An Overview of Additive Manufacturing of Titanium Co Deposition: Microstructure and Mechanical Properties

Applied Sciences (Switzerland)

7, 883

DOI: 10.3390/app7090883

Citation Report

#	Article	IF	Citations
1	Novel nucleation mechanisms through satelliting in direct metal deposition of Ti-15Mo. Materials Letters, 2018, 213, 197-200.	1.3	21
2	Prediction and Experiment of Fracture Behavior in Hot Press Forming of a TA32 Titanium Alloy Rolled Sheet. Metals, 2018, 8, 985.	1.0	10
3	Modeling of Microstructure Evolution of Ti6Al4V for Additive Manufacturing. Metals, 2018, 8, 633.	1.0	52
4	The Hardness of Additively Manufactured Alloys. Materials, 2018, 11, 2070.	1.3	94
5	Embedding anti-counterfeiting features in metallic components via multiple material additive manufacturing. Additive Manufacturing, 2018, 24, 1-12.	1.7	47
6	Thermoelectric Cooling-Aided Bead Geometry Regulation in Wire and Arc-Based Additive Manufacturing of Thin-Walled Structures. Applied Sciences (Switzerland), 2018, 8, 207.	1.3	75
7	An Overview of Key Challenges in the Fabrication of Metal Matrix Nanocomposites Reinforced by Graphene Nanoplatelets. Metals, 2018, 8, 172.	1.0	55
8	An Overview of Metal Matrix Nanocomposites Reinforced with Graphene Nanoplatelets; Mechanical, Electrical and Thermophysical Properties. Metals, 2018, 8, 423.	1.0	57
9	Prediction and validation of residual stresses generated during laser metal deposition of Î³ titanium aluminide thin wall structures. Materials Research Express, 2019, 6, 106550.	0.8	19
10	Evaluating the Quality Surface Performance of Additive Manufacturing Systems: Methodology and a Material Jetting Case Study. Materials, 2019, 12, 995.	1.3	60
11	Near Net Shape Manufacture of Titanium Alloy Components from Powder and Wire: A Review of State-of-the-Art Process Routes. Metals, 2019, 9, 689.	1.0	32
12	Particle Erosion Induced Phase Transformation of Different Matrix Microstructures of Powder Bed Fusion Ti-6Al-4V Alloy Flakes. Metals, 2019, 9, 730.	1.0	4
13	Reactive spontaneous infiltration of Al-activated TiO2 by molten aluminum. Transactions of Nonferrous Metals Society of China, 2019, 29, 657-666.	1.7	7
14	Fabrication of Metal Matrix Composite by Laser Metal Depositionâ€"A New Process Approach by Direct Dry Injection of Nanopowders. Materials, 2019, 12, 3584.	1.3	7
15	The effect of wire feed geometry on electron beam freeform 3D printing of complex-shaped samples from Ti-6Al-4V alloy. International Journal of Advanced Manufacturing Technology, 2019, 105, 3147-3156.	1.5	34
16	Additive manufacturing technology. , 2019, , 11-53.		18
17	An Overview of the Recent Developments in Metal Matrix Nanocomposites Reinforced by Graphene. Materials, 2019, 12, 2823.	1.3	61
18	Effects of boron addition on microstructures and mechanical properties of Ti-6Al-4V manufactured by direct laser deposition. Materials and Design, 2019, 184, 108191.	3.3	80

