Wei Zhu

List of Publications by Year
in descending order

74 papers	8,304 citations	53794 45 h-index	85541 71 g-index
74 all docs	74 docs citations	74 times ranked	9796 citing authors

#	Article	IF	Citations
1	Deterministically patterned biomimetic human iPSC-derived hepatic model via rapid 3D bioprinting. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2206-2211.	7.1	676
2	3D printing of functional biomaterials for tissue engineering. Current Opinion in Biotechnology, 2016, 40, 103-112.	6.6	584
3	Biomimetic 3D-printed scaffolds for spinal cord injury repair. Nature Medicine, 2019, 25, 263-269.	30.7	460
4	Direct 3D bioprinting of prevascularized tissue constructs with complex microarchitecture. Biomaterials, 2017, 124, 106-115.	11.4	433
5	Recent Progress on Polymer Materials for Additive Manufacturing. Advanced Functional Materials, 2020, 30, 2003062.	14.9	364
6	3D bioprinting of functional tissue models for personalized drug screening and in vitro disease modeling. Advanced Drug Delivery Reviews, 2018, 132, 235-251.	13.7	297
7	3D Optical Printing of Piezoelectric Nanoparticleâ€“Polymer Composite Materials. ACS Nano, 2014, 8, 9799-9806.	14.6	296
8	4D printing smart biomedical scaffolds with novel soybean oil epoxidized acrylate. Scientific Reports, 2016, 6, 27226.	3.3	296
9	4D printing of polymeric materials for tissue and organ regeneration. Materials Today, 2017, 20, 577-591.	14.2	292
10	Photopolymerizable Biomaterials and Light-Based 3D Printing Strategies for Biomedical Applications. Chemical Reviews, 2020, 120, 10695-10743.	47.7	283
11	Bio-inspired detoxification using 3D-printed hydrogel nanocomposites. Nature Communications, 2014, 5, 3774.	12.8	271
12	3Dâ€Printed Artificial Microfish. Advanced Materials, 2015, 27, 4411-4417.	21.0	251
13	Microstructure and mechanical properties of aluminium alloy cellular lattice structures manufactured by direct metal laser sintering. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 628, 238-246.	5.6	241
14	Scanningless and continuous 3D bioprinting of human tissues with decellularized extracellular matrix. Biomaterials, 2019, 194, 1-13.	11.4	197
15	Rapid continuous 3D printing of customizable peripheral nerve guidance conduits. Materials Today, 2018, 21, 951-959.	14.2	173
16	3D printed nanocomposite matrix for the study of breast cancer bone metastasis. Nanomedicine: Nanotechnology, Biology, and Medicine, 2016, 12, 69-79.	3.3	162
17	Comparative study on 3D printing of polyamide 12 by selective laser sintering and multi jet fusion. Journal of Materials Processing Technology, 2021, 288, 116882.	6.3	155
18	Hierarchical Fabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D Bioprinting: Integrating Regional Bioactive Factors into Architectural Design. Advanced Healthcare Materials, 2016, 5, 2174-2181.	7.6	153

