2019 , 5, 440-450	112
1085	3D in vitro cancerous tumor models: Using 3D printers. 2019 , 124, 91-94	9
1084	Personalized Single-Cell Encapsulation Using E-Jet 3D Printing with AC-Pulsed Modulation. 2019 , 304, 1800776	4
1083	Bioprinting. 2019 ,	1
1082	Myogenic differentiation of human amniotic mesenchymal cells and its tissue repair capacity on volumetric muscle loss. 2019 , 10, 2041731419887100	11
1081	3D Printing in Personalized Drug Delivery. 2018 , 24, 5062-5071	31
1080	Adhesive liposomes loaded onto an injectable, self-healing and antibacterial hydrogel for promoting bone reconstruction. 2019 , 11,	36
1079	Michael-Type Addition of Gelatin on Electrospun Nanofibrils for Self-Assembly of Cell Sheets Composed of Human Dermal Fibroblasts. 2019 , 4, 18677-18684	4
1078	Development of Functionalized Carbon Nano-Onions Reinforced Zein Protein Hydrogel Interfaces for Controlled Drug Release. 2019 , 11,	26
1077	Mussel-Inspired Injectable Hydrogel Adhesive Formed under Mild Conditions Features Near-Native Tissue Properties. 2019 , 11, 47707-47719	30

1076	The Application of Hyaluronic Acid-Based Hydrogels in Bone and Cartilage Tissue Engineering. 2019 , 2019, 1-12	17
1075	Engineered 3D Polymer and Hydrogel Microenvironments for Cell Culture Applications. 2019 , 6,	32
1074	Protocols of 3D Bioprinting of Gelatin Methacryloyl Hydrogel Based Bioinks. 2019 ,	7
1073	Recent advances in the development of nature-derived photocrosslinkable biomaterials for 3D printing in tissue engineering. 2019 , 23, 18	17
1072	On-Chip Construction of Multilayered Hydrogel Microtubes for Engineered Vascular-Like Microstructures. 2019 , 10,	7
1071	A Facile Method to Fabricate Anisotropic Extracellular Matrix with 3D Printing Topological Microfibers. 2019 , 12,	1
1070	Electrically controlled release of 5-fluorouracil from conductive gelatin methacryloyl-based hydrogels. 2019 , 136, 46914	24
1069	2D Gelatin Methacrylate Hydrogels with Tunable Stiffness for Investigating Cell Behaviors.. 2019 , 2, 570-576	8
1068	A Stimuli-Responsive Nanocomposite for 3D Anisotropic Cell-Guidance and Magnetic Soft Robotics. 2019 , 29, 1804647	77
1067	Biodegradable Gelatin Methacryloyl Microneedles for Transdermal Drug Delivery. 2019 , 8, e1801054	105
1066	A terpolymeric hydrogel of hyaluronate-hydroxyethyl acrylate-gelatin methacryloyl with tunable properties as biomaterial. 2019 , 207, 628-639	13
1065	Microfluidic-enabled bottom-up hydrogels from annealable naturally-derived protein microbeads. <i>Biomaterials</i> , 2019 , 192, 560-568	15.6 61
1064	Enhanced chondrogenic differentiation of bone marrow mesenchymal stem cells on gelatin/glycosaminoglycan electrospun nanofibers with different amount of glycosaminoglycan. 2019 , 107, 38-48	25
1063	Hydrocolloid Inks for 3D Printing of Porous Hydrogels. 2019 , 4, 1800343	11
1062	Enhanced mechanical and cell adhesive properties of photo-crosslinked PEG hydrogels by incorporation of gelatin in the networks. 2019 , 14, 024102	16
1061	Heart on a chip: Micro-nanofabrication and microfluidics steering the future of cardiac tissue engineering. 2019 , 203-204, 44-62	42
1060	Gelatin-Based Hydrogels. 2019 , 1601-1641	10
1059	Silk-Based Hydrogels for Biomedical Applications. 2019 , 1791-1817	3

1058	One-Step Generation of CoreShell Gelatin Methacrylate (GelMA) Microgels Using a Droplet Microfluidic System. 2019 , 4, 1800632	30
1057	Gelatin-Based Matrices as a Tunable Platform To Study in Vitro and in Vivo 3D Cell Invasion.. 2019 , 2, 916-929	9
1056	The influence of the stiffness of GelMA substrate on the outgrowth of PC12 cells. 2019 , 39,	38
1055	Gellan Fluid Gel as a Versatile Support Bath Material for Fluid Extrusion Bioprinting. 2019 , 11, 5714-5726	49
1054	Gallol-derived ECM-mimetic adhesive bioinks exhibiting temporal shear-thinning and stabilization behavior. 2019 , 95, 165-175	53
1053	Engineering Precision Medicine. 2019 , 6, 1801039	38
1052	In situ photocrosslinkable hyaluronic acid-based surgical glue with tunable mechanical properties and high adhesive strength. 2019 , 57, 522-530	20
1051	Photo-crosslinked synthetic biodegradable polymer networks for biomedical applications. 2019 , 30, 77-106	34
1050	Gelatin-polysaccharide composite scaffolds for 3D cell culture and tissue engineering: Towards natural therapeutics. 2019 , 4, 96-115	121
1049	Bioinspired Hydrogel Electrospun Fibers for Spinal Cord Regeneration. 2019 , 29, 1806899	78
1048	3D bioprinting of hydrogel-based biomimetic microenvironments. 2019 , 107, 1695-1705	16
1047	Polymeric 3D scaffolds for tissue regeneration: Evaluation of biopolymer nanocomposite reinforced with cellulose nanofibrils. 2019 , 94, 867-878	25
1046	Messenger RNA Delivery for Tissue Engineering and Regenerative Medicine Applications. 2019 , 25, 91-112	34
1045	Bio-ink development for three-dimensional bioprinting of hetero-cellular cartilage constructs. 2020 , 61, 137-151	41
1044	Glial cells influence cardiac permittivity as evidenced through in vitro and in silico models. 2019 , 12, 015014	7
1043	Bioengineering strategies for bone and cartilage tissue regeneration using growth factors and stem cells. 2020 , 108, 394-411	25
1042	3D Bioprinting: The Emergence of Programmable Biodesign. 2020 , 9, e1900554	17
1041	Additive Manufacturing of Precision Biomaterials. 2020 , 32, e1901994	62

1040	Simple fabrication of sericin/graphene nanocomposites for application in articular cartilage repair in knee joints in nursing care. 2020 , 10, 695-702	2
1039	Spatially modulated stiffness on hydrogels for soft and stretchable integrated electronics. 2020 , 7, 203-213	39
1038	Void-free 3D Bioprinting for In-situ Endothelialization and Microfluidic Perfusion. 2020 , 30, 1908349	50
1037	A Novel Double-Crosslinking-Double-Network Design for Injectable Hydrogels with Enhanced Tissue Adhesion and Antibacterial Capability for Wound Treatment. 2020 , 30, 1904156	112
1036	Injectable Cryogels for Biomedical Applications. 2020 , 38, 418-431	74
1035	Ferritin Nanocage Conjugated Hybrid Hydrogel for Tissue Engineering and Drug Delivery Applications. 2020 , 6, 277-287	16
1034	Customizable Composite Fibers for Engineering Skeletal Muscle Models. 2020 , 6, 1112-1123	18
1033	Biomaterial-based possibilities for managing peri-implantitis. 2020 , 55, 165-173	20
1032	Hydrogel Bioink Reinforcement for Additive Manufacturing: A Focused Review of Emerging Strategies. 2020 , 32, e1902026	208
1031	Engineering of Hydrogel Materials with Perfusable Microchannels for Building Vascularized Tissues. 2020 , 16, e1902838	63
1030	Graphene Hybrid Anisotropic Structural Color Film for Cardiomyocytes' Monitoring. 2020 , 30, 1906353	38
1029	Tissue engineering of retina through high resolution 3-dimensional inkjet bioprinting. 2020 , 12, 025006	33
1028	A 3D-Printed Hybrid Nasal Cartilage with Functional Electronic Olfaction. 2020 , 7, 1901878	38
1027	3D biofabrication of microfiber-laden minispheroids: a facile 3D cell co-culturing system. 2019 , 8, 109-117	12
1026	Glycerylphytate as an ionic crosslinker for 3D printing of multi-layered scaffolds with improved shape fidelity and biological features. 2019 , 8, 506-516	20
1025	Hydrogel scaffolds for tissue engineering: the importance of polymer choice. 2020 , 11, 184-219	181
1024	Nanotechnology Scaffolds for Alveolar Bone Regeneration. 2020 , 13,	33
1023	Engineering and Functionalization of Gelatin Biomaterials: From Cell Culture to Medical Applications. 2020 , 26, 164-180	134

1022	Multi-material 3D bioprinting of porous constructs for cartilage regeneration. 2020 , 109, 110578	36
1021	Uniaxial Stretching of Cell-Laden Microfibers for Promoting C2C12 Myoblasts Alignment and Myofibers Formation. 2020 , 12, 2162-2170	16
1020	A high-throughput approach to compare the biocompatibility of candidate bioink formulations. 2020 , 17, e00068	6
1019	Comparison of Photo Cross Linkable Gelatin Derivatives and Initiators for Three-Dimensional Extrusion Bioprinting. 2020 , 21, 454-463	14
1018	Biocompatible supramolecular pseudorotaxane hydrogels for controllable release of doxorubicin in ovarian cancer SKOV-3 cells.. 2020 , 10, 689-697	7
1017	Investigation of gelatin methacrylate working curves in dynamic optical projection stereolithography of vascular-like constructs. 2020 , 124, 109487	14
1016	Synchronous 3D Bioprinting of Large-Scale Cell-Laden Constructs with Nutrient Networks. 2020 , 9, e1901142	30
1015	Molecular recognition-directed site-specific release of stem cell differentiation inducers for enhanced joint repair. <i>Biomaterials</i> , 2020 , 232, 119644	15.6 23
1014	Introduction to the state-of-the-art 3D bioprinting methods, design, and applications in orthopedics. 2020 , 18, e00070	29
1013	Investigating the repair of alveolar bone defects by gelatin methacrylate hydrogels-encapsulated human periodontal ligament stem cells. 2019 , 31, 3	8
1012	Development of 3D bioprinting: From printing methods to biomedical applications. 2020 , 15, 529-557	102
1011	Enhancement and orchestration of osteogenesis and angiogenesis by a dual-modular design of growth factors delivery scaffolds and 26SCS decoration. <i>Biomaterials</i> , 2020 , 232, 119645	15.6 29
1010	Therapeutic options and drug delivery strategies for the prevention of intrauterine adhesions. 2020 , 318, 25-37	35
1009	Micropatterned hydrogels and cell alignment enhance the odontogenic potential of stem cells from apical papilla in-vitro. 2020 , 36, 88-96	13
1008	Human articular cartilage repair: Sources and detection of cytotoxicity and genotoxicity in photo-crosslinkable hydrogel bioscaffolds. 2020 , 9, 302-315	24
1007	Hybrid Cornea: Cell Laden Hydrogel Incorporated Decellularized Matrix. 2020 , 6, 122-133	6
1006	Chemically Modified Natural Polymer-Based Theranostic Nanomedicines: Are They the Golden Gate toward a Clinical Approach against Cancer?. 2020 , 6, 134-166	17
1005	A sericin/ graphene oxide composite scaffold as a biomimetic extracellular matrix for structural and functional repair of calvarial bone. 2020 , 10, 741-756	27

1004	Lab-on-a-Chip for Cardiovascular Physiology and Pathology. 2020 , 11,	6
1003	Boosting up printability of biomacromolecule based bio-ink by modulation of hydrogen bonding pairs. 2020 , 141, 110070	3
1002	The Hofmeister effect on protein hydrogels with stranded and particulate microstructures. 2020 , 196, 111332	6
1001	Vascular bioprinting with enzymatically degradable bioinks via multi-material projection-based stereolithography. 2020 , 117, 121-132	27
1000	Injectable drug loaded gelatin based scaffolds as minimally invasive approach for drug delivery system: CNC/PAMAM nanoparticles. 2020 , 139, 109992	10
999	Comprehensive Survey on Nanobiomaterials for Bone Tissue Engineering Applications. 2020 , 10,	17
998	Precision 3D-Printed Cell Scaffolds Mimicking Native Tissue Composition and Mechanics. 2020 , 9, e2000918	12
997	Human-Recombinant-Elastin-Based Bioinks for 3D Bioprinting of Vascularized Soft Tissues. 2020 , 32, e2003915	43
996	MXene-Based Hydrogels Endow Polyetheretherketone with Effective Osteogenicity and Combined Treatment of Osteosarcoma and Bacterial Infection. 2020 , 12, 45891-45903	47
995	Embedded 3D Bioprinting of Gelatin Methacryloyl-Based Constructs with Highly Tunable Structural Fidelity. 2020 , 12, 44563-44577	29
994	Design of a polyacrylamide and gelatin hydrogel as a synthetic extracellular matrix. 2020 , 1-12	3
993	3D biofabrication for soft tissue and cartilage engineering. 2020 , 82, 13-39	7
992	Printing of Adhesive Hydrogel Scaffolds for the Treatment of Skeletal Muscle Injuries.. 2020 , 3, 1568-1579	50
991	Dual functional construct containing kartogenin releasing microtissues and curcumin for cartilage regeneration. 2020 , 11, 289	7
990	Effect of sterilization treatment on mechanical properties, biodegradation, bioactivity and printability of GelMA hydrogels. 2020 , 15, 065017	14
989	Natural Materials. 2020 , 361-375	
988	Advanced Bioink for 3D Bioprinting of Complex Free-Standing Structures with High Stiffness. 2020 , 7,	12
987	3D Bioprinting of Neural Tissues. 2021 , 10, e2001600	16

986	Development of bentonite-gelatin nanocomposite hybrid hydrogels for tissue engineering. 2020 , 199, 105860	6
985	Injectable Magnesium-Zinc Alloy Containing Hydrogel Complex for Bone Regeneration. 2020 , 8, 617585	6
984	Nano-Silicate-Reinforced and SDF-1 β -Loaded Gelatin-Methacryloyl Hydrogel for Bone Tissue Engineering. 2020 , 15, 9337-9353	7
983	Surface Functionalization of Three Dimensional-Printed Polycaprolactone-Bioactive Glass Scaffolds by Grafting GelMA Under UV Irradiation. 2020 , 7,	8
982	Nitric oxide released injectable hydrogel combined with synergistic photothermal therapy for antibacterial and accelerated wound healing. 2020 , 20, 100781	18
981	Gelatin Methacrylate as an Enzyme-Controlled Release Vehicle of Hyaluronic Acid for the Treatment of Recurrent Corneal Erosion.. 2020 , 3, 6214-6223	1
980	Biodegradable microneedle patch for transdermal gene delivery. 2020 , 12, 16724-16729	18
979	Biomedical Application of Functional Materials in Organ-on-a-Chip. 2020 , 8, 823	18
978	Enzyme-Cross-linked Gelatin Hydrogel Enriched with an Articular Cartilage Extracellular Matrix and Human Adipose-Derived Stem Cells for Hyaline Cartilage Regeneration of Rabbits. 2020 , 6, 5110-5119	13
977	Integrated design and fabrication strategies for biomechanically and biologically functional PLA/ β -TCP nanofiber reinforced GelMA scaffold for tissue engineering applications. 2020 , 164, 976-985	9
976	3D Printing and Bioprinting Nerve Conduits for Neural Tissue Engineering. 2020 , 12,	26
975	Microfluidic Systems with Embedded Cell Culture Chambers for High-Throughput Biological Assays.. 2020 , 3, 6661-6671	5
974	3D printing and bioprinting using multiphoton lithography. 2020 , 20, e00090	6
973	Cell-loaded injectable gelatin/alginate/LAPONITE \square nanocomposite hydrogel promotes bone healing in a critical-size rat calvarial defect model.. 2020 , 10, 25652-25661	18
972	In situ forming microporous gelatin methacryloyl hydrogel scaffolds from thermostable microgels for tissue engineering. 2020 , 5, e10180	12
971	Development of a Dual Hydrogel Model System for Vascularization. 2020 , 20, e2000204	2
970	Biological perspectives and current biofabrication strategies in osteochondral tissue engineering. 2020 , 5, 1	10
969	Hydrogels: The Next Generation Body Materials for Microfluidic Chips?. 2020 , 16, e2003797	22

968	3D Cell Printing of Tissue/Organ-Mimicking Constructs for Therapeutic and Drug Testing Applications. 2020 , 21,	11
967	Recent advances and challenges in materials for 3D bioprinting. 2020 , 30, 618-634	26
966	Convection patterns gradients of non-living and living micro-entities in hydrogels. 2020 , 21, 100859	1
965	Three-Dimensional Models as a New Frontier for Studying the Role of Proteoglycans in the Normal and Malignant Breast Microenvironment. 2020 , 8, 569454	4
964	Cells, Materials, and Fabrication Processes for Cardiac Tissue Engineering. 2020 , 8, 955	11
963	Biomaterials for Bioprinting Microvasculature. 2020 , 120, 10887-10949	25
962	Coaxial Scale-Up Printing of Diameter-Tunable Biohybrid Hydrogel Microtubes with High Strength, Perfusability, and Endothelialization. 2020 , 30, 2001485	30
961	Solid Organ Bioprinting: Strategies to Achieve Organ Function. 2020 , 120, 11093-11127	22
960	Measurements of Elastic Properties of Biological Hydrogels using Atomic Force Microscopy. 2020 , 1455, 012012	1
959	Development of an N-Cadherin Biofunctionalized Hydrogel to Support the Formation of Synaptically Connected Neural Networks. 2020 , 6, 5811-5822	7
958	Overview of Current Advances in Extrusion Bioprinting for Skin Applications. 2020 , 21,	16
957	Strategies to use fibrinogen as bioink for 3D bioprinting fibrin-based soft and hard tissues. 2020 , 117, 60-76	53
956	Tendon stem cell-derived exosomes regulate inflammation and promote the high-quality healing of injured tendon. 2020 , 11, 402	21
955	High-Resolution 3D Bioprinting of Photo-Cross-linkable Recombinant Collagen to Serve Tissue Engineering Applications. 2020 , 21, 3997-4007	28
954	Rheological Properties of Coordinated Physical Gelation and Chemical Crosslinking in Gelatin Methacryloyl (GelMA) Hydrogels. 2020 , 20, e2000183	16
953	Physically Active Bioreactors for Tissue Engineering Applications. 2020 , 4, e2000125	15
952	Polymeric Hydrogel Systems as Emerging Biomaterial Platforms to Enable Hemostasis and Wound Healing. 2020 , 9, e2000905	63
951	3D-bioprinted all-inclusive bioanalytical platforms for cell studies. 2020 , 10, 14669	10