#	Article	IF	Citations
19	An investigation on the effect of powder recycling on the microstructure and mechanical properties of AISI 316L produced by Directed Energy Deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138360.	2.6	104
20	Application of Directed Energy Deposition-Based Additive Manufacturing in Repair. Applied Sciences (Switzerland), 2019, 9, 3316.	1.3	265
21	Effect of Nickel as Catalyst on the Activation of Titanium Hydride (TiH2) to Titanium Trichloride (TiCl3). Materials Today: Proceedings, 2019, 17, 743-751.	0.9	1
22	Mechanical Properties of Tool Steels with High Wear Resistance via Directed Energy Deposition. Metals, 2019, 9, 282.	1.0	20
23	Thermal Decomposition of Massive Phase to Fine Lamellar Î±/Î² in Tiâ€“6Alâ€“4V Additively Manufactured Alloy by Directed Energy Deposition. Metals and Materials International, 2019, 25, 1428-1435.	1.8	27
24	How the nozzle position affects the geometry of the melt pool in directed energy deposition process. Powder Metallurgy, 2019, 62, 213-217.	0.9	20
25	A comprehensive review of extrusion-based additive manufacturing processes for rapid production of metallic and ceramic parts. Advances in Manufacturing, 2019, 7, 155-173.	3.2	110
26	A stress-based topology optimization method by a Voronoi tessellation Additive Manufacturing oriented. International Journal of Advanced Manufacturing Technology, 2019, 103, 1965-1975.	1.5	16
27	Reduction of TiCl4 to TiH2 with CaH2 in Presence of Ni Powder. Minerals, Metals and Materials Series, 2019, , 131-144.	0.3	1
28	Microstructure and texture formation in commercially pure titanium prepared by cryogenic milling and spark plasma sintering. Materials Characterization, 2019, 151, 1-5.	1.9	12
29	Effect of Interlayer Cooling Time, Constraint and Tool Path Strategy on Deformation of Large Components Made by Laser Metal Deposition with Wire. Applied Sciences (Switzerland), 2019, 9, 5115.	1.3	26
30	The influence of technological regimes for obtaining samples from Ti-alloy by EBF3 method on its structural and mechanical characteristics. AIP Conference Proceedings, 2019, , .	0.3	0
31	An analysis of defects influence on axial fatigue strength of maraging steel specimens produced by additive manufacturing. International Journal of Fatigue, 2019, 118, 54-64.	2.8	99
32	Critical Features in the Microstructural Analysis of AISI 316L Produced By Metal Additive Manufacturing. Metallography, Microstructure, and Analysis, 2020, 9, 92-96.	0.5	19
33	Additive manufacturing of functionally graded metallic materials using laser metal deposition. Additive Manufacturing, 2020, 31, 100901.	1.7	101
34	Impact of DED process parameters on the metallurgical characteristics of 17-4 PH SS deposited using DED. CIRP Journal of Manufacturing Science and Technology, 2020, 31, 450-458.	2.3	23
35	In-situ synthesis and characterization of powdery nanocomposite â€œcarbon nanotubes/nanoaluminaâ€• Composites Communications, 2020, 22, 100534.	3.3	2
36	Microstructure evolution and mechanical properties of wire-feed electron beam additive manufactured Ti-5Al-2Sn-2Zr-4Mo-4Cr alloy with different subtransus heat treatments. Materials and Design, 2020, 195, 109063.	3.3	37

#	Article	IF	Citations
37	Hybrid manufacturing: a review of the synergy between directed energy deposition and subtractive processes. International Journal of Advanced Manufacturing Technology, 2020, 110, 3377-3390.	1.5	52
38	Development of an additive and subtractive hybrid manufacturing process planning strategy of planar surface for productivity and geometric accuracy. International Journal of Advanced Manufacturing Technology, 2020, 109, 1479-1491.	1.5	10
39	Biomedical Applications of Additive Manufacturing. , 2020, , 623-639.		5
40	The Effects of Combined Infill Patterns on Mechanical Properties in FDM Process. Polymers, 2020, 12, 2792.	2.0	57
41	A Shape Optimization Method for Part Design Derived from the Buildability Restrictions of the Directed Energy Deposition Additive Manufacturing Process. Designs, 2020, 4, 19.	1.3	15
42	Selective Laser Sintering (SLS) and Post-Processing of Prosopis Chilensis/Polyethersulfone Composite (PCPC). Materials, 2020, 13, 3034.	1.3	13
43	Sintering quality and parameters optimization of sisal fiber/PES composite fabricated by selective laser sintering (SLS). Journal of Thermoplastic Composite Materials, 2022, 35, 1632-1646.	2.6	12
44	A computational study of porosity formation mechanism, flow characteristics and solidification microstructure in the L-DED process. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	8
45	Physicalâ€“Mechanical Characteristics and Microstructure of Ti6Al7Nb Lattice Structures Manufactured by Selective Laser Melting. Materials, 2020, 13, 4123.	1.3	15
46	A Review on Metallic Alloys Fabrication Using Elemental Powder Blends by Laser Powder Directed Energy Deposition Process. Materials, 2020, 13, 3562.	1.3	23
47	A Critical Review of the Material Characteristics of Additive Manufactured IN718 for High-Temperature Application. Metals, 2020, 10, 1576.	1.0	26
48	Direct Laser Additive Manufacturing of TiAl Intermetallic Compound by Powder Directed Energy Deposition (DED). MATEC Web of Conferences, 2020, 321, 03020.	0.1	2
49	Characterization of Microstructure, Precipitations and Microsegregation in Laser Additive Manufactured Nickel-Based Single-Crystal Superalloy. Materials, 2020, 13, 2300.	1.3	7
50	Mechanical Properties of High Strength Aluminum Alloy EN AW-7075 Additively Manufactured by Directed Energy Deposition. Metals, 2020, 10, 579.	1.0	21
51	Tutorial Review of Bio-Inspired Approaches to Robotic Manipulation for Space Debris Salvage. Biomimetics, 2020, 5, 19.	1.5	12
52	Development of a Magnetic Levitation System for Additive Manufacturing: Simulation Analyses. IEEE Transactions on Magnetics, 2020, 56, 1-7.	1.2	9
53	Microstructure and Mechanical Properties of AISI 316L Produced by Directed Energy Deposition-Based Additive Manufacturing: A Review. Applied Sciences (Switzerland), 2020, 10, 3310.	1.3	105
54	Additive manufacturing of Ti-alloy: Thermal analysis and assessment of properties. Advances in Mechanical Engineering, 2020, 12, 168781402093306.	0.8	1

