Chee-Kai Chua

List of Publications by Year
in descending order

107 papers	11,623 citations	36271 51 h-index	36008 97 g-index
115 all docs	115 docs citations	115 times ranked	11628 citing authors

#	Article	IF	Citations
1	Influence of erbium addition on the defects of selective laser-melted 7075 aluminium alloy. Virtual and Physical Prototyping, 2022, 17, 406-418.	5.3	31
2	Effect of electropolishing on mechanical property enhancement of Ti6Al4V porous materials fabricated by selective laser melting. Virtual and Physical Prototyping, 2022, 17, 919-931.	5.3	5
3	A review on spacers and membranes: Conventional or hybrid additive manufacturing?. Water Research, 2021, 188, 116497.	5.3	46
4	Fouling mitigation in reverse osmosis processes with 3D printed sinusoidal spacers. Water Research, 2021, 207, 117818.	5.3	25
5	Bioprinting of 3D Functional Tissue Constructs. International Journal of Bioprinting, 2021, 7, 395.	1.7	0
6	Three-Dimensional Printing of Food Foams Stabilized by Hydrocolloids for Hydration in Dysphagia. International Journal of Bioprinting, 2021, 7, 393.	1.7	27
7	Introduction to rapid prototyping of biomaterials. , 2020, , 1-15.		11
8	Induction Sintering of Silver Nanoparticle Inks on Polyimide Substrates. Advanced Materials Technologies, 2020, 5, 1900897.	3.0	39
9	Contactless reversible 4D-printing for 3D-to-3D shape morphing. Virtual and Physical Prototyping, 2020, 15, 481-495.	5.3	36
10	The global rise of 3D printing during the COVID-19 pandemic. Nature Reviews Materials, 2020, 5, 637-639.	23.3	188
11	Recent Advances on Highâ€Entropy Alloys for 3D Printing. Advanced Materials, 2020, 32, e1903855.	11.1	269
12	Deep learning for fabrication and maturation of 3D bioprinted tissues and organs. Virtual and Physical Prototyping, 2020, 15, 340-358.	5.3	79
13	Acoustic absorptions of multifunctional polymeric cellular structures based on triply periodic minimal surfaces fabricated by stereolithography. Virtual and Physical Prototyping, 2020, 15, 242-249.	5.3	85
14	3D Printing of Polymeric Multi-Layer Micro-Perforated Panels for Tunable Wideband Sound Absorption. Polymers, 2020, 12, 360.	2.0	32
15	Application of Machine Learning in 3D Bioprinting: Focus on Development of Big Data and Digital Twin. International Journal of Bioprinting, 2020, 7, 342.	1.7	54
16	Bioprinting of 3D in vitro skeletal muscle models: A review. Materials and Design, 2020, 193, 108794.	3.3	57
17	Print Me An Organ! Why We Are Not There Yet. Progress in Polymer Science, 2019, 97, 101145.	11.8	192
18	Preliminary Investigation of the Reversible 4D Printing of a Dual-Layer Component. Engineering, 2019, 5, 1159-1170.	3.2	42