950	Gelatin methacryloyl-based tactile sensors for medical wearables. 2020 , 30, 2003601	41
949	3D Printed porous tissue engineering scaffolds with the self-folding ability and controlled release of growth factor. 2020 , 10, 579-586	5
948	Effects of the bonding intensity between hyaluronan and gelatin on chondrogenic phenotypic maintenance. 2020 ,	6
947	Leachable-Free Fabrication of Hydrogel Foams Enabling Homogeneous Viability of Encapsulated Cells in Large-Volume Constructs. 2020 , 9, e2000543	4
946	A Review of Conductive Hydrogel Used in Flexible Strain Sensor. 2020 , 13,	37
945	Magnesium-Based Whitlockite Bone Mineral Promotes Neural and Osteogenic Activities. 2020 , 6, 5785-5796	7
944	Nanoengineering in Cardiac Regeneration: Looking Back and Going Forward. 2020 , 10,	7
943	Swellable Gelatin Methacryloyl Microneedles for Extraction of Interstitial Skin Fluid toward Minimally Invasive Monitoring of Urea. 2020 , 20, e2000195	12
942	Structural evolution of dispersed hydrophobic association in a hydrogel analyzed by the tensile behavior. 2020 , 16, 8245-8253	6
941	Natural-Based Hydrogels for Tissue Engineering Applications. 2020 , 25,	22
940	Hydrogels and Dentin-Pulp Complex Regeneration: From the Benchtop to Clinical Translation. 2020 , 12,	12
939	Photo-Crosslinked Silk Fibroin for 3D Printing. 2020 , 12,	9
938	The Potential of a Tailored Biomimetic Hydrogel for In Vitro Cell Culture Applications: Characterization and Biocompatibility. 2020 , 10, 9035	2
937	Engineered Collagen Matrices. 2020 , 7,	16
936	Cell-Laden Gelatin Methacryloyl Bioink for the Fabrication of Z-Stacked Hydrogel Scaffolds for Tissue Engineering. 2020 , 12,	3
935	Gelatin Methacryloyl (GelMA) Nanocomposite Hydrogels Embedding Bioactive Naringin Liposomes. 2020 , 12,	4
934	Locally Controlled Diffusive Release of Bone Morphogenetic Protein-2 Using Micropatterned Gelatin Methacrylate Hydrogel Carriers. 2020 , 14, 405-420	10
933	Biomaterials in Valvular Heart Diseases. 2020 , 8, 529244	6

932	Creating Three-Dimensional Tumor Models: A Guide for the Biofabrication of a Primary Osteosarcoma Model. 2021 , 27, 514-529	5
931	Local Delivery of Minocycline and Vorinostat Targets the Tumor Microenvironment to Inhibit the Recurrence of Glioma. 2020 , 13, 11397-11409	4
930	Enhancement of Podocyte Attachment on Polyacrylamide Hydrogels with Gelatin-Based Polymers.. 2020 , 3, 7531-7539	2
929	Polymer Hydrogels to Guide Organotypic and Organoid Cultures. 2020 , 30, 2000097	28
928	Injectable Polypeptide-Protein Hydrogels for Promoting Infected Wound Healing. 2020 , 30, 2001196	84
927	Biodegradable β -Cyclodextrin Conjugated Gelatin Methacryloyl Microneedle for Delivery of Water-Insoluble Drug. 2020 , 9, e2000527	35
926	Efficient regeneration of rat calvarial defect with gelatin-hydroxyapatite composite cryogel. 2020 , 15, 065005	8
925	Electrospun cellulose acetate/gelatin nanofibrous wound dressing containing berberine for diabetic foot ulcer healing: in vitro and in vivo studies. 2020 , 10, 8312	74
924	The effect of BMP-mimetic peptide tethering bioinks on the differentiation of dental pulp stem cells (DPSCs) in 3D bioprinted dental constructs. 2020 , 12, 035029	23
923	Injectable Antimicrobial Conductive Hydrogels for Wound Disinfection and Infectious Wound Healing. 2020 , 21, 1841-1852	147
922	Electrofluidic control of bioactive molecule delivery into soft tissue models based on gelatin methacryloyl hydrogels using threads and surgical sutures. 2020 , 10, 7120	7
921	GelMA combined with sustained release of HUVECs derived exosomes for promoting cutaneous wound healing and facilitating skin regeneration. 2020 , 51, 251-263	24
920	On-chip hydrogel arrays individually encapsulating acoustic formed multicellular aggregates for high throughput drug testing. 2020 , 20, 2228-2236	26
919	The effect of print speed and material aging on the mechanical properties of a self-healing nanocomposite hydrogel. 2020 , 35, 101253	2
918	Preparation and characterization of environmentally friendly agar/κ-carrageenan/montmorillonite nanocomposite hydrogels. 2020 , 602, 124987	21
917	Sustained Release of Melatonin from GelMA Liposomes Reduced Osteoblast Apoptosis and Improved Implant Osseointegration in Osteoporosis. 2020 , 2020, 6797154	10
916	A novel mineralized high strength hydrogel for enhancing cell adhesion and promoting skull bone regeneration in situ. 2020 , 197, 108183	32
915	Polymeric Systems for Bioprinting. 2020 , 120, 10744-10792	68

914	Gelatin Methacryloyl Bioadhesive Improves Survival and Reduces Scar Burden in a Mouse Model of Myocardial Infarction. 2020 , 9, e014199	7
913	A Facile Fabrication of Biodegradable and Biocompatible Cross-Linked Gelatin as Screen Printing Substrates. 2020 , 12,	3
912	Angiogenic biomaterials to promote therapeutic regeneration and investigate disease progression. <i>Biomaterials</i> , 2020 , 255, 120207	15.6 17
911	Oxygen-generating smart hydrogels supporting chondrocytes survival in oxygen-free environments. 2020 , 194, 111192	13
910	Recent Advances in 3D Bioprinted Tumor Microenvironment. 2020 , 14, 137-147	12
909	Biomimetic periosteum-bone substitute composed of preosteoblast-derived matrix and hydrogel for large segmental bone defect repair. 2020 , 113, 317-327	26
908	Injectable hydrogels for tendon and ligament tissue engineering. 2020 , 14, 1333-1348	8
907	Synthesis of photocrosslinkable hydrogels for engineering three-dimensional vascular-like constructs by surface tension-driven assembly. 2020 , 116, 111143	5
906	Fabrication of Polypyrrole-Grafted Gelatin-Based Hydrogel with Conductive, Self-Healing, and Injectable Properties. 2020 , 2, 3016-3023	16
905	Acrylic-Based Hydrogels as Advanced Biomaterials. 2020 ,	1
904	Biodegradable Polymers for Biomedical Additive Manufacturing. 2020 , 20, 100700	37
903	3D Bioprinting of Oxygenated Cell-Laden Gelatin Methacryloyl Constructs. 2020 , 9, e1901794	41
902	Spatiotemporally Controlled Photoresponsive Hydrogels: Design and Predictive Modeling from Processing through Application. 2020 , 30, 2000639	21
901	GelMa Microbubbles Prepared in Microfluidics as Suitable Cell Carriers. 2020 , 982, 51-58	
900	Microfluidic Templating of Spatially Inhomogeneous Protein Microgels. 2020 , 16, e2000432	4
899	Effect of cell imprinting on viability and drug susceptibility of breast cancer cells to doxorubicin. 2020 , 113, 119-129	7
898	Cell-cell interaction in a coculture system consisting of CRISPR/Cas9 mediated GFP knock-in HUVECs and MG-63 cells in alginate-GelMA based nanocomposites hydrogel as a 3D scaffold. 2020 , 108, 1596-1606	7
897	Template-based fabrication of spatially organized 3D bioactive constructs using magnetic low-concentration gelation methacrylate (GelMA) microfibers. 2020 , 16, 3902-3913	3

896	Thermally self-assembled biodegradable poly(casein-g-N-isopropylacrylamide) unimers and their application in drug delivery for cancer therapy. 2020 , 154, 446-455	9
895	Directly coaxial 3D bioprinting of large-scale vascularized tissue constructs. 2020 , 12, 035014	45
894	Stem cell-laden injectable hydrogel microspheres for cancellous bone regeneration. 2020 , 393, 124715	33
893	Laser-assisted 3D bioprinting of exocrine pancreas spheroid models for cancer initiation study. 2020 , 12, 035001	31
892	Comparative study of gelatin cryogels reinforced with hydroxyapatites with different morphologies and interfacial bonding. 2020 , 15, 035012	5
891	Recent Applications of Three Dimensional Printing in Cardiovascular Medicine. 2020 , 9,	23
890	A liposome/gelatin methacrylate nanocomposite hydrogel system for delivery of stromal cell-derived factor-1 and stimulation of cell migration. 2020 , 108, 67-76	22
889	Effect of temperature on gelation and cross-linking of gelatin methacryloyl for biomedical applications. 2020 , 32, 033102	6
888	A universal self-eroding sacrificial bioink that enables bioprinting at room temperature. 2020 , 31, 1634-1647	4
887	Control of Matrix Stiffness Using Methacrylate-Gelatin Hydrogels for a Macrophage-Mediated Inflammatory Response. 2020 , 6, 3091-3102	22
886	"All-in-One" Gel System for Whole Procedure of Stem-Cell Amplification and Tissue Engineering. 2020 , 16, e1906539	13
885	Co-electrospun gelatin-chondroitin sulfate/polycaprolactone nanofibrous scaffolds for cartilage tissue engineering. 2020 , 22, 100215	17
884	Microfluidic liposomes-anchored microgels as extended delivery platform for treatment of osteoarthritis. 2020 , 400, 126004	42
883	Peptide Chitosan/Dextran Core/Shell Vascularized 3D Constructs for Wound Healing. 2020 , 12, 32328-32339	25
882	Acellular matrix hydrogel for repair of the temporomandibular joint disc. 2020 , 108, 2995-3007	4
881	In vivo models for biomaterials: applications from cardiovascular tissue engineering. 2020 , 195-217	
880	Recent Advancements in Engineering Strategies for Manipulating Neural Stem Cell Behavior. 2020 , 1, 41-47	
879	Natural polymers-based light-induced hydrogels: Promising biomaterials for biomedical applications. 2020 , 420, 213432	51

878	Fabrication of 3D-Printed Fish-Gelatin-Based Polymer Hydrogel Patches for Local Delivery of PEGylated Liposomal Doxorubicin. 2020 , 18,	21
877	Bioprinting small diameter blood vessel constructs with an endothelial and smooth muscle cell bilayer in a single step. 2020 , 12, 045012	28
876	Quantification of fractional and absolute functionalization of gelatin hydrogels by optimized ninhydrin assay and H NMR. 2020 , 412, 6211-6220	5
875	Cells and Surfaces in Vitro. 2020 , 661-681	2
874	A novel 3D printing PCL/GelMA scaffold containing USPIO for MRI-guided bile duct repair. 2020 , 15, 045004	16
873	Modular and Customized Fabrication of 3D Functional Microgels for Bottom-Up Tissue Engineering and Drug Screening. 2020 , 5, 1900847	7
872	Gelatin Methacryloyl Hydrogels Control the Localized Delivery of Albumin-Bound Paclitaxel. 2020 , 12,	19
871	Glycosaminoglycan-Inspired Biomaterials for the Development of Bioactive Hydrogel Networks. 2020 , 25,	17
870	Thermo/photo dual-crosslinking chitosan-gelatin methacrylate hydrogel with controlled shrinking property for contraction fabrication. 2020 , 236, 116067	15
869	3D printing of hydrogels: Rational design strategies and emerging biomedical applications. 2020 , 140, 100543	241
868	A cryopreservable cell-laden GelMa-based scaffold fabricated using a 3D printing process supplemented with an in situ photo-crosslinking. 2020 , 85, 249-257	8
867	A Biomimetic 3D-Self-Forming Approach for Microvascular Scaffolds. 2020 , 7, 1903553	27
866	Rational design and engineering of carbon nano-onions reinforced natural protein nanocomposite hydrogels for biomedical applications. 2020 , 104, 103696	19
865	Keratinocytes-hair follicle bulge stem cells-fibroblasts co-cultures on a tri-layer skin equivalent derived from gelatin/PEG methacrylate nanofibers. 2020 , 31, 869-894	2
864	Direct-Write Bioprinting Approach to Construct Multilayer Cellular Tissues. 2019 , 7, 478	10
863	Photocurable chitosan as bioink for cellularized therapies towards personalized scaffold architecture. 2020 , 18, e00082	36
862	Biomimetic organic-inorganic hybrid hydrogel electrospinning periosteum for accelerating bone regeneration. 2020 , 110, 110670	34
861	Gelatin Matrices for Growth Factor Sequestration. 2020 , 38, 546-557	22

860	Photocurable Albumin Methacryloyl Hydrogels as a Versatile Platform for Tissue Engineering.. 2020 , 3, 920-934	13
859	Preparation and characterization of methacrylated gelatin/bacterial cellulose composite hydrogels for cartilage tissue engineering. 2020 , 7, 195-202	26
858	From design to applications of stimuli-responsive hydrogel strain sensors. 2020 , 8, 3171-3191	72
857	Dual-enzymatically crosslinked hyaluronic acid hydrogel as a long-time 3D stem cell culture system. 2020 , 15, 045013	12
856	Programmed Sustained Release of Recombinant Human Bone Morphogenetic Protein-2 and Inorganic Ion Composite Hydrogel as Artificial Periosteum. 2020 , 12, 6840-6851	35
855	Magnetic/pH-sensitive double-layer microrobots for drug delivery and sustained release. 2020 , 19, 100583	25
854	Improved physical and osteoinductive properties of demineralized bone matrix by gelatin methacryloyl formulation. 2020 , 14, 475-485	3
853	Sacrificial microgel-laden bioink-enabled 3D bioprinting of mesoscale pore networks. 2020 , 3, 30-39	32
852	Hydrophobically-modified gelatin hydrogel as a carrier for charged hydrophilic drugs and hydrophobic drugs. 2020 , 149, 140-147	14
851	Injectable Gelatin Microgel-Based Composite Ink for 3D Bioprinting in Air. 2020 , 12, 22453-22466	26
850	Polyhedral Oligomeric Silsesquioxane-Incorporated Gelatin Hydrogel Promotes Angiogenesis during Vascularized Bone Regeneration. 2020 , 12, 22410-22425	32
849	Fe (III)@TA@IGF-2 microspheres loaded hydrogel for liver injury treatment. 2020 , 159, 183-193	4
848	Geometrically Structured Microtumors in 3D Hydrogel Matrices. 2020 , 4, e2000056	6
847	Engineering cartilage and other structural tissues: principals of bone and cartilage reconstruction. 2020 , 979-987	
846	3D-bioprinted functional and biomimetic hydrogel scaffolds incorporated with nanosilicates to promote bone healing in rat calvarial defect model. 2020 , 112, 110905	30
845	Using chaotic advection for facile high-throughput fabrication of ordered multilayer micro- and nanostructures: continuous chaotic printing. 2020 , 12, 035023	24
844	A Patch of Detachable Hybrid Microneedle Depot for Localized Delivery of Mesenchymal Stem Cells in Regeneration Therapy. 2020 , 30, 2000086	38
843	A Review of 3D Printing Technologies for Soft Polymer Materials. 2020 , 30, 2000187	148

842	Pluronic-coated nanoparticles for enhanced spatial distribution and increased softness of nanocomposite hydrogels. 2020 , 55, 8968-8982		4
841	Wet-adhesive, haemostatic and antimicrobial bilayered composite nanosheets for sealing and healing soft-tissue bleeding wounds. <i>Biomaterials</i> , 2020 , 252, 120018	15.6	34
840	A bio-inspired magnetic natural hydrogel containing gelatin and alginate as a drug delivery system for cancer chemotherapy. 2020 , 156, 438-445		51
839	Development of GelMA/PCL and dECM/PCL resins for 3D printing of acellular in vitro tissue scaffolds by stereolithography. 2020 , 112, 110958		27
838	Arbitrarily-shaped microgels composed of chemically unmodified biopolymers. 2020 , 8, 3044-3051		3
837	Experimental study on the mechanical properties of biological hydrogels of different concentrations. 2020 , 28, 685-695		1
836	3D bioprinted multiscale composite scaffolds based on gelatin methacryloyl (GelMA)/chitosan microspheres as a modular bioink for enhancing 3D neurite outgrowth and elongation. 2020 , 574, 162-173		30
835	Gelatin-based nanofibrous electrically conductive scaffolds for tissue engineering applications. 2021 , 70, 693-702		7
834	Designing composite cryogel carriers for tyrosine adsorption. 2021 , 254, 117622		2
833	Lithography-Based 3D Bioprinting and Bioinks for Bone Repair and Regeneration. 2021 , 7, 806-816		8
832	Modeling the printability of photocuring and strength adjustable hydrogel bioink during projection-based 3D bioprinting. 2021 , 13,		19
831	Effect of kartogenin-loaded gelatin methacryloyl hydrogel scaffold with bone marrow stimulation for enthesis healing in rotator cuff repair. 2021 , 30, 544-553		7
830	Hydrogel microfluidic-based liver-on-a-chip: Mimicking the mass transfer and structural features of liver. 2021 , 118, 612-621		6
829	Nano-biomaterials for designing functional bioinks towards complex tissue and organ regeneration in 3D bioprinting. 2021 , 37, 101639		9
828	Neuro-regenerative imidazole-functionalized GelMA hydrogel loaded with hAMSC and SDF-1 β promote stem cell differentiation and repair focal brain injury. 2021 , 6, 627-637		18
827	Application of bioactive hydrogels combined with dental pulp stem cells for the repair of large gap peripheral nerve injuries. 2021 , 6, 638-654		29
826	Three-dimensional bioprinting of multicell-laden scaffolds containing bone morphogenic protein-4 for promoting M2 macrophage polarization and accelerating bone defect repair in diabetes mellitus. 2021 , 6, 757-769		30
825	Dual-functional alginate crosslinker: Independent control of crosslinking density and cell adhesive properties of hydrogels via separate conjugation pathways. 2021 , 252, 117128		5

