

Ryan R Dehoff

List of Publications by Citations

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59
papers

4,350
citations

28
h-index

65
g-index

69
ext. papers

5,293
ext. citations

5
avg, IF

5.87
L-index

#	Paper	IF	Citations
59	The metallurgy and processing science of metal additive manufacturing. <i>International Materials Reviews</i> , 2016 , 61, 315-360	16.1	1185
58	Site specific control of crystallographic grain orientation through electron beam additive manufacturing. <i>Materials Science and Technology</i> , 2015 , 31, 931-938	1.5	303
57	Numerical modeling of heat-transfer and the influence of process parameters on tailoring the grain morphology of IN718 in electron beam additive manufacturing. <i>Acta Materialia</i> , 2016 , 112, 303-314	8.4	271
56	Self-organized amorphous TiO ₂ nanotube arrays on porous Ti foam for rechargeable lithium and sodium ion batteries. <i>Journal of Power Sources</i> , 2013 , 222, 461-466	8.9	219
55	Effects of the microstructure and porosity on properties of Ti-6Al-4V ELI alloy fabricated by electron beam melting (EBM). <i>Additive Manufacturing</i> , 2016 , 10, 47-57	6.1	189
54	Effects of heat treatments on microstructure and properties of Ti-6Al-4V ELI alloy fabricated by electron beam melting (EBM). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 685, 417-428	5.3	186
53	Comparison of Residual Stresses in Inconel 718 Simple Parts Made by Electron Beam Melting and Direct Laser Metal Sintering. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 1419-1432	2.3	150
52	Thermal effects on microstructural heterogeneity of Inconel 718 materials fabricated by electron beam melting. <i>Journal of Materials Research</i> , 2014 , 29, 1920-1930	2.5	136
51	Control and elimination of nucleation-related defects in GaP/Si(001) heteroepitaxy. <i>Applied Physics Letters</i> , 2009 , 94, 232106	3.4	119
50	Characterization of interfacial microstructures in 3003 aluminum alloy blocks fabricated by ultrasonic additive manufacturing. <i>Acta Materialia</i> , 2010 , 58, 4305-4315	8.4	113
49	Localized melt-scan strategy for site specific control of grain size and primary dendrite arm spacing in electron beam additive manufacturing. <i>Acta Materialia</i> , 2017 , 140, 375-387	8.4	99
48	Crystallographic texture engineering through novel melt strategies via electron beam melting: Inconel 718. <i>Materials Science and Technology</i> , 2015 , 31, 939-944	1.5	95
47	Feedstock powder processing research needs for additive manufacturing development. <i>Current Opinion in Solid State and Materials Science</i> , 2018 , 22, 8-15	12	90
46	A review on the fatigue behavior of Ti-6Al-4V fabricated by electron beam melting additive manufacturing. <i>International Journal of Fatigue</i> , 2019 , 119, 173-184	5	86
45	. <i>IEEE Transactions on Electron Devices</i> , 2010 , 57, 3361-3369	2.9	84
44	Recyclability Study on Inconel 718 and Ti-6Al-4V Powders for Use in Electron Beam Melting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016 , 47, 754-762	2.5	81
43	Thermographic Microstructure Monitoring in Electron Beam Additive Manufacturing. <i>Scientific Reports</i> , 2017 , 7, 43554	4.9	70

42	Mechanical behavior of post-processed Inconel 718 manufactured through the electron beam melting process. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 680, 338-346	5.3	70
41	Additive manufacturing of materials: Opportunities and challenges. <i>MRS Bulletin</i> , 2015 , 40, 1154-1161	3.2	69
40	Microstructure Development in Electron Beam-Melted Inconel 718 and Associated Tensile Properties. <i>Jom</i> , 2016 , 68, 1012-1020	2.1	69
39	Solidification and solid-state transformation sciences in metals additive manufacturing. <i>Scripta Materialia</i> , 2017 , 135, 130-134	5.6	59
38	Defects and 3D structural inhomogeneity in electron beam additively manufactured Inconel 718. <i>Materials Characterization</i> , 2018 , 143, 171-181	3.9	52
37	Additive manufacturing of liquid/gas diffusion layers for low-cost and high-efficiency hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2016 , 41, 3128-3135	6.7	47
36	Microstructural and micromechanical characterization of IN718 theta shaped specimens built with electron beam melting. <i>Acta Materialia</i> , 2016 , 108, 161-175	8.4	47
35	Powder bed charging during electron-beam additive manufacturing. <i>Acta Materialia</i> , 2017 , 124, 437-445	8.4	44
34	A defect-resistant Co-Ni superalloy for 3D printing. <i>Nature Communications</i> , 2020 , 11, 4975	17.4	38
33	Properties of Inconel 625 mesh structures grown by electron beam additive manufacturing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 615, 191-197	5.3	37
32	Thermographic in-situ process monitoring of the electron-beam melting technology used in additive manufacturing 2013 ,		36
31	Electron beam melting of Inconel 718: effects of processing and post-processing. <i>Materials Science and Technology</i> , 2018 , 34, 612-619	1.5	28
30	Porosity detection in electron beam-melted Ti-6Al-4V using high-resolution neutron imaging and grating-based interferometry. <i>Progress in Additive Manufacturing</i> , 2017 , 2, 125-132	5	28
29	Correlations Between Powder Feedstock Quality, In Situ Porosity Detection, and Fatigue Behavior of Ti-6Al-4V Fabricated by Powder Bed Electron Beam Melting: A Step Towards Qualification. <i>Jom</i> , 2018 , 70, 1686-1691	2.1	26
28	Correlation of Microstructure to Creep Response of Hot Isostatically Pressed and Aged Electron Beam Melted Inconel 718. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018 , 49, 5107-5117	2.3	22
27	Characterization of Crystallographic Structures Using Bragg-Edge Neutron Imaging at the Spallation Neutron Source. <i>Journal of Imaging</i> , 2017 , 3, 65	3.1	22
26	Effect of Hypoeutectic Boron Additions on the Grain Size and Mechanical Properties of Ti-6Al-4V Manufactured with Powder Bed Electron Beam Additive Manufacturing. <i>Jom</i> , 2017 , 69, 472-478	2.1	18
25	Towards high-temperature applications of aluminium alloys enabled by additive manufacturing. <i>International Materials Reviews</i> , 1-48	16.1	15

