Kah Fai Leong

List of Publications by Year
in descending order

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		53751	27389
142	14,239	45	106
papers	citations	h-index	g-index

154	154	154	12220
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Design of Scaffolds for Use in Tissue Engineering. Part I. Traditional Factors. Tissue Engineering, 2001, 7, 679-689.	4.9	2,018
2	Solid freeform fabrication of three-dimensional scaffolds for engineering replacement tissues and organs. Biomaterials, 2003, 24, 2363-2378.	5.7	952
3	Rapid prototyping in tissue engineering: challenges and potential. Trends in Biotechnology, 2004, 22, 643-652.	4.9	741
4	The Design of Scaffolds for Use in Tissue Engineering. Part II. Rapid Prototyping Techniques. Tissue Engineering, 2002, 8, 1-11.	4.9	696
5	3D printing of smart materials: A review on recent progresses in 4D printing. Virtual and Physical Prototyping, 2015, 10, 103-122.	5.3	660
6	Scaffold development using selective laser sintering of polyetheretherketoneâ€“hydroxyapatite biocomposite blends. Biomaterials, 2003, 24, 3115-3123.	5.7	558
7	Graded microstructure and mechanical properties of additive manufactured Tiâ€“6Alâ€“4V via electron beam melting. Acta Materialia, 2015, 97, 1-16.	3.8	535
8	3D printing trends in building and construction industry: a review. Virtual and Physical Prototyping, 2017, 12, 261-276.	5.3	516
9	Poly-Îµ-caprolactone/hydroxyapatite for tissue engineering scaffold fabrication via selective laser sintering. Acta Biomaterialia, 2007, 3, 1-12.	4.1	375
10	Rapid Prototyping. , 2003, , .		348
11	Compressive properties of functionally graded lattice structures manufactured by selective laser melting. Materials and Design, 2017, 131, 112-120.	3.3	314
12	Porous polycaprolactone scaffold for cardiac tissue engineering fabricated by selective laser sintering. Acta Biomaterialia, 2010, 6, 2028-2034.	4.1	310
13	Engineering functionally graded tissue engineering scaffolds. Journal of the Mechanical Behavior of Biomedical Materials, 2008, 1, 140-152.	1.5	290
14	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
15	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
16	Modeling temperature and residual stress fields in selective laser melting. International Journal of Mechanical Sciences, 2018, 136, 24-35.	3.6	208
17	Development of a Tissue Engineering Scaffold Structure Library for Rapid Prototyping. Part 1: Investigation and Classification. International Journal of Advanced Manufacturing Technology, 2003, 21, 291-301.	1.5	199
18	Melt flow behaviour of poly-Îµ-caprolactone in fused deposition modelling. Journal of Materials Science: Materials in Medicine, 2008, 19, 2541-2550.	1.7	195

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19	Investigation of the mechanical properties and porosity relationships in selective laser-sintered polyhedral for functionally graded scaffolds. Acta Biomaterialia, 2011, 7, 530-537.	4.1	191
20	3D Bioprinting of Highly Thixotropic Alginate/Methylcellulose Hydrogel with Strong Interface Bonding. ACS Applied Materials & Interfaces, 2017, 9, 20086-20097.	4.0	191
21	A systematical review of 3D printable cementitious materials. Construction and Building Materials, 2019, 207, 477-490.	3.2	160
22	Development of a 95/5 poly(L-lactide-co-glycolide)/hydroxylapatite and Î²-tricalcium phosphate scaffold as bone replacement material via selective laser sintering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2008, 84B, 17-25.	1.6	157
23	Fabrication of customised scaffolds using computerâ€aided design and rapid prototyping techniques. Rapid Prototyping Journal, 2005, 11, 249-259.	1.6	126
24	3D Printing and Additive Manufacturing. , 2017, , .		126
25	Fabrication and characterization of three-dimensional poly(ether-ether-ketone)/-hydroxyapatite biocomposite scaffolds using laser sintering. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2005, 219, 183-194.	1.0	122
26	Development of a Tissue Engineering Scaffold Structure Library for Rapid Prototyping. Part 2: Parametric Library and Assembly Program. International Journal of Advanced Manufacturing Technology, 2003, 21, 302-312.	1.5	121
27	Investigation of 3D Non-Random Porous Structures by Fused Deposition Modelling. International Journal of Advanced Manufacturing Technology, 2002, 19, 217-223.	1.5	115
28	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
29	Compressive properties of Ti-6Al-4V lattice structures fabricated by selective laser melting: Design, orientation and density. Additive Manufacturing, 2017, 16, 213-224.	1.7	109
30	Improved biocomposite development of poly(vinyl alcohol) and hydroxyapatite for tissue engineering scaffold fabrication using selective laser sintering. Journal of Materials Science: Materials in Medicine, 2008, 19, 989-996.	1.7	108
31	An experimental and simulation study on build thickness dependent microstructure for electron beam melted Tiâ€“6Alâ€“4V. Journal of Alloys and Compounds, 2015, 646, 303-309.	2.8	105
32	Automatic Algorithm for Generating Complex Polyhedral Scaffold Structures for Tissue Engineering. Tissue Engineering, 2004, 10, 595-610.	4.9	100
33	Advances in Ultrasonic Welding of Thermoplastic Composites: A Review. Materials, 2020, 13, 1284.	1.3	100
34	Indirect fabrication of collagen scaffold based on inkjet printing technique. Rapid Prototyping Journal, 2006, 12, 229-237.	1.6	98
35	Crystal structure analysis of M2 high speed steel parts produced by selective laser melting. Materials Characterization, 2013, 84, 72-80.	1.9	95
36	Characterization of microfeatures in selective laser sintered drug delivery devices. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2002, 216, 369-383.	1.0	88