824	Nonswelling injectable chitosan hydrogel via UV crosslinking induced hydrophobic effect for minimally invasive tissue engineering. 2021 , 252, 117143	17
823	Designing Gelatin Methacryloyl (GelMA)-Based Bioinks for Visible Light Stereolithographic 3D Biofabrication. 2021 , 21, e2000317	14
822	Heterogeneous Structural Color Microfibers for Cardiomyocytes Tug-of-War. 2021 , 31, 2007527	13
821	3D-printed bioactive and biodegradable hydrogel scaffolds of alginate/gelatin/cellulose nanocrystals for tissue engineering. 2021 , 167, 644-658	39
820	Photo-crosslinkable hydrogel and its biological applications. 2021 , 32, 1603-1614	15
819	Highly substituted decoupled gelatin methacrylamide free of hydrolabile methacrylate impurities: An optimum choice for long-term stability and cytocompatibility. 2021 , 167, 479-490	5
818	Cell-Free Bilayered Porous Scaffolds for Osteochondral Regeneration Fabricated by Continuous 3D-Printing Using Nascent Physical Hydrogel as Ink. 2021 , 10, e2001404	33
817	Application of electrospun nanofibers in bone, cartilage and osteochondral tissue engineering. 2021 , 32, 536-561	6
816	Image analysis as PAT-Tool for use in extrusion-based bioprinting. 2021 , 21, e00112	2
815	Molybdenum disulfide (MoS) nanosheets-based hydrogels with light-triggered self-healing property for flexible sensors. 2021 , 586, 601-612	15
814	Biomolecule-assisted synthesis of biomimetic nanocomposite hydrogel for hemostatic and wound healing applications. 2021 , 23, 629-669	26
813	From prevention to diagnosis and treatment: Biomedical applications of metal nanoparticle-hydrogel composites. 2021 , 122, 1-25	21
812	Swelling and Shrinking Behavior of Modified Starch Biopolymer with Iron Oxide. 2021 , 73, 2000108	3
811	A Hydrogen-Bonded Extracellular Matrix-Mimicking Bactericidal Hydrogel with Radical Scavenging and Hemostatic Function for pH-Responsive Wound Healing Acceleration. 2021 , 10, e2001122	47
810	Novel three-dimensional bioglass functionalized gelatin nanofibrous scaffolds for bone regeneration. 2021 , 109, 517-526	4
809	Facile 3D cell culture protocol based on photocurable hydrogels. 2021 , 4, 149-153	6
808	Regulation of the inflammatory cycle by a controllable release hydrogel for eliminating postoperative inflammation after discectomy. 2021 , 6, 146-157	14
807	Tunable Hydrogels: Introduction to the World of Smart Materials for Biomedical Applications. 2021 , 178, 1-35	0

806	Engineering bioactive synthetic polymers for biomedical applications: a review with emphasis on tissue engineering and controlled release.	6
805	Porous scaffolds with the structure of an interpenetrating polymer network made by gelatin methacrylated nanoparticle-stabilized high internal phase emulsion polymerization targeted for tissue engineering.. 2021 , 11, 22544-22555	1
804	Hyaluronic acid and chondroitin sulfate (meth)acrylate-based hydrogels for tissue engineering: Synthesis, characteristics and pre-clinical evaluation. <i>Biomaterials</i> , 2021 , 268, 120602	15.6 30
803	Gelatin methacryloyl hydrogels functionalized with endothelin-1 for angiogenesis and full-thickness wound healing. 2021 , 9, 4700-4709	5
802	Hyaluronic acid-based hydrogels to study cancer cell behaviors. 2021 , 9, 6103-6115	7
801	Hydrogel Encapsulation of Mesenchymal Stem Cells and Their Derived Exosomes for Tissue Engineering. 2021 , 22,	25
800	Shining a light on the hidden structure of gelatin methacryloyl bioinks using small-angle X-ray scattering (SAXS).	2
799	Bone defect reconstruction via endochondral ossification: A developmental engineering strategy. 2021 , 12, 20417314211004211	6
798	Advanced Functional Polymers for Biomedical Applications: Drug, Sensor, Diagnosis, and Prognosis. 2021 , 181-196	
797	Fabrication and characterization of 3D printable nanocellulose-based hydrogels for tissue engineering.. 2021 , 11, 7466-7478	11
796	Characterization of Gelatin Hydrogels Cross-Linked with Microbial Transglutaminase as Engineered Skeletal Muscle Substrates. 2021 , 8,	13
795	Hydrogel: A potential therapeutic material for bone tissue engineering. 2021 , 11, 010701	8
794	A flexible microfluidic strategy to generate grooved microfibers for guiding cell alignment. 2021 , 9, 4880-48908	
793	Temperature-activated PRP α ryogel for long-term osteogenesis of adipose-derived stem cells to promote bone repair. 2021 , 5, 396-405	2
792	Muscle tissue engineering α materials perspective. 2021 , 249-274	
791	Gelatin-based composite hydrogels with biomimetic lubrication and sustained drug release. 1	4
790	Biomedical applications of gelatin methacryloyl hydrogels. 2021 , 2, 47-56	19
789	Transparent silk/gelatin methacrylate (GelMA) fibrillar film for corneal regeneration. 2021 , 120, 111744	15

788	Clinical applications of biopolymer-based hydrogels. 2021 , 535-568	1
787	Gelatin Methacryloyl-Riboflavin (GelMA-RF) Hydrogels for Bone Regeneration. 2021 , 22,	8
786	Rheological Properties of Fish Gelatin Modified with Sodium Alginate. 2021 , 13,	4
785	Crystallization enhanced thermal-sensitive hydrogels of PCL-PEG-PCL triblock copolymer for 3D printing. 2020 ,	7
784	Precise control of synthetic hydrogel network structure via linear, independent synthesis-swelling relationships. 2021 , 7,	19
783	Engineering multifunctional bactericidal nanofibers for abdominal hernia repair. 2021 , 4, 233	9
782	Bioresorbable Polymers: Advanced Materials and 4D Printing for Tissue Engineering. 2021 , 13,	24
781	Polymeric Bioinks for 3D Hepatic Printing. 2021 , 3, 164-181	6
780	Light-Controlled Growth Factors Release on Tetrapodal ZnO-Incorporated 3D-Printed Hydrogels for Developing Smart Wound Scaffold. 2021 , 31, 2007555	18
779	Gelatin-methacryloyl hydrogel based blood-brain barrier model for studying breast cancer-associated brain metastasis. 2021 , 26, 490-500	7
778	3D-Printed Gelatin Methacryloyl-Based Scaffolds with Potential Application in Tissue Engineering. 2021 , 13,	8
777	Low-autofluorescence, transparent composite for multiphoton 3D printing. 2021 , 11, 801	5
776	Modeling the Mechanobiology of Cancer Cell Migration Using 3D Biomimetic Hydrogels. 2021 , 7,	7
775	hDPSC-laden GelMA microspheres fabricated using electrostatic microdroplet method for endodontic regeneration. 2021 , 121, 111850	9
774	Differentiation of physical and chemical cross-linking in gelatin methacryloyl hydrogels. 2021 , 11, 3256	9
773	Necessities, opportunities, and challenges for tympanic membrane perforation scaffolding-based bioengineering. 2020 ,	2
772	Dynamically tunable intravascular catheter delivery of hydrogels for endovascular embolization. 2021 , 6, 66-71	0
771	Methacrylated pullulan/polyethylene (glycol) diacrylate composite hydrogel for cartilage tissue engineering. 2021 , 32, 1057-1071	5

770	Engineering Three-Dimensional Vascularized Cardiac Tissues. 2021 ,	3
769	Cosmetic, Biomedical and Pharmaceutical Applications of Fish Gelatin/Hydrolysates. 2021 , 19,	24
768	Non-invasive in vivo monitoring of transplanted stem cells in 3D-bioprinted constructs using near-infrared fluorescent imaging. 2021 , 6, e10216	0
767	MgO Nanoparticles-Incorporated PCL/Gelatin-Derived Coaxial Electrospinning Nanocellulose Membranes for Periodontal Tissue Regeneration. 2021 , 9, 668428	14
766	PEDOT and PEDOT:PSS conducting polymeric hydrogels: A report on their emerging applications. 2021 , 273, 116709	12
765	In vitro characterisation of 3D printed platelet lysate-based bioink for potential application in skin tissue engineering. 2021 , 123, 286-297	12
764	Covalently Functionalized Carbon Nano-Onions Integrated Gelatin Methacryloyl Nanocomposite Hydrogel Containing β -Cyclodextrin as Drug Carrier for High-Performance pH-Triggered Drug Release. 2021 , 14,	13
763	Encapsulation and recovery of murine hematopoietic stem and progenitor cells in a thiol-crosslinked maleimide-functionalized gelatin hydrogel.	
762	Low-Cost, Modular Modification to a Desktop 3D Printer for General Purpose Gel/Paste Extrusion & Direct Ink Writing.	
761	Recent developments in sustainably sourced protein-based biomaterials. 2021 , 49, 953-964	5
760	Hybrid Gelatin Hydrogels in Nanomedicine Applications.. 2021 , 4, 2886-2906	7
759	Biological function following radical photo-polymerization of biomedical polymers and surrounding tissues: Design considerations and cellular risk factors. 2021 , 8, 011301	7
758	Continuous chaotic bioprinting of skeletal muscle-like constructs. 2021 , 21, e00125	16
757	Degradable and Removable Tough Adhesive Hydrogels. 2021 , 33, e2008553	22
756	From Protein Building Blocks to Functional Materials. 2021 , 15, 5819-5837	24
755	3D-printed gelatin methacrylate (GelMA)/silanated silica scaffold assisted by two-stage cooling system for hard tissue regeneration. 2021 , 8, rbab001	5
754	Engineered Hydrogels. 2021 , 89-114	1
753	Sampling of fluid through skin with magnetohydrodynamics for noninvasive glucose monitoring. 2021 , 11, 7609	4

752	Toward Designing of Anti-infective Hydrogels for Orthopedic Implants: From Lab to Clinic. 2021 , 7, 1933-1961	10
751	Suturable elastomeric tubular grafts with patterned porosity for rapid vascularization of 3D constructs. 2021 ,	4
750	Gelatine-based drug-eluting bandage contact lenses: Effect of PEGDA concentration and manufacturing technique. 2021 , 599, 120452	6
749	Brownian Sieving Effect for Boosting the Performance of Microcapillary Hydrodynamic Chromatography. Proof of Concept. 2021 , 93, 6808-6816	4
748	Bioinks for 3D Bioprinting: A Scientometric Analysis of Two Decades of Progress. 2021 , 7, 333	7
747	Development and characterization of pH-sensitive chondroitin sulfate-co-poly(acrylic acid) hydrogels for controlled release of diclofenac sodium. 2021 , 25, 101212	8
746	Recent Advances in Injectable Dual Crosslinking Hydrogels for Biomedical Applications. 2021 , 21, e2100109	8
745	Biomimetic nanoengineered scaffold for enhanced full-thickness cutaneous wound healing. 2021 , 124, 191-204	25
744	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. 2021 , 121, 4309-4372	145
743	Glycyrrhizic Acid Promotes Osteogenic Differentiation of Human Bone Marrow Stromal Cells by Activating the Wnt/ β Catenin Signaling Pathway. 2021 , 12, 607635	3
742	Review of Design Considerations for Brain-on-a-Chip Models. 2021 , 12,	7
741	BoneMA-synthesis and characterization of a methacrylated bone-derived hydrogel for bioprinting of vascularized tissue constructs.. 2021 , 13,	4
740	Feasibility studies of intraocular use of gelatin methacryloyl hydrogel to patch retinal tears. 2021 , 32, 3160-3166	0
739	Recent Advances in 3D Printing with Protein-Based Inks. 2021 , 115, 101375-101375	20
738	Photo-crosslinkable amniotic membrane hydrogel for skin defect healing. 2021 , 125, 197-207	19
737	Mechanobiology. 2021 , 229-270	
736	A porous hydrogel scaffold mimicking the extracellular matrix with swim bladder derived collagen for renal tissue regeneration. 2021 ,	1
735	4D spatiotemporal modulation of biomolecules distribution in anisotropic corrugated microwrinkles via electrically manipulated microcapsules within hierarchical hydrogel for spinal cord regeneration. <i>Biomaterials</i> , 2021 , 271, 120762	15.6 2

734	Printability and bio-functionality of a shear thinning methacrylated xanthan - gelatin composite bioink. 2021 ,	5
733	3D printing of chemical-empowered tendon stem/progenitor cells for functional tissue repair. <i>Biomaterials</i> , 2021 , 271, 120722	15.6 4
732	Fabrication of Biomedical Scaffolds Using Biodegradable Polymers. 2021 , 121, 11238-11304	30
731	Conductive GelMA-Collagen-AgNW Blended Hydrogel for Smart Actuator. 2021 , 13,	2
730	Engineering Hydrogel-Based Biomedical Photonics: Design, Fabrication, and Applications. 2021 , 33, e2006582	14
729	Preparation of a photocurable hydrogel with adjustable mechanical properties for 3D printing. 2021 , 27, 797-807	1
728	Three-dimensional bioprinting of artificial ovaries by an extrusion-based method using gelatin-methacryloyl bioink. 2021 , 1-9	4
727	Polymer-based hydrogels with local drug release for cancer immunotherapy. 2021 , 137, 111333	10
726	Strontium ranelate promotes chondrogenesis through inhibition of the Wnt/ β -catenin pathway. 2021 , 12, 296	6
725	Property-Tuneable Microgels Fabricated by Using Flow-Focusing Microfluidic Geometry for Bioactive Agent Delivery. 2021 , 13,	17
724	Periosteal Tissue Engineering: Current Developments and Perspectives. 2021 , 10, e2100215	6
723	Bio-inspired Incrustation Interfacial Polymerization of Dopamine and Cross-linking with Gelatin toward Robust, Biodegradable Three-Dimensional Hydrogels. 2021 , 37, 6201-6207	3
722	Application of 3D Bioprinters for Dental Pulp Regeneration and Tissue Engineering (Porous architecture). 1	4
721	3D printed hybrid bone constructs of PCL and dental pulp stem cells loaded GelMA. 2021 , 109, 2425-2437	7
720	3D tumor model biofabrication. 2021 , 4, 526-540	2
719	Deciphering the Molecular Mechanism of Water Interaction with Gelatin Methacryloyl Hydrogels: Role of Ionic Strength, pH, Drug Loading and Hydrogel Network Characteristics. 2021 , 9,	4
718	Electronic Drugs: Spatial and Temporal Medical Treatment of Human Diseases. 2021 , 33, e2005930	6
717	Sustainable Cellulose-Nanofiber-Based Hydrogels. 2021 , 15, 7889-7898	16

716	Optimization of Polysaccharide Hydrocolloid for the Development of Bioink with High Printability/Biocompatibility for Coextrusion 3D Bioprinting. 2021 , 13,	3
715	Mitochondria Encapsulation in Hydrogel-Based Artificial Cells as ATP Producing Subunits. 2021 , 17, e2007959	2
714	Tough fibrous mats prepared by electrospinning mixtures of methacrylated poly(trimethylene carbonate) and methacrylated gelatin. 2021 , 152, 110471	2
713	pH sensitive composite hydrogels based on gelatin and reinforced with cellulose microcrystals: In depth physicochemical and microstructural analyses for controlled release of vitamin B2. 2021 , 27, 102334	2
712	3D printing in biomedical engineering: Processes, materials, and applications. 2021 , 8, 021322	9
711	Dynamically and Spatially Controllable Albumin-Based Hydrogels for the Prevention of Postoperative Adhesion. 2021 , 7, 3293-3305	4
710	Surfactin-reinforced gelatin methacrylate hydrogel accelerates diabetic wound healing by regulating the macrophage polarization and promoting angiogenesis. 2021 , 414, 128836	14
709	Long-Term Controlled Release of Simvastatin from Photoprinted Triple-Networked Hydrogels Composed of Modified Chitosan and PLA-PEG Micelles. 2021 , 21, e2100123	1
708	Adipose-derived mesenchymal stromal cell-derived exosomes promote tendon healing by activating both SMAD1/5/9 and SMAD2/3. 2021 , 12, 338	12
707	Crosslinking Strategies for the Microfluidic Production of Microgels. 2021 , 26,	6
706	Tuneable Hybrid Hydrogels via Complementary Self-Assembly of a Bioactive Peptide with a Robust Polysaccharide. 2021 , 7, 3340-3350	11
705	Recent Advances on Bioprinted Gelatin Methacrylate-Based Hydrogels for Tissue Repair. 2021 , 27, 679-702	17
704	Impact of cell density on the bioprinting of gelatin methacrylate (GelMA) bioinks. 2021 , 22, e00131	4
703	Tuning Superfast Curing Thiol-Norbornene-Functionalized Gelatin Hydrogels for 3D Bioprinting. 2021 , 10, e2100206	7
702	Microfluidic 3D Printing of a Photo-Cross-Linkable Bioink Using Insights from Computational Modeling. 2021 , 7, 3269-3280	3
701	Pectin as Rheology Modifier of a Gelatin-Based Biomaterial Ink. 2021 , 14,	1
700	Bio-Inspired Hydrogels via 3D Bioprinting.	0
699	3D printed step-gradient composite hydrogels for directed migration and osteogenic differentiation of human bone marrow-derived mesenchymal stem cells.	