24	Mechanical Characterization of an Additively Manufactured Inconel 718 Theta-Shaped Specimen. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016 , 47, 971-980	2.3	14
23	Direct digital additive manufacturing technologies: Path towards hybrid integration 2012 ,		12
22	Current Status of Ti PM: Progress, Opportunities and Challenges. <i>Key Engineering Materials</i> , 2012 , 520, 1-7	0.4	11
21	Nucleation and growth of chimney pores during electron-beam additive manufacturing. <i>Journal of Materials Science</i> , 2017 , 52, 3429-3435	4.3	10
20	Use of stereology to derive a new kinetic equation for mean curvature driven grain growth. <i>Acta Materialia</i> , 2015 , 100, 240-246	8.4	9
19	Investigating the effect of metal powder recycling in Electron beam Powder Bed Fusion using process log data. <i>Additive Manufacturing</i> , 2020 , 32, 100994	6.1	9
18	Elevated temperature ductility dip in an additively manufactured Al-Cu-Ce alloy. <i>Acta Materialia</i> , 2021 , 220, 117285	8.4	9
17	Development of a two-body wet abrasion test method with attention to the effects of reused abrasant. <i>Wear</i> , 2013 , 302, 1035-1039	3.5	8
16	Calibrating IR cameras for in-situ temperature measurement during the electron beam melt processing of Inconel 718 and Ti-Al6-V4 2016 ,		7
15	Processing of tungsten through electron beam melting. <i>Journal of Nuclear Materials</i> , 2021 , 555, 153041	3.3	7
14	Microstructural Properties of Gamma Titanium Aluminide Manufactured by Electron Beam Melting	455-462	7
13	The Influence of Powder Reuse on the Properties of Nickel Super Alloy ATI 718 in Laser Powder Bed Fusion Additive Manufacturing. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2021 , 52, 676-688	2.5	6
12	3D Characterization of the Columnar-to-Equiaxed Transition in Additively Manufactured Inconel 718. <i>Minerals, Metals and Materials Series</i> , 2020 , 990-1002	0.3	5
11	Geometry-independent microstructure optimization for electron beam powder bed fusion additive manufacturing. <i>Additive Manufacturing</i> , 2020 , 35, 101354	6.1	4
10	Non-destructive characterization of additively manufactured components with x-ray computed tomography for part qualification: A study with laboratory and synchrotron x-rays. <i>Materials Characterization</i> , 2021 , 173, 110894	3.9	4
9	Predicting geometric influences in metal additive manufacturing. <i>Materials Today Communications</i> , 2020 , 25, 101174	2.5	3
8	A creep-resistant additively manufactured Al-Ce-Ni-Mn alloy. <i>Acta Materialia</i> , 2022 , 227, 117699	8.4	3
7	Considerations for Application of Additive Manufacturing to Nuclear Reactor Core Components 2019 ,		3

6	Progress in the Processing and Understanding of Alloy 718 Fabricated Through Powder Bed Additive Manufacturing Processes. <i>Minerals, Metals and Materials Series</i> , 2018 , 69-88	0.3	3
5	Electron Beam Melting Technology Improvements		2
4	Al-Cu-Ce(-Zr) alloys with an exceptional combination of additive processability and mechanical properties. <i>Additive Manufacturing</i> , 2021 , 48, 102404	6.1	2
3	Free Form Fluidics. <i>Mechanical Engineering</i> , 2013 , 135, S17-S20	0.9	2
2	Processing-Microstructure Relationships From 3D Characterization of Additively Manufactured Metals. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2582-2583	0.5	1
1	Developing Processing Parameters for Nickel-base Superalloys for the Electron Beam Melting Additive Manufacturing Process359-365		