

Christopher J Tuck

List of Publications by Year in descending order

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136
papers

11,186
citations

50276

46
h-index

30922

102
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142
all docs

142
docs citations

142
times ranked

8737
citing authors

#	ARTICLE	IF	CITATIONS
1	The influence of printing parameters on multi-material two-photon polymerisation based micro additive manufacturing. Additive Manufacturing, 2022, 51, 102575.	3.0	19
2	Ink-jet 3D printing as a strategy for developing bespoke non-eluting biofilm resistant medical devices. Biomaterials, 2022, 281, 121350.	11.4	8
3	Additive Manufacturing of a Terahertz Back-to-Back Horn Antenna for Use in Life Sciences. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2022, 12, 595-601.	2.5	2
4	3D reactive inkjet printing of bisphenol A-polycarbonate. Additive Manufacturing, 2022, 54, 102745.	3.0	2
5	Stochastic design for additive manufacture of true biomimetic populations. Additive Manufacturing, 2022, 55, 102739.	3.0	1
6	Functionalized Gold Nanoparticles with a Cohesion Enhancer for Robust Flexible Electrodes. ACS Applied Nano Materials, 2022, 5, 6708-6716.	5.0	9
7	Reducing production losses in additive manufacturing using overall equipment effectiveness. Additive Manufacturing, 2022, 56, 102904.	3.0	5
8	Interâ€Flake Quantum Transport of Electrons and Holes in Inkjetâ€Printed Graphene Devices. Advanced Functional Materials, 2021, 31, 2007478.	14.9	25
9	Universal mobility characteristics of graphene originating from charge scattering by ionised impurities. Communications Physics, 2021, 4, .	5.3	65
10	Development of Conductive Gelatine-Methacrylate Inks for Two-Photon Polymerisation. Polymers, 2021, 13, 1038.	4.5	10
11	The Impact of Additive Manufacturing on the Flexibility of a Manufacturing Supply Chain. Applied Sciences (Switzerland), 2021, 11, 3707.	2.5	21
12	Residual polymer stabiliser causes anisotropic electrical conductivity during inkjet printing of metal nanoparticles. Communications Materials, 2021, 2, .	6.9	14
13	Exploiting Generative Design for 3D Printing of Bacterial Biofilm Resistant Composite Devices. Advanced Science, 2021, 8, e2100249.	11.2	7
14	UV-curable silicone materials with tuneable mechanical properties for 3D printing. Materials and Design, 2021, 205, 109681.	7.0	10
15	Bespoke 3D-Printed Polydrug Implants Created via Microstructural Control of Oligomers. ACS Applied Materials & Interfaces, 2021, 13, 38969-38978.	8.0	6
16	Direct ink writing of boron carbide monoliths. Journal of the European Ceramic Society, 2021, 41, 76-92.	5.7	11
17	An imidazolium-based supramolecular gelator enhancing interlayer adhesion in 3D printed dual network hydrogels. Materials and Design, 2021, 206, 109792.	7.0	10
18	The Effects of Feature Sizes in Selectively Laser Melted Ti-6Al-4V Parts on the Validity of Optimised Process Parameters. Materials, 2020, 13, 117.	2.9	41

