M J Bermingham

List of Publications by Year
in descending order

82 papers	5,000 citations	101384 36 h-index	95083 68 g-index
83 all docs	83 docs citations	83 times ranked	3166 citing authors

#	Article	IF	Citations
1	Promoting the columnar to equiaxed transition and grain refinement of titanium alloys during additive manufacturing. Acta Materialia, 2019, 168, 261-274.	3.8	434
2	Grain structure control during metal 3D printing by high-intensity ultrasound. Nature Communications, 2020, 11, 142.	5.8	416
3	New observations on tool life, cutting forces and chip morphology in cryogenic machining Ti-6Al-4V. International Journal of Machine Tools and Manufacture, 2011, 51, 500-511.	6.2	302
4	Controlling the microstructure and properties of wire arc additive manufactured Tiâ€“6Alâ€“4V with trace boron additions. Acta Materialia, 2015, 91, 289-303.	3.8	280
5	A comparison of cryogenic and high pressure emulsion cooling technologies on tool life and chip morphology in Tiâ€“6Alâ€“4V cutting. Journal of Materials Processing Technology, 2012, 212, 752-765.	3.1	172
6	Grain-refinement mechanisms in titanium alloys. Journal of Materials Research, 2008, 23, 97-104.	1.2	165
7	Current development of creep-resistant magnesium cast alloys: A review. Materials and Design, 2018, 155, 422-442.	3.3	151
8	Effects of boron on microstructure in cast titanium alloys. Scripta Materialia, 2008, 59, 538-541.	2.6	147
9	Optimising the mechanical properties of Ti-6Al-4V components produced by wire + arc additive manufacturing with post-process heat treatments. Journal of Alloys and Compounds, 2018, 753, 247-255.	2.8	138
10	Mechanical properties and biocompatibility of porous titanium scaffolds for bone tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 169-174.	1.5	128
11	Grain refinement of wire arc additively manufactured titanium by the addition of silicon. Journal of Alloys and Compounds, 2017, 695, 2097-2103.	2.8	118
12	Metal injection moulding of titanium and titanium alloys: Challenges and recent development. Powder Technology, 2017, 319, 289-301.	2.1	115
13	Grain Refinement of Alloys in Fusion-Based Additive Manufacturing Processes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4341-4359.	1.1	115
14	Beryllium as a grain refiner in titanium alloys. Journal of Alloys and Compounds, 2009, 481, L20-L23.	2.8	113
15	The mechanism of grain refinement of titanium by silicon. Scripta Materialia, 2008, 58, 1050-1053.	2.6	111
16	Additively manufactured iron-manganese for biodegradable porous load-bearing bone scaffold applications. Acta Biomaterialia, 2020, 103, 346-360.	4.1	111
17	Effect of trace lanthanum hexaboride and boron additions on microstructure, tensile properties and anisotropy of Ti-6Al-4V produced by additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 719, 1-11.	2.6	103
18	Understanding the tool wear mechanism during thermally assisted machining Ti-6Al-4V. International Journal of Machine Tools and Manufacture, 2012, 62, 76-87.	6.2	95