#	Article	IF	Citations
55	An investigation on the effect of deposition pattern on the microstructure, mechanical properties and residual stress of 316L produced by Directed Energy Deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 780, 139179.	2.6	101
56	An Innovative Approach on Directed Energy Deposition Optimization: A Study of the Process Environmentâ€™s Influence on the Quality of Ti-6Al-4V Samples. Applied Sciences (Switzerland), 2020, 10, 4212.	1.3	9
57	Ti-6Al-4V lattice structures produced by EBM: Heat treatment and mechanical properties. Procedia CIRP, 2020, 88, 411-416.	1.0	13
58	Hot deformation behavior and flow stress modeling of Tiâ€“6Alâ€“4V alloy produced via electron beam melting additive manufacturing technology in single Î²-phase field. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 792, 139822.	2.6	55
59	Microstructure and Mechanical Performance of Tiâ€“6Alâ€“4V Lattice Structures Manufactured via Electron Beam Melting (EBM): A Review. Acta Metallurgica Sinica (English Letters), 2020, 33, 183-203.	1.5	75
60	The characterisation and formation of novel microstructural features in a Tiâˆ’Nbâˆ’Zrâˆ’Moâˆ’Sn alloy manufactured by Laser Engineered Net Shaping (LENS). Additive Manufacturing, 2021, 37, 101705.	1.7	5
61	Effective parameters on the final properties of NiTi-based alloys manufactured by powder metallurgy methods: A review. Progress in Materials Science, 2021, 117, 100739.	16.0	68
62	Laser Powder Bed Fusion in-situ alloying of Ti-5%Cu alloy: Process-structure relationships. Journal of Alloys and Compounds, 2021, 857, 157558.	2.8	31
63	Medical application of biomimetic 4D printing. Drug Development and Industrial Pharmacy, 2021, 47, 521-534.	0.9	34
64	Additive manufacturing of a porous titanium layer structure Ti on a Coâ€“Cr alloy for manufacturing cementless implants. Journal of Materials Research and Technology, 2021, 10, 250-267.	2.6	13
65	Simulations of Laser Assisted Additive Manufacturing by Smoothed Particle Hydrodynamics. Computer Methods in Applied Mechanics and Engineering, 2021, 373, 113491.	3.4	34
66	Directed Energy Deposition (DED) Technology. , 2022, , 66-84.		7
67	Laser-directed energy deposition. , 2021, , 121-157.		3
68	Main Microstructural Characteristics of Ti-6Al-4V Components Produced via Electron Beam Additive Manufacturing (EBAM). Minerals, Metals and Materials Series, 2021, , 176-188.	0.3	1
69	Reclamation of titanium alloy based aerospace parts using laser based metal deposition methodology. Materials Today: Proceedings, 2021, 45, 4886-4892.	0.9	15
70	Review on the evolution and technology of State-of-the-Art metal additive manufacturing processes. Materials Today: Proceedings, 2021, 46, 7907-7920.	0.9	34
71	Exploration of surface roughness measurement solutions for additive manufactured components built by multi-axis tool paths. Additive Manufacturing, 2021, 38, 101822.	1.7	8
72	Effect of boron addition on microstructure, hardness and wear performance of Ti-6Al-4ÂV alloy manufactured by laser powder bed fusion additive manufacturing. Materials Characterization, 2021, 172, 110848.	1.9	30