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37	Fabrication of porous polymeric matrix drug delivery devices using the selective laser sintering technique. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2001, 215, 191-192.	1.0	84
38	A study of stereolithography file errors and repair. Part 1. Generic solution. International Journal of Advanced Manufacturing Technology, 1996, 12, 407-414.	1.5	83
39	Compressive properties and degradability of poly(É›-caprolatone)/hydroxyapatite composites under accelerated hydrolytic degradation. Journal of Biomedical Materials Research - Part A, 2007, 80A, 655-660.	2.1	83
40	Characterization of SLS parts for drug delivery devices. Rapid Prototyping Journal, 2001, 7, 262-268.	1.6	82
41	Processing and Properties of Construction Materials for 3D Printing. Materials Science Forum, 0, 861, 177-181.	0.3	78
42	Building Porous Biopolymeric Microstructures for Controlled Drug Delivery Devices Using Selective Laser Sintering. International Journal of Advanced Manufacturing Technology, 2006, 31, 483-489.	1.5	74
43	Selective laser sintering of biocompatible polymers for applications in tissue engineering. Bio-Medical Materials and Engineering, 2005, 15, 113-24.	0.4	70
44	Heat transfer and phase transition in the selective laser melting process. International Journal of Heat and Mass Transfer, 2017, 108, 2408-2416.	2.5	66
45	Designing spray-based 3D printable cementitious materials with fly ash cenosphere and air entraining agent. Construction and Building Materials, 2019, 211, 1073-1084.	3.2	66
46	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
47	Esophageal tissue engineering: An inâ€depth review on scaffold design. Biotechnology and Bioengineering, 2012, 109, 1-15.	1.7	59
48	A study of stereolithography file errors and repair. Part 2. Special cases. International Journal of Advanced Manufacturing Technology, 1996, 12, 415-422.	1.5	55
49	Rapid freeze prototyping technique in bioâ€plotters for tissue scaffold fabrication. Rapid Prototyping Journal, 2008, 14, 246-253.	1.6	48
50	Cryogenic prototyping of chitosan scaffolds with controlled micro and macro architecture and their effect on in vivo neoâ€vascularization and cellular infiltration. Journal of Biomedical Materials Research - Part A, 2010, 94A, 1303-1311.	2.1	48
51	Abrasive jet deburring of jewellery models built by stereolithography apparatus (SLA). Journal of Materials Processing Technology, 1998, 83, 36-47.	3.1	46
52	Indirect fabrication of gelatin scaffolds using rapid prototyping technology. Virtual and Physical Prototyping, 2010, 5, 45-53.	5.3	44
53	Investigation on Ultrasonic Welding Attributes of Novel Carbon/EliumÂ® Composites. Materials, 2020, 13, 1117.	1.3	44
54	A heuristic-based approach to conceptual design. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2009, 20, 97-116.	1.2	43