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19	Layer-by-layer ultraviolet assisted extrusion-based (UAE) bioprinting of hydrogel constructs with high aspect ratio for soft tissue engineering applications. PLoS ONE, 2019, 14, e0216776.	1.1	99
20	Metallic Nanoparticle Inks for 3D Printing of Electronics. Advanced Electronic Materials, 2019, 5, 1800831.	2.6	166
21	3D food printing: a categorised review of inks and their development. Virtual and Physical Prototyping, 2019, 14, 203-218.	5.3	100
22	Influence of re-melting on surface roughness and porosity of AlSi10Mg parts fabricated by selective laser melting. Journal of Alloys and Compounds, 2019, 792, 574-581.	2.8	231
23	Polymeric composites for powder-based additive manufacturing: Materials and applications. Progress in Polymer Science, 2019, 91, 141-168.	11.8	328
24	Effect of Heat Treatment on Repetitively Scanned SLM NiTi Shape Memory Alloy. Materials, 2019, 12, 77.	1.3	32
25	3Dâ€Printed Mechanical Metamaterials with High Energy Absorption. Advanced Materials Technologies, 2019, 4, 1800419.	3.0	188
26	Density Functional Theory Study of M_n₊₁AX_nPhases: A Review. Critical Reviews in Solid State and Materials Sciences, 2019, 44, 56-107.	6.8	46
27	Publication Trends in 3D Bioprinting and 3D Food Printing. International Journal of Bioprinting, 2019, 6, 257.	1.7	14
28	Call for special issues. International Journal of Bioprinting, 2019, 5, 228.	1.7	0
29	Bioprinting in space and International Journal of Bioprinting stays ahead of the game. International Journal of Bioprinting, 2019, 5, 184.	1.7	0
30	Simultaneously enhanced strength and ductility for 3D-printed stainless steel 316L by selective laser melting. NPG Asia Materials, 2018, 10, 127-136.	3.8	385
31	Fabrication of SLM NiTi Shape Memory Alloy via Repetitive Laser Scanning. Shape Memory and Superelasticity, 2018, 4, 112-120.	1.1	34
32	Joining of 3D-printed AlSi10Mg by friction stir welding. Welding in the World, Le Soudage Dans Le Monde, 2018, 62, 675-682.	1.3	26
33	Electrical and thermal conductivities of MWCNT/polymer composites fabricated by selective laser sintering. Composites Part A: Applied Science and Manufacturing, 2018, 105, 203-213.	3.8	125
34	Development of process efficiency maps for selective laser sintering of polymeric composite powders: Modeling and experimental testing. Journal of Materials Processing Technology, 2018, 254, 52-59.	3.1	46
35	Modeling temperature and residual stress fields in selective laser melting. International Journal of Mechanical Sciences, 2018, 136, 24-35.	3.6	208
36	3D neural tissue models: From spheroids to bioprinting. Biomaterials, 2018, 154, 113-133.	5.7	207

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37	Advanced Material Strategies for Next-Generation Additive Manufacturing. Materials, 2018, 11, 166.	1.3	76
38	Design and 4D Printing of Cross-Folded Origami Structures: A Preliminary Investigation. Materials, 2018, 11, 376.	1.3	40
39	A Review of Selective Laser Melted NiTi Shape Memory Alloy. Materials, 2018, 11, 519.	1.3	88
40	3D soft auxetic lattice structures fabricated by selective laser sintering: TPU powder evaluation and process optimization. Materials and Design, 2017, 120, 317-327.	3.3	177
41	Toughening of polyamide 11 with carbon nanotubes for additive manufacturing. Virtual and Physical Prototyping, 2017, 12, 235-240.	5.3	41
42	Emerging 3Dâ€Printed Electrochemical Energy Storage Devices: A Critical Review. Advanced Energy Materials, 2017, 7, 1700127.	10.2	300
43	Fundamentals and applications of 3D printing for novel materials. Applied Materials Today, 2017, 7, 120-133.	2.3	925
44	A review: additive manufacturing for active electronic components. Virtual and Physical Prototyping, 2017, 12, 31-46.	5.3	119
45	Multi-stage responsive 4D printed smart structure through varying geometric thickness of shape memory polymer. Smart Materials and Structures, 2017, 26, 125001.	1.8	53
46	A highly printable and biocompatible hydrogel composite for direct printing of soft and perfusable vasculature-like structures. Scientific Reports, 2017, 7, 16902.	1.6	142
47	Two-Way 4D Printing: A Review on the Reversibility of 3D-Printed Shape Memory Materials. Engineering, 2017, 3, 663-674.	3.2	225
48	Citation trend of Virtual and Physical Prototyping in 2017. Virtual and Physical Prototyping, 2017, 12, 277-278.	5.3	0
49	Bioprinting of Thermoresponsive Hydrogels for Next Generation Tissue Engineering: A Review. Macromolecular Materials and Engineering, 2017, 302, 1600266.	1.7	135
50	3D Printing and Bioprinting in MEMS Technology. Micromachines, 2017, 8, 229.	1.4	10
51	Process Control and Modeling. , 2017, , 159-179.		1
52	3D Printing and Additive Manufacturing. , 2017, , .		126
53	Roles of support materials in 3D bioprinting â€“ Present and future. International Journal of Bioprinting, 2017, 3, 83.	1.7	37
54	Cell powered biobots and more perspectives for IJB. International Journal of Bioprinting, 2017, 3, 1.	1.7	0

