

Christopher B Williams

List of Publications by Year in descending order

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48
papers

2,348
citations

236925

25
h-index

214800

47
g-index

48
all docs

48
docs citations

48
times ranked

2678
citing authors

#	ARTICLE	IF	CITATIONS
1	Polymer structure-property requirements for stereolithographic 3D printing of soft tissue engineering scaffolds. <i>Biomaterials</i> , 2017, 140, 170-188.	11.4	339
2	A review of the process physics and material screening methods for polymer powder bed fusion additive manufacturing. <i>Progress in Polymer Science</i> , 2019, 93, 68-95.	24.7	177
3	Polymer Design for 3D Printing Elastomers: Recent Advances in Structure, Properties, and Printing. <i>Progress in Polymer Science</i> , 2019, 97, 101144.	24.7	169
4	3D Printing All-Aromatic Polyimides using Mask Projection Stereolithography: Processing the Nonprocessable. <i>Advanced Materials</i> , 2017, 29, 1701240.	21.0	131
5	3D Printing Phosphonium Ionic Liquid Networks with Mask Projection Microstereolithography. <i>ACS Macro Letters</i> , 2014, 3, 1205-1209.	4.8	91
6	3D Printing Polymers with Supramolecular Functionality for Biological Applications. <i>Biomacromolecules</i> , 2017, 18, 2669-2687.	5.4	90
7	Binder jetting additive manufacturing with a particle-free metal ink as a binder precursor. <i>Materials and Design</i> , 2018, 147, 146-156.	7.0	85
8	110th Anniversary: Vat Photopolymerization-Based Additive Manufacturing: Current Trends and Future Directions in Materials Design. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 15109-15118.	3.7	80
9	3D Printing All-Aromatic Polyimides Using Stereolithographic 3D Printing of Polyamic Acid Salts. <i>ACS Macro Letters</i> , 2018, 7, 493-497.	4.8	79
10	Model analysis of feedstock behavior in fused filament fabrication: Enabling rapid materials screening. <i>Polymer</i> , 2018, 152, 51-61.	3.8	77
11	Ultraviolet-Assisted Direct Ink Write to Additively Manufacture All-Aromatic Polyimides. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 34828-34833.	8.0	69
12	Current understanding and challenges in high temperature additive manufacturing of engineering thermoplastic polymers. <i>Additive Manufacturing</i> , 2020, 34, 101218.	3.0	68
13	Functional siloxanes with photo-activated, simultaneous chain extension and crosslinking for lithography-based 3D printing. <i>Polymer</i> , 2018, 152, 25-34.	3.8	64
14	Vat photopolymerization 3D printing of acid-cleavable PEG-methacrylate networks for biomaterial applications. <i>Materials Today Communications</i> , 2019, 19, 204-211.	1.9	59
15	Impacts of process-induced porosity on material properties of copper made by binder jetting additive manufacturing. <i>Materials and Design</i> , 2019, 182, 108001.	7.0	53
16	Comparison of Linear and 4-Arm Star Poly(vinyl pyrrolidone) for Aqueous Binder Jetting Additive Manufacturing of Personalized Dosage Tablets. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 23938-23947.	8.0	51
17	Binder jetting advanced ceramics for metal-ceramic composite structures. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 92, 531-545.	3.0	47
18	Vat photopolymerization of charged monomers: 3D printing with supramolecular interactions. <i>Polymer Chemistry</i> , 2019, 10, 1442-1451.	3.9	46