#	Article	IF	Citations
73	Challenges in Qualifying Additive Manufacturing for Turbine Components: A Review. Transactions of the Indian Institute of Metals, 2021, 74, 1107-1128.	0.7	8
74	Exploration of hardness variations for additive manufactured thin-walled components built by multi-axis tool paths. International Journal of Advanced Manufacturing Technology, 2021, 113, 2209-2226.	1.5	0
75	Laser Based Additive Manufacturing Technology for Fabrication of Titanium Aluminide-Based Composites in Aerospace Component Applications. , 0, , .		3
76	Reverse effect of hot isostatic pressing on high-speed selective laser melted Tiâ€“6Alâ€“4V alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 807, 140880.	2.6	3
77	Rapid Synthesis and Sintering of Metals from Powders. Advanced Science, 2021, 8, e2004229.	5.6	23
78	Investigation of the dimensional accuracy using image processing techniques in powder bed fusion. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2021, 235, 1587-1597.	1.4	9
79	A Review of Path Planning for Wire Arc Additive Manufacturing (WAAM). Journal of Advanced Manufacturing Systems, 2021, 20, 589-609.	0.4	5
80	Evaluation of Mechanical Performance of Fibula Trauma Plate via EBM and SLM-Based Additive Manufacturing. Journal of the Korean Society of Manufacturing Technology Engineers, 2021, 30, 148-154.	0.1	0
81	Component design optimisation based on artificial intelligence in support of additive manufacturing repair and restoration: Current status and future outlook for remanufacturing. Journal of Cleaner Production, 2021, 296, 126401.	4.6	48
82	A Comprehensive Overview on the Latest Progress in the Additive Manufacturing of Metal Matrix Composites: Potential, Challenges, and Feasible Solutions. Acta Metallurgica Sinica (English Letters), 2021, 34, 1173-1200.	1.5	44
83	Hybrid metal additive manufacturing: A stateâ€“ofâ€“the-art review. Advances in Industrial and Manufacturing Engineering, 2021, 2, 100032.	1.2	57
84	Simulation of Metal Additive Manufacturing. , 0, , .		0
85	Optimization of the Projection Microstereolithography Process for a Photocurable Biomass-Based Resin. 3D Printing and Additive Manufacturing, 2021, 8, 293-301.	1.4	2
86	Additive manufacturing of alumina-silica reinforced Ti6Al4V for articulating surfaces of load-bearing implants. Ceramics International, 2021, 47, 18875-18885.	2.3	6
87	Cubic Lattice Structures of Ti6Al4V under Compressive Loading: Towards Assessing the Performance for Hard Tissue Implants Alternative. Materials, 2021, 14, 3866.	1.3	14
88	Electron beam melting of Ti-6Al-4V lattice structures: correlation between post heat treatment and mechanical properties. International Journal of Advanced Manufacturing Technology, 2021, 116, 3535-3547.	1.5	12
89	In-Situ Laser Directed Energy Deposition of Biomedical Ti-Nb and Ti-Zr-Nb Alloys from Elemental Powders. Metals, 2021, 11, 1205.	1.0	15
90	Role of changes in heat input on additively manufactured Tiâ€“6Alâ€“4V fabricated by directed energy deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 822, 141541.	2.6	6

#	Article	IF	Citations
91	Process planning solution strategies for fabrication of thin-wall domes using directed energy deposition. International Journal of Computer Integrated Manufacturing, 2022, 35, 493-509.	2.9	2
92	In-situ alloying in laser-based additive manufacturing processes: A critical review. Journal of Alloys and Compounds, 2021, 872, 159567.	2.8	113
93	Additive Manufacturing: A Layered Taxonomy and Classification for Material Engineering Process. Materials Science Forum, 0, 1045, 157-178.	0.3	0
94	On the influence of laser cladding parameters and number of deposited layers on as-built and machined AISI H13 tool steel multilayered claddings. CIRP Journal of Manufacturing Science and Technology, 2021, 35, 361-370.	2.3	17
95	Additive manufacturing of metals: Microstructure evolution and multistage control. Journal of Materials Science and Technology, 2022, 100, 224-236.	5.6	215
96	Model-Based Feedforward Control of Part Height in Directed Energy Deposition. Materials, 2021, 14, 337.	1.3	9
97	Additive Manufacturing and Repair by Using Laser Metal Deposition. Yosetsu Gakkai Shi/Journal of the Japan Welding Society, 2021, 90, 107-112.	0.0	0
98	Dynamic response of Ti-6.5Alâ€“1Moâ€“1Vâ€“2Zr-0.1B alloy fabricated by wire arc additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140310.	2.6	18
99	Innovative Approach to Evaluate the Mechanical Performance of Tiâ€“6Alâ€“4V Lattice Structures Produced by Electron Beam Melting Process. Metals and Materials International, 2021, 27, 55-67.	1.8	30
100	Recrystallization behavior and tensile properties of laser metal deposited Inconel 718 upon in-situ ultrasonic impact peening and heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 786, 139434.	2.6	46
101	Repairing Ti-6Al-4V aeronautical components with DED additive manufacturing. MATEC Web of Conferences, 2020, 321, 03017.	0.1	5
102	Directed-Energy Deposition Processes. , 2020, , 220-238.		5
103	Laser Metal Deposition of Ti6Al4Vâ€”A Brief Review. Applied Sciences (Switzerland), 2020, 10, 764.	1.3	50
104	Optimization and Simulation of Additive Manufacturing Processes. Advances in Civil and Industrial Engineering Book Series, 2020, , 187-209.	0.2	17
105	Theory and Technology of Direct Laser Deposition. , 0, , .		5
106	Influence of Angle of Corner Deposition on Temperature and Residual Stress Distributions in the Vicinity of the Deposited Region by a Ti-6Al-4V Wire-Feeding Type of Direct Energy Deposition Process. Journal of the Korean Society for Precision Engineering, 2018, 35, 853-859.	0.1	2
107	Additive Manufacturing. Advances in Logistics, Operations, and Management Science Book Series, 2019, , 165-183.	0.3	2
110	Laser Metal Deposition of Titanium Alloy: A Review. Lecture Notes in Mechanical Engineering, 2020, , 87-95.	0.3	0