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55	Selective laser sintering of functionally graded tissue scaffolds. MRS Bulletin, 2011, 36, 1006-1014.	1.7	42
56	Damping, impact and flexural performance of novel carbon/EliumÂ® thermoplastic tubular composites. Composites Part B: Engineering, 2020, 203, 108480.	5.9	41
57	Fabrication of channeled scaffolds with ordered array of micro-pores through microsphere leaching and indirect Rapid Prototyping technique. Biomedical Microdevices, 2013, 15, 83-96.	1.4	39
58	Clothing polymer fibers with well-aligned and high-aspect ratio carbon nanotubes. Nanoscale, 2013, 5, 2870.	2.8	37
59	Improvement of densification and microstructure of ASTM A131 EH36 steel samples additively manufactured via selective laser melting with varying laser scanning speed and hatch spacing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 746, 300-313.	2.6	36
60	Study of MgO-activated slag as a cementless material for sustainable spray-based 3D printing. Journal of Cleaner Production, 2020, 258, 120671.	4.6	36
61	Solvent-free fabrication of three dimensionally aligned polycaprolactone microfibers for engineering of anisotropic tissues. Biomedical Microdevices, 2012, 14, 863-872.	1.4	35
62	Modeling of powder particle heat transfer process in selective laser sintering for fabricating tissue engineering scaffolds. Rapid Prototyping Journal, 2010, 16, 400-410.	1.6	34
63	Fabrication of SLM NiTi Shape Memory Alloy via Repetitive Laser Scanning. Shape Memory and Superelasticity, 2018, 4, 112-120.	1.1	34
64	Dual Material Rapid Prototyping Techniques for the Development of Biomedical Devices. Part 1: Space Creation. International Journal of Advanced Manufacturing Technology, 2001, 18, 717-723.	1.5	31
65	Selective laser sintering adaptation tools for cost effective fabrication of biomedical prototypes. Rapid Prototyping Journal, 2010, 16, 90-99.	1.6	28
66	An ontology learning system for customer needs representation in product development. International Journal of Advanced Manufacturing Technology, 2013, 67, 441-453.	1.5	28
67	Ultrasonic Welding of Novel Carbon/EliumÂ® Thermoplastic Composites with Flat and Integrated Energy Directors: Lap Shear Characterisation and Fractographic Investigation. Materials, 2020, 13, 1634.	1.3	28
68	Development and impact characterization of acrylic thermoplastic composite bicycle helmet shell with improved safety and performance. Composites Part B: Engineering, 2021, 221, 109008.	5.9	28
69	Superior energy absorption of continuously graded microlattices by electron beam additive manufacturing. Virtual and Physical Prototyping, 2021, 16, 14-28.	5.3	28
70	Properties of Test Coupons Fabricated by Selective Laser Melting. Key Engineering Materials, 0, 447-448, 780-784.	0.4	27
71	Characterization, mechanical behavior and in vitro evaluation of a melt-drawn scaffold for esophageal tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 57, 246-259.	1.5	27
72	Effects of foot rotation positions on knee valgus during single-leg drop landing: Implications for ACL injury risk reduction. Knee, 2017, 24, 547-554.	0.8	27