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19	3D Printing Latex: A Route to Complex Geometries of High Molecular Weight Polymers. ACS Applied Materials & Interfaces, 2020, 12, 10918-10928.	8.0	46
20	Quadruple Hydrogen Bonding Supramolecular Elastomers for Melt Extrusion Additive Manufacturing. ACS Applied Materials & Interfaces, 2020, 12, 32006-32016.	8.0	41
21	Additive manufacturing of pharmaceuticals for precision medicine applications: A review of the promises and perils in implementation. Additive Manufacturing, 2018, 23, 319-328.	3.0	36
22	Mechanical and material properties of castings produced via 3D printed molds. Additive Manufacturing, 2019, 27, 199-207.	3.0	36
23	Semi-Crystalline Polymer Blends for Material Extrusion Additive Manufacturing Printability: A Case Study with Poly(ethylene terephthalate) and Polypropylene. Macromolecular Materials and Engineering, 2019, 304, 1800764.	3.6	35
24	3D Printing Amorphous Polysiloxane Terpolymers via Vat Photopolymerization. Macromolecular Chemistry and Physics, 2019, 220, 1800425.	2.2	33
25	Additive Manufacturing of Hydrocarbon Elastomers via Simultaneous Chain Extension and Cross-linking of Hydrogenated Polybutadiene. ACS Applied Polymer Materials, 2019, 1, 684-690.	4.4	30
26	Poly(ether ester) Ionomers as Water-Soluble Polymers for Material Extrusion Additive Manufacturing Processes. ACS Applied Materials & Interfaces, 2017, 9, 12324-12331.	8.0	25
27	Inkjet Printing of Quantum Dots in Photopolymer for Use in Additive Manufacturing of Nanocomposites. Advanced Engineering Materials, 2013, 15, 903-907.	3.5	23
28	A physical hash for preventing and detecting cyber-physical attacks in additive manufacturing systems. Journal of Manufacturing Systems, 2020, 56, 202-212.	13.9	23
29	Vat photopolymerization of liquid, biodegradable PLGA-based oligomers as tissue scaffolds. European Polymer Journal, 2020, 130, 109693.	5.4	22
30	Using multi-axis material extrusion to improve mechanical properties through surface reinforcement. Virtual and Physical Prototyping, 2018, 13, 32-38.	10.4	21
31	3D printing tissue-mimicking materials for realistic transeptal puncture models. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 110, 103971.	3.1	20
32	Polymer-inorganic hybrid colloids for ultraviolet-assisted direct ink write of polymer nanocomposites. Additive Manufacturing, 2020, 35, 101393.	3.0	19
33	Powder bed fusion of poly(phenylene sulfide) at bed temperatures significantly below melting. Additive Manufacturing, 2019, 28, 506-516.	3.0	18
34	Dissociative Carbamate Exchange Anneals 3D Printed Acrylates. ACS Applied Materials & Interfaces, 2021, 13, 38680-38687.	8.0	18
35	3D-Printable Biodegradable Polyester Tissue Scaffolds for Cell Adhesion. Australian Journal of Chemistry, 2015, 68, 1409.	0.9	17
36	Tuning the material properties of a water-soluble ionic polymer using different counterions for material extrusion additive manufacturing. Polymer, 2019, 176, 283-292.	3.8	16

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37	3D Printing Carbonaceous Objects from Polyimide Pyrolysis. ACS Macro Letters, 2021, 10, 412-418.	4.8	14
38	Additively manufactured respirators: quantifying particle transmission and identifying system-level challenges for improving filtration efficiency. Journal of Manufacturing Systems, 2021, 60, 762-773.	13.9	13
39	Toward Rapid Manufacturability Analysis Tools for Engineering Design Education. Procedia Manufacturing, 2016, 5, 1183-1196.	1.9	11
40	Mechanical properties of tissue-mimicking composites formed by material jetting additive manufacturing. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104938.	3.1	10
41	Deposition path planning for material extrusion using specified orientation fields. Procedia Manufacturing, 2019, 34, 754-763.	1.9	9
42	Supramolecular Salts for Additive Manufacturing of Polyimides. ACS Applied Materials & Interfaces, 2021, 13, 48061-48070.	8.0	9
43	Printing nanomaterials in shrinking gels. Science, 2018, 362, 1244-1245.	12.6	7
44	Design of a low-cost, high-temperature inverted build environment to enable desktop-scale additive manufacturing of performance polymers. Additive Manufacturing, 2020, 33, 101111.	3.0	7
45	Penetration Resistance of Cast Metal~Ceramic Composite Lattice Structures. Advanced Engineering Materials, 0, , 2100577.	3.5	5
46	Introduction for polymer special issue: Advanced polymers for 3D printing/additive manufacturing. Polymer, 2018, 152, 2-3.	3.8	4
47	Ageing of PBF~Grade Poly(Phenylene Sulfide) Powder and its Effect on Critical Printability Properties. Macromolecular Materials and Engineering, 2021, 306, 2000599.	3.6	3
48	Process-structure~property relationships following thermo-oxidative exposure of powder bed fusion printed poly(phenylene sulfide). MRS Communications, 2021, 11, 179-188.	1.8	2