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19	Dispersion and stability of colloidal boron carbide suspensions. <i>Ceramics International</i> , 2020, 46, 27957-27966.	4.8	8
20	Additive manufacturing of metamaterials: A review. <i>Additive Manufacturing</i> , 2020, 36, 101562.	3.0	125
21	On the thermal conductivity of AlSi10Mg and lattice structures made by laser powder bed fusion. <i>Additive Manufacturing</i> , 2020, 34, 101214.	3.0	39
22	Laser calorimetry for assessment of melting behaviour in multi-walled carbon nanotube decorated aluminium by laser powder bed fusion. <i>CIRP Annals - Manufacturing Technology</i> , 2020, 69, 197-200.	3.6	12
23	A Reactive Prodrug Ink Formulation Strategy for Inkjet 3D Printing of Controlled Release Dosage Forms and Implants. <i>Advanced Therapeutics</i> , 2020, 3, 1900187.	3.2	11
24	Analytical Design of Additively Manufactured Focusing Metamaterial. , 2020, , .		0
25	Developing an Understanding of the Cost of Additive Manufacturing. , 2019, , 67-83.		3
26	High-throughput characterization of fluid properties to predict droplet ejection for three-dimensional inkjet printing formulations. <i>Additive Manufacturing</i> , 2019, 29, 100792.	3.0	16
27	3D printing of Aluminium alloys: Additive Manufacturing of Aluminium alloys using selective laser melting. <i>Progress in Materials Science</i> , 2019, 106, 100578.	32.8	872
28	Multifunctional Bioinspired 3D Architectures to Modulate Cellular Behavior. <i>Advanced Functional Materials</i> , 2019, 29, 1902016.	14.9	25
29	Towards digital metal additive manufacturing via high-temperature drop-on-demand jetting. <i>Additive Manufacturing</i> , 2019, 30, 100930.	3.0	36
30	Evolution of carbon nanotubes and their metallurgical reactions in Al-based composites in response to laser irradiation during selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 765, 138307.	5.6	23
31	Dynamics of water evaporation from porous asphalt. <i>Construction and Building Materials</i> , 2019, 202, 406-414.	7.2	22
32	Rheological Tunability of Perovskite Precursor Solutions: From Spin Coating to Inkjet Printing Process. <i>Nanomaterials</i> , 2019, 9, 582.	4.1	31
33	Design and optical characterisation of an efficient light trapping structure for dye-sensitized solar cell integrated windows. <i>Building Simulation</i> , 2019, 12, 41-49.	5.6	5
34	Water-based 3D inkjet printing of an oral pharmaceutical dosage form. <i>International Journal of Pharmaceutics</i> , 2019, 564, 359-368.	5.2	62
35	Modulating Two-Photon Polymerisation Fabrication Parameters towards the Production of Gradient Index Optics. , 2019, , .		1
36	Reactive material jetting of polyimide insulators for complex circuit board design. <i>Additive Manufacturing</i> , 2019, 25, 477-484.	3.0	21

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37	Creation of Food Structures Through Binder Jetting. , 2019, , 257-288.		16
38	Creep behaviour of inconel 718 processed by laser powder bed fusion. Journal of Materials Processing Technology, 2018, 256, 13-24.	6.3	58
39	Identification of Novel Inks for 3D Printing Using High-Throughput Screening: Bioresorbable Photocurable Polymers for Controlled Drug Delivery. ACS Applied Materials & Interfaces, 2018, 10, 6841-6848.	8.0	44
40	Fluid Gels: a New Feedstock for High Viscosity Jetting. Food Biophysics, 2018, 13, 175-185.	3.0	12
41	Scanning photocurrent microscopy of 3D printed light trapping structures in dye-sensitized solar cells. Solar Energy Materials and Solar Cells, 2018, 180, 103-109.	6.2	22
42	Design and characterisation of food grade powders and inks for microstructure control using 3D printing. Journal of Food Engineering, 2018, 220, 12-19.	5.2	97
43	Insights into the mechanical properties of several triply periodic minimal surface lattice structures made by polymer additive manufacturing. Polymer, 2018, 152, 62-71.	3.8	371
44	Using Laser Ultrasound to Detect Subsurface Defects in Metal Laser Powder Bed Fusion Components. Jom, 2018, 70, 378-383.	1.9	44
45	3-Dimensional inkjet printing of macro structures from silver nanoparticles. Materials and Design, 2018, 139, 81-88.	7.0	38
46	A comparison of Ti-6Al-4V in-situ alloying in Selective Laser Melting using simply-mixed and satellited powder blend feedstocks. Materials Characterization, 2018, 143, 118-126.	4.4	88
47	Effective design and simulation of surface-based lattice structures featuring volume fraction and cell type grading. Materials and Design, 2018, 155, 220-232.	7.0	241
48	Optimisation of Substrate Angles for Multi-material and Multi-functional Inkjet Printing. Scientific Reports, 2018, 8, 9030.	3.3	9
49	Selective recrystallization of cellulose composite powders and microstructure creation through 3D binder jetting. Carbohydrate Polymers, 2018, 200, 229-238.	10.2	43
50	Band gap behaviour of optimal one-dimensional composite structures with an additive manufactured stiffener. Composites Part B: Engineering, 2018, 153, 26-35.	12.0	24
51	3D-printed components for quantum devices. Scientific Reports, 2018, 8, 8368.	3.3	16
52	An investigation into reinforced and functionally graded lattice structures. Journal of Cellular Plastics, 2017, 53, 151-165.	2.4	205
53	Shape Complexity and Process Energy Consumption in Electron Beam Melting: A Case of Something for Nothing in Additive Manufacturing?. Journal of Industrial Ecology, 2017, 21, S157.	5.5	85
54	Combined Inkjet Printing and Infrared Sintering of Silver Nanoparticles using a Swathe-by-Swathe and Layer-by-Layer Approach for 3-Dimensional Structures. ACS Applied Materials & Interfaces, 2017, 9, 6560-6570.	8.0	38