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73	Modelling of Extrusion Behaviour of Biopolymer and Composites in Fused Deposition Modelling. Key Engineering Materials, 2007, 334-335, 1241-1244.	0.4	26
74	Human-centric product conceptualization using a design space framework. Advanced Engineering Informatics, 2009, 23, 149-156.	4.0	26
75	Dual Material Rapid Prototyping Techniques for the Development of Biomedical Devices. Part 2: Secondary Powder Deposition. International Journal of Advanced Manufacturing Technology, 2002, 19, 679-687.	1.5	24
76	Fibroblast response to interstitial flow: A stateâ€ofâ€theâ€art review. Biotechnology and Bioengineering, 2010, 107, 1-10.	1.7	24
77	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
78	Fabrication and in vitro analysis of tubular scaffolds by melt-drawing for esophageal tissue engineering. Materials Letters, 2015, 159, 424-427.	1.3	22
79	Ultrasonic welding of novel Carbon/EliumÂ® with carbon/epoxy composites. Composites Communications, 2020, 22, 100463.	3.3	22
80	Development of cryogenic prototyping for tissue engineering. Virtual and Physical Prototyping, 2008, 3, 25-31.	5.3	20
81	A preliminary investigation on Selective Laser Melting of M2 high speed steel. , 2011, , 339-346.		20
82	Quasi-static indentation response of core-shell particle reinforced novel NCCF/EliumÂ® composites at different feed rates. Composites Communications, 2020, 21, 100383.	3.3	19
83	Enhanced impact energy absorption and failure characteristics of novel fully thermoplastic and hybrid composite bicycle helmet shells. Materials and Design, 2021, 209, 110003.	3.3	19
84	A mathematical model for fluid shear-sensitive 3D tissue construct development. Biomechanics and Modeling in Mechanobiology, 2013, 12, 19-31.	1.4	18
85	Characterization of a poly-epsilon-caprolactone polymeric drug delivery device built by selective laser sintering. Bio-Medical Materials and Engineering, 2007, 17, 147-57.	0.4	17
86	Mechanical performance and damage mechanisms of thin rectangular carbon/ EliumÂ® tubular thermoplastic composites under flexure and low-velocity impact. Thin-Walled Structures, 2021, 165, 107971.	2.7	15
87	Manufacturing and investigating the load, energy and failure attributes of thin ply carbon/EliumÂ® thermoplastic hollow composites under low-velocity impact. Materials and Design, 2021, 206, 109814.	3.3	14
88	The Development of Computer-Aided System for Tissue Scaffolds (CASTS) System for Functionally Graded Tissue-Engineering Scaffolds. Methods in Molecular Biology, 2012, 868, 111-123.	0.4	13
89	Introduction to rapid prototyping of biomaterials. , 2014, , 1-15.		13
90	Multimedia courseware for teaching of rapid prototyping systems. Rapid Prototyping Journal, 2010, 16, 80-89.	1.6	12

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91	Enhanced energy absorption characteristics of novel integrated hybrid honeycomb/polystyrene foam. Journal of Cellular Plastics, 2020, , 0021955X2096521.	1.2	12
92	A Pilot Study: Evaluations of Compression Garment Performance via Muscle Activation Tests. Procedia Engineering, 2013, 60, 361-366.	1.2	11
93	Introduction to rapid prototyping of biomaterials. , 2020, , 1-15.		11
94	Computer Aided Tissue Engineering Scaffold Fabrication. , 2008, , 67-85.		11
95	Influence of Foot-Landing Positions at Initial Contact on Knee Flexion Angles for Single-Leg Drop Landings. Research Quarterly for Exercise and Sport, 2020, 91, 316-325.	0.8	9
96	Feasibility of tissue engineering scaffold fabrication using fused deposition modelling. , 2001, , .		8
97	An exploratory study of the use of ultrasound in the measurement of anterior tibial translation under gastrocnemius muscle stimulation. Research in Sports Medicine, 2021, 29, 103-115.	0.7	8
98	Construction and finite element analysis of a coupled finite element model of foot and barefoot running footwear. Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology, 2019, 233, 101-109.	0.4	7
99	Manufacturing Optimization and Experimental Investigation of Ex-situ Core-shell Particles Toughened Carbon/EliumÃ® Thermoplastic Composites. Fibers and Polymers, 2021, 22, 1693.	1.1	7
100	Additive Manufacturing and 3D Printing. , 2021, , 621-652.		6
101	On the structural damping response of hollow carbon composite shafts with room temperature curable novel acrylic liquid thermoplastic resin. Composites Communications, 2022, 29, 100990.	3.3	6
102	Optimizing Bladder Resin Transfer Molding Process to Manufacture Complex, Thin-Ply Thermoplastic Tubular Composite Structures: An Experimental Case Study. Polymers, 2021, 13, 4093.	2.0	6
103	Microstructural Investigation of M2 High Speed Steel Produced by Selective Laser Melting: Microstructural Investigation of M2 High Speed Steel. , 2012, , .		5
104	A Solvent-Free Surface Suspension Melt Technique for Making Biodegradable PCL Membrane Scaffolds for Tissue Engineering Applications. Molecules, 2016, 21, 386.	1.7	5
105	Impact performance of innovative corrugated polystyrene foam for bicycle helmets. Journal of Cellular Plastics, 2020, , 0021955X2096521.	1.2	4
106	Rapid prototyping in Singapore: 1988 to 1997. Rapid Prototyping Journal, 1997, 3, 116-119.	1.6	3
107	Microblasting characteristics of jewellery models built using stereolithography apparatus (SLA). International Journal of Advanced Manufacturing Technology, 1998, 14, 450-458.	1.5	3
108	Effect of PMMA Coupling Layer in Enhancing the Ultrasonic Weld Strength of Novel Room Temperature Curable Acrylic Thermoplastic to Epoxy Based Composites. Polymers, 2022, 14, 1862.	2.0	3