#	Article	IF	Citations
111	Mechanical and Physical Characteristics Analysis of Radius Trauma Plate by EBM Additive Manufacturing. Journal of the Korean Society of Manufacturing Technology Engineers, 2020, 29, 147-154.	0.1	0
112	Additive Manufacturing of Titanium Alloys. , 2020, , 333-338.		0
113	Investigation on Interfacial Microstructures of Stainless Steel/Inconel Bonded by Directed Energy Deposition of alloy Powders. Journal of Korean Powder Metallurgy Institute, 2020, 27, 219-225.	0.2	0
114	Optimization of hybrid manufacturing process combining forging and wire-arc additive manufactured Ti-6Al-4V through hot deformation characterization. Journal of Alloys and Compounds, 2022, 894, 162453.	2.8	24
115	Additive Manufacturing (AM). Advances in Chemical and Materials Engineering Book Series, 2022, , 27-48.	0.2	0
116	The Effects of LENS Process Parameters on the Behaviour of 17-4 PH Stainless Steel. Minerals, Metals and Materials Series, 2020, , 481-490.	0.3	2
117	Mechanical and Physical Characteristic Analysis of Cranial Implants Manufactured through SLM and EBM Additive Manufacturing. Journal of the Korean Society of Manufacturing Technology Engineers, 2020, 29, 1-8.	0.1	1
118	COMPARATIVE STUDY OF LASER METAL DEPOSITION (LMD) OF COAXIAL WIRE AND POWDER IN THE MANUFACTURE OF TI-6AL-4V STRUCTURES. Dyna (Spain), 2020, 95, 376-379.	0.1	3
119	Additive Manufacturing Materials. , 2022, , 667-700.		1
120	Thermoplastics and Photopolymer Desktop 3D Printing System Selection Criteria Based on Technical Specifications and Performances for Instructional Applications. Technologies, 2021, 9, 91.	3.0	8
121	Enhanced osseointegration through direct energy deposition porous coating for cementless orthopedic implant fixation. Scientific Reports, 2021, 11, 22317.	1.6	4
122	A review on metallurgical aspects of laser additive manufacturing (LAM): Stainless steels, nickel superalloys, and titanium alloys. Journal of Materials Research and Technology, 2022, 16, 1029-1068.	2.6	67
123	Fatigue Analysis of Additive Manufacturing Materials with Microstructural Properties. , 2022, , .		0
124	The role of substrate preheating on the microstructure, roughness, and mechanical performance of AISI 316L produced by directed energy deposition additive manufacturing. International Journal of Advanced Manufacturing Technology, 2022, 119, 7159-7174.	1.5	13
125	Uncertainties Induced by Processing Parameter Variation in Selective Laser Melting of Ti6Al4V Revealed by In-Situ X-ray Imaging. Materials, 2022, 15, 530.	1.3	6
126	Additive manufacturing of a metallic optical benchâ€"process development, material qualification and demonstration. CEAS Space Journal, 0, , 1.	1.1	1
127	Additive Manufacturing in India Aerospace Manufacturing and MRO Industry: Challenges and Opportunities. Journal of the Institution of Engineers (India): Series C, 0, , 1.	0.7	0
128	Contributions of intra-build design parameters to mechanical properties in electron beam additive manufacturing of Ti6Al4V. Materials Today Communications, 2022, 30, 103190.	0.9	3