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55	A Novel Approach to Design Lesion-Specific Stents for Minimum Recoil. Journal of Medical Devices, Transactions of the ASME, 2017, 11, .	0.7	3
56	The Use of Laser Ultrasound to Detect Defects in Laser Melted Parts. Minerals, Metals and Materials Series, 2017, , 105-116.	0.4	5
57	Fractal scan strategies for selective laser melting of “unweldable” nickel superalloys. Additive Manufacturing, 2017, 15, 113-122.	3.0	104
58	Selective laser melting of aluminum alloys. MRS Bulletin, 2017, 42, 311-319.	3.5	88
59	Compressive failure modes and energy absorption in additively manufactured double gyroid lattices. Additive Manufacturing, 2017, 16, 24-29.	3.0	258
60	An investigation into the depth and time dependent behavior of UV cured 3D ink jet printed objects. Journal of Materials Research, 2017, 32, 1407-1420.	2.6	17
61	Calorimetric study and microstructure analysis of the order-disorder phase transformation in silicon steel built by SLM. Journal of Alloys and Compounds, 2017, 722, 293-301.	5.5	46
62	Multi-branched benzylidene ketone based photoinitiators for multiphoton fabrication. Additive Manufacturing, 2017, 16, 206-212.	3.0	3
63	3D reactive inkjet printing of polydimethylsiloxane. Journal of Materials Chemistry C, 2017, 5, 9733-9743.	5.5	47
64	A Tripropylene Glycol Diacrylate-based Polymeric Support Ink for Material Jetting. Additive Manufacturing, 2017, 16, 153-161.	3.0	21
65	3D Inkjet Printing of Electronics Using UV Conversion. Advanced Materials Technologies, 2017, 2, 1700134.	5.8	50
66	Staged thermomechanical testing of nickel superalloys produced by selective laser melting. Materials and Design, 2017, 133, 520-527.	7.0	20
67	Additive manufacture of complex 3D Au-containing nanocomposites by simultaneous two-photon polymerisation and photoreduction. Scientific Reports, 2017, 7, 17150.	3.3	46
68	3D printing of tablets using inkjet with UV photoinitiation. International Journal of Pharmaceutics, 2017, 529, 523-530.	5.2	157
69	A voxel-based method of constructing and skinning conformal and functionally graded lattice structures suitable for additive manufacturing. Additive Manufacturing, 2017, 13, 1-13.	3.0	125
70	A combined inverse finite element “elastoplastic modelling method to simulate the size-effect in nanoindentation and characterise materials from the nano to micro-scale. International Journal of Solids and Structures, 2017, 104-105, 25-34.	2.7	21
71	A new photocrosslinkable polycaprolactone-based ink for three-dimensional inkjet printing. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 1645-1657.	3.4	48
72	3D inkjet-printed UV-curable inks for multi-functional electromagnetic applications. Additive Manufacturing, 2017, 13, 143-148.	3.0	59