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55	Special Issue â€œBiomaterials and Bioprintingâ€• Molecules, 2016, 21, 1231.	1.7	2
56	An engineering perspective on 3D printed personalized scaffolds for tracheal suspension technique. Journal of Thoracic Disease, 2016, 8, E1723-E1725.	0.6	10
57	A Mathematical Model on the Resolution of Extrusion Bioprinting for the Development of New Bioinks. Materials, 2016, 9, 756.	1.3	113
58	A Solvent-Free Surface Suspension Melt Technique for Making Biodegradable PCL Membrane Scaffolds for Tissue Engineering Applications. Molecules, 2016, 21, 386.	1.7	5
59	Material Evaluation and Process Optimization of CNT-Coated Polymer Powders for Selective Laser Sintering. Polymers, 2016, 8, 370.	2.0	93
60	Energy Absorption of Thermoplastic Polyurethane Lattice Structures via 3D Printing: Modeling and Prediction. International Journal of Applied Mechanics, 2016, 08, 1640006.	1.3	60
61	Characterization of Creeping and Shape Memory Effect in Laser Sintered Thermoplastic Polyurethane. Journal of Computing and Information Science in Engineering, 2016, 16, .	1.7	33
62	Highly enhanced thermal conductivity of thermoplastic nanocomposites with a low mass fraction of MWCNTs by a facilitated latex approach. Composites Part A: Applied Science and Manufacturing, 2016, 90, 699-710.	3.8	76
63	3D printing by selective laser sintering of polypropylene feed channel spacers for spiral wound membrane modules for the water industry. Virtual and Physical Prototyping, 2016, 11, 151-158.	5.3	68
64	Reduced graphene oxide/silver hybrid with N,N-dimethyl formamide for oxygen reduction reactions and surface enhanced Raman scattering. RSC Advances, 2016, 6, 102519-102527.	1.7	6
65	Revealing martensitic transformation and Î±/Î² interface evolution in electron beam melting three-dimensional-printed Ti-6Al-4V. Scientific Reports, 2016, 6, 26039.	1.6	114
66	The potential to enhance membrane module design with 3D printing technology. Journal of Membrane Science, 2016, 499, 480-490.	4.1	238
67	Effect of gas plasma on polycaprolactone (PCL) membrane wettability and collagen type I immobilized for enhancing cell proliferation. Materials Letters, 2016, 171, 293-296.	1.3	27
68	A Perspective on 4D Bioprinting. International Journal of Bioprinting, 2016, 2, .	1.7	84
69	Design and 3D Printing of Scaffolds and Tissues. Engineering, 2015, 1, 261-268.	3.2	344
70	Biodegradable Polymeric Films and Membranes Processing and Forming for Tissue Engineering. Macromolecular Materials and Engineering, 2015, 300, 858-877.	1.7	41
71	Thermal Influence of CNT on the Polyamide 12 Nanocomposite for Selective Laser Sintering. Molecules, 2015, 20, 19041-19050.	1.7	72
72	Smooth Muscle Cell Alignment and Phenotype Control by Melt Spun Polycaprolactone Fibers for Seeding of Tissue Engineered Blood Vessels. International Journal of Biomaterials, 2015, 2015, 1-8.	1.1	34

