

Guijun Bi

List of Publications by Year in descending order

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107
papers

4,433
citations

109264

35
h-index

114418

63
g-index

107
all docs

107
docs citations

107
times ranked

3135
citing authors

#	ARTICLE	IF	CITATIONS
1	Strength and strain hardening of a selective laser melted AlSi10Mg alloy. Scripta Materialia, 2017, 141, 45-49.	2.6	312
2	Friction stir welding of dissimilar materials between AA6061 and AA7075 Al alloys effects of process parameters. Materials & Design, 2014, 56, 185-192.	5.1	281
3	Microstructure and enhanced strength of laser aided additive manufactured CoCrFeNiMn high entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 137-144.	2.6	166
4	Porosity formation and gas bubble retention in laser metal deposition. Applied Physics A: Materials Science and Processing, 2009, 97, 641-649.	1.1	163
5	Progress and perspectives in laser additive manufacturing of key aeroengine materials. International Journal of Machine Tools and Manufacture, 2021, 170, 103804.	6.2	156
6	Deposition of TiAl ₄ V using a high power diode laser and wire, Part I: Investigation on the process characteristics. Surface and Coatings Technology, 2008, 202, 3933-3939.	2.2	144
7	Thermo-mechanical model for simulating laser cladding induced residual stresses with single and multiple clad beads. Journal of Materials Processing Technology, 2015, 224, 89-101.	3.1	120
8	Identification and qualification of temperature signal for monitoring and control in laser cladding. Optics and Lasers in Engineering, 2006, 44, 1348-1359.	2.0	116
9	Characterization of the process control for the direct laser metallic powder deposition. Surface and Coatings Technology, 2006, 201, 2676-2683.	2.2	108
10	Study on influential factors for process monitoring and control in laser aided additive manufacturing. Journal of Materials Processing Technology, 2013, 213, 463-468.	3.1	102
11	Microstructure and tensile properties of superalloy IN100 fabricated by micro-laser aided additive manufacturing. Materials & Design, 2014, 60, 401-408.	5.1	102
12	Microhardness and microstructure evolution of TiB ₂ reinforced Inconel 625/TiB ₂ composite produced by selective laser melting. Optics and Laser Technology, 2016, 80, 186-195.	2.2	101
13	A hybrid machine learning approach for additive manufacturing design feature recommendation. Rapid Prototyping Journal, 2017, 23, 983-997.	1.6	95
14	Numerical and experimental study of laser aided additive manufacturing for melt-pool profile and grain orientation analysis. Materials and Design, 2018, 137, 286-297.	3.3	95
15	Restoration of Nickel-Base Turbine Blade Knife-Edges with Controlled Laser Aided Additive Manufacturing. Physics Procedia, 2011, 12, 402-409.	1.2	94
16	Development and qualification of a novel laser-cladding head with integrated sensors. International Journal of Machine Tools and Manufacture, 2007, 47, 555-561.	6.2	91
17	Fabrication of a new Al-Al ₂ O ₃ -CNTs composite using friction stir processing (FSP). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 667, 125-131.	2.6	88
18	Effects of nano-Al ₂ O ₃ particle addition on grain structure evolution and mechanical behaviour of friction-stir-processed Al. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 602, 143-149.	2.6	84