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73	Additive Manufacture of Three Dimensional Nanocomposite Based Objects through Multiphoton Fabrication. <i>Polymers</i> , 2016, 8, 325.	4.5	24
74	Special issue collection on additive manufacturing (AM). <i>Surface Topography: Metrology and Properties</i> , 2016, 4, 020201.	1.6	2
75	Printability of elastomer latex for additive manufacturing or 3D printing. <i>Journal of Applied Polymer Science</i> , 2016, 133, .	2.6	42
76	Inkjet printing of polyimide insulators for the 3D printing of dielectric materials for microelectronic applications. <i>Journal of Applied Polymer Science</i> , 2016, 133, .	2.6	61
77	The microstructure and mechanical properties of selectively laser melted AlSi10Mg: The effect of a conventional T6-like heat treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 667, 139-146.	5.6	478
78	Improving the fatigue behaviour of a selectively laser melted aluminium alloy: Influence of heat treatment and surface quality. <i>Materials and Design</i> , 2016, 104, 174-182.	7.0	240
79	An Investigation of the Behavior of Solvent based Polycaprolactone ink for Material Jetting. <i>Scientific Reports</i> , 2016, 6, 20852.	3.3	39
80	Development, printability and post-curing studies of formulations of materials resistant to microbial attachment for use in inkjet based 3D printing. <i>Rapid Prototyping Journal</i> , 2016, 22, 835-841.	3.2	18
81	A mechanical property evaluation of graded density Al-Si10-Mg lattice structures manufactured by selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 670, 264-274.	5.6	461
82	Spreading of the nanofluid triple line in ink jet printed electronics tracks. <i>Additive Manufacturing</i> , 2016, 11, 77-84.	3.0	16
83	Three dimensional ink-jet printing of biomaterials using ionic liquids and co-solvents. <i>Faraday Discussions</i> , 2016, 190, 509-523.	3.2	47
84	On the formation of AlSi10Mg single tracks and layers in selective laser melting: Microstructure and nano-mechanical properties. <i>Journal of Materials Processing Technology</i> , 2016, 230, 88-98.	6.3	248
85	Quantification and characterisation of porosity in selectively laser melted AlSi10Mg using X-ray computed tomography. <i>Materials Characterization</i> , 2016, 111, 193-204.	4.4	249
86	Surface microstructuring to modify wettability for 3D printing of nano-filled inks. <i>Chemical Engineering Research and Design</i> , 2016, 109, 414-420.	5.6	27
87	The cost of additive manufacturing: machine productivity, economies of scale and technology-push. <i>Technological Forecasting and Social Change</i> , 2016, 102, 193-201.	11.6	432
88	Application of Nanoparticles in Manufacturing. , 2016, , 1219-1278.		3
89	Effects of Net and Solid Skins on Self-Supporting Lattice Structures. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 83-89.	0.5	3
90	Nanoindentation Shows Uniform Local Mechanical Properties Across Melt Pools And Layers Produced By Selective Laser Melting Of AlSi 10Mg Alloy. <i>Advanced Materials Letters</i> , 2016, 7, 13-16.	0.6	15

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91	An inverse method for determining the spatially resolved properties of viscoelastic-viscoplastic three-dimensional printed materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150477.	2.1	8
92	Mechanical Properties of Ti-6Al-4V Selectively Laser Melted Parts with Body-Centred-Cubic Lattices of Varying cell size. Experimental Mechanics, 2015, 55, 1261-1272.	2.0	91
93	Nano-hardness and microstructure of selective laser melted AlSi10Mg scan tracks. Proceedings of SPIE, 2015, , .	0.8	5
94	Evaluation of laser ultrasonic testing for inspection of metal additive manufacturing. Proceedings of SPIE, 2015, , .	0.8	19
95	On the Precipitation Hardening of Selective Laser Melted AlSi10Mg. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3337-3341.	2.2	220
96	A Study on the Laser Spatter and the Oxidation Reactions During Selective Laser Melting of 316L Stainless Steel, Al-Si10-Mg, and Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3842-3851.	2.2	253
97	Application of Nanoparticles in Manufacturing. , 2015, , 1-53.		4
98	An experimental study into the effects of bulk and flow behaviour of laser sintering polymer powders on resulting part properties. Journal of Materials Processing Technology, 2015, 215, 239-250.	6.3	119
99	The formation of $\hat{1}\pm + \hat{1}^2$ microstructure in as-fabricated selective laser melting of Ti-6Al-4V. Journal of Materials Research, 2014, 29, 2028-2035.	2.6	98
100	Aging behavior of thermoplastic elastomers in the laser sintering process. Journal of Materials Research, 2014, 29, 1841-1851.	2.6	30
101	On the Texture Formation of Selective Laser Melted Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 2863-2872.	2.2	264
102	Reducing porosity in AlSi10Mg parts processed by selective laser melting. Additive Manufacturing, 2014, 1-4, 77-86.	3.0	608
103	Effect of the build orientation on the mechanical properties and fracture modes of SLM Ti-6Al-4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 616, 1-11.	5.6	702
104	Transparency Built-in. Journal of Industrial Ecology, 2013, 17, 418-431.	5.5	131
105	The effects of bidirectional evolutionary structural optimization parameters on an industrial designed component for additive manufacture. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2013, 227, 794-807.	2.4	27
106	Microstructure of Ti-6Al-4V produced by selective laser melting. Journal of Physics: Conference Series, 2012, 371, 012084.	0.4	39
107	Laser sintering of polyamides and other polymers. Progress in Materials Science, 2012, 57, 229-267.	32.8	623
108	Realised levels of geometric complexity in additive manufacturing. International Journal of Product Development, 2011, 13, 222.	0.2	9