#	Article	IF	Citations
129	Thermo-mechanical characteristics of inconel 718 layer deposited on AISI 1045 steel substrate using a directed energy deposition process. Journal of Materials Research and Technology, 2022, 17, 293-309.	2.6	6
130	Review of high energy x-ray computed tomography for non-destructive dimensional metrology of large metallic advanced manufactured components. Reports on Progress in Physics, 2022, 85, 016102.	8.1	16
131	Characterization of Surface Topography Features for the Effect of Process Parameters and Their Correlation to Quality Monitoring in Metal Additive Manufacturing. Metrology, 2022, 2, 73-83.	0.9	1
132	Review on Additive Manufacturing of Multi-Material Parts: Progress and Challenges. Journal of Manufacturing and Materials Processing, 2022, 6, 4.	1.0	35
133	Microstructure and Corrosion Properties of CP-Ti Processed by Laser Powder Bed Fusion under Similar Energy Densities. Acta Metallurgica Sinica (English Letters), 2022, 35, 1453-1464.	1.5	8
134	Effects of additive manufacturing processes on part defects and properties: a classification review. International Journal on Interactive Design and Manufacturing, 2022, 16, 1471-1496.	1.3	12
135	Additive Manufacturing of AlSi10Mg and Ti6Al4V Lightweight Alloys via Laser Powder Bed Fusion: A Review of Heat Treatments Effects. Materials, 2022, 15, 2047.	1.3	21
136	Laser-based directed energy deposition (DED-LB) of advanced materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 142967.	2.6	82
137	Microstructural, mechanical, electrochemical, and biological studies of an electron beam melted Ti-6Al-4V alloy. Materials Today Communications, 2022, 31, 103337.	0.9	6
138	Intelligent systems for additive manufacturing-based repair in remanufacturing: a systematic review of its potential. PeerJ Computer Science, 2021, 7, e808.	2.7	10
139	Microstructure and Electrochemical Behavior of Contemporary Ti6Al4V Implant Alloys. Journal of Bio- and Tribo-Corrosion, 2022, 8, 1.	1.2	3
140	The Effect of Additive Manufacturing Parameters on Microstructure and Mechanical Properties of Biomedical Grade Ti-6Al-4V Alloy. , 2022, , 265-281.		3
141	Tensile properties of Ti-6Al-4V as-built by laser metal deposition: The relationship between heat affected zone bands, strain localization and anisotropy in ductility. Additive Manufacturing, 2022, 55, 102830.	1.7	5
142	Effect of Vacuum Heat Treatment on the Microstructure of a Laser Powder-Bed Fusion-Fabricated NiTa Alloy. Metals, 2022, 12, 700.	1.0	0
143	Effect of Heat Treatment on Microstructure and Mechanical Properties of Direct Energy Deposited AlCoCrFeNi2.1. Journal of Thermal Spray Technology, 2022, 31, 1634-1648.	1.6	2
144	Designer Metasurfaces for Antireflective Applications Enabled by Advanced Nanoparticle Technology. Advanced Optical Materials, 0, , 2200151.	3.6	6
145	Investigation of the properties, structure and quality of the alloy Tiâ€“4.25Alâ€“2V blanks produced by direct laser deposition. Voprosy Materialovedeniya, 2022, , 40-53.	0.0	0
146	A critical review on additive manufacturing of Ti-6Al-4V alloy: microstructure and mechanical properties. Journal of Materials Research and Technology, 2022, 18, 4641-4661.	2.6	131