698	3D bioprinted human iPSC-derived somatosensory constructs with functional and highly purified sensory neuron networks. 2021 , 13,	3
697	Recent Advances in Microfluidically Spun Microfibers for Tissue Engineering and Drug Delivery Applications. 2021 , 14, 185-205	
696	Effect of Photoinitiator on Precursory Stability and Curing Depth of Thiol-Ene Clickable Gelatin. 2021 , 13,	8
695	Designing Inherently Photodegradable Cell-Adhesive Hydrogels for 3D Cell Culture. 2021 , 10, e2100632	2
694	Swelling Behaviors of 3D Printed Hydrogel and Hydrogel-Microcarrier Composite Scaffolds. 2021 , 27, 665-678	4
693	Photopolymerizable pullulan: Synthesis, self-assembly and inkjet printing. 2021 , 592, 430-439	3
692	Controlling cellular organization in bioprinting through designed 3D microcompartmentalization. 2021 , 8, 021404	20
691	Self-aligned myofibers in 3D bioprinted extracellular matrix-based construct accelerate skeletal muscle function restoration. 2021 , 8, 021405	9
690	A convenient strategy to synthesize highly tunable gelatin methacryloyl with very low gelation temperature. 2021 , 154, 110538	2
689	3D-Printable Hierarchical Nanogel-GelMA Composite Hydrogel System. 2021 , 13,	3
688	A 3D-printed PRP-GelMA hydrogel promotes osteochondral regeneration through M2 macrophage polarization in a rabbit model. 2021 , 128, 150-162	28
687	New Endeavors of (Micro)Tissue Engineering: Cells Tissues Organs on-Chip and Communication Thereof. 2021 , 1-15	1
686	3D-Printed Gelatin Methacrylate Scaffolds with Controlled Architecture and Stiffness Modulate the Fibroblast Phenotype towards Dermal Regeneration. 2021 , 13,	8
685	A tuned gelatin methacryloyl (GelMA) hydrogel facilitates myelination of dorsal root ganglia neurons in vitro. 2021 , 126, 112131	5
684	An Overview on Collagen and Gelatin-Based Cryogels: Fabrication, Classification, Properties and Biomedical Applications. 2021 , 13,	10
683	Biofabrication of Cell-Laden Gelatin Methacryloyl Hydrogels with Incorporation of Silanized Hydroxyapatite by Visible Light Projection. 2021 , 13,	1
682	Current research progress of photopolymerized hydrogels in tissue engineering. 2021 , 32, 2117-2126	11
681	TPE based aggregation induced emission fluorescent sensors for viscosity of liquid and mechanical properties of hydrogel. 2021 , 33, 252-252	1

680	Self-Oxygenation of Tissues Orchestrates Full-Thickness Vascularization of Living Implants.. 2021 , 31, 2100850	2
679	Self-healable and flexible supramolecular gelatin/MoS hydrogels with molecular recognition properties. 2021 , 182, 2048-2055	7
678	Biocompatible and Enzymatically Degradable Gels for 3D Cellular Encapsulation under Extreme Compressive Strain. 2021 , 7,	3
677	Self-Healable, High-Strength Hydrogel Electrode for Flexible Sensors and Supercapacitors. 2021 , 13, 36240-36252	13
676	Pharmaceutical electrospinning and 3D printing scaffold design for bone regeneration. 2021 , 174, 504-534	29
675	Biotherapeutic-loaded injectable hydrogels as a synergistic strategy to support myocardial repair after myocardial infarction. 2021 , 335, 216-236	8
674	Incorporating nanocrystalline cellulose into a multifunctional hydrogel for heart valve tissue engineering applications. 2022 , 110, 76-91	4
673	A Smartphone-Enabled Portable Digital Light Processing 3D Printer. 2021 , 33, e2102153	15
672	Injectable and reversible preformed cryogels based on chemically crosslinked gelatin methacrylate (GelMA) and physically crosslinked hyaluronic acid (HA) for soft tissue engineering. 2021 , 203, 111725	3
671	Hyaluronic Acid Oligomer Immobilization as an Angiogenic Trigger for the Neovascularization of TE Constructs.. 2021 , 4, 6023-6035	0
670	Biology and Models of the Blood-Brain Barrier. 2021 , 23, 359-384	27
669	Photo Cross-linkable Biopolymers for Cornea Tissue Healing. 2021 ,	1
668	Recent Advances in Microfluidic Platforms for Programming Cell-Based Living Materials. 2021 , 33, e2005944	4
667	Synthesis and characterization of C2C12-laden gelatin methacryloyl (GelMA) from marine and mammalian sources. 2021 , 183, 918-926	2
666	Hydrogel-Based Scaffolds in Oral Tissue Engineering. 2021 , 8,	2
665	Decellularized human amniotic particles reinforced with GelMA assist wound healing of the oral mucosa in vivo. 2021 , 11, 1092-1100	
664	Stretchable and Bioadhesive Gelatin Methacryloyl-Based Hydrogels Enabled by Dopamine Polymerization. 2021 , 13, 40290-40301	12
663	A 3D Bioprinted In Vitro Model of Pulmonary Artery Atresia to Evaluate Endothelial Cell Response to Microenvironment. 2021 , 10, e2100968	1

662	Micromechanical Characterisation of 3D Bioprinted neural cell models using Brillouin Microscopy.	1
661	Dual Functionalization of Gelatin for Orthogonal and Dynamic Hydrogel Cross-Linking. 2021 , 7, 4196-4208	5
660	Natural Polymeric Scaffolds for Tissue Engineering Applications. 2021 , 32, 2144-2194	12
659	A Bioprinting Process Supplemented with In Situ Electrical Stimulation Directly Induces Significant Myotube Formation and Myogenesis. 2105170	3
658	Injectable Multifunctional Drug Delivery System for Hard Tissue Regeneration under Inflammatory Microenvironments.. 2021 , 4, 6993-7006	3
657	Modified mannan for 3D bioprinting: a potential novel bioink for tissue engineering. 2021 , 16,	1
656	Advances in Photocrosslinkable Materials for 3D Bioprinting. 2100663	2
655	Applications of Functionalized Hydrogels in the Regeneration of the Intervertebral Disc. 2021 , 2021, 2818624	1
654	High ligand density drives extensive spreading and motility on soft GelMA gels. 2021 , 16,	0
653	6-deoxy-aminocellulose derivatives embedded soft gelatin methacryloyl (GelMA) hydrogels for improved wound healing applications: In vitro and in vivo studies. 2021 , 185, 419-433	16
652	Nanohydroxyapatite, Nanosilicate-Reinforced Injectable, and Biomimetic Gelatin-Methacryloyl Hydrogel for Bone Tissue Engineering. 2021 , 16, 5603-5619	3
651	An Integrated Smart Sensor Dressing for Real-Time Wound Microenvironment Monitoring and Promoting Angiogenesis and Wound Healing. 2021 , 9, 701525	6
650	Stimuli-responsive hydrogels: Fabrication and biomedical applications. 20200112	12
649	Development of photo-crosslinkable platelet lysate-based hydrogels for 3D printing and tissue engineering. 2021 , 13,	0
648	4D Printing of Self-Folding Hydrogel Tubes for Potential Tissue Engineering Applications. 2141001	2
647	Transplantation of 3D bio-printed cardiac mesh improves cardiac function and vessel formation via ANGPT1/Tie2 pathway in rats with acute myocardial infarction. 2021 , 13,	5
646	3D Printing in Drug Delivery and Biomedical Applications: A State-of-the-Art Review. 2021 , 1, 94-115	3
645	ROS-Catalytic Transition-Metal-Based Enzymatic Nanoagents for Tumor and Bacterial Eradication. 2107530	16

644	The effects of surface topography modification on hydrogel properties. 2021 , 5, 031509	5
643	Hierarchical biomaterials via photopatterning-enhanced direct ink writing. 2021 , 13,	4
642	New biodegradable drug delivery system for patients with dry eye. 2021 ,	0
641	Controlled co-delivery system of magnesium and lanthanum ions for vascularized bone regeneration. 2021 , 16,	1
640	A comprehensive overview of common conducting polymers based nonocomposites; design, and their recent advance applications. 2021 , 160, 110773	4
639	An injectable bioink with rapid prototyping in the air and mild polymerization for 3D bioprinting. 2021 , 13,	7
638	Exosome-loaded extracellular matrix-mimic hydrogel with anti-inflammatory property Facilitates/promotes growth plate injury repair.. 2022 , 10, 145-158	6
637	Biomimetic Vasculatures by 3D-Printed Porous Molds.	
636	Shaping collagen for engineering hard tissues: Towards a printomics approach. 2021 , 131, 41-61	7
635	Synthesis, properties, and biomedical applications of alginate methacrylate (ALMA)-based hydrogels: Current advances and challenges. 2021 , 24, 101150	6
634	Donut-like MOFs of copper/nicotinic acid and composite hydrogels with superior bioactivity for rh-bFGF delivering and skin wound healing. 2021 , 19, 275	4
633	Photo-cross-linked Gelatin Glycidyl Methacrylate/N-Vinylpyrrolidone Copolymeric Hydrogel with Tunable Mechanical Properties for Ocular Tissue Engineering Applications.. 2021 , 4, 7682-7691	5
632	Adipose Tissue-Derived Stromal Cells Alter the Mechanical Stability and Viscoelastic Properties of Gelatine Methacryloyl Hydrogels. 2021 , 22,	1
631	Recent Advances on Stimuli-Responsive Hydrogels Based on Tissue-Derived ECMs and Their Components: Towards Improving Functionality for Tissue Engineering and Controlled Drug Delivery. 2021 , 13,	0
630	Encapsulation of murine hematopoietic stem and progenitor cells in a thiol-crosslinked maleimide-functionalized gelatin hydrogel. 2021 , 131, 138-148	2
629	Hydrogel Composites with Different Dimensional Nanoparticles for Bone Regeneration. 2021 , 42, e2100362	3
628	Photo-Crosslinked Gelatin-Based Hydrogel Films to Support Wound Healing. 2021 , 21, e2100246	1
627	A biofabrication method to align cells within bioprinted photocrosslinkable and cell-degradable hydrogel constructs via embedded fibers. 2021 , 13,	8

626	Skin-inspired gelatin-based flexible bio-electronic hydrogel for wound healing promotion and motion sensing. <i>Biomaterials</i> , 2021 , 276, 121026	15.6	24
625	Mechanotopography-Driven Design of Dispersible Nanofiber-Laden Hydrogel as a 3D Cell Culture Platform for Investigating Tissue Fibrosis. 2021 , 10, e2101109		0
624	Recent Advances in Cardiac Tissue Engineering for the Management of Myocardium Infarction. 2021 , 10,		8
623	Multifunctional Thermoresponsive Microcarriers for High-Throughput Cell Culture and Enzyme-Free Cell Harvesting. 2021 , 17, e2103192		5
622	Engineering a 3D bone marrow adipose composite tissue loading model suitable for studying mechanobiological questions. 2021 , 128, 112313		2
621	Fabrication approaches for high-throughput and biomimetic disease modeling. 2021 , 132, 52-82		1
620	Advances in bioactive glass-containing injectable hydrogel biomaterials for tissue regeneration. 2021 , 136, 1-36		13
619	Acoustic transmitted electrospun fibrous membranes for tympanic membrane regeneration. 2021 , 419, 129536		2
618	Converging 2D Nanomaterials and 3D Bioprinting Technology: State-of-the-Art, Challenges, and Potential Outlook in Biomedical Applications. 2021 , 10, e2101439		2
617	Engineered bone tissues using biomineralized gelatin methacryloyl/sodium alginate hydrogels. 2021 , 1-18		2
616	Platelet lysate functionalized gelatin methacrylate microspheres for improving angiogenesis in endodontic regeneration. 2021 , 136, 441-455		6
615	Characterization of codfish gelatin: a comparative study of fresh and salted skins and different extraction methods. 2021 , 124, 107238		3
614	State-of-art affordable bioprinters: A guide for the DiY community. 2021 , 8, 031312		2
613	Regenerative Medicine for the Treatment of Ischemic Heart Disease; Status and Future Perspectives. 2021 , 9, 704903		6
612	Recent trends in gelatin methacryloyl nanocomposite hydrogels for tissue engineering. 2021 ,		11
611	Gelatin methacrylate hydrogel loaded with brain-derived neurotrophic factor enhances small molecule-induced neurogenic differentiation of stem cells from apical papilla. 2021 ,		1
610	Characterizing the Effects of Synergistic Thermal and Photo-Cross-Linking during Biofabrication on the Structural and Functional Properties of Gelatin Methacryloyl (GelMA) Hydrogels. 2021 , 7, 5175-5188		5
609	Biocompatibility evaluation of a 3D-bioprinted alginate-GelMA-bacteria nanocellulose (BNC) scaffold laden with oriented-growth RSC96 cells. 2021 , 129, 112393		6

608	Biomimetic Ti-6Al-4V alloy/gelatin methacrylate hybrid scaffold with enhanced osteogenic and angiogenic capabilities for large bone defect restoration. 2021 , 6, 3437-3448	13
607	Wound healing properties of triple cross-linked poly (vinyl alcohol)/methacrylate kappa-carrageenan/chitooligosaccharide hydrogel. 2021 , 269, 118272	8
606	Self-stratifying behavior of a novel light-curable coating with gradient hydrophobic properties: Computational and experimental study. 2021 , 159, 106435	1
605	Local delivery strategies to restore immune homeostasis in the context of inflammation. 2021 , 178, 113971	5
604	Biofabrication of natural hydrogels for cardiac, neural, and bone Tissue engineering Applications. 2021 , 6, 3904-3923	29
603	Chondrocyte-laden GelMA hydrogel combined with 3D printed PLA scaffolds for auricle regeneration. 2021 , 130, 112423	4
602	Adipose-derived stem cells (ADSCs) and platelet-rich plasma (PRP) loaded gelatin/silk fibroin hydrogels for improving healing in a murine pressure ulcer model. 2021 , 424, 130429	7
601	Chitosan-based nanodelivery systems for cancer therapy: Recent advances. 2021 , 272, 118464	18
600	Tuning gelatin-based hydrogel towards bioadhesive ocular tissue engineering applications. 2021 , 6, 3947-3961	25
599	Development of photo-crosslinkable collagen hydrogel building blocks for vascular tissue engineering applications: A superior alternative to methacrylated gelatin?. 2021 , 130, 112460	2
598	Fullerol-hydrogel microfluidic spheres for redox regulation of stem cell fate and refractory bone healing. 2021 , 6, 4801-4815	15
597	Design of different self-stratifying patterns in a VOC-free light-curable coating containing bio-renewable materials: Study on formulation and processing conditions. 2021 , 161, 106519	0
596	Articular cartilage and osteochondral tissue engineering techniques: Recent advances and challenges. 2021 , 6, 4830-4855	31
595	Biodegradable dual-crosslinked adhesive glue for fixation and promotion of osteogenesis. 2022 , 427, 132000	6
594	Multifunctional GelMA platforms with nanomaterials for advanced tissue therapeutics. 2022 , 8, 267-295	30
593	Long-term induction of endogenous BMPs growth factor from antibacterial dual network hydrogels for fast large bone defect repair. 2022 , 607, 1500-1515	5
592	printing of growth factor-eluting adhesive scaffolds improves wound healing. 2022 , 8, 296-308	13
591	An injectable, self-healing, electroconductive extracellular matrix-based hydrogel for enhancing tissue repair after traumatic spinal cord injury. 2022 , 7, 98-111	21

590	Integration of three-dimensional printing and microfluidics. 2022 , 385-406	0
589	Natural polymer-derived photocurable bioadhesive hydrogels for sutureless keratoplasty. 2022 , 8, 196-209	9
588	Crosslinking porcine aortic valve by radical polymerization for the preparation of BHVs with improved cytocompatibility, mild immune response, and reduced calcification. 2021 , 35, 1218-1232	1
587	A bi-layered scaffold of a poly(lactic--glycolic acid) nanofiber mat and an alginate-gelatin hydrogel for wound healing. 2021 , 9, 7492-7505	7
586	3D bioprinting for skin tissue engineering: Current status and perspectives. 2021 , 12, 20417314211028574	18
585	Polymeric Tissue Adhesives. 2021 , 121, 11336-11384	71
584	A highly efficient microwave-assisted synthesis of an LED-curable methacrylated gelatin for bio applications.. 2021 , 11, 14996-15009	2
583	Fabricating poly(vinyl alcohol)/gelatin composite sponges with high absorbency and water-triggered expansion for noncompressible hemorrhage and wound healing. 2021 , 9, 1568-1582	17
582	Engineered Microgels-Their Manufacturing and Biomedical Applications. 2021 , 12,	9
581	Dual mechanism amino acid polymers promoting cell adhesion. 2021 , 12, 562	18
580	3D printing of functional microrobots. 2021 , 50, 2794-2838	73
579	Hydrogel composite scaffolds with an attenuated immunogenicity component for bone tissue engineering applications. 2021 , 9, 2033-2041	8
578	Tissue engineering applications. 2021 , 323-347	
577	Stereolithography 3D Bioprinting. 2020 , 2140, 93-108	34
576	Collagen Self-assembly: Biophysics and Biosignaling for Advanced Tissue Generation. 2020 , 203-245	3
575	Biofabrication in Tissue Engineering. 2020 , 289-312	4
574	Photopolymerizable Materials for Cell Encapsulation. 2017 , 1-43	2
573	3D Bioprinting of Tissue Models with Customized Bioinks. 2020 , 1249, 67-84	5

572	Bioprinting of novel 3D tumor array chip for drug screening. 2020 , 3, 175-188	16
571	Biomaterials for on-chip organ systems. 2020 , 669-707	4
570	3D bioprinting of functional cell-laden bioinks and its application for cell-alignment and maturation. 2020 , 19, 100588	19
569	Rhodamine Conjugated Gelatin Methacryloyl Nanoparticles for Stable Cell Imaging.. 2020 , 3, 6908-6918	5
568	Chapter 1:Microstereolithography. 2019 , 1-21	4
567	Artificial small-diameter blood vessels: materials, fabrication, surface modification, mechanical properties, and bioactive functionalities. 2020 , 8, 1801-1822	31
566	Biomechanical factors in three-dimensional tissue bioprinting. 2020 , 7, 041319	13
565	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
564	Role of temperature on bio-printability of gelatin methacrylate bioinks in two-step cross-linking strategy for tissue engineering applications. 2020 ,	9
563	An3D diabetic human skin model from diabetic primary cells. 2020 ,	2
562	Toward a neurospheroid niche model: optimizing embedded 3D bioprinting for fabrication of neurospheroid brain-like co-culture constructs. 2020 ,	16
561	Improved accuracy and precision of bioprinting through progressive cavity pump-controlled extrusion. 2020 ,	10
560	3D-Printed Biodegradable Microswimmer for Drug Delivery and Targeted Cell Labeling.	5
559	A Gelatin Hydrogel to Study Endometrial Angiogenesis and Trophoblast Invasion.	1
558	Development of an N-Cadherin Biofunctionalized Hydrogel to Support the Formation of Synaptically Connected Neural Networks.	1
557	Electrospun cellulose acetate/gelatin nanofibrous wound dressing containing berberine for diabetic foot ulcer healing: in vitro and in vivo studies.	1
556	Three-dimensional imaging of cell and extracellular matrix elasticity using quantitative micro-elastography. 2020 , 11, 867-884	15
555	Role of Biological Scaffolds, Hydro Gels and Stem Cells in Tissue Regeneration Therapy. 2017 , 2,	5

554	A dual crosslinking strategy to tailor rheological properties of gelatin methacryloyl. 2017 , 3, 003	28
553	3D printing for drug manufacturing: A perspective on the future of pharmaceuticals. 2018 , 4, 119	10
552	Bio-ink Materials for 3D Bio-printing. 2016 , 3, 49-59	5
551	The amelioration of cartilage degeneration by photo-crosslinked GelHA hydrogel and crizotinib encapsulated chitosan microspheres. 2017 , 8, 30235-30251	8
550	Dual-Enzyme Crosslinking and Post-polymerization for Printing of Polysaccharide-Polymer Hydrogel. 2020 , 8, 36	7
549	Emerging polymeric materials in additive manufacturing for use in biomedical applications. 2019 , 6, 1-20	8
548	Recent Advances in Hydrogels and Stem Cells. 2021 , 589-618	0
547	Cell-laden injectable microgels: Current status and future prospects for cartilage regeneration. <i>Biomaterials</i> , 2021 , 279, 121214	15.6 5
546	Synchrotron-Based UV Resonance Raman Spectroscopy for Polymer Characterization. 2021 , 183-225	
545	Calcium-Based Biomineralization: A Smart Approach for the Design of Novel Multifunctional Hybrid Materials. 2021 , 5, 278	0
544	Extracellular Matrix-Based Conductive Interpenetrating Network Hydrogels with Enhanced Neurovascular Regeneration Properties for Diabetic Wounds Repair. 2021 , e2101556	9
543	Multi-material digital light processing bioprinting of hydrogel-based microfluidic chips. 2021 , 14,	3
542	Preparation and In Vitro Characterization of Gelatin Methacrylate for Corneal Tissue Engineering. 2021 , 1	0
541	Modelling Human Physiology on-Chip: Historical Perspectives and Future Directions. 2021 , 12,	1
540	Spatiotemporally controlled, aptamers-mediated growth factor release locally manipulates microvasculature formation within engineered tissues.. 2022 , 12, 71-84	1
539	The Application of Cartilage Tissue Engineering with Cell-Laden Hydrogel in Plastic Surgery: A Systematic Review. 2021 , 1	2
538	Computational Modeling and Experimental Characterization of Extrusion Printing into Suspension Baths. 2021 , e2101679	1
537	An interpenetrating and patternable conducting polymer hydrogel for electrically stimulated release of glutamate. 2021 ,	1