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19	3D bioprinting mesenchymal stem cell-laden construct with coreâ€“shell nanospheres for cartilage tissue engineering. Nanotechnology, 2018, 29, 185101.	2.6	134
20	Four-Dimensional Printing Hierarchy Scaffolds with Highly Biocompatible Smart Polymers for Tissue Engineering Applications. Tissue Engineering - Part C: Methods, 2016, 22, 952-963.	2.1	128
21	Highly aligned nanocomposite scaffolds by electrospinning and electrospraying for neural tissue regeneration. Nanomedicine: Nanotechnology, Biology, and Medicine, 2015, 11, 693-704.	3.3	108
22	Improved Human Bone Marrow Mesenchymal Stem Cell Osteogenesis in 3D Bioprinted Tissue Scaffolds with Low Intensity Pulsed Ultrasound Stimulation. Scientific Reports, 2016, 6, 32876.	3.3	99
23	3D nano/microfabrication techniques and nanobiomaterials for neural tissue regeneration. Nanomedicine, 2014, 9, 859-875.	3.3	98
24	3Dâ€Printed Anisotropic Polymer Materials for Functional Applications. Advanced Materials, 2022, 34, e2102877.	21.0	92
25	Fabrication and characterization of carbon fiber reinforced SiC ceramic matrix composites based on 3D printing technology. Journal of the European Ceramic Society, 2018, 38, 4604-4613.	5.7	89
26	Enhanced neural stem cell functions in conductive annealed carbon nanofibrous scaffolds with electrical stimulation. Nanomedicine: Nanotechnology, Biology, and Medicine, 2018, 14, 2485-2494.	3.3	89
27	Structural reinforcement of cell-laden hydrogels with microfabricated three dimensional scaffolds. Biomaterials Science, 2014, 2, 703-709.	5.4	88
28	Investigation into mechanical and microstructural properties of polypropylene manufactured by selective laser sintering in comparison with injection molding counterparts. Materials and Design, 2015, 82, 37-45.	7.0	88
29	The Specific Vulnerabilities of Cancer Cells to the Cold Atmospheric Plasma-Stimulated Solutions. Scientific Reports, 2017, 7, 4479.	3.3	83
30	Design and 3D Printing of Hydrogel Scaffolds with Fractal Geometries. ACS Biomaterials Science and Engineering, 2016, 2, 1763-1770.	5.2	82
31	3Dâ€Printing of Functional Biomedical Microdevices via Lightâ€•and Extrusionâ€Based Approaches. Small Methods, 2018, 2, 1700277.	8.6	79
32	Three-dimensional direct cell patterning in collagen hydrogels with near-infrared femtosecond laser. Scientific Reports, 2015, 5, 17203.	3.3	78
33	Nanoscale 3D printing of hydrogels for cellular tissue engineering. Journal of Materials Chemistry B, 2018, 6, 2187-2197.	5.8	78
34	3D Printing of Mixed Matrix Films Based on Metalâ€“Organic Frameworks and Thermoplastic Polyamide 12 by Selective Laser Sintering for Water Applications. ACS Applied Materials & Interfaces, 2019, 11, 40564-40574.	8.0	75
35	Engineering a biomimetic three-dimensional nanostructured bone model for breast cancer bone metastasis study. Acta Biomaterialia, 2015, 14, 164-174.	8.3	70
36	Synergistic Effect of Cold Atmospheric Plasma and Drug Loaded Core-shell Nanoparticles on Inhibiting Breast Cancer Cell Growth. Scientific Reports, 2016, 6, 21974.	3.3	70

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37	3D printing scaffold coupled with low level light therapy for neural tissue regeneration. Biofabrication, 2017, 9, 025002.	7.1	68
38	A 3D printed nano bone matrix for characterization of breast cancer cell and osteoblast interactions. Nanotechnology, 2016, 27, 315103.	2.6	62
39	Investigation into the processability, recyclability and crystalline structure of selective laser sintered Polyamide 6 in comparison with Polyamide 12. Polymer Testing, 2018, 69, 366-374.	4.8	62
40	Systematical mechanism of Polyamide-12 aging and its micro-structural evolution during laser sintering. Polymer Testing, 2018, 67, 370-379.	4.8	61
41	A novel method based on selective laser sintering for preparing high-performance carbon fibres/polyamide12/epoxy ternary composites. Scientific Reports, 2016, 6, 33780.	3.3	57
42	Continuous Optical 3D Printing of Green Aliphatic Polyurethanes. ACS Applied Materials & Interfaces, 2017, 9, 836-844.	8.0	56
43	The Strong Cell-based Hydrogen Peroxide Generation Triggered by Cold Atmospheric Plasma. Scientific Reports, 2017, 7, 10831.	3.3	56
44	Effect of silicon addition on the microstructure, mechanical and thermal properties of Cf/SiC composite prepared via selective laser sintering. Journal of Alloys and Compounds, 2019, 792, 1045-1053.	5.5	56
45	Rapid 3D bioprinting of in vitro cardiac tissue models using human embryonic stem cell-derived cardiomyocytes. Bioprinting, 2019, 13, e00040.	5.8	52
46	Oriented structure of short fiber reinforced polymer composites processed by selective laser sintering: The role of powder-spreading process. International Journal of Machine Tools and Manufacture, 2021, 163, 103703.	13.4	41
47	High throughput direct 3D bioprinting in multiwell plates. Biofabrication, 2021, 13, 025007.	7.1	40
48	3D bioprinting of hydrogels for retina cell culturing. Bioprinting, 2018, 12, e00029.	5.8	38
49	Oncogenic human herpesvirus hijacks proline metabolism for tumorigenesis. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8083-8093.	7.1	36
50	Material optimization and post-processing of sand moulds manufactured by the selective laser sintering of binder-coated Al2O3 sands. Journal of Materials Processing Technology, 2015, 225, 93-102.	6.3	33
51	3D Printing of Polymeric Multi-Layer Micro-Perforated Panels for Tunable Wideband Sound Absorption. Polymers, 2020, 12, 360.	4.5	32
52	Relative impact of uniaxial alignment vs. form-induced stress on differentiation of human adipose derived stem cells. Biomaterials, 2013, 34, 9812-9818.	11.4	31
53	Cold Atmospheric Plasma Modified Electrospun Scaffolds with Embedded Microspheres for Improved Cartilage Regeneration. PLoS ONE, 2015, 10, e0134729.	2.5	29
54	Modulating physical, chemical, and biological properties in 3D printing for tissue engineering applications. Applied Physics Reviews, 2018, 5, .	11.3	28