#	ARTICLE	IF	CITATIONS
19	Evaluation of the mechanical and wear properties of titanium produced by three different additive manufacturing methods for biomedical application. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 760, 339-345.	2.6	90
20	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
21	Tool life and wear mechanisms in laser assisted milling Tiâ€"6Alâ€"4V. Wear, 2015, 322-323, 151-163.	1.5	74
22	Understanding solid solution strengthening at elevated temperatures in a creep-resistant Mgâ€"Gdâ€"Ca alloy. Acta Materialia, 2019, 181, 185-199.	3.8	71
23	Revealing the Mechanisms of Grain Nucleation and Formation During Additive Manufacturing. Jom, 2020, 72, 1065-1073.	0.9	66
24	Segregation and grain refinement in cast titanium alloys. Journal of Materials Research, 2009, 24, 1529-1535.	1.2	64
25	Sensitivity of Ti-6Al-4V components to oxidation during out of chamber Wireâ€‑+â€‑Arc Additive Manufacturing. Journal of Materials Processing Technology, 2018, 258, 29-37.	3.1	59
26	SPH/FE modeling of cutting force and chip formation during thermally assisted machining of Ti6Al4V alloy. Computational Materials Science, 2014, 84, 188-197.	1.4	58
27	Novel cost-effective Fe-based high entropy alloys with balanced strength and ductility. Materials and Design, 2019, 162, 24-33.	3.3	58
28	Trace Carbon Addition to Refine Microstructure and Enhance Properties of Additive-Manufactured Ti-6Al-4V. Jom, 2018, 70, 1670-1676.	0.9	57
29	Grain refinement of laser remelted Al-7Si and 6061 aluminium alloys with TiborÂ® and scandium additions. Journal of Manufacturing Processes, 2018, 35, 715-720.	2.8	46
30	Laser additive manufacturing of steels. International Materials Reviews, 2022, 67, 487-573.	9.4	45
31	Finite Element Modeling of Cutting Force and Chip Formation During Thermally Assisted Machining of Ti6Al4V Alloy. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	1.3	41
32	The response of the high strength Tiâ€"10Vâ€"2Feâ€"3Al beta titanium alloy to laser assisted cutting. Precision Engineering, 2013, 37, 461-472.	1.8	41
33	A novel method to 3D-print fine-grained AlSi10Mg alloy with isotropic properties via inoculation with LaB6 nanoparticles. Additive Manufacturing, 2020, 32, 101034.	1.7	41
34	Metallurgical features of direct laser-deposited Ti6Al4V with trace boron. Journal of Manufacturing Processes, 2018, 35, 651-656.	2.8	40
35	The influence of laser processing parameters on the densification and surface morphology of pure Fe and Fe-35Mn scaffolds produced by selective laser melting. Journal of Manufacturing Processes, 2019, 40, 113-121.	2.8	40
36	Comparative Study of Pure Iron Manufactured by Selective Laser Melting, Laser Metal Deposition, and Casting Processes. Advanced Engineering Materials, 2019, 21, 1900049.	1.6	39

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37	Laser-assisted milling strategies with different cutting tool paths. International Journal of Advanced Manufacturing Technology, 2014, 74, 1487-1494.	1.5	36
38	Challenges and Opportunities in the Selective Laser Melting of Biodegradable Metals for Load-Bearing Bone Scaffold Applications. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 3311-3334.	1.1	35
39	Manufacturing of biocompatible porous titanium scaffolds using a novel spherical sugar pellet space holder. Materials Letters, 2017, 195, 92-95.	1.3	34
40	A cost-effective Fe-rich compositionally complicated alloy with superior high-temperature oxidation resistance. Corrosion Science, 2021, 180, 109190.	3.0	28
41	Advantages of milling and drilling Ti-6Al-4V components with high-pressure coolant. International Journal of Advanced Manufacturing Technology, 2014, 72, 77-88.	1.5	27
42	The Challenges Associated with the Formation of Equiaxed Grains during Additive Manufacturing of Titanium Alloys. Key Engineering Materials, 0, 770, 155-164.	0.4	27
43	High strength heat-treatable Î²-titanium alloy for additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 791, 139646.	2.6	27
44	Sintering and biocompatibility of blended elemental Ti-xNb alloys. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 104, 103691.	1.5	27
45	Towards Î²-fleck defect free additively manufactured titanium alloys by promoting the columnar to equiaxed transition and grain refinement. Acta Materialia, 2022, 224, 117511.	3.8	27
46	Spheroidization behaviour of a Fe-enriched eutectic high-entropy alloy. Journal of Materials Science and Technology, 2020, 51, 173-179.	5.6	26
47	A new understanding of the wear processes during laser assisted milling 17-4 precipitation hardened stainless steel. Wear, 2015, 328-329, 518-530.	1.5	25
48	Cutting force, chip formation, and tool wear during the laser-assisted machining a near-alpha titanium alloy BTi-6431S. International Journal of Advanced Manufacturing Technology, 2015, 79, 1949-1960.	1.5	25
49	Roles of Nd and Mn in a new creep-resistant magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 779, 139152.	2.6	25
50	The effect of cutting speed and heat treatment on the fatigue life of Grade 5 and Grade 23 Tiâ€“6Alâ€“4V alloys. Materials & Design, 2013, 46, 640-644.	5.1	24
51	A new approach to nuclei identification and grain refinement in titanium alloys. Journal of Alloys and Compounds, 2019, 794, 268-284.	2.8	24
52	Manufacturing of graded titanium scaffolds using a novel space holder technique. Bioactive Materials, 2017, 2, 248-252.	8.6	21
53	Titanium as an endogenous grain-refining nucleus. Philosophical Magazine, 2010, 90, 699-715.	0.7	20
54	Improved biodegradable magnesium alloys through advanced solidification processing. Scripta Materialia, 2020, 177, 234-240.	2.6	20