536	Advances in the Surface Functionalization of Nanodiamonds for Biological Applications: A Review. 2021 , 4, 9985-10005	6
535	Polyethylene glycol diacrylate scaffold filled with cell-laden methacrylamide gelatin/alginate hydrogels used for cartilage repair. 2021 , 8853282211044853	1
534	Digital Light Processing Based Bioprinting with Composable Gradients. 2021 , e2107038	15
533	Optimized Photoclick (Bio)Resins for Fast Volumetric Bioprinting. 2021 , 33, e2102900	10
532	An organic hydrogel with high-strength, high-water retention properties for pressure sore protection. 2021 , 56, 18697-18709	0
531	Visible light-induced crosslinking of unmodified gelatin with PEGDA for DLP-3D printable hydrogels. 2021 , 160, 110813	2
530	Photopolymerizable chitosan hydrogels with improved strength and 3D printability. 2021 , 193, 109-116	2
529	Multifunctional 3D printed porous GelMA/xanthan gum based dressing with biofilm control and wound healing activity. 2021 , 131, 112493	2
528	The Present and Future of the Cancer Microenvironment Bioprinting. 2017 , 15, 103-110	
527	Glial Cells in the Heart? Replicating the Diversity of the Myocardium with Low-Cost 3D Models.	
526	Glial cells in the heart? Replicating the diversity of the myocardium with low-cost 3D models.	
525	Understanding the impact of crosslinked PCL/PEG/GelMA electrospun nanofibers on bactericidal activity.	1
524	3D Bioprinting of Non-viscous Bioink. 2019 , 81-104	
523	In situ Crosslinking System of Gelatin with Acrylated Cyclodextrin Towards the Fabrication of Hydrogels for Sustained Drug Release. 597-608	
522	3D bioprinted silk fibroin hydrogels for tissue engineering. 2021 , 16, 5484-5532	10
521	Engineering Microsphere-Loaded Non-mulberry Silk-Based 3D Bioprinted Vascularized Cardiac Patches with Oxygen-Releasing and Immunomodulatory Potential. 2021 , 13, 50744-50759	4
520	Smart and Biomimetic 3D and 4D Printed Composite Hydrogels: Opportunities for Different Biomedical Applications. 2021 , 9,	10
519	Composite Scaffolds from Gelatin and Bone Meal Powder for Tissue Engineering. 2021 , 8,	2

518	The addition of hyaluronic acid in chemical hydrogels can tune the physical properties and degradability. 2021 , 161, 110843	0
517	Narrative review of the choices of stem cell sources and hydrogels for cartilage tissue engineering. 2020 , 8, 1598	3
516	A low-autofluorescence, transparent resin for multiphoton 3D printing.	0
515	The hydroxyapatite microtubes enhanced GelMA hydrogel scaffold with inner pipeline framework structure for bone tissue regeneration. 2022 , 228, 109396	3
514	Biodegradable Polymers for Biomedical and Tissue Engineering. 1-29	
513	Hierarchically Inverse Opal Porous Scaffolds from Droplet Microfluidics for Biomimetic 3D Cell Co-Culture. 2021 ,	4
512	A dual-layer cell-laden tubular scaffold for bile duct regeneration. 2021 , 212, 110229	1
511	The role of pregnancy-specific glycoproteins on trophoblast motility in three-dimensional gelatin hydrogels.	0
510	An elastic auto-bone patch for one-step repair large skull defects accompanied by Craniocerebral injury. 2020 , 20, 100664	1
509	[Effect of microfracture combined with biomimetic hydrogel scaffold on rotator cuff tendon-to-bone healing in rabbits]. 2020 , 34, 1177-1183	1
508	Potential Mechanisms of the Impact of Hepatocyte Growth Factor Gene-Modified Tendon Stem Cells on Tendon Healing. 2021 , 9, 659389	
507	A Dual-sensitive Hydrogel Based on Poly(Lactide-co-Glycolide)-Polyethylene Glycol-Poly(Lactide-co-Glycolide) Block Copolymers for 3D Printing. 2021 , 7, 389	
506	3D Bioprinting Photo-Crosslinkable Hydrogels for Bone and Cartilage Repair. 2021 , 7, 367	6
505	[Experimental study on tissue engineered cartilage constructed by three-dimensional bioprinted human adipose-derived stem cells combined with gelatin methacryloyl]. 2021 , 35, 896-903	
504	Natural polymeric biomaterials for tissue engineering. 2022 , 75-110	
503	The Effects of Irradiation Time on Gelatin Methacrylate Hydrogels Used for Bone Tissue Engineering. 2022 , 12, 192-198	
502	Overview of scaffolds processing technologies. 2022 , 215-262	
501	Nonglutaraldehyde crosslinked bioprosthetic heart valves based on 2-isocyanatoethyl methacrylate crosslinked porcine pericardium with improved properties of stability, cytocompatibility and anti-calcification. 2022 , 230, 109504	5

500	Micromechanical characterisation of 3D bioprinted neural cell models using Brillouin microspectroscopy. 2022 , 25, e00179	0
499	3D Bioprinting Photo-Crosslinkable Hydrogels for Bone and Cartilage Repair. 2021 , 7, 367	16
498	Cellulose Nanocrystal-Enhanced Thermal-Sensitive Hydrogels of Block Copolymers for 3D Bioprinting. 2021 , 7, 397	1
497	Bioinks and bioprinting strategies for skeletal muscle tissue engineering. 2021 , e2105883	5
496	Volumetric Tomographic 3D Bioprinting of Heterocellular Bone-like Tissues in Seconds.	0
495	Low Intensity Pulsed Ultrasound for Bone Tissue Engineering.. 2021 , 12,	4
494	Injectable conductive gelatin methacrylate / oxidized dextran hydrogel encapsulating umbilical cord mesenchymal stem cells for myocardial infarction treatment.. 2022 , 13, 119-134	5
493	Photoinduced Gelatin-Methacrylate Scaffolds to Examine the Impact of Extracellular Environment on Trabecular Meshwork Cells.	1
492	Exosome-loaded hydrogels: a new cell-free therapeutic approach for skin regeneration. 2021 ,	5
491	Fabrication and Characterization of Ta ₂ O ₅ /GelMABG Scaffolds by Chemical Crosslinking Processing for Promotion Osteointegration. 8,	0
490	Effects of mechanical properties of gelatin methacryloyl hydrogels on encapsulated stem cell spheroids for 3D tissue engineering. 2021 , 194, 903-903	0
489	Use of Electrospun Phenylalanine/Poly-ε-Caprolactone Chiral Hybrid Scaffolds to Promote Endothelial Remodeling.. 2021 , 9, 773635	0
488	Photocrosslinked gelatin hydrogel improves wound healing and skin flap survival by the sustained release of basic fibroblast growth factor. 2021 , 11, 23094	5
487	Karaciğer hücreleri ve organoidlerin 3 boyutlu kütüphanelerinde kullanılmak üzere geliştirilmiş biyomalzemeler.	
486	3D Printed Scaffolds Incorporated with Platelet-Rich Plasma Show Enhanced Angiogenic Potential while not Inducing Fibrosis. 2109915	1
485	Preservation of Small Extracellular Vesicle in Gelatin Methacryloyl Hydrogel Through Reduced Particles Aggregation for Therapeutic Applications. 2021 , 16, 7831-7846	0
484	Directed Regeneration of Osteochondral Tissue by Hierarchical Assembly of Spatially Organized Composite Spheroids. 2021 , e2103525	6
483	Human Organs-on-Chips: A Review of the State-of-the-Art, Current Prospects, and Future Challenges. 2021 , 6, e2000526	1

- 482 A strategy to engineer vascularized tissue constructs by optimizing and maintaining the geometry. **2021**, 1
- 481 Tunable and Controlled Release of Cobalt Ions from Metal-Organic Framework Hydrogel Nanocomposites Enhances Bone Regeneration. **2021**, 4
- 480 Smart biomaterial-based systems for intrinsic stimuli-responsive chronic wound management. **2021**, 22, 100623 4
- 479 3D bioprinting: current status and trendsB guide to the literature and industrial practice. 1 8
- 478 Local delivery of biocompatible lentinan/chitosan composite for prolonged inhibition of postoperative breast cancer recurrence. **2021**, 194, 233-245 0
- 477 Hybrid Self-Assembling Peptide/Gelatin Methacrylate (GelMA) Bioink Blend for Improved Bioprintability and Primary Myoblast Response. 2100106 1
- 476 Representative 3D Bioprinting Approaches. **2022**, 11-45
- 475 Microfiber-Based Organoids Bioprinting for In Vitro Model. **2022**, 237-256
- 474 GelMA-Alginate Core-Shell Microcapsules as Efficient Delivery Platform For Prevascularized Microtissues in Endodontic Regeneration.
- 473 Supplementation of GelMA With Minimally Processed Tissue Promotes the Formation of Densely Packed Skeletal Muscle-Like Tissue.
- 472 Use of biomaterials in corneal endothelial repair.. **2021**, 13, 25158414211058249 1
- 471 Biomimetic 3D Printed PCL/TCP/GelMA Scaffolds with Improved Osteogenesis and Angiogenesis for Non-load Bearing Applications.
- 470 3D bioprinted tumor model with extracellular matrix enhanced bioinks for nanoparticle evaluation.. **2022**, 14, 1
- 469 Applications of bone regeneration hydrogels in the treatment of bone defects: a review. **2022**, 57, 887 1
- 468 Facile engineering of ECM-mimetic injectable dual crosslinking hydrogels with excellent mechanical resilience, tissue adhesion, and biocompatibility. **2021**, 3
- 467 3D printing for soft musculoskeletal tissue engineering. **2022**, 167-200
- 466 Bisulfite-initiated crosslinking of gelatin methacryloyl hydrogels for embedded 3D bioprinting.. **2022**, 1
- 465 Dendrimer-modified gelatin methacrylate hydrogels carrying adipose-derived stromal/stem cells promote cartilage regeneration.. **2022**, 13, 26 2

464	Preparation and antibacterial properties of an AgBr@SiO/GelMA composite hydrogel.. 2022 ,	2
463	Effect of Post-Treatment on Mechanical and Biological Properties of Coaxial Electrospun CoreShell Structured Poly(lactic-co-glycolic acid)/Gelatin Methacrylamide Fibrous Scaffolds. 2022 , 4, 987-998	
462	Surface Modification of Polycaprolactone Scaffold With Improved Biocompatibility and Controlled Growth Factor Release for Enhanced Stem Cell Differentiation.. 2021 , 9, 802311	0
461	Injectable bottlebrush hydrogels with tissue-mimetic mechanical properties.. 2022 , 8, eabm2469	6
460	Effect of gelatin methacryloyl hydrogel on healing of the guinea pig vaginal wall with or without mesh augmentation.. 2022 , 1	0
459	Recent Progress in Biopolymer-Based Hydrogel Materials for Biomedical Applications.. 2022 , 23,	7
458	3D printing of functional polymers for miniature machines. 2022 , 5, 012001	0
457	Multiscale Anisotropic Tissue Biofabrication via Bulk Acoustic Patterning of Cells and Functional Additives in Hybrid Bioinks.. 2022 , e2102351	1
456	Perfused Platforms to Mimic Bone Microenvironment at the Macro/Milli/Microscale: Pros and Cons.. 2021 , 9, 760667	
455	Collagen-based materials in reproductive medicine and engineered reproductive tissues. 2022 , 4,	5
454	Controlled Release of Epigenetically-Enhanced Extracellular Vesicles from a GelMA/Nanoclay Composite Hydrogel to Promote Bone Repair.. 2022 , 23,	3
453	Vascularized pulp regeneration via injecting simvastatin functionalized GelMA cryogel microspheres loaded with stem cells from human exfoliated deciduous teeth.. 2022 , 13, 100209	3
452	Methacrylate-Modified Gold Nanoparticles Enable Non-Invasive Monitoring of Photocrosslinked Hydrogel Scaffolds.	
451	Nanoengineered myogenic scaffolds for skeletal muscle tissue engineering.. 2021 ,	2
450	Innovative Platform for the Advanced Online Monitoring of Three-Dimensional Cells and Tissue Cultures.. 2022 , 11,	0
449	A photo-crosslinked proteinogenic hydrogel enabling self-recruitment of endogenous TGF- β for cartilage regeneration. 2022 , 3, 85-93	2
448	3D bioprinted GelMA/PEGDA hybrid scaffold for establishing in-vitro model of melanoma.. 2022 , 32, 1-10	1
447	Injectable Nano-microfluidic combined gene-hydrogel microspheres for local treatment of osteoarthritis. 2022 , 14,	7

446	Tomographic Volumetric Bioprinting of Heterocellular Bone-Like Tissues in Seconds.	
445	3D-bioprinted vascular scaffold with tunable mechanical properties for simulating and promoting neo-vascularization. 2022 , 3, 199-208	4
444	Gelatin Methacrylate Hydrogel for Tissue Engineering Applications-A Review on Material Modifications.. 2022 , 15,	4
443	3D-bioprinted peptide coupling patches for wound healing.. 2022 , 13, 100188	5
442	Effects of Pregnancy-Specific Glycoproteins on Trophoblast Motility in Three-Dimensional Gelatin Hydrogels.. 2022 , 15, 175-191	0
441	Water soluble photocurable carboxymethyl cellulose-based bioactive hydrogels for digital light processing. 52155	
440	Biomimetic 3D printed PCL/TCP/GelMA scaffolds with improved osteogenesis and angiogenesis for non-load bearing applications. 2022 , 21, 101339	
439	Hydrogel-Based Fiber Biofabrication Techniques for Skeletal Muscle Tissue Engineering.. 2022 ,	9
438	Selection of natural biomaterials for micro-tissue and organ-on-chip models.. 2022 ,	2
437	Additive Manufacturing Approaches toward the Fabrication of Biomaterials. 2100670	2
436	Lanthanide-based metal-organic frameworks solidified by gelatin-methacryloyl hydrogels for improving the accuracy of localization and excision of small pulmonary nodules.. 2022 , 20, 60	1
435	Evolution of 3D bioprinting-from the perspectives of bioprinting companies. 2022 , 25, e00193	1
434	Sprayable methacrylic anhydride-modified gelatin hydrogel combined with bionic neutrophils nanoparticles for scar-free wound healing of diabetes mellitus.. 2022 , 202, 418-430	4
433	A novel cell-based electrochemical biosensor based on MnO catalysis for antioxidant activity evaluation of anthocyanins.. 2022 , 202, 113990	1
432	Hybrid hydrogel system composed of CdTe quantum dots and photonic crystals for optical anti-counterfeiting and information encoding-decoding.	0
431	Engineering a highly elastic bioadhesive for sealing soft and dynamic tissues.. 2022 ,	1
430	Biological Signal Integrated Microfluidic Hydrogel Microspheres for Promoting Bone Regeneration. 2022 , 436, 135176	3
429	Colloidal multiscale porous adhesive (bio)inks facilitate scaffold integration.. 2021 , 8, 041415	4

428	Chondrocyte Spheroids Laden in GelMA/HAMA Hybrid Hydrogel for Tissue-Engineered Cartilage with Enhanced Proliferation, Better Phenotype Maintenance, and Natural Morphological Structure.. 2021 , 7,	2
427	Electrospun Methacrylated Gelatin/Poly(L-Lactic Acid) Nanofibrous Hydrogel Scaffolds for Potential Wound Dressing Application.. 2021 , 12,	4
426	A 3D-printed biphasic calcium phosphate scaffold loaded with platelet lysate/gelatin methacrylate to promote vascularization.. 2022 ,	2
425	Core-shell microcapsules: biofabrication and potential applications in tissue engineering and regenerative medicine.. 2022 ,	1
424	Responsive hydrogel-based microneedle dressing for diabetic wound healing.. 2022 ,	3
423	Biomaterials in Organoid Development. 2022 , 155-178	
422	Laser Direct-Write Bioprinting: A Powerful Tool for Engineering Cellular Microenvironments. 2022 , 123-151	0
421	Single-Chain Mechanical Properties of Gelatin: A Single-Molecule Study.. 2022 , 14,	1
420	Reductionist Three-Dimensional Tumor Microenvironment Models in Synthetic Hydrogels.. 2022 , 14,	1
419	Functional Hydrogels for Treatment of Chronic Wounds.. 2022 , 8,	6
418	Main Applications and Recent Research Progresses of Additive Manufacturing in Dentistry.. 2022 , 2022, 5530188	2
417	Engineering Hydrogels for the Development of Three-Dimensional In Vitro Models.. 2022 , 23,	1
416	Surface-Engineered Hybrid Gelatin Methacryloyl with Nanoceria as Reactive Oxygen Species Responsive Matrixes for Bone Therapeutics.. 2022 ,	1
415	Review on Multicomponent Hydrogel Bioinks Based on Natural Biomaterials for Bioprinting 3D Liver Tissues.. 2022 , 10, 764682	1
414	Engineered Nanotechnology: An Effective Therapeutic Platform for the Chronic Cutaneous Wound.. 2022 , 12,	1
413	Advances in Modification Methods Based on Biodegradable Membranes in Guided Bone/Tissue Regeneration: A Review.. 2022 , 14,	0
412	Multi-network granular hydrogel with enhanced strength for 3D bioprinting.. 2022 , 8853282221075198	1
411	Biodegradable Elastomers and Gels for Elastic Electronics.. 2022 , e2105146	7