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109	Enhanced Learning of Rapid Prototyping Systems through Multimedia. International Journal of Mechanical Engineering Education, 2004, 32, 115-125.	0.6	2
110	A novel virtual design platform for product innovation through customer involvement. , 2011, , .		2
111	The Effect of a Knee-ankle Restraint on ACL Injury Risk Reduction during Jump-landing. Procedia Engineering, 2013, 60, 300-306.	1.2	2
112	The use of rapid prototyping in the design of a customised ankle brace structure for ACL injury risk reduction. Virtual and Physical Prototyping, 2013, 8, 241-247.	5.3	2
113	Review of Selective Laser Melting process parameters for Commercially Pure Titanium and Ti6Al4V. , 2013, , 71-76.		2
114	Vibration damping and dynamic mechanical attributes of core-shell particles modified glass epoxy prepregs cured using microwave irradiations. Composites Communications, 2020, 21, 100412.	3.3	2
115	Specialized Fabrication Processes: Rapid Prototyping. , 2009, , 493-523.		2
116	Phase Evolution of MHigh Speed Steel During Selective Laser Melting: Experimental Investigation and Modelling. , 2014, , .		2
117	Behaviour of Rectangular Hollow Thin Ply Carbon Thermoset and Thermoplastic Composite Tubes Subjected to Bending. Polymers, 2022, 14, 1386.	2.0	2
118	A Portable Device for Fabricating Biomaterial Microfiber Bundles. Key Engineering Materials, 2010, 447-448, 750-754.	0.4	1
119	Impact of shortâ€term perfusion on cell retention for 3D bioconstruct development. Journal of Biomedical Materials Research - Part A, 2013, 101A, 647-652.	2.1	1
120	SOLID-BASED ADDITIVE MANUFACTURING SYSTEMS. , 2014, , 127-192.		1
121	Spinning of biomaterial microfibers for tendon tissue engineering. , 2009, , .		1
122	Process flow for designing functionally graded tissue engineering scaffolds. , 2009, , .		1
123	Selective Laser Melting of Density Graded TI6AL4V. , 2014, , .		1
124	Regression model for predicting knee flexion angles using ankle plantar flexion angles, body mass index and generalised joint laxity. Sports Biomechanics, 2021, , 1-16.	0.8	1
125	Prototyping a feature based modelling system for automated process planning. Journal of Mechanical Working Technology, 1989, 20, 195-204.	0.1	0
126	Sports technology and prototyping. Virtual and Physical Prototyping, 2013, 8, 233-233.	5.3	0

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127	LIQUID-BASED RAPID PROTOTYPING SYSTEMS. , 2000, , 27-77.		0
128	POWDER-BASED RAPID PROTOTYPING SYSTEMS. , 2000, , 117-149.		0
129	SOLID-BASED RAPID PROTOTYPING SYSTEMS. , 2000, , 79-115.		0
130	RAPID PROTOTYPING DATA FORMATS. , 2000, , 151-200.		0
131	A practical approach on temperature variation in Selective Laser Melting with a novel heat transfer model. , 2009, , .		0
132	An interactive multimedia approach to enhance learning of rapid prototyping. , 2009, , .		0
133	Indirect fabrication of tissue engineering scaffolds using rapid prototyping and a foaming process. , 2009, , .		0
134	MEDICAL AND BIOENGINEERING APPLICATIONS. , 2010, , 403-436.		0
135	Impact of Dynamic Perfusion on Cell Population. , 2011, , .		0
136	Biodegradable Double-layer Cell Carriers for Tissue Engineering. , 2011, , .		0
137	3D Printing of Polycaprolactone Membrane. , 2014, , .		0
138	MEDICAL AND BIOENGINEERING APPLICATIONS. , 2014, , 423-465.		0
139	BENCHMARKING AND THE FUTURE OF ADDITIVE MANUFACTURING. , 2014, , 467-501.		0
140	LIQUID-BASED ADDITIVE MANUFACTURING SYSTEMS. , 2014, , 31-125.		0
141	ADDITIVE MANUFACTURING DATA FORMATS. , 2014, , 303-354.		0
142	ADDITIVE MANUFACTURING PROCESS CHAIN. , 2014, , 19-30.		0