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109	Processing of a Polyamide-12/carbon nanofibre composite by laser sintering. <i>Polymer Testing</i> , 2011, 30, 94-100.	4.8	195
110	Additive Manufacturing for Mass Customization. <i>Springer Series in Advanced Manufacturing</i> , 2011, , 275-289.	0.5	48
111	Sustainability of additive manufacturing: measuring the energy consumption of the laser sintering process. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2011, 225, 2228-2239.	2.4	135
112	Effect of long-term ageing on the tensile properties of a polyamide 12 laser sintering material. <i>Polymer Testing</i> , 2010, 29, 483-493.	4.8	50
113	An empirical study into laser sintering of ultra-high molecular weight polyethylene (UHMWPE). <i>Journal of Materials Processing Technology</i> , 2010, 210, 72-80.	6.3	82
114	Extreme Customization: Rapid Manufacturing Products that Enhance the Consumer. , 2009, , 537-554.		0
115	Free-Radical Polymerization in Ionic Liquids: The Case for a Protected Radical. <i>Macromolecules</i> , 2008, 41, 2814-2820.	4.8	68
116	Rapid manufacturing facilitated customization. <i>International Journal of Computer Integrated Manufacturing</i> , 2008, 21, 245-258.	4.6	132
117	The effects of new technology adoption on employee skills in the prosthetics profession. <i>International Journal of Production Research</i> , 2008, 46, 6461-6478.	7.5	9
118	Body-fitting customisation of motorcycle seats: an investigation of consumer requirements. <i>International Journal of Mass Customisation</i> , 2008, 2, 375.	1.2	3
119	Make or buy analysis for rapid manufacturing. <i>Rapid Prototyping Journal</i> , 2007, 13, 23-29.	3.2	76
120	Rapid manufacturing: impact on supply chain methodologies and practice. <i>International Journal of Services and Operations Management</i> , 2007, 3, 1.	0.2	88
121	Rapid manufactured textiles. <i>International Journal of Computer Integrated Manufacturing</i> , 2007, 20, 96-105.	4.6	37
122	Low cost optical fibre based Fabry-Perot strain sensor production. <i>Measurement Science and Technology</i> , 2006, 17, 2206-2212.	2.6	19
123	Management and Implementation of Rapid Manufacturing. , 2006, , 159-173.		3
124	The pivotal role of rapid manufacturing in the production of cost-effective customised products. <i>International Journal of Mass Customisation</i> , 2006, 1, 360.	1.2	39
125	Cost estimation for rapid manufacturing - laser sintering production for low to medium volumes. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2006, 220, 1417-1427.	2.4	242
126	Empirical laser sintering time estimator for Duraform PA. <i>International Journal of Production Research</i> , 2006, 44, 5131-5146.	7.5	46

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127	Laser micromachined and acid-etched Fabry-Perot cavities in silica fibres. , 2005, , .		2
128	<title>New techniques for manufacturing optical-fiber-based fiber Fabry-Perot sensors</title>. , 2002, 4694, 43.		0
129	<title>Multiplexed optical fiber Fabry-Perot sensors for strain metrology</title>. , 1999, , .		1
130	Porous ceramics prepared from aqueous foams. Journal of Materials Science Letters, 1999, 18, 1003-1005.	0.5	52
131	Multiplexed optical fibre Fabry-Perot sensors for strain metrology. Smart Materials and Structures, 1999, 8, 549-553.	3.5	26
132	<title>Multifunctional fiber optic sensors for cure and temperature monitoring</title>. , 1999, , .		6
133	Fracture Mechanisms in High-Cycle Fatigue of Selective Laser Melted Ti-6Al-4V. Key Engineering Materials, 0, 627, 125-128.	0.4	11
134	Multimaterial Manufacture Through Combining Optical Tweezers with Multiphoton Fabrication. Journal of Laser Micro Nanoengineering, 0, , .	0.1	0
135	Reactive Jetting of High Viscosity Nanocomposites for Dielectric Elastomer Actuation. Advanced Materials Technologies, 0, , 2101111.	5.8	6
136	Antimicrobial â€˜inksâ€™™ for 3D printing: block copolymer-silver nanoparticle composites synthesised using supercritical CO₂. Polymer Chemistry, 0, , .	3.9	4