410	Sustainable Macromolecular Materials in Flexible Electronics. 2100978	0
409	Modeling of Thermo-Responsive Stiffening of Poly(oligo(ethylene glycol)methacrylate)/Cellulose Nanocrystal Hydrogels. 2022 , 4, 2674-2682	
408	Enzyme-mediated Alleviation of Peroxide Toxicity in Self-oxygenating Biomaterials.. 2022 , e2102697	0
407	Microfluidic Tissue Engineering and Bio-actuation.. 2022 , e2108427	4
406	Covalently cross-linked hydrogels: Mechanisms of nonlinear viscoelasticity.	1
405	Biosurfactant-Stabilized Micropore-Forming GelMA Inks Enable Improved Usability for 3D Printing Applications. 1	0
404	Gelatin methacryloyl-alginate core-shell microcapsules as efficient delivery platforms for prevascularized microtissues in endodontic regeneration.. 2022 ,	5
403	Polymeric Hydrogels for In Vitro 3D Ovarian Cancer Modeling.. 2022 , 23,	1
402	GelMA/PEGDA microneedles patch loaded with HUVECs-derived exosomes and Tazarotene promote diabetic wound healing.. 2022 , 20, 147	6
401	Current and future perspectives on biomaterials for segmental mandibular defect repair. 1-13	0
400	A Dual-Cross-Linked Hydrogel Patch for Promoting Diabetic Wound Healing.. 2022 , e2106172	7
399	Bioinspired Multifunctional Black Phosphorus Hydrogel with Antibacterial and Antioxidant Properties: A Stepwise Countermeasure for Diabetic Skin Wound Healing.. 2022 , e2102791	6
398	Biomimetic Mineralized Hydroxyapatite Nanofiber-Incorporated Methacrylated Gelatin Hydrogel with Improved Mechanical and Osteoinductive Performances for Bone Regeneration.. 2022 , 17, 1511-1529	1
397	Current Advances in 3D Bioprinting for Cancer Modeling and Personalized Medicine.. 2022 , 23,	1
396	User-friendly microfluidic manufacturing of hydrogel microspheres with sharp needle.. 2022 , 14,	0
395	3D Bioprinted GelMA-Nanoclay Hydrogels Induce Colorectal Cancer Stem Cells Through Activating Wnt/ECatenin Signaling.. 2022 , e2200364	1
394	Evaluation of the Reproducibility and Robustness of Extrusion-Based Bioprinting Processes Applying a Flow Sensor.. 2022 , 10, 831350	0
393	The effect of near-infrared light-assisted photothermal therapy combined with polymer materials on promoting bone regeneration: a systematic review. 2022 , 110621	1

392	BC enhanced photocurable hydrogel based on 3D bioprinting for nasal cartilage repair. 1-12	0
391	Heterogeneous spheroids with tunable interior morphologies by droplet-based microfluidics.. 2022 , 344, 97-112	0
390	In vitro and in vivo assessment of a 3D printable gelatin methacrylate hydrogel for bone regeneration applications.. 2022 ,	1
389	Dual-RNA controlled delivery system inhibited tumor growth by apoptosis induction and TME activation.. 2022 , 344, 97-112	0
388	A kinetic model for predicting imperfections in the bioink photopolymerization process during visible-light stereolithography printing. 2022 , 102808	2
387	Hyaluronic acid-based biphasic scaffold with layer-specific induction capacity for osteochondral defect regeneration. 2022 , 216, 110550	2
386	Controlled Release of Epidermal Growth Factor from Furfuryl-Gelatin Hydrogel Using in Situ Visible Light-Induced Crosslinking and Its Effects on Fibroblasts Proliferation and Migration.. 2022 , 8,	2
385	Hybprinting for musculoskeletal tissue engineering.. 2022 , 25, 104229	0
384	Biomimetic macroporous hydrogel with a triple-network structure for full-thickness skin regeneration. 2022 , 27, 101442	2
383	Super-aligned carbon nanotubes and GelMA hydrogel composite scaffolds promote spiral ganglion neuron growth and orientation. 2022 , 18, 100181	0
382	Increased matrix stiffness suppresses ATP-induced sustained Ca influx in MDA-MB-231 breast cancer cells.. 2022 , 104, 102569	2
381	Bioprinting and regeneration of auricular cartilage using a bioactive bioink based on microporous photocrosslinkable acellular cartilage matrix.. 2022 , 16, 66-81	7
380	Free or fixed state of nHAP differentially regulates hBMSC morphology and osteogenesis through the valve role of ITGA7.. 2022 , 18, 539-551	2
379	Synergistic osteogenic and angiogenic effects of KP and QK peptides incorporated with an injectable and self-healing hydrogel for efficient bone regeneration.. 2022 , 18, 267-283	3
378	Revisiting Airflow and Aerosol Transport Phenomena in the Deep Lungs with Microfluidics.. 2021 ,	3
377	Customized construction of microscale multi-component biostructures for cellular applications.. 2021 , 112599	
376	A high-dosage microneedle for programmable lidocaine delivery and enhanced local long-lasting analgesia.. 2021 , 112620	1
375	Effect of Freezing Process on the Microstructure of Gelatin Methacryloyl Hydrogels.. 2021 , 9, 810155	2

- 374 Systematic optimization of visible light-induced crosslinking conditions of gelatin methacryloyl (GelMA). **2021**, 11, 23276 3
- 373 Cross-Linking of Apatite-Gelatin Nanocomposites as the Basis for Dentine Replacement Materials.. **2021**, 1
- 372 Microreactor equipped with naturally acid-resistant histidine ammonia lyase from an extremophile. **2022**, 3, 3649-3662 0
- 371 Hybridizing gellan/alginate and thixotropic magnesium phosphate-based hydrogel scaffolds for enhanced osteochondral repair.. **2022**, 14, 100261 2
- 370 Hybrid Materials Based on Nanoparticles Functionalized with Alkylsilanes Covalently Anchored to Epoxy Matrices.. **2022**, 14, 0
- 369 Shape-Recoverable Macroporous Nanocomposite Hydrogels Created via Ice Templating Polymerization for Noncompressible Wound Hemorrhage.. **2022**, 0
- 368 Transporting Hydrogel via Chinese Acupuncture Needles for Lesion Positioning Therapy.. **2022**, e2200079 3
- 367 Table_1.docx. **2019**,
- 366 Image_1.JPEG. **2020**,
- 365 Data_Sheet_1.pdf. **2018**,
- 364 Seamless and early gap healing of osteochondral defects by autologous mosaicplasty combined with bioactive supramolecular nanofiber-enabled gelatin methacryloyl (BSN-GelMA) hydrogel.. **2023**, 19, 88-102 1
- 363 Biodegradable Inks in Indirect Three-Dimensional Bioprinting for Tissue Vascularization.. **2022**, 10, 856398 0
- 362 Potential Mechanisms of the Impact of Hepatocyte Growth Factor Gene-Modified Tendon Stem Cells on Tendon Healing. **2021**, 9, 659389 0
- 361 Controlled release of silibinin in GelMA hydrogels inhibits inflammation by inducing M2-type macrophage polarization and promotes vascularization .. **2022**, 12, 13192-13202 1
- 360 The efficacy of injectable biomaterials for wound care, orthopedic application, and tissue engineering. **2022**, 285-334
- 359 Mesenchymal Stem CellsHydrogel Microspheres System for Bone Regeneration in Calvarial Defects. **2022**, 8, 275 1
- 358 Osteogenesis of Iron Oxide Nanoparticles-Labeled Human Precartilaginous Stem Cells in Interpenetrating Network Printable Hydrogel.. **2022**, 10, 872149 1
- 357 In situ bioprinting: intraoperative implementation of regenerative medicine.. **2022**, 5

356	Co-Electrospun Silk Fibroin and Gelatin Methacryloyl Sheet Seeded with Mesenchymal Stem Cells for Tendon Regeneration.. 2022 , e2107714	7
355	Surface Modification of Sponge-like Porous Poly(3-hydroxybutyrate--4-hydroxybutyrate)/Gelatine Blend Scaffolds for Potential Biomedical Applications.. 2022 , 14,	
354	Binary polymer systems for biomedical applications. 1-41	0
353	Micro- and nano-environment dual-modulated anti-tendon adhesion barrier membranes. 2022 , 110737	2
352	Continuous Production of Acoustically Patterned Cells Within Hydrogel Fibers for Musculoskeletal Tissue Engineering. 2113038	2
351	Robust gelatin hydrogels for local sustained release of bupivacaine following spinal surgery.. 2022 ,	0
350	A bioactive dextran-based hydrogel promote the healing of infected wounds via antibacterial and immunomodulatory. 2022 , 119558	7
349	Current Understanding of Hydrogel for Drug Release and Tissue Engineering. 2022 , 8, 301	1
348	Polymer based sustained drug delivery to the ocular posterior segment: barriers and future opportunities for the treatment of neovascular pathologies.. 2022 , 114342	5
347	VH298-loaded extracellular vesicles released from gelatin methacryloyl hydrogel facilitate diabetic wound healing by HIF-1 β -mediated enhancement of angiogenesis.. 2022 ,	1
346	Stem Cell-Laden Hydrogel-Based 3D Bioprinting for Bone and Cartilage Tissue Engineering. 2022 , 10,	0
345	Upregulation of biochemical and biophysical properties of cell-laden microfiber, silk-hyaluronic acid composite.. 2022 ,	0
344	Three-dimensional electroconductive carbon nanotube-based hydrogel scaffolds enhance neural differentiation of stem cells from apical papilla. 2022 , 212868	0
343	Self-Assembled Hydrogel Microparticle-Based Tooth-Germ Organoids. 2022 , 9, 215	0
342	Low-intensity pulsed ultrasound promotes cell viability and inhibits apoptosis of H9C2 cardiomyocytes in 3D bioprinting scaffolds via PI3K-Akt and ERK1/2 pathways.. 2022 , 8853282221102669	0
341	[A 3D hydrogel loaded with exosomes derived from bone marrow stem cells promotes cartilage repair in rats by modulating immunological microenvironment].. 2022 , 42, 528-537	
340	Gelatinized PLCL Electrospun Membrane for the Prevention of Postoperative Abdominal Adhesion Through Fibrinolysis Activation. 2200063	2
339	Progress and prospects of nanocomposite hydrogels in bone tissue engineering. 2022 , 8, 102-124	1

338	Guiding cell migration in 3D with high-resolution photografting. 2022 , 12,	1
337	Exosome Mimetics-Loaded Hydrogel Accelerates Wound Repair by Transferring Functional Mitochondrial Proteins. 2022 , 10,	
336	In-situ formed elastin-based hydrogels enhance wound healing via promoting innate immune cells recruitment and angiogenesis. 2022 , 15, 100300	3
335	Remodelling 3D printed GelMA-HA corneal scaffolds by cornea stromal cells. 2022 , 49, 100632	1
334	Stabilizing gelatin-based bioinks under physiological conditions by incorporation of ethylene-glycol-conjugated Fmoc-FF peptides.	0
333	A Biodegradable Magnetic Microrobot Based on Gelatin Methacrylate for Precise Delivery of Stem Cells with Mass Production Capability. 2107888	5
332	An EPO -loaded multifunctional hydrogel synergizing with adipose-derived stem cells restores neurogenic erectile function via enhancing nerve regeneration and penile rehabilitation.	2
331	Progress in Gelatin as Biomaterial for Tissue Engineering. 2022 , 14, 1177	6
330	Hydrogels for Exosome Delivery in Biomedical Applications. 2022 , 8, 328	1
329	Tissue-engineered heart chambers as a platform technology for drug discovery and disease modeling. 2022 , 212916	1
328	Radical scavenging gelatin methacrylamide based bioink formulation for three dimensional bioprinting of parenchymal liver construct. 2022 , e00214	0
327	Qualitative Comparison Between Different Biopolymers for Usage in Two-Photon Polymerization Towards Liver Regeneration.	1
326	Hydrogel-based scaffolds for bone and cartilage tissue engineering and regeneration. 2022 , 105313	1
325	Mechanical and biological properties of enhanced porous scaffolds based on triply periodic minimal surfaces. 2022 , 219, 110803	1
324	Novel bi-layered dressing patches constructed with radially-oriented nanofibrous pattern and herbal compound-loaded hydrogel for accelerated diabetic wound healing. 2022 , 28, 101542	7
323	Development of Gelatin Methacrylate (GelMa) Hydrogels for Versatile Intracavitary Applications: In-vitro Characterization and Ex-vivo Performance Assessment.	3
322	Graphene-based polymer nanocomposites in biomedical applications. 2022 , 199-245	1
321	Biomaterial Composition and Stiffness as Decisive Properties of 3D Bioprinted Constructs for Type II Collagen Stimulation.	0

320	Craniomaxillofacial derived bone marrow mesenchymal stem/stromal cells (BMSCs) for craniomaxillofacial bone tissue engineering: A literature review. 2022 ,	0
319	Progress of Platelet Derivatives for Cartilage Tissue Engineering. 10,	0
318	Conductive Hydrogel Conduits with Growth Factor Gradients for Peripheral Nerve Repair in Diabetics with Non-Suture Tape. 2200755	1
317	Advances in Translational 3D Printing for Cartilage, Bone, and Osteochondral Tissue Engineering. 2201869	2
316	Tomographic volumetric bioprinting of heterocellular bone-like tissues in seconds. 2022 ,	2
315	A tunable gelatin-hyaluronan dialdehyde/methacryloyl gelatin interpenetrating polymer network hydrogel for additive tissue manufacturing. 2022 , 17, 045027	
314	Bioink Formulation and Machine Learning-Empowered Bioprinting Optimization. 10,	0
313	Extracellular Vesicles in Facial Aesthetics: A Review. 2022 , 23, 6742	2
312	Methacrylate-Modified Gold Nanoparticles Enable Noninvasive Monitoring of Photocrosslinked Hydrogel Scaffolds. 2200022	0
311	Coaxial Embedded Printing of Gelatin Methacryloyl/Alginate Double Network Hydrogel for Multilayer Vascular Tubes. 2022 , 100024	
310	Substrate-Independent, Mechanically Tunable, and Scalable Gelatin Methacryloyl Hydrogel Coating with Drag-Reducing and Anti-Freezing Properties.	2
309	A photo-triggering double cross-linked adhesive, antibacterial, and biocompatible hydrogel for wound healing. 2022 , 25, 104619	1
308	Angiogenesis induction by natural and synthetic polymers. 2022 , 227-239	
307	Improving printability of hydrogel-based bio-inks for thermal inkjet bioprinting applications via saponification and heat treatment process.	2
306	Analysis of the potential role of Photocurable Hydrogel in Patient-derived Glioblastoma Organoid Culture through RNA Sequencing.	
305	PgC3Mg metal-organic cages functionalized hydrogels with enhanced bioactive and ROS scavenging capabilities for accelerated bone regeneration.	0
304	The Emerging Use of ASC/Scaffold Composites for the Regeneration of Osteochondral Defects. 10,	1
303	Photo-Crosslinkable Hydrogels for 3D Bioprinting in the Repair of Osteochondral Defects: A Review of Present Applications and Future Perspectives. 2022 , 13, 1038	1

302 Photoreactive polymer and C,H-insertion reaction to tailor the properties of CHA/gelatin-based scaffold. **2022**, 27, 326-345

301 Perspectives for 3D-Bioprinting in Modeling of Tumor Immune Evasion. **2022**, 14, 3126

1

300 Free radical-scavenging composite gelatin methacryloyl hydrogels for cell encapsulation. **2022**,

0

299 In vitro and in vivo evaluation of 3D constructs engineered with human iPSC-derived chondrocytes in gelatin methacryloyl hydrogel.

0

298 Visible-Light Stiffness Patterning of GelMA Hydrogels Towards In Vitro Scar Tissue Models. 10,

0

297 Approximating Scaffold Printability Utilizing Computational Methods.

0

296 Bio-functional hydrogel with antibacterial and anti-inflammatory dual properties to combat with burn wound infection.

0

295 Enhanced intramyocardial vascular cell delivery promotes post-myocardial infarction healing by polarizing pro-regenerative neutrophils.

294 Advances in Organ-on-a-Chip Materials and Devices.

5

293 Microfluidic Invasion Chemotaxis Platform for 3D Neurovascular Co-Culture. **2022**, 7, 238

3

292 Porous microneedle patch with sustained exosomes delivery repairs severe spinal cord injury.

291 3D Bioprinted Scaffolds for Tissue Repair and Regeneration. 9,

0

290 Recent Advances in Microgels: From Biomolecules to Functionality. 2200180

2

289 Strategies for sustained release of heparin: A review. **2022**, 294, 119793

0

288 A Structured Scaffold Featuring Biomimetic Heterogeneous Architecture for the Regeneration of Critical-Size Bone Defects. 10,

0

287 Gelatin Methacryloyl Hydrogels for Musculoskeletal Tissue Regeneration. **2022**, 9, 332

0

286 Mussel-Inspired Biomaterials: From Chemistry to Clinic.

7

285 Biomimetic Vasculatures by 3D-Printed Porous Molds. 2203426

1

- 284 Evaluation of a Novel Thiol-Terminated Norbornene-Functionalized Gelatin Hydrogel for Bioprinting of Mesenchymal Stem Cells. **2022**, 23, 7939 1
- 283 Porous hydrogel constructs based on methacrylated gelatin/polyethylene oxide for corneal stromal regeneration. **2022**, 32, 104071 0
- 282 3D Bioprinting of Heterogeneous Tissue-Engineered Skin Containing Human Dermal Fibroblasts and Keratinocytes.
- 281 Bioactive Interpenetrating Hydrogel Networks Based on 2-Hydroxyethyl Methacrylate and Gelatin Intertwined with Alginate and Doped with Apatite as Scaffolding Biomaterials. **2022**, 14, 3112 2
- 280 Matrix Metalloproteases from Adipose Tissue-Derived Stromal Cells Are Spatiotemporally Regulated by Hydrogel Mechanics in a 3D Microenvironment. **2022**, 9, 340 1
- 279 Role of Biomaterials in Cardiac Repair and Regeneration: Therapeutic Intervention for Myocardial Infarction. **2022**, 8, 3271-3298 2
- 278 Human gelatin-based composite hydrogels for osteochondral tissue engineering and their adaptation into biopinks for extrusion, inkjet, and digital light processing bioprinting. **2022**, 14, 045012 3
- 277 Mineralized Enzyme-Based Biomaterials with Superior Bioactivities for Bone Regeneration. **2022**, 14, 36315-36330 2
- 276 Industrial Applications of Inkjet Printing in Life Sciences. **2022**, 1461-1499
- 275 Multifunctional fish gelatin hydrogel inverse opal films for wound healing. **2022**, 20, 0 0
- 274 Gelatin-Based Hybrid Hydrogel Scaffolds: Toward Physicochemical Liver Mimicry.
- 273 Release of O-GlcNAc transferase inhibitor promotes neuronal differentiation of neural stem cells in 3D bioprinted supramolecular hydrogel scaffold for spinal cord injury repair. **2022**, 4 4
- 272 3D Printing GelMA/PVA Interpenetrating Polymer Networks Scaffolds Mediated with CuO Nanoparticles for Angiogenesis. 2200208 0
- 271 Rationally Designed Anisotropic and Auxetic Hydrogel Patches for Adaptation to Dynamic Organs. 2207590 0
- 270 Inflammation-triggered dual release of nitroxide radical and growth factor from heparin mimicking hydrogel-tissue composite as cardiovascular implants for anti-coagulation, endothelialization, anti-inflammation, and anti-calcification. **2022**, 121761 0
- 269 Tunable PEG Hydrogels for Discerning Differential Tumor Cell Response to Biomechanical Cues. 2200084 0
- 268 Nanoengineered Granular Hydrogel Biopinks with Preserved Interconnected Microporosity for Extrusion Bioprinting. 2202390 2
- 267 3D printing of inorganic-biopolymer composites for bone regeneration. 1