#	Article	IF	Citations
147	A review on additive/subtractive hybrid manufacturing of directed energy deposition (DED) process. , 2022, 1, 100054.		40
148	Non-symmetrical design of coaxial nozzle for minimal gas consumption on L-DED process for Ti6Al4V reactive alloy. Journal of Manufacturing Processes, 2022, 78, 218-230.	2.8	0
149	3D Printing and Virtual Surgical Planning in Oral and Maxillofacial Surgery. Journal of Clinical Medicine, 2022, 11, 2385.	1.0	29
150	A review on various approaches of 3D printing of Ti-Alloy. Materials Today: Proceedings, 2022, 62, 3865-3868.	0.9	2
151	Microstructure and mechanical properties of in-situ synthesized Ti(N,C) strengthen IN718/1040 steel laminate by directed energy deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, , 143247.	2.6	7
152	Fatigue strength of LPBF Ti6Al4V machined under flood and cryogenic lubri-cooling conditions. International Journal of Fatigue, 2022, 162, 106973.	2.8	4
153	In-situ alloying of a fine grained fully equiaxed Ti-based alloy via electron beam powder bed fusion additive manufacturing process. Additive Manufacturing, 2022, 56, 102878.	1.7	2
154	Ti6Al4V-ELI Alloy Manufactured via Laser Powder-Bed Fusion and Heat-Treated below and above the Î²-Transus: Effects of Sample Thickness and Sandblasting Post-Process. Applied Sciences (Switzerland), 2022, 12, 5359.	1.3	2
155	Heat Treatment Behaviour of SLM-Built Titanium Matrix Composite: Microstructure and Tribological Performance. Journal of Materials Engineering and Performance, 0, , .	1.2	0
156	Online Deformation Measurement of Laser Repair Substrate Based on Orthogonal Sampling MoirÃ©. Applied Sciences (Switzerland), 2022, 12, 5469.	1.3	4
157	Fatigue behaviour of laser powder bed fusion (L-PBF) Tiâ€“6Alâ€“4V, Alâ€“Siâ€“Mg and stainless steels: a brief overview. International Journal of Fracture, 2022, 235, 3-46.	1.1	9
159	Evolutionary Numerical Analysis of the Melt Pool Generated by Directed Energy Deposition on Tilted Substrates. SSRN Electronic Journal, 0, , .	0.4	0
160	Hybrid additive manufacturing of an electron beam powder bed fused Ti6Al4V by transient liquid phase bonding. Journal of Materials Research and Technology, 2022, 20, 180-194.	2.6	8
161	Laser based directed energy deposition system for operando synchrotron x-ray experiments. Review of Scientific Instruments, 2022, 93, .	0.6	3
162	Powder spreading and spreadability in the additive manufacturing of metallic materials: A critical review. Journal of Materials Processing Technology, 2022, 308, 117706.	3.1	15
163	A deep-learning-based in-situ surface anomaly detection methodology for laser directed energy deposition via powder feeding. Journal of Manufacturing Processes, 2022, 81, 624-637.	2.8	13
164	Evolutionary Numerical Analysis of the Melt Pool Generated by Directed Energy Deposition on Tilted Substrates. SSRN Electronic Journal, 0, , .	0.4	0
165	An Overview of Laser Metal Deposition for Cladding: Defect Formation Mechanisms, Defect Suppression Methods and Performance Improvements of Laser-Cladded Layers. Materials, 2022, 15, 5522.	1.3	15

#	Article	IF	Citations
166	Investigation of IR pyrometer-captured thermal signatures and their role on microstructural evolution and properties of Inconel 625 tracks in DED-based additive manufacturing. Surface and Coatings Technology, 2022, 447, 128818.	2.2	2
167	Computational AI models in VAT photopolymerization: a review, current trends, open issues, and future opportunities. Neural Computing and Applications, 2022, 34, 17207-17229.	3.2	15
168	Directed energy deposition GRCop-42 copper alloy: Characterization and size effects. Materials and Design, 2022, 222, 111035.	3.3	7
169	Reclamation of intermetallic titanium aluminide aero-engine components using directed energy deposition technology. Manufacturing Review, 2022, 9, 27.	0.9	1
170	Enhanced surface properties and bioactivity of additively manufactured 316L stainless steel using different post-treatments. Materials Today: Proceedings, 2022, 70, 188-194.	0.9	5
171	Directed Energy Deposition via Artificial Intelligence-Enabled Approaches. Complexity, 2022, 2022, 1-32.	0.9	13
172	Microstructure and mechanical properties of a Monel K-500 alloy fabricated by directed energy deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 857, 144113.	2.6	1
173	Failure Analysis of Ultra-High Molecular Weight Polyethylene Tibial Insert in Total Knee Arthroplasty. Materials, 2022, 15, 7102.	1.3	5
174	Laser-Deposited Beta Type Ti-42Nb Alloy with Anisotropic Mechanical Properties for Pioneering Biomedical Implants with a Very Low Elastic Modulus. Materials, 2022, 15, 7172.	1.3	10
175	The effect of solar energy production on financial development and economic growth: Evidence from 11 selected countries. Energy Sources, Part B: Economics, Planning and Policy, 2022, 17, .	1.8	4
176	Optimisation of downskin parameters to produce metallic parts via laser powder bed fusion process: an overview. International Journal of Advanced Manufacturing Technology, 2022, 123, 2159-2182.	1.5	8
177	Achieving ultra-high strength rapidly in Ti-3Al-8V-6Cr-4Mo-4Zr alloy processed by directed energy deposition. Materials and Design, 2022, 224, 111325.	3.3	1
178	The Inhomogeneous Microstructure and Mechanical Properties of Tiâ€“6Alâ€“4V Additively Manufactured by Electron Beam Freeform Fabrication. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2023, 54, 312-319.	1.1	1
179	A review of geometry representation and processing methods for cartesian and multiaxial robot-based additive manufacturing. International Journal of Advanced Manufacturing Technology, 2022, 123, 3767-3794.	1.5	2
180	Process Modeling of Laser-Based Metal Additive Manufacturing of Metal Alloy. Materials Horizons, 2023, , 443-455.	0.3	0
181	Investigation of the microstructure evolution of TiC/Ti-6Al-4V composite manufactured by laser melting deposition. MATEC Web of Conferences, 2022, 370, 01005.	0.1	0
182	Laser Generated Broadband Rayleigh Waveform Evolution for Metal Additive Manufacturing Process Monitoring. Applied Sciences (Switzerland), 2022, 12, 12208.	1.3	3
184	An Approach to Improve the Resolution of DLP 3D Printing by Parallel Mechanism. Applied Sciences (Switzerland), 2022, 12, 12905.	1.3	2