#	ARTICLE	IF	CITATIONS
19	Deposition of TiAl ₄ using a high power diode laser and wire, Part II: Investigation on the mechanical properties. <i>Surface and Coatings Technology</i> , 2008, 202, 4613-4619.	2.2	79
20	Comparative study of microstructure evaluation and mechanical properties of 4043 aluminum alloy fabricated by wire-based additive manufacturing. <i>Materials and Design</i> , 2020, 186, 108205.	3.3	78
21	Rapid surface defect identification for additive manufacturing with in-situ point cloud processing and machine learning. <i>Virtual and Physical Prototyping</i> , 2021, 16, 50-67.	5.3	78
22	Thermal field prediction for laser scanning paths in laser aided additive manufacturing by physics-based machine learning. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 362, 112734.	3.4	77
23	Thermo-mechanical analyses for optimized path planning in laser aided additive manufacturing processes. <i>Materials and Design</i> , 2019, 162, 80-93.	3.3	75
24	Laser welding of CP Ti to stainless steel with different temporal pulse shapes. <i>Journal of Materials Processing Technology</i> , 2016, 231, 58-65.	3.1	73
25	The effect of processing conditions on the mechanical properties of polyethylene produced by selective laser sintering. <i>Polymer Testing</i> , 2016, 52, 89-93.	2.3	68
26	Additive manufacturing of steel-copper functionally graded material with ultrahigh bonding strength. <i>Journal of Materials Science and Technology</i> , 2021, 72, 217-222.	5.6	64
27	Microstructure and mechanical properties of Inconel 625/nano-TiB ₂ composite fabricated by LAAM. <i>Materials and Design</i> , 2016, 111, 70-79.	3.3	55
28	Effects of heat treatment on microstructures and tensile properties of IN718/TiC nanocomposite fabricated by selective laser melting. <i>International Journal of Precision Engineering and Manufacturing</i> , 2017, 18, 1693-1701.	1.1	51
29	Additive manufacturing of multi-scale heterostructured high-strength steels. <i>Materials Research Letters</i> , 2021, 9, 291-299.	4.1	49
30	Femtosecond Laser Produced Hydrophobic Hierarchical Structures on Additive Manufacturing Parts. <i>Nanomaterials</i> , 2018, 8, 601.	1.9	48
31	Investigation on the direct laser metallic powder deposition process via temperature measurement. <i>Applied Surface Science</i> , 2006, 253, 1411-1416.	3.1	47
32	Enhanced welding efficiency in laser welding of highly reflective pure copper. <i>Journal of Materials Processing Technology</i> , 2015, 216, 287-293.	3.1	41
33	Effects of laser cladding on fatigue performance of AISI 4340 steel in the as-clad and machine treated conditions. <i>Journal of Materials Processing Technology</i> , 2017, 243, 246-257.	3.1	39
34	Mechanical properties and microstructure evolution of selective laser melting Inconel 718 along building direction and sectional dimension. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 794, 139941.	2.6	38
35	Micro-structure and Mechanical Properties of Nano-TiC Reinforced Inconel 625 Deposited using LAAM. <i>Physics Procedia</i> , 2013, 41, 828-834.	1.2	37
36	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. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 746, 300-313.	2.6	36

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37	Comparison of carbon-based reinforcement on laser aided additive manufacturing Inconel 625 composites. Applied Surface Science, 2019, 490, 522-534.	3.1	35
38	Thermal analyses for optimal scanning pattern evaluation in laser aided additive manufacturing. Journal of Materials Processing Technology, 2019, 271, 178-188.	3.1	33
39	Laves phase tuning for enhancing high temperature mechanical property improvement in laser directed energy deposited Inconel 718. Composites Part B: Engineering, 2021, 215, 108819.	5.9	33
40	Achieving grain refinement and ultrahigh yield strength in laser aided additive manufacturing of Ti-6Al-4V alloy by trace Ni addition. Virtual and Physical Prototyping, 2021, 16, 417-427.	5.3	32
41	Influence of oxides on the cryogenic tensile properties of the laser aided additive manufactured CoCrNi medium entropy alloy. Composites Part B: Engineering, 2021, 216, 108837.	5.9	30
42	A Cost-Driven Design Methodology for Additive Manufactured Variable Platforms in Product Families. Journal of Mechanical Design, Transactions of the ASME, 2016, 138, .	1.7	29
43	Multidisciplinary design optimization to identify additive manufacturing resources in customized product development. Journal of Computational Design and Engineering, 2017, 4, 131-142.	1.5	29
44	Investigation of porosity reduction, microstructure and mechanical properties for joining of selective laser melting fabricated aluminium composite via friction stir welding. Journal of Manufacturing Processes, 2018, 36, 33-43.	2.8	29
45	Microstructure and wear behavior of laser clad interstitial CoCrFeNi high entropy alloy coating reinforced by carbon nanotubes. Surface and Coatings Technology, 2022, 434, 128241.	2.2	28
46	Stiffness modeling of an industrial robot with a gravity compensator considering link weights. Mechanism and Machine Theory, 2021, 161, 104331.	2.7	27
47	Effects of laser pulse modulation on intermetallic compounds formation for welding of Ti-6Al-4V and AA7075 using AA4047 filler. Materials and Design, 2022, 213, 110325.	3.3	27
48	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
49	Laser aided additive manufacturing of spatially heterostructured steels. International Journal of Machine Tools and Manufacture, 2022, 172, 103817.	6.2	26
50	Enhanced corrosion resistance of laser aided additive manufactured CoCrNi medium entropy alloys with oxide inclusion. Corrosion Science, 2022, 195, 109965.	3.0	26
51	Effect of post-deposition heat treatment on laser-TIG hybrid additive manufactured Al-Cu alloy. Virtual and Physical Prototyping, 2020, 15, 445-459.	5.3	25
52	A multi-material part design framework in additive manufacturing. International Journal of Advanced Manufacturing Technology, 2018, 99, 2111-2119.	1.5	24
53	Laser-Induced Graphene on Additive Manufacturing Parts. Nanomaterials, 2019, 9, 90.	1.9	24
54	Influence of pulse energy density in micro laser weld of crack sensitive Al alloy sheets. Journal of Manufacturing Processes, 2019, 38, 1-8.	2.8	23