266	Engineering the viscoelasticity of gelatin methacryloyl (GelMA) hydrogels via small dynamic bridges to regulate BMSC behaviors for osteochondral regeneration. 2022 ,	0
265	Conformational Transition-Driven Self-Folding Hydrogel Based on Silk Fibroin and Gelatin for Tissue Engineering Applications. 2200189	
264	Alendronate-functionalized double network hydrogel scaffolds for effective osteogenesis. 10,	0
263	Applications of Gelatin in Biosensors: Recent Trends and Progress. 2022 , 12, 670	2
262	Gelatin/sodium alginate composite hydrogel with dynamic matrix stiffening ability for bone regeneration. 2022 , 243, 110162	3
261	Macroporous Aligned Hydrogel Microstrands for 3D Cell Guidance.	2
260	Bioprinted anisotropic scaffolds with fast stress relaxation bioink for engineering 3D skeletal muscle and repairing volumetric muscle loss. 2022 ,	3
259	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
258	Photocrosslinkable methacrylated gelatin hydrogel as a cell-friendly injectable delivery system for chlorhexidine in regenerative endodontics. 2022 , 38, 1507-1517	1
257	Tailoring a variety of self-stratifying patterns in a light-curable coating on the substrates with different surface free energies. 2022 , 171, 107023	0
256	Preparation, properties, and applications of gelatin-based hydrogels (GHs) in the environmental, technological, and biomedical sectors. 2022 , 218, 601-633	5
255	Microgels based on 0D-3D carbon materials: Synthetic techniques, properties, applications, and challenges. 2022 , 307, 135981	0
254	Dynamic gelatin-based hydrogels promote the proliferation and self-renewal of embryonic stem cells in long-term 3D culture. 2022 , 289, 121802	1
253	Coaxial bioprinting vascular constructs: A review. 2022 , 179, 111549	1
252	Recent advances on gelatin methacrylate hydrogels with controlled microstructures for tissue engineering. 2022 , 221, 91-107	1
251	Lipid nanoparticle-encapsulated VEGFa siRNA facilitates cartilage formation by suppressing angiogenesis. 2022 , 221, 1313-1324	2
250	Functional biomaterials for tendon/ligament repair and regeneration. 2022 , 9,	3
249	Synthesis of Biopolymer-Based Cryogel Matrix: A Unique Solution for Cell Storage. 2022 , 383-397	0

248	Development of a label-free electrochemiluminescence biosensor for the sensitive detection of porcine gelatin using carbon nanostructured materials. 2022 , 1, 968-976	0
247	Chapter 8. 3D Bioprinting of Islets. 2022 , 233-261	0
246	Application and development of 3D bioprinting in cartilage tissue engineering. 2022 , 10, 5430-5458	1
245	A naringin-derived bioink enhances the shape fidelity of 3D bioprinting and efficiency of cartilage defect repair. 2022 , 10, 7030-7044	0
244	Photo-crosslinkable methacrylated konjac glucomannan (KGMA) hydrogels as promising bioink for 3D bioprinting.	2
243	Biomaterial composition and stiffness as decisive properties of 3D bioprinted constructs for type II collagen stimulation. 2022 ,	0
242	Galunisertib-Loaded Gelatin Methacryloyl Hydrogel Microneedle Patch for Cardiac Repair after Myocardial Infarction. 2022 , 14, 40491-40500	0
241	Tannic acid-loaded hydrogel coating endues polypropylene mesh with hemostatic and anti-inflammatory capacity for facilitating pelvic floor repair.	0
240	An experimental and theoretical approach to understand the interaction between particles and mucosal tissues.	0
239	Bioprinting using PEGDMA-based hydrogel on DLP printer. 2022 ,	0
238	Hybrid Hydrogels Based on Methacrylate-Functionalized Gelatin (GelMA) and Synthetic Polymers.	1
237	Stretchable and Electroactive Crosslinked Gelatin for Biodevice and Cell Culture Applications.	0
236	Gelatin-methacryloyl hydrogels containing turnip mosaic virus for fabrication of nanostructured materials for tissue engineering. 10,	1
235	Systematic review on the application of 3D-bioprinting technology in orthoregeneration: current achievements and open challenges. 2022 , 9,	0
234	Reactive Oxygen Species Suppressive Kraft Lignin-Gelatin Antioxidant Hydrogels for Chronic Wound Repair. 2200234	0
233	Fiber density and matrix stiffness modulate distinct cell migration modes in a 3D stroma mimetic composite hydrogel. 2022 ,	0
232	Delivering Multifunctional Peptide-Conjugated Gene Carrier/miRNA-218 Complexes from Monodisperse Microspheres for Bone Regeneration. 2022 , 14, 42904-42914	0
231	Advanced injectable hydrogels for cartilage tissue engineering. 10,	2

- 230 Preparation and Properties of Double-Crosslinked Hydroxyapatite Composite Hydrogels. **2022**, 23, 9962 O
- 229 Advances in scaffolds used for pulp dentine complex tissue engineering: A narrative review. O
- 228 Application of Nano-Inspired Scaffolds-Based Biopolymer Hydrogel for Bone and Periodontal Tissue Regeneration. **2022**, 14, 3791 1
- 227 Design, synthesis, and characterization of a novel dual cross-linked gelatin-based bioadhesive for hard and soft tissues adhesion capability. **2022**, 17, 065010 O
- 226 Recent Advances in 3D Printing of Photocurable Polymers: Types, Mechanism, and Tissue Engineering Application. 2200278 2
- 225 Multiomics reveal that silk fibroin and sericin differentially potentiate the paracrine functions of mesenchymal stem cells and enhance tissue regeneration. O
- 224 Rapid and mass manufacturing of soft hydrogel microstructures for cell patterns assisted by 3D printing. 1
- 223 Micropatterned Hydrogels with Highly Ordered Cellulose Nanocrystals for Visually Monitoring Cardiomyocytes. 2202235 O
- 222 Bioprinting of 3D Adipose Tissue Models Using a GelMA-Bioink with Human Mature Adipocytes or Human Adipose-Derived Stem Cells. **2022**, 8, 611 1
- 221 Effects and Progress of Photo-Crosslinking Hydrogels in Wound Healing Improvement. **2022**, 8, 609 O
- 220 A multifunctional cascade bioreactor based on a layered double oxides composite hydrogel for synergetic tumor chemodynamic/starvation/photothermal therapy. **2022**, O
- 219 Research progress on detachable microneedles for advanced applications. **2022**, 19, 1115-1131 O
- 218 SFRP4+ stromal cell subpopulation with IGF1 signaling in human endometrial regeneration. **2022**, 8, 1
- 217 Recent progress in nanocomposites of carbon dioxide fixation derived reproducible biomedical polymers. 10, O
- 216 Biocompatible scaffolds constructed by chondroitin sulfate microspheres conjugated 3D-printed frameworks for bone repair. **2022**, 120188 1
- 215 Materials and Biomedical Applications of Implantable Electronic Devices. 2200853 O
- 214 Subaqueous Bioprinting: A Novel Strategy for Fetal Membrane Repair with 7-Axis Robot-Assisted Minimally Invasive Surgery. 2207496 O
- 213 Efficient Myogenic/Adipogenic Transdifferentiation of Bovine Fibroblasts in a 3D Bioprinting System for Steak-Type Cultured Meat Production. 2202877 O

212	Epidermal growth factor-loaded microspheres/hydrogel composite for instant hemostasis and liver regeneration. 2022 ,	0
211	Constructing biomimetic liver models through biomaterials and vasculature engineering. 2022 , 9,	1
210	Application Prospect and Preliminary Exploration of GelMA in Corneal Stroma Regeneration. 2022 , 14, 4227	0
209	3D-Printed Hybrid Collagen/GelMA Hydrogels for Tissue Engineering Applications. 2022 , 11, 1561	0
208	The synergistic regulation of chondrogenesis by collagen-based hydrogels and cell co-culture. 2022 ,	0
207	Advances in biomaterials as a retinal patch for the repair of rhegmatogenous retinal detachment. 10,	0
206	A composite hydrogel containing resveratrol-laden nanoparticles and platelet-derived extracellular vesicles promotes wound healing in diabetic mice. 2022 ,	3
205	Silylated biomolecules: Versatile components for bioinks. 10,	1
204	OP3 -4 peptide sustained-release hydrogel inhibits osteoclast formation and promotes vascularization to promote bone regeneration in a rat femoral defect model.	0
203	Volume adaptation of neonatal cardiomyocyte spheroids in 3D stiffness gradient GelMA.	0
202	A Macroporous Cryogel with Enhanced Mechanical Properties for Osteochondral Regeneration In vivo.	0
201	A Stretching Force Control-Based Cyclic Loading Method for the Evaluation of Mechanical Properties of Gelation Methacrylate (GelMA) Microfibers. 2022 , 13, 1703	0
200	3D-printed microgels supplemented with dentin matrix molecules as a novel biomaterial for direct pulp capping.	0
199	Deformable Nanovesicle-Loaded Gel for Buccal Insulin Delivery. 2022 , 14, 2262	0
198	Hydrogel interfaces for merging humans and machines.	11
197	Hydrogel: A Potential Material for Bone Tissue Engineering Repairing the Segmental Mandibular Defect. 2022 , 14, 4186	0
196	Insights of 3D bioprinting and focusing the paradigm shift towards 4D printing for biomedical applications.	0
195	3D-printed mesoporous bioactive glass/GelMA biomimetic scaffolds for osteogenic/cementogenic differentiation of periodontal ligament cells. 10,	0

194	Optimization of methacrylated gelatin /layered double hydroxides nanocomposite cell-laden hydrogel bioinks with high printability for 3D extrusion bioprinting.	3
193	Advances in Biodegradable Soft Robots. 2022 , 14, 4574	0
192	One-Step Generation of Porous GelMA Microgels by Droplet-Based Chaotic Advection Effect. 2201102	0
191	Recent Advances in the Application of Natural and Synthetic Polymer-Based Scaffolds in Musculoskeletal Regeneration. 2022 , 14, 4566	4
190	Nanoparticle-Reinforced Tough Hydrogel as a Versatile Platform for Pharmaceutical Drug Delivery: Preparation and in Vitro Characterization.	0
189	ECM-Mimicking Hydrogels Loaded with Bone Mesenchymal Stem Cell-Derived Exosomes for the Treatment of Cartilage Defects. 2022 , 2022, 1-13	0
188	Scalable and high-throughput production of an injectable platelet-rich plasma (PRP)/cell-laden microcarrier/hydrogel composite system for hair follicle tissue engineering. 2022 , 20,	0
187	Gelatin/polyacrylamide ionic conductive hydrogel with skin temperature-triggered adhesion for human motion sensing and body heat harvesting. 2022 , 107977	1
186	HYDRHA: Hydrogels of hyaluronic acid. New biomedical approaches in cancer, neurodegenerative diseases, and tissue engineering. 2022 , 17, 100453	0
185	Microspheres in bone regeneration: Fabrication, properties and applications. 2022 , 16, 100315	0
184	Drug-preloadable methacrylated gelatin microspheres fabricated using an aqueous two-phase system. 2022 , 181, 111671	0
183	Stretchable, conductive, breathable and moisture-sensitive e-skin based on CNTs/graphene/GelMA mat for wound monitoring. 2022 , 143, 213172	1
182	Injectable and photocurable CAR-T cell formulation enhances the anti-tumor activity to melanoma in mice. 2022 , 291, 121872	1
181	Uninterrupted dynamic stiffening microenvironment enhances the paracrine function of mesenchymal stem cells for vascularization through chromatin remodeling. 2022 , 224, 111328	0
180	An artificial LAMA2-GelMA hydrogel microenvironment for the development of pancreatic endocrine progenitors. 2022 , 291, 121882	0
179	Genetic scissorsCRISPR/Cas9 genome editing cutting-edge biocarrier technology for bone and cartilage repair. 2023 , 22, 254-273	0
178	A multifunctional neuromodulation platform utilizing Schwann cell-derived exosomes orchestrates bone microenvironment via immunomodulation, angiogenesis and osteogenesis. 2023 , 23, 206-222	1
177	Formulation and Characterization of Gelatin Methacrylamide D-Hydroxypropyl Methacrylate Based Bioink for Bioprinting Applications. 1-20	0

176	Shape Fidelity Evaluation of Alginate-Based Hydrogels through Extrusion-Based Bioprinting. 2022 , 13, 225	1
175	Biomaterials and bioengineering to guide tissue morphogenesis in epithelial organoids. 10,	1
174	The synthesis, mechanisms, and additives for bio-compatible polyvinyl alcohol hydrogels: A review on current advances, trends, and future outlook.	0
173	Application of Hydrogels as Sustained-Release Drug Carriers in Bone Defect Repair. 2022 , 14, 4906	1
172	Knowledge domain and hotspots concerning photosensitive hydrogels for tissue engineering applications: A bibliometric and visualized analysis (1996-2022). 10,	0
171	Tunable and Compartmentalized Multimaterial Bioprinting for Complex Living Tissue Constructs.	1
170	3D Bioprinting of Smart Oxygen-Releasing Cartilage Scaffolds. 2022 , 13, 252	0
169	Three-in-one customized bioink for islet organoid: GelMA/ECM/PRP orchestrate pro-angiogenic and immunoregulatory function. 2023 , 221, 113017	0
168	Microfluidics-derived microcarrier systems for oral delivery. 2023 , 1, 30-38	2
167	Bone tissue engineering for treating osteonecrosis of the femoral head. 2023 , 3,	2
166	Enzyme-regulated NO programmed to release from hydrogel-forming microneedles with endogenous/photodynamic synergistic antibacterial for diabetic wound healing. 2023 , 226, 813-822	0
165	Novel ROS-scavenging hydrogel with enhanced anti-inflammation and angiogenic properties for promoting diabetic wound healing. 2023 , 144, 213226	1
164	Advances in metal-organic framework-based hydrogel materials: preparation, properties and applications.	0
163	Development and systematic characterization of GelMA/alginate/PEGDMA/xanthan gum hydrogel bioink system for extrusion bioprinting. 2023 , 293, 121969	0
162	Challenges in osteoarthritis treatment. 2023 , 80, 101992	0
161	Tissue adhesive hemostatic microneedle arrays for rapid hemorrhage treatment. 2023 , 23, 314-327	1
160	Structural and biological engineering of 3D hydrogels for wound healing. 2023 , 24, 197-235	1
159	In situ Photo-crosslinked Adhesive Hydrogel Loaded Mesenchymal Stem Cell-derived Extracellular Vesicles Promotes Diabetic Wound Healing.	0

158	Chapter 5. Mimicking Chemical Features of the Tumor Microenvironment. 2022 , 97-140	0
157	Perfusable cell-laden matrices to guide patterning of vascularization in vivo.	0
156	Microfluidic-templated cell-laden microgels fabricated using phototriggered imine-crosslinking as injectable and adaptable granular gels for bone regeneration. 2022 ,	0
155	Nanomaterials-Incorporated Chemically Modified Gelatin Methacryloyl-Based Biomedical Composites: A Novel Approach for Bone Tissue Engineering. 2022 , 14, 2645	1
154	Species-Based Differences in Mechanical Properties, Cytocompatibility, and Printability of Methacrylated Collagen Hydrogels. 2022 , 23, 5137-5147	1
153	Functional engineering strategies of 3D printed implants for hard tissue replacement.	0
152	Methacrylated Gelatin as an On-Demand Injectable Vehicle for Drug Delivery in Dentistry. 2023 , 493-503	0
151	Instantly adhesive and ultra-elastic patches for dynamic organ and wound repair.	0
150	Porous composite hydrogels with improved MSC survival for robust epithelial sealing around implants and M2 macrophage polarization. 2022 ,	0
149	Within or Without You? A Perspective Comparing In Situ and Ex Situ Tissue Engineering Strategies for Articular Cartilage Repair. 2022 , 11, 2201305	0
148	Low-Swelling Adhesive Hydrogel with Rapid Hemostasis and Potent Anti-Inflammatory Capability for Full-Thickness Oral Mucosal Defect Repair. 2022 , 14, 53575-53592	2
147	Inorganic/Biopolymers Hybrid Hydrogels Dual Cross-Linked for Bone Tissue Regeneration. 2022 , 8, 762	1
146	Peptide GL13K releasing hydrogel functionalized micro/nanostructured titanium enhances its osteogenic and antibacterial activity. 1-17	0
145	Himatanthus bracteatus-Composed In Situ Polymerizable Hydrogel for Wound Healing. 2022 , 23, 15176	1
144	Light-Mediated 3D Printing of Micro-Pyramid-Decorated Tailorable Wound Dressings with Endogenous Growth Factor Sequestration for Improved Wound Healing.	1
143	Biodegradable and Non-Biodegradable Biomaterials and Their Effect on Cell Differentiation. 2022 , 23, 16185	0
142	A Psychrophilic GelMA: Breaking Technical and Immunological Barriers for Multimaterial High-Resolution 3D Bioprinting.	1
141	Fabrication and characterization of electrospun GelMA/PCL/CS nanofiber composites for wound dressing applications. 2023 , 38, 3-24	1