#	Article	IF	Citations
185	Investigation of the Properties, Structure, and Quality of the Tiâ€“4.25Alâ€“2V Alloy Blanks Produced by Direct Laser Deposition. Inorganic Materials: Applied Research, 2022, 13, 1552-1561.	0.1	0
187	An Overview of the Process Mechanisms in the Laser Powder Directed Energy Deposition. Applied Sciences (Switzerland), 2023, 13, 117.	1.3	6
188	Development of a production approach to build a titanium flaperon rib by directed energy deposition. Progress in Additive Manufacturing, 0, , .	2.5	0
189	Rapid in situ alloying of CoCrFeMnNi high-entropy alloy from elemental feedstock toward high-throughput synthesis via laser powder bed fusion. Frontiers of Mechanical Engineering, 2023, 18, .	2.5	2
190	The shear properties and failure mechanism of TC11 titanium alloy fabricated by laser melting deposition technology. Materials Today Communications, 2023, 34, 105245.	0.9	2
191	Advances in Additive Manufacturing and Its Numerical Modelling. , 2023, , 1-21.		1
192	Modification of H950 Condition for 17-4 PH Stainless Steel Processed by DED. Minerals, Metals and Materials Series, 2023, , 165-176.	0.3	0
193	Quality of AM implants in biomedical application. , 2023, , 689-743.		1
194	The microstructure and mechanical properties of 316L austenitic stainless steel prepared by forge and laser melting deposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2023, 870, 144820.	2.6	11
195	Designing of gradient scaffolds and their applications in tissue regeneration. Biomaterials, 2023, 296, 122078.	5.7	12
196	Additive manufacturing of nickel-based superalloys: A state-of-the-art review on process-structure-defect-property relationship. Progress in Materials Science, 2023, 136, 101108.	16.0	48
197	3D Monte Carlo simulation: Effects of the scanning strategy on the grain evolution of AISI 304 powder by laser melting deposition. Journal of Materials Research, 2023, 38, 1706-1718.	1.2	0
198	Microstructure-electrochemical behavior relationship in post processed AISI316L stainless steel parts fabricated by laser powder bed fusion. Journal of Materials Research and Technology, 2023, 23, 3294-3311.	2.6	5
200	Effects of lead and lean in multi-axis directed energy deposition. International Journal of Advanced Manufacturing Technology, 2023, 125, 5119-5134.	1.5	1
205	A review on the melt extrusion-based fused deposition modeling (FDM): background, materials, process parameters and military applications. International Journal on Interactive Design and Manufacturing, 0, , .	1.3	5
208	Role of Machine Learning in Additive Manufacturing of Titanium Alloysâ€”A Review. Archives of Computational Methods in Engineering, 2023, 30, 5053-5069.	6.0	1
212	Advances in Additive Manufacturing and Its Numerical Modelling. , 2023, , 1193-1213.		0
215	Challenges in Additive Manufacturing Technology: Post Processing, Design and Materialâ€™s Selection. Materials Horizons, 2024, , 23-40.	0.3	0

#	Article	IF	Citations
220	Additive Manufacturing of Titanium and Alloys. Springer Handbooks, 2023, , 671-698.	0.3	0
221	Corrosion Behaviour of Additive Manufactured Metals. Springer Handbooks, 2023, , 751-776.	0.3	0
225	Alloy Systems for Additive Manufacturing. , 2023, , 359-382.		0
237	Single-Bead Microstructures of an AlCrFeCoNi High Entropy Alloy Processed by the Laser Directed Energy Deposition. Advances in Science and Technology, 0, , .	0.2	0