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73	Fabrication and microstructural characterisation of additive manufactured Ti-6Al-4V parts by electron beam melting. Virtual and Physical Prototyping, 2015, 10, 13-21.	5.3	70
74	Investigation on processing of ASTM A131 Eh36 high tensile strength steel using selective laser melting. Virtual and Physical Prototyping, 2015, 10, 187-193.	5.3	24
75	Interfacial characterization of SLM parts in multi-material processing: Intermetallic phase formation between AlSi10Mg and C18400 copper alloy. Materials Characterization, 2015, 107, 220-227.	1.9	160
76	3D printing of smart materials: A review on recent progresses in 4D printing. Virtual and Physical Prototyping, 2015, 10, 103-122.	5.3	660
77	Effect of surface orientation on the tribological properties of laser sintered polyamide 12. Polymer Testing, 2015, 48, 111-114.	2.3	31
78	Numerical investigation and an effective modelling on the Selective Laser Melting (SLM) process with aluminium alloy 6061. International Journal of Heat and Mass Transfer, 2015, 80, 288-300.	2.5	327
79	Bioprinting. , 2015, , .		46
80	Cartilage Tissue Engineering with Silk Fibroin Scaffolds Fabricated by Indirect Additive Manufacturing Technology. Materials, 2014, 7, 2104-2119.	1.3	57
81	Selective Laser Melting of aluminium alloy using a uniform beam profile. Virtual and Physical Prototyping, 2014, 9, 11-16.	5.3	57
82	Interfacial characterization of SLM parts in multi-material processing: Metallurgical diffusion between 316L stainless steel and C18400 copper alloy. Materials Characterization, 2014, 94, 116-125.	1.9	260
83	A mathematical model for fluid shear-sensitive 3D tissue construct development. Biomechanics and Modeling in Mechanobiology, 2013, 12, 19-31.	1.4	18
84	Advanced nanobiomaterials for tissue engineering and regenerative medicine. Nanomedicine, 2013, 8, 501-503.	1.7	3
85	Monitoring cell proliferation in silk fibroin scaffolds using spectroscopic optical coherence tomography. Microwave and Optical Technology Letters, 2013, 55, 2587-2594.	0.9	2
86	A quality management framework for implementing additive manufacturing of medical devices. Virtual and Physical Prototyping, 2013, 8, 193-199.	5.3	17
87	Microstructural Investigation of M2 High Speed Steel Produced by Selective Laser Melting: Microstructural Investigation of M2 High Speed Steel. , 2012, , .		5
88	Effects of layer thickness and binder saturation level parameters on 3D printing process. International Journal of Advanced Manufacturing Technology, 2011, 53, 275-284.	1.5	256
89	Selective laser sintering of functionally graded tissue scaffolds. MRS Bulletin, 2011, 36, 1006-1014.	1.7	42
90	Fibroblast response to interstitial flow: A stateâ€ofâ€theâ€art review. Biotechnology and Bioengineering, 2010, 107, 1-10.	1.7	24

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91	Comparison of drying methods in the fabrication of collagen scaffold via indirect rapid prototyping. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2007, 82B, 260-266.	1.6	60
92	Application of rapid prototyping and computational fluid dynamics in the development of water flow regulating valves. International Journal of Advanced Manufacturing Technology, 2006, 30, 828-835.	1.5	10
93	Investigation of the mechanical properties and porosity relationships in fused deposition modellingâ€fabricated porous structures. Rapid Prototyping Journal, 2006, 12, 100-105.	1.6	230
94	Rapid prototyping and tooling techniques: a review of applications for rapid investment casting. International Journal of Advanced Manufacturing Technology, 2005, 25, 308-320.	1.5	228
95	Rapid prototyping in the development of optical pickup unit. International Journal of Advanced Manufacturing Technology, 2005, 25, 484-492.	1.5	3
96	Rapid investment casting: direct and indirect approaches via model maker II. International Journal of Advanced Manufacturing Technology, 2005, 25, 26-32.	1.5	82
97	Development of tissue scaffolds using selective laser sintering of polyvinyl alcohol/hydroxyapatite biocomposite for craniofacial and joint defects. Journal of Materials Science: Materials in Medicine, 2004, 15, 1113-1121.	1.7	225
98	Rapid investment casting: direct and indirect approaches via fused deposition modelling. International Journal of Advanced Manufacturing Technology, 2004, 23, 93-101.	1.5	118
99	RAPID PROTOTYPING TECHNOLOGIES AND LIMITATIONS. , 2003, , 165-185.		3
100	The Design of Scaffolds for Use in Tissue Engineering. Part II. Rapid Prototyping Techniques. Tissue Engineering, 2002, 8, 1-11.	4.9	696
101	Rapid prototyping versus virtual prototyping in product design and manufacturing. International Journal of Advanced Manufacturing Technology, 1999, 15, 597-603.	1.5	51
102	Rapid tooling technology. Part 1. A comparative study. International Journal of Advanced Manufacturing Technology, 1999, 15, 604-608.	1.5	71
103	Rapid tooling technology. Part 2. A case study using arc spray metal tooling. International Journal of Advanced Manufacturing Technology, 1999, 15, 609-614.	1.5	32
104	A study of the state-of-the-art rapid prototyping technologies. International Journal of Advanced Manufacturing Technology, 1998, 14, 146-152.	1.5	112
105	Checking for machinability on surface patches. International Journal of Advanced Manufacturing Technology, 1998, 14, 806-814.	1.5	0
106	Abrasive jet deburring of jewellery models built by stereolithography apparatus (SLA). Journal of Materials Processing Technology, 1998, 83, 36-47.	3.1	46
107	Rapid prototyping assisted surgery planning. International Journal of Advanced Manufacturing Technology, 1998, 14, 624-630.	1.5	52