140	Bacterial Cellulose Cultivations Containing Gelatin Form Tunable, Highly Ordered, Laminae Structures with Fourfold Enhanced Productivity. 2022 , 7, 47709-47719	0
139	Self-Forming Norbornene-Tetrazine Hydrogels with Independently Tunable Properties. 2200425	0
138	Development of osteon-like scaffold-cell construct by quadruple coaxial extrusion-based 3D bioprinting of nanocomposite hydrogel. 2022 , 213254	1
137	Photosynthetic Cyanobacteria can Clearly Induce Efficient Muscle Tissue Regeneration of Bioprinted Cell-Constructs. 2209157	0
136	Effect of Tribute citrus essential oil nanoemulsion-loaded gelatin on the gel behavior and gelation surface morphologies. 2022 , 102322	0
135	Modularized bioceramic scaffold/hydrogel membrane hierarchical architecture beneficial for periodontal tissue regeneration in dogs. 2022 , 26,	0
134	A 3D-Bioprinted Functional Module Based on Decellularized Extracellular Matrix Bioink for Periodontal Regeneration. 2205041	2
133	Ultrasoft and Biocompatible Magnetic-Hydrogel-Based Strain Sensors for Wireless Passive Biomechanical Monitoring.	1
132	Removal of Methylene Blue Dye from Aqueous Solutions by Pullulan Polysaccharide/Polyacrylamide/Activated Carbon Complex Hydrogel Adsorption.	0
131	Human Albumin-Based Hydrogels for Their Potential Xeno-Free Microneedle Applications. 2200463	0
130	Emerging 3D bioprinting applications in plastic surgery. 2023 , 27,	2
129	Therapeutic potential and mechanisms of mesenchymal stem cell-derived exosomes as bioactive materials in tendonBone healing. 2023 , 21,	0
128	Interplay of Fluid Mechanics and Matrix Stiffness in Tuning the Mechanical Behaviors of Single Cells Probed by Atomic Force Microscopy.	0
127	BMSCs-Seeded Interpenetrating Network GelMA/SF Composite Hydrogel for Articular Cartilage Repair. 2023 , 14, 39	0
126	Tunable metacrylated silk fibroin-based hybrid bioinks for bioprinting of tissue engineering scaffolds.	1
125	Multifunctional Integrated Nanozymes Facilitate Spinal Cord Regeneration by Remodeling the Extrinsic Neural Environment. 2205997	0
124	Immunized Microspheres Engineered Hydrogel Membrane for Reprogramming Macrophage and Mucosal Repair. 2207030	0
123	Bilayer dressing based on aerogel/electrospun mats with self-catalytic hydrogen sulfide generation and enhanced antioxidant ability.	0

122	An Adhesive Bioink toward Biofabrication under Wet Conditions. 2205078	0
121	A bifunctional TPE-based fluorescent sensor for liquid viscosity and amyloid β measurements.	0
120	Physical properties and cellular responses of gelatin methacryloyl bulk hydrogels and highly ordered porous hydrogels. 2,	0
119	Bioprinting a skin patch with dual-crosslinked gelatin (GelMA) and silk fibroin (SilMA): An approach to accelerating cutaneous wound healing. 2023 , 100550	0
118	Defined, Simplified, Scalable, and Clinically Compatible Hydrogel-Based Production of Human Brain Organoids. 2023 , 2, 20-36	1
117	ColMA/PEGDA Bioink for Digital Light Processing 3D Printing in Biomedical Engineering.	1
116	Electrically Responsive Release of Proteins from Conducting Polymer Hydrogels. 2023 ,	1
115	GelMA, Click-Chemistry Gelatin and Bioprinted Polyethylene Glycol-Based Hydrogels as 3D Ex Vivo Drug Testing Platforms for Patient-Derived Breast Cancer Organoids. 2023 , 15, 261	2
114	Electrically stimulated 3D bioprinting of gelatin-polypyrrole hydrogel with dynamic semi-IPN network induces osteogenesis via collective signaling and immunopolarization. 2023 , 121999	0
113	Bioprinting EphrinB2-modified DPSCs with enhanced osteogenic capacity for alveolar bone engineering.	0
112	An overview on recent biomedical applications of biopolymers: Their role in drug delivery systems and comparison of major systems. 2023 , 80, 104121	1
111	Extracellular matrix mimicking dynamic interpenetrating network hydrogel for skin tissue engineering. 2023 , 457, 141362	0
110	Bone microenvironment regulative hydrogels with ROS scavenging and prolonged oxygen-generating for enhancing bone repair. 2023 , 24, 477-496	0
109	Fabrication, bacteriostasis and osteointegration properties researches of the additively-manufactured porous tantalum scaffolds loading vancomycin. 2023 , 24, 450-462	0
108	A Breathable, Passive-Cooling, Non-Inflammatory, and Biodegradable Aerogel Electronics for Wearable Physical-Electrophysiological-Chemical Analysis. 2209300	0
107	Photo-crosslinked GelMA loaded with dental pulp stem cells and VEGF to repair critical-sized soft tissue defects in rats. 2022 , 101373	0
106	An experimental and theoretical approach to understand the interaction between particles and mucosal tissues. 2022 ,	0
105	Living and Injectable Porous Hydrogel Microsphere with Paracrine Activity for Cartilage Regeneration. 2207211	1

- 104 Impact of graphene oxide lateral dimensions on the properties of methacrylated gelatin nanocomposite hydrogels. o
- 103 Architecture-Engineered Electrospinning Cascade Regulates Spinal Microenvironment to Promote Nerve Regeneration. 2202658 o
- 102 Bioprinting of bone. **2023**, 95-118 o
- 101 Atomistic simulations of pristine and nanoparticle reinforced hydrogels: A review. o
- 100 3D Bioprinting techniques. **2023**, 91-145 1
- 99 Starch-g-Acrylic Acid/Magnetic Nanochitin Self-Healing Ferrogels as Flexible Soft Strain Sensors. **2023**, 23, 1138 o
- 98 Precise Printing of Microfiber Scaffold with Gelatin Methacryloyl (GelMA)/Polyethylene Oxide (PEO) Bioink. **2023**, 10, 130 o
- 97 Photo-crosslinked gelatin methacryloyl hydrogel strengthened with calcium phosphate-based nanoparticles for early healing of rabbit calvarial defects. 53, o
- 96 Tuning of Mechanical Properties in Photopolymerizable Gelatin-Based Hydrogels for In Vitro Cell Culture Systems. **2023**, 5, 1487-1498 o
- 95 Microfluidic Organ-On-A-Chip: A Guide to Biomaterial Choice and Fabrication. **2023**, 24, 3232 o
- 94 Blow walk-mimetic tensile loading maintains human meniscus tissue resident progenitor cells homeostasis in photocrosslinked gelatin hydrogel. **2023**, 25, 256-272 o
- 93 In vivo bioprinting: Broadening the therapeutic horizon for tissue injuries. **2023**, 25, 201-222 o
- 92 Injectable, stretchable, toughened, bioadhesive composite hydrogel for bladder injury repair. **2023**, 13, 10903-10913 o
- 91 Gelatin-based nanosystems for therapeutic applications. **2023**, 497-520 o
- 90 Ferroptosis-Mediated Synergistic Therapy of Hypertrophic Scarring Based on Metal-Organic Framework Microneedle Patch. 2300575 o
- 89 Bioadhesives based on multifunctional biopolymers for biomedical applications. o
- 88 Methacrylated Fibrinogen Hydrogels for 3D Cell Culture and Delivery. **2023**, o
- 87 The Use of Hydrogel-Based Materials for Radioprotection. **2023**, 9, 301 o

86	Dentin extracellular matrix loaded bioactive glass/GelMA support rapid bone mineralization for potential pulp regeneration. 2023 , 234, 123771	0
85	Suspension bath bioprinting and maturation of anisotropic meniscal constructs. 2023 , 15, 035003	0
84	Formation Theory and Printability of Photocurable Hydrogel for 3D Bioprinting.	0
83	A Novel 3D-Bioprinting Technology of Orderly Extruded Multi-Materials via Photopolymerization.	0
82	Smart stimuli-responsive hydrogels for drug delivery in periodontitis treatment. 2023 , 162, 114688	0
81	Current advancements in bio-ink technology for cartilage and bone tissue engineering. 2023 , 171, 116746	0
80	Near-infrared light-responsive multifunctional hydrogel releasing peptide-functionalized gold nanorods sequentially for diabetic wound healing. 2023 , 639, 369-384	0
79	Creating a semi-opened micro-cavity ovary through sacrificial microspheres as an in vitro model for discovering the potential effect of ovarian toxic agents. 2023 , 26, 216-230	0
78	Sustained release of magnesium and zinc ions synergistically accelerates wound healing. 2023 , 26, 88-101	0
77	Advances in dermatological application of GelMA hydrogel microneedles. 2023 , 29,	0
76	The importance of elastin and its role in auricular cartilage tissue engineering. 2023 , 32, e00276	0
75	Spatial control of self-organizing vascular networks with programmable aptamer-tethered growth factor photopatterning. 2023 , 19, 100551	0
74	Stereolithography apparatus and digital light processing-based 3D bioprinting for tissue fabrication. 2023 , 26, 106039	2
73	Modification, 3D printing process and application of sodium alginate based hydrogels in soft tissue engineering: A review. 2023 , 232, 123450	5
72	An interplay of matrix stiffness, dimensionality and adhesivity on cellular behavior. 2023 , 18, 025010	0
71	Human urine-derived stem cell exosomes delivered via injectable GelMA templated hydrogel accelerate bone regeneration. 2023 , 19, 100569	1
70	Classification, processing, and applications of bioink and 3D bioprinting: A detailed review. 2023 , 232, 123476	1
69	Recent Developments in Biopolymer-Based Hydrogels for Tissue Engineering Applications. 2023 , 13, 280	2

68	Engineering injectable, biocompatible, and highly elastic bioadhesive cryogels. 2023 , 19, 100572	o
67	Applications of functionally-adapted hydrogels in tendon repair. 11,	o
66	White-light crosslinkable milk protein bioadhesive with ultrafast gelation for first-aid wound treatment. 2023 , 27,	o
65	Enzymatically-Crosslinked Gelatin Hydrogels with Nanostructured Architecture and Self-Healing Performance for Potential Use as Wound Dressings. 2023 , 15, 780	o
64	Compact holographic sound fields enable rapid one-step assembly of matter in 3D. 2023 , 9,	1
63	Biodegradable Dual-Cross-Linked Hydrogels with Stem Cell Differentiation Regulatory Properties Promote Growth Plate Injury Repair via Controllable Three-Dimensional Mechanics and a Cartilage-like Extracellular Matrix.	1
62	3D bioprinting and the revolution in experimental cancer model systemsA review of developing new models and experiences with in vitro 3D bioprinted breast cancer tissue-mimetic structures. 29,	1
61	Recent Advancements and Perspectives of Biodegradable Polymers for Supercapacitors. 2023 , 33,	o
60	Microfluidic Fabrication of Natural Polymer-Based Scaffolds for Tissue Engineering Applications: A Review. 2023 , 8, 74	o
59	3D-Printed GelMA/PEGDA/F127DA Scaffolds for Bone Regeneration. 2023 , 14, 96	o
58	Two-step method fabricating a 3D nerve cell model with brain-like mechanical properties and tunable porosity vascular structures via coaxial printing. 2023 , 224, 113202	1
57	A Gelatin Methacrylate-Based Hydrogel as a Potential Bioink for 3D Bioprinting and Neuronal Differentiation. 2023 , 15, 627	o
56	Gelatin methacryloyl (GelMA) loaded with concentrated hypoxic pretreated adipose-derived mesenchymal stem cells(ADSCs) conditioned medium promotes wound healing and vascular regeneration in aged skin. 2023 , 27,	o
55	Low glutaminase and glycolysis correlate with a high transdifferentiation efficiency in mouse cortex.	o
54	Development of Gut-Mucus Chip for Intestinal Absorption Study.	o
53	Advances in Gelatin Bioinks to Optimize Bioprinted Cell Functions. 2203148	o
52	Reconstruction of the alveolarcapillary barrier in vitro based on a photo-responsive stretchable Janus membrane. 2023 , 2,	o
51	Duo-role Platelet-rich Plasma: temperature-induced fibrin gel and growth factorsreservoir for microneedles to promote hair regrowth. 2023 ,	o

- 50 Poly-Catecholic Functionalization of Biomolecules for Rapid Gelation, Robust Injectable Bioadhesion, and Near-Infrared Responsiveness. 2203404 ○
- 49 Fabrication of Silk Hydrogel Scaffolds with Aligned Porous Structures and Tunable Mechanical Properties. **2023**, 9, 181 ○
- 48 Chinese Tofu-Inspired Biomimetic Conductive and Transparent Fibers for Biomedical Applications. **2023**, 7, ○
- 47 Novel biomaterials for stem cell engineering and bone regeneration. **2023**, 169-204 ○
- 46 Weakly acidic microenvironment of the wound bed boosting the efficacy of acidic fibroblast growth factor to promote skin regeneration. 11, ○
- 45 Magnetically Actuated Hydrogel Stamping-Assisted Cellular Mechanical Analyzer for Stored Blood Quality Detection. **2023**, 8, 1183-1191 ○
- 44 Hyaluronic acid-based bioink improves the differentiation and network formation of neural progenitor cells. 11, ○
- 43 In Situ Formation of Injectable Gelatin Methacryloyl (GelMA) Hydrogels for Effective Intraocular Delivery of Triamcinolone Acetonide. **2023**, 24, 4957 ○
- 42 Photocrosslinkable, Injectable Locust Bean Gum Hydrogel Induces Chondrogenic Differentiation of Stem Cells for Cartilage Regeneration. 2203079 ○
- 41 Bioabsorbable nano-micelle hybridized hydrogel scaffold prevents postoperative melanoma recurrence. **2023**, 356, 219-231 ○
- 40 On the development of modular polyurethane-based bioelastomers for rapid hemostasis and wound healing. **2023**, 10, ○
- 39 Sonochemical Degradation of Gelatin Methacryloyl to Control Viscoelasticity for Inkjet Bioprinting. 2200509 ○
- 38 Microfluidic intestine-on-a-chip: Current progress and further perspectives of probiotic-foodborne pathogen interactions. **2023**, 134, 207-221 ○
- 37 Repairing Avascular Meniscal Lesions by Recruiting Endogenous Targeted Cells Through Bispecific Synovial-Meniscal Aptamers. **2023**, 51, 1177-1193 ○
- 36 Silk Fibroin and Sericin Differentially Potentiate the Paracrine and Regenerative Functions of Stem Cells Through Multiomics Analysis. ○
- 35 Microfluidic Droplet-Assisted Fabrication of Vessel-Supported Tumors for Preclinical Drug Discovery. **2023**, 15, 15152-15161 ○
- 34 Waffle-inspired hydrogel-based macrodevice for spatially controlled distribution of encapsulated therapeutic microtissues and pro-angiogenic endothelial cells. ○
- 33 Electrical Stimuli-Responsive Gelatin/Shellac Gel Blends for Use as Controllable Transdermal Delivery Patches. ○

- 32 Gelatin methacryloyl hydrogel as an injectable scaffold with multi-therapeutic effects to promote antimicrobial disinfection and angiogenesis for regenerative endodontics. ○
- 31 Mussel-inspired methacrylated gelatin-dopamine/quaternized chitosan/glycerin sponges with self-adhesion, antibacterial activity, and hemostatic ability for wound dressings. **2023**, 124102 ○
- 30 Recent Tissue Engineering Approaches to Mimicking the Extracellular Matrix Structure for Skin Regeneration. **2023**, 8, 130 ○
- 29 Development of a biomimetic arch-like 3D bioprinted construct for cartilage regeneration using gelatin methacryloyl and silk fibroin-gelatin bioinks. **2023**, 15, 035009 ○
- 28 A gradient four-layered gelatin methacrylate/agarose construct as an injectable scaffold for mimicking osteochondral tissue. **2023**, 58, 5735-5755 ○
- 27 Marine Gelatin-Methacryloyl-Based Hydrogels as Cell Templates for Cartilage Tissue Engineering. **2023**, 15, 1674 ○
- 26 Electrical Stimulation Promotes the Vascularization and Functionalization of an Engineered Biomimetic Human Cardiac Tissue. ○
- 25 Biofunctionalized 3D printed structures for biomedical applications: A critical review of recent advances and future prospects. **2023**, 137, 101124 ○
- 24 3D bioprinting using a new photo-crosslinking method for muscle tissue restoration. **2023**, 8, ○
- 23 Visible Light-Based 4D-Bioprinted Tissue Scaffold. **2023**, 12, 494-502 ○
- 22 Naturally sourced hydrogels: emerging fundamental materials for next-generation healthcare sensing. ○
- 21 Adjustable extracellular matrix rigidity tumor model for studying stiffness dependent pancreatic ductal adenocarcinomas progression and tumor immunosuppression. ○
- 20 Evaluation of the Effect of Fibroblasts on Melanoma Metastasis Using a Biomimetic Co-Culture Model. ○
- 19 Cleanroom-Free Fabrication of Microneedles for Multimodal Drug Delivery. ○
- 18 Tissue-Engineered Injectable GelatinMethacryloyl Hydrogel-Based Adjunctive Therapy for Intervertebral Disc Degeneration. **2023**, 8, 13509-13518 ○
- 17 PBP -based bioprinting of hydrogels for biomedical applications. ○
- 16 Multifunctional and biodegradable methacrylated gelatin/Aloe vera nanofibers for endodontic disinfection and immunomodulation. **2023**, 150, 213427 ○
- 15 Ionically Modified Gelatin Hydrogels Maintain Murine Myogenic Cell Viability and Fusion Capacity. ○

- 14 A self-indicating and antibacterial gelatine-chitosan blended hydrogel enabling real-time quality control and sustained bioactive agent delivery. **2023**, 13, 11865-11873 ○
- 13 Gelatin methacrylate hydrogel with drug-loaded polymer microspheres as a new bioink for 3D bioprinting. **2023**, 213436 ○
- 12 Soft, Strong, Tough, and Durable Bio-Hydrogels Via Maximizing Elastic Entropy. ○
- 11 Strategy insight: Mechanical properties of biomaterials-Influence on hydrogel-mesenchymal stromal cell combination for osteoarthritis therapy. 14, ○
- 10 Understanding the Molecular Conformation and Viscoelasticity of Low Sol-Gel Transition Temperature Gelatin Methacryloyl Suspensions. **2023**, 24, 7489 ○
- 9 3D Bioprinting of an Endothelialized Liver Lobule-like Construct as a Tumor-Scale Drug Screening Platform. **2023**, 14, 878 ○
- 8 Injectable, High Specific Surface Area Cryogel Microscaffolds Integrated with Osteoinductive Bioceramic Fibers for Enhanced Bone Regeneration. ○
- 7 Encapsulation for breast cancer treatment. **2023**, 661-720 ○
- 6 A self-healing hydrogel and injectable cryogel of gelatin methacryloyl-polyurethane double network for 3D printing. **2023**, ○
- 5 Advanced polymer hydrogels that promote diabetic ulcer healing: mechanisms, classifications, and medical applications. **2023**, 27, ○
- 4 Preparation and Application of Biomass-based Sprayable Hydrogels. **2023**, 8, 1-19 ○
- 3 3D printed elastic hydrogel conduits with 7,8-dihydroxyflavone release for peripheral nerve repair. **2023**, 20, 100652 ○
- 2 Chromatin remodeling and nucleoskeleton synergistically control osteogenic differentiation in different matrix stiffnesses. **2023**, 20, 100661 ○
- 1 Multifunctional dendrimer-engineered GelMA hydrogel accelerates bone regeneration through orchestrated cellular responses. **2023**, 20, 100664 ○