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55	An additive manufacturing process model for product family design. <i>Journal of Engineering Design</i> , 2016, 27, 751-767.	1.1	21
56	Numerical study of temperature and cooling rate in selective laser melting with functionally graded support structures. <i>Additive Manufacturing</i> , 2018, 24, 543-551.	1.7	20
57	Characterization of wear properties of the functionally graded material deposited on cast iron by laser-aided additive manufacturing. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 105, 4097-4105.	1.5	20
58	Double-side friction stir welding of thick magnesium alloy: microstructure and mechanical properties. <i>Science and Technology of Welding and Joining</i> , 2020, 25, 359-368.	1.5	20
59	Comparison Study on Additive Manufacturing (AM) and Powder Metallurgy (PM) AlSi10Mg Alloys. <i>Jom</i> , 2018, 70, 644-649.	0.9	19
60	In-process adaptive dimension correction strategy for laser aided additive manufacturing using laser line scanning. <i>Journal of Materials Processing Technology</i> , 2022, 303, 117544.	3.1	19
61	Microstructure and mechanical behavior of laser aided additive manufactured low carbon interstitial Fe _{49.5} Mn ₃₀ Co ₁₀ Cr ₁₀ Co _{0.5} multicomponent alloy. <i>Journal of Materials Science and Technology</i> , 2021, 77, 38-46.	5.6	18
62	Microstructure evaluation and resultant mechanical properties of laser- arc hybrid additive manufactured Cu-Cr-Zr alloy. <i>Journal of Alloys and Compounds</i> , 2022, 912, 165044.	2.8	18
63	Study of the intrinsic mechanisms of nickel additive for grain refinement and strength enhancement of laser aided additively manufactured Ti-6Al-4V. <i>International Journal of Extreme Manufacturing</i> , 2022, 4, 035102.	6.3	18
64	Superior strength-ductility in laser aided additive manufactured high-strength steel by combination of intrinsic tempering and heat treatment. <i>Virtual and Physical Prototyping</i> , 2021, 16, 460-480.	5.3	17
65	Excellent combination of strength and ductility of CoCrNi medium entropy alloy fabricated by laser aided additive manufacturing. <i>Additive Manufacturing</i> , 2020, 34, 101202.	1.7	17
66	IN100 Ni-based superalloy fabricated by micro-laser aided additive manufacturing: Correlation of the microstructure and fracture mechanism. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 788, 139467.	2.6	16
67	Integrated numerical modelling and deep learning for multi-layer cube deposition planning in laser aided additive manufacturing. <i>Virtual and Physical Prototyping</i> , 2021, 16, 318-332.	5.3	16
68	Feasibility study on the Laser Aided Additive Manufacturing of die inserts for liquid forging. <i>Materials & Design</i> , 2010, 31, S112-S116.	5.1	15
69	Characteristic length of the solidified melt pool in selective laser melting process. <i>Rapid Prototyping Journal</i> , 2017, 23, 370-381.	1.6	15
70	Al-Cu alloy fabricated by novel laser-tungsten inert gas hybrid additive manufacturing. <i>Additive Manufacturing</i> , 2020, 32, 100954.	1.7	15
71	High-mass-proportion TiCp/Ti6Al4V titanium matrix composites prepared by directed energy deposition. <i>Additive Manufacturing</i> , 2020, 35, 101323.	1.7	15
72	Interplay between microstructure and deformation behavior of a laser-welded CoCrFeNi high entropy alloy. <i>Materials Research Express</i> , 2019, 6, 046514.	0.8	14