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55	A sequential 3D bioprinting and orthogonal bioconjugation approach for precision tissue engineering. Biomaterials, 2020, 258, 120294.	11.4	27
56	Development of organically modified montmorillonite/polypropylene composite powders for selective laser sintering. Powder Technology, 2020, 369, 25-37.	4.2	27
57	4D printing smart biosystems for nanomedicine. Nanomedicine, 2019, 14, 1643-1645.	3.3	25
58	Study on the selective laser sintering of a low-isotacticity polypropylene powder. Rapid Prototyping Journal, 2016, 22, 621-629.	3.2	22
59	Modeling the temperature, crystallization, and residual stress for selective laser sintering of polymeric powder. Acta Mechanica, 2021, 232, 3635-3653.	2.1	21
60	Artificial bone scaffolds of coral imitation prepared by selective laser sintering. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 104, 103664.	3.1	20
61	Tunable Surface and Matrix Chemistries in Optically Printed (0â€“3) Piezoelectric Nanocomposites. ACS Applied Materials & Interfaces, 2016, 8, 33394-33398.	8.0	18
62	Three-Dimensional Printing of Bisphenol A-Free Polycarbonates. ACS Applied Materials & Interfaces, 2018, 10, 5331-5339.	8.0	17
63	A macroscale FEM-based approach for selective laser sintering of thermoplastics. International Journal of Advanced Manufacturing Technology, 2017, 91, 3169-3180.	3.0	15
64	How can 3D printing be a powerful tool in nanomedicine?. Nanomedicine, 2018, 13, 251-253.	3.3	15
65	Comparative study on the selective laser sintering of polypropylene homopolymer and copolymer: processability, crystallization kinetics, crystal phases and mechanical properties. Additive Manufacturing, 2021, 37, 101610.	3.0	14
66	Enhanced human bone marrow mesenchymal stem cell functions on cathodic arc plasma-treated titanium. International Journal of Nanomedicine, 2015, 10, 7385.	6.7	8
67	Development of a Novel 3D Bioprinted In Vitro Nano Bone Model for Breast Cancer Bone Metastasis Study. Materials Research Society Symposia Proceedings, 2014, 1724, 1.	0.1	5
68	3D Printing and Nanomanufacturing. , 2015, , 25-55.		5
69	Projection Printing of Ultrathin Structures with Nanoscale Thickness Control. ACS Applied Materials & Interfaces, 2019, 11, 16059-16064.	8.0	5
70	Bioprinting of Complex Vascularized Tissues. Methods in Molecular Biology, 2021, 2147, 163-173.	0.9	4
71	Enhanced Human Bone Marrow Mesenchymal Stem Cell Chondrogenic Differentiation on Cold Atmospheric Plasma Modified Cartilage Scaffold. Materials Research Society Symposia Proceedings, 2014, 1723, 1.	0.1	3
72	Preparation and selective laser sintering of a new nylon elastomer powder. Rapid Prototyping Journal, 2018, 24, 1026-1033.	3.2	2

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73	Inaugural Charles River World Congress on Animal Models in Drug Discovery and Development. Journal of Translational Medicine, 2017, 15, .	4.4	1
74	3D Bioprinting: Biologically Inspired Smart Release System Based on 3D Bioprinted Perfused Scaffold for Vascularized Tissue Regeneration (Adv. Sci. 8/2016). Advanced Science, 2016, 3, .	11.2	0