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55	Challenges in laser-assisted milling of titanium alloys. International Journal of Extreme Manufacturing, 2021, 3, 015001.	6.3	20
56	Comparison of the Microstructure and Biocorrosion Properties of Additively Manufactured and Conventionally Fabricated near Î² Tiâ€“25Nbâ€“3Zrâ€“3Moâ€“2Sn Alloy. ACS Biomaterials Science and Engineering, 2019, 5, 5844-5856.	2.6	19
57	Heterogeneous lamella design to tune the mechanical behaviour of a new cost-effective compositionally complicated alloy. Journal of Materials Science and Technology, 2022, 96, 113-125.	5.6	19
58	High-temperature age-hardening of a novel cost-effective Fe45Ni25Cr25Mo5 high entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 788, 139580.	2.6	17
59	The effect of boron on the refinement of microstructure in cast cobalt alloys. Journal of Materials Research, 2011, 26, 951-956.	1.2	16
60	Biocompatible porous titanium scaffolds produced using a novel space holder technique. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 2796-2806.	1.6	16
61	Porous Titanium Scaffolds Fabricated by Metal Injection Moulding for Biomedical Applications. Materials, 2018, 11, 1573.	1.3	16
62	High stability and high strength Î²-titanium alloys for additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 816, 141326.	2.6	15
63	Effects of boron on microstructure in cast zirconium alloys. Journal of Materials Research, 2010, 25, 1695-1700.	1.2	14
64	Processing considerations for cast Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn biomedical alloys. Materials Science and Engineering C, 2011, 31, 1520-1525.	3.8	14
65	Eutectic modification of Fe-enriched high-entropy alloys through minor addition of boron. Journal of Materials Science, 2020, 55, 14571-14587.	1.7	14
66	Systematic investigation of the effect of Ni concentration in Cu-xNi/Sn couples for high temperature soldering. Acta Materialia, 2022, 226, 117661.	3.8	14
67	Highly ductile hypereutectic Al-Si alloys fabricated by selective laser melting. Journal of Materials Science and Technology, 2022, 110, 84-95.	5.6	13
68	Introduction to the Interdependence Theory of Grain Formation and its Application to Aluminium, Magnesium and Titanium Alloys. Materials Science Forum, 0, 690, 206-209.	0.3	12
69	Understanding the grain refinement mechanisms in aluminium 2319 alloy produced by wire arc additive manufacturing. Science and Technology of Welding and Joining, 2022, 27, 479-489.	1.5	12
70	Insights into Machining of a Î² Titanium Biomedical Alloy from Chip Microstructures. Metals, 2018, 8, 710.	1.0	10
71	Effect of Oxygen on the Î²-Grain Size of Cast Titanium. Materials Science Forum, 0, 654-656, 1472-1475.	0.3	9
72	Investigating the morphological effects of solute on the Î²-phase in as-cast titanium alloys. Journal of Alloys and Compounds, 2019, 778, 204-214.	2.8	9

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73	Latest Developments in Understanding the Grain Refinement of Cast Titanium. Materials Science Forum, 2009, 618-619, 315-318.	0.3	7
74	Eliminating segregation defects during additive manufacturing of high strength Î²-titanium alloys. Additive Manufacturing, 2021, 39, 101855.	1.7	6
75	Selective laser melting Fe and Fe-35Mn for biodegradable implants. International Journal of Modern Physics B, 2020, 34, 2040034.	1.0	5
76	FEA Modelling of Cutting Force and Chip Formation in Thermally