Xinhua Wu

List of Publications by Year
in descending order

82 papers	6,302 citations	94433 37 h-index	69250 77 g-index
82 all docs	82 docs citations	82 times ranked	3921 citing authors

#	Article	IF	Citations
1	Review of alloy and process development of TiAl alloys. Intermetallics, 2006, 14, 1114-1122.	3.9	806
2	Microstructures of laser-deposited Tiâ€"6Alâ€"4V. Materials & Design, 2004, 25, 137-144.	5.1	356
3	Selective laser melting of a high strength Al Mn Sc alloy: Alloy design and strengthening mechanisms. Acta Materialia, 2019, 171, 108-118.	7.9	307
4	The influence of processing parameters on aluminium alloy A357 manufactured by Selective Laser Melting. Materials and Design, 2016, 109, 334-346.	7.0	269
5	Comparative study of the microstructures and mechanical properties of direct laser fabricated and arc-melted Al x CoCrFeNi high entropy alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 633, 184-193.	5.6	250
6	Columnar to equiaxed transition in Al-Mg(-Sc)-Zr alloys produced by selective laser melting. Scripta Materialia, 2018, 145, 113-117.	5.2	247
7	Influence of post heat treatments on anisotropy of mechanical behaviour and microstructure of Hastelloy-X parts produced by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 667, 42-53.	5.6	204
8	Influences of processing parameters on surface roughness of Hastelloy X produced by selective laser melting. Additive Manufacturing, 2017, 13, 103-112.	3.0	197
9	Evolution of microstructure, mechanical and corrosion properties of AlCoCrFeNi high-entropy alloy prepared by direct laser fabrication. Journal of Alloys and Compounds, 2017, 694, 971-981.	5.5	196
10	Role of martensite decomposition in tensile properties of selective laser melted Ti-6Al-4V. Journal of Alloys and Compounds, 2018, 744, 357-363.	5.5	190
11	Porosity formation mechanisms and fatigue response in Al-Si-Mg alloys made by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 166-174.	5.6	186
12	Comparative study of commercially pure titanium produced by laser engineered net shaping, selective laser melting and casting processes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 705, 385-393.	5.6	176
13	Effect of heat treatment on the microstructure and anisotropy in mechanical properties of A357 alloy produced by selective laser melting. Materials and Design, 2018, 154, 275-290.	7.0	156
14	Direct laser deposition cladding of Al CoCrFeNi high entropy alloys on a high-temperature stainless steel. Surface and Coatings Technology, 2017, 332, 440-451.	4.8	123
15	Effect of platform temperature on the porosity, microstructure and mechanical properties of an Alâ€"Mgâ€"Scâ€"Zr alloy fabricated by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 732, 41-52.	5.6	122
16	Precipitation kinetics, microstructure evolution and mechanical behavior of a developed Alâ€"Mnâ€"Sc alloy fabricated by selective laser melting. Acta Materialia, 2020, 193, 239-251.	7.9	116
17	Mechanical Properties and In Vitro Behavior of Additively Manufactured and Functionally Graded Ti6Al4V Porous Scaffolds. Metals, 2018, 8, 200.	2.3	110
18	Effect of hot isostatic pressing on the microstructure and mechanical properties of additive manufactured AlxCoCrFeNi high entropy alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 733, 59-70.	5.6	109