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73	Effect of Al_2O_3 on the part density and microstructure during the laser-based powder bed fusion of $\text{AlSi}_{10}\text{Mg}$ composite. Rapid Prototyping Journal, 2020, 26, 727-735.	1.6	14
74	Semi-Analytic Solution of Multiple Inhomogeneous Inclusions and Cracks in an Infinite Space. International Journal of Computational Methods, 2015, 12, 1550002.	0.8	13
75	Effect of Nano-Particle Addition on Grain Structure Evolution of Friction Stir-Processed Al 6061 During Postweld Annealing. Jom, 2016, 68, 2268-2273.	0.9	13
76	Effect of cyclic heat treatment on microstructure and mechanical properties of laser aided additive manufacturing $\text{Ti-6Al-2Sn-4Zr-2Mo}$ alloy. , 2022, 1, 100002.		13
77	Data-Driven Adaptive Control for Laser-Based Additive Manufacturing with Automatic Controller Tuning. Applied Sciences (Switzerland), 2020, 10, 7967.	1.3	12
78	On the heterogeneous cooling rates in laser-clad Al-50Si alloy. Surface and Coatings Technology, 2021, 408, 126780.	2.2	12
79	Influence of surface porosity on fatigue life of additively manufactured ASTM A131 EH36 steel. International Journal of Fatigue, 2021, 142, 105894.	2.8	11
80	Thermo-metallurgical simulation and performance evaluation of hybrid laser arc welding of chromium-molybdenum steel. Materials and Design, 2021, 210, 110029.	3.3	11
81	Surface Monitoring for Additive Manufacturing with in-situ Point Cloud Processing. , 2020, , .		9
82	Fatigue behavior of ASTM A131 EH36 steel samples additively manufactured with selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 777, 139049.	2.6	8
83	Hole design quality identification in laser aided additive manufacturing. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2018, 232, 909-917.	1.5	6
84	Microstructure and mechanical behavior of the laser synthesized composites modified by micro/nano scale rare earth oxides. Journal of Alloys and Compounds, 2022, 895, 162641.	2.8	6
85	Analysis of the combustion mechanism of diesel surrogate fuel under CO_2/O_2 atmosphere. Fuel, 2022, 309, 122223.	3.4	5
86	Effects of the TiC Nanoparticle on Microstructures and Tensile Properties of Selective Laser Melted IN718/TiC Nanocomposites. IOP Conference Series: Materials Science and Engineering, 2018, 317, 012074.	0.3	4
87	Microstructure and mechanical properties of ASTM A131 EH36 steel fabricated by laser aided additive manufacturing. Materials Characterization, 2021, 174, 110949.	1.9	4
88	Commonality and performance metrics to evaluate and optimise the design of additive manufactured product families. International Journal of Manufacturing Research, 2017, 12, 44.	0.1	3
89	Analytical Solution of Temperature Distribution in a Nonuniform Medium Due to a Moving Laser Beam and a Double Beam Scanning Strategy in the Selective Laser Melting Process. Journal of Heat Transfer, 2018, 140, .	1.2	3
90	Repair feasibility of SS416 stainless steel via laser aided additive manufacturing with SS410/Inconel625 powders. IOP Conference Series: Materials Science and Engineering, 0, 744, 012031.	0.3	3

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91	Heuristic Kinematics of a Redundant Robot-Positioner System for Additive Manufacturing. , 2020, , .		2
92	Process study and characterization of properties of FerCrNiMnCo high-entropy alloys fabricated by laser-aided additive manufacturing. , 2018, , .		2
93	The effect of output fibre diameter when welding austenitic stainless steel with a fibre laser. , 2007, , .		1
94	Study on the Deposition of Ni-base Waspaloy Powder via High Power Fiber Laser. , 2008, , .		1
95	Micro-Laser Welding of Plastics for the Applications in Micro-Fluidic Devices. Key Engineering Materials, 0, 447-448, 745-749.	0.4	1
96	Laser Transmission Welding of Transparent Thermoplastics Microfluidic Devices. , 2012, , .		1
97	An Additive Manufacturing resource process model for product family design. , 2013, , .		1
98	Multiphysics Modeling, Sensitivity Analysis, and Optical Performance Optimization for Optical Laser Head in Additive Manufacturing. Applied Sciences (Switzerland), 2021, 11, 868.	1.3	1
99	An evolutionary algorithm for automatic 2D layer segmentation in laser-aided additive manufacturing. Additive Manufacturing, 2021, 47, 102342.	1.7	1
100	Additive manufacturing and topology optimization to support product family design. , 2013, , 505-510.		1
101	Feasibility Study on Deposition of Tribaloy T800 on Cobalt-Based L605 Using Micro-Laser-Aided Additive Manufacturing. Metals, 2022, 12, 586.	1.0	1
102	Fibre laser welding of Ti6Al4V. , 2008, , .		0
103	Picosecond pulse of variable duration by phase matching frequency doubling crystal. Laser Physics, 2012, 22, 1455-1458.	0.6	0
104	The Additive Manufacturing Process Setting Feasible Space Exploration and Association With Variable Product Platform Design. , 2015, , .		0
105	Design of a novel control strategy for laser-aided additive manufacturing processes. , 2016, , .		0
106	Feasibility Study on Fabrication of Large-Scale Offshore Structural Steel Component Using LAAM Technology. , 2020, , .		0
107	Effects of High-Concentration CO2 on Ignition Delay Time of 70% n-Heptane/30% Toluene Mixtures. Journal of Sensors, 2022, 2022, 1-17.	0.6	0