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19	Surface roughness of Selective Laser Melted Ti-6Al-4V alloy components. Additive Manufacturing, 2018, 21, 91-103.	3.0	106
20	Towards a high strength aluminium alloy development methodology for selective laser melting. Materials and Design, 2019, 174, 107775.	7.0	102
21	Investigation of the structure and mechanical properties of additively manufactured Ti-6Al-4V biomedical scaffolds designed with a Schwartz primitive unit-cell. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 745, 195-202.	5.6	101
22	Effect of minor alloying elements on crack-formation characteristics of Hastelloy-X manufactured by selective laser melting. Additive Manufacturing, 2017, 16, 65-72.	3.0	95
23	Review of high-strength aluminium alloys for additive manufacturing by laser powder bed fusion. Materials and Design, 2022, 219, 110779.	7.0	94
24	Characterisation of a novel Sc and Zr modified Alâ€"Mg alloy fabricated by selective laser melting. Materials Letters, 2017, 196, 347-350.	2.6	89
25	Microstructure study of direct laser fabricated Ti alloys using powder and wire. Applied Surface Science, 2006, 253, 1424-1430.	6.1	84
26	Defect, Microstructure, and Mechanical Property of Ti-6Al-4V Alloy Fabricated by High-Power Selective Laser Melting. Jom, 2017, 69, 2684-2692.	1.9	83
27	Direct laser fabrication of Ti6Al4V/TiB. Journal of Materials Processing Technology, 2008, 195, 321-326.	6.3	72
28	Microstructural refinement in cast TiAl alloys by solid state transformations. Scripta Materialia, 2005, 52, 731-734.	5.2	71
29	Influence of heat treatment on microstructure and tensile behavior of a hot isostatically pressed nickel-based superalloy. Journal of Alloys and Compounds, 2013, 578, 454-464.	5.5	71
30	The Effects of Selective Laser Melting Process Parameters on Relative Density of the AlSi10Mg Parts and Suitable Procedures of the Archimedes Method. Applied Sciences (Switzerland), 2019, 9, 583.	2.5	71
31	The origins for tensile properties of selective laser melted aluminium alloy A357. Additive Manufacturing, 2017, 17, 113-122.	3.0	66
32	Optimisation of selective laser melting parameters for the Ni-based superalloy IN-738 LC using Doehlertâ€™s design. Rapid Prototyping Journal, 2017, 23, 881-892.	3.2	61
33	Multiple precipitation pathways in an Al-7Si-0.6Mg alloy fabricated by selective laser melting. Scripta Materialia, 2019, 160, 66-69.	5.2	55
34	Selective laser melted Al-7Si-0.6Mg alloy with in-situ precipitation via platform heating for residual strain removal. Materials and Design, 2019, 182, 108005.	7.0	52
35	Oxidation-induced embrittlement of TiAl alloys. Intermetallics, 2009, 17, 540-552.	3.9	51
36	Analytical electron microscopy of C-free and C-containing Tiâ€"15â€"3. Acta Materialia, 2006, 54, 5433-5448.	7.9	50

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37	Static coarsening behaviour of lamellar microstructure in selective laser melted Tiâ€“6Alâ€“4V. Journal of Materials Science and Technology, 2019, 35, 1578-1586.	10.7	48
38	The mechanism of aqueous stress-corrosion cracking of Î± + Î² titanium alloys. Corrosion Science, 2017, 125, 29-39.	6.6	36
39	Characterization of a laser-fabricated hypereutectic Alâ€“Sc alloy bar. Scripta Materialia, 2014, 87, 13-16.	5.2	35
40	Influence of Gas Flow Speed on Laser Plume Attenuation and Powder Bed Particle Pickup in Laser Powder Bed Fusion. Jom, 2020, 72, 1039-1051.	1.9	35
41	Review of laser powder bed fusion (LPBF) fabricated Ti-6Al-4V: process, post-process treatment, microstructure, and property. Light Advanced Manufacturing, 2021, 2, 1.	5.1	35
42	Characterisation of AlScZr and AlErZr alloys processed by rapid laser melting. Scripta Materialia, 2018, 151, 42-46.	5.2	34
43	Effect of solution heat treatment and hot isostatic pressing on the microstructure and mechanical properties of Hastelloy X manufactured by electron beam powder bed fusion. Journal of Materials Science and Technology, 2022, 98, 99-117.	10.7	33
44	Alloy and process development of TiAl. Journal of Materials Science, 2004, 39, 3935-3940.	3.7	31
45	Pre-yielding and pre-yield cracking in TiAl-based alloys. Intermetallics, 2006, 14, 82-90.	3.9	31
46	On the role of cooling rate and temperature in forming twinned Î±â€™ martensite in Tiâ€“6Alâ€“4V. Journal of Alloys and Compounds, 2020, 813, 152247.	5.5	30
47	Effect of heat treatment on microstructure and mechanical properties of laser deposited Ti60A alloy. Journal of Alloys and Compounds, 2014, 585, 220-228.	5.5	27
48	Effects of microtexture and Ti3Al (Î±2) precipitates on stress-corrosion cracking properties of a Ti-8Al-1Mo-1V alloy. Corrosion Science, 2017, 116, 22-33.	6.6	27
49	The influence of interrupted cooling on the massive transformation in Ti46Al8Nb. Intermetallics, 2007, 15, 1147-1155.	3.9	25
50	Improving fatigue performances of selective laser melted Al-7Si-0.6Mg alloy via defects control. International Journal of Fatigue, 2019, 129, 105215.	5.7	25
51	A strong and ductile Ti-3Al-8V-6Cr-4Mo-4Zr (Beta-C) alloy achieved by introducing trace carbon addition and cold work. Scripta Materialia, 2020, 178, 124-128.	5.2	24
52	The role of oxygen content and cooling rate on transformations in TiAl-based alloys. Intermetallics, 2006, 14, 838-847.	3.9	23
53	Effect of Carbon on Microstructure and Mechanical Properties of a Eutectoid Î² Titanium Alloy. Journal of Materials Engineering and Performance, 2005, 14, 735-740.	2.5	22
54	Origin of non-uniform plasticity in a high-strength Al-Mn-Sc based alloy produced by laser powder bed fusion. Journal of Materials Science and Technology, 2022, 103, 121-133.	10.7	22

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55	Effect of stiffness anisotropy on topology optimisation of additively manufactured structures. Engineering Structures, 2018, 171, 842-848.	5.3	21
56	Microstructure, mechanical behaviour and strengthening mechanisms in Hastelloy X manufactured by electron beam and laser beam powder bed fusion. Journal of Alloys and Compounds, 2021, 862, 158034.	5.5	21
57	Investigation on the Microstructure of Direct Laser Additive Manufactured Ti6Al4V Alloy. Materials Research, 2015, 18, 24-28.	1.3	20
58	The role of surface condition, residual stress and microstructure on pre-yield cracking in Ti44Al8Nb1B. Intermetallics, 2004, 12, 281-287.	3.9	19
59	High cycle fatigue and fracture behaviour of a hot isostatically pressed nickel-based superalloy. Philosophical Magazine, 2014, 94, 242-264.	1.6	18
60	Aluminum alloys for selective laser melting â€" towards improved performance. , 2019, , 301-325.		16
61	The influence of pressure on solid-state transformations in Tiâ€"46Alâ€"8Nb. Scripta Materialia, 2007, 56, 253-256.	5.2	15
62	The effect of HIPping pressure on phase transformations in Tiâ€"5Alâ€"5Moâ€"5Vâ€"3Cr. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 598, 207-216.	5.6	13
63	Characterisation of the multiple effects of Sc/Zr elements in selective laser melted Al alloy. Materials Characterization, 2022, 183, 111653.	4.4	12
64	The formation of grain boundary gamma during cooling of Ti46Al8Nb. Intermetallics, 2009, 17, 285-290.	3.9	11
65	Experimental and statistical analysis on process parameters and surface roughness relationship for selective laser melting of Hastelloy X. Rapid Prototyping Journal, 2019, 25, 1309-1318.	3.2	9
66	In-situ formed graded microstructure and mechanical property of selective laser melted 15â€"5ÂPH stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 847, 143340.	5.6	9
67	The Influence of Oxygen and Carbon-Content on Aging of Ti-15-3. Journal of Materials Engineering and Performance, 2005, 14, 728-734.	2.5	8
68	Microstructural study of pre-yielding and pre-yield cracking in TiAl-based alloys. Intermetallics, 2006, 14, 91-101.	3.9	8
69	Axisymmetric structural optimization design and void control for selective laser melting. Structural and Multidisciplinary Optimization, 2017, 56, 1027-1043.	3.5	8
70	Melt pool morphology and surface roughness relationship for direct metal laser solidification of Hastelloy X. Rapid Prototyping Journal, 2020, 26, 1389-1399.	3.2	8
71	Isotropic and improved tensile properties of Ti-6Al-4V achieved by in-situ rolling in direct energy deposition. Additive Manufacturing, 2021, 46, 102151.	3.0	8
72	Effect of Deformation Reduction on Microstructure, Texture, and Mechanical Properties of Forged Ti-6Al-4V. Journal of Materials Engineering and Performance, 2021, 30, 1147-1156.	2.5	7

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73	On the Role of C Addition on Î± Precipitation in a Î² Titanium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 1089-1095.	2.2	6
74	Implementing a structural continuity constraint and a halting method for the topology optimization of energy absorbers. Structural and Multidisciplinary Optimization, 2016, 54, 429-448.	3.5	6
75	On the complex intermetallics in an Al-Mn-Sc based alloy produced by laser powder bed fusion. Journal of Alloys and Compounds, 2022, 901, 163571.	5.5	6
76	Process variation in Laser Powder Bed Fusion of Ti-6Al-4V. Additive Manufacturing, 2021, 41, 101987.	3.0	5
77	In Situ Synchrotron Studies of Reversible and Irreversible Non-elastic Strain in a Two-Phase TiAl Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 607-618.	2.2	3
78	Novel implant for peri-prosthetic proximal tibia fractures. Injury, 2018, 49, 705-711.	1.7	3
79	Factors Influencing the Return to Equilibrium of Quenched Beta Ti Alloys and of Massively Transformed TiAl-Based Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 1480-1485.	2.2	2
80	Microstructure and Texture Evolution in Double-Cone Samples of Ti-6Al-4V Alloy with Colony Preform Microstructure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 5989-6002.	2.2	1
81	The processing and heat treatment of selective laser melted Al-7Si-0.6Mg alloy. , 2019, , 143-161.		1
82	Process variation in Selective Laser Melting of Ti-6Al-4V alloy. MATEC Web of Conferences, 2020, 321, 03024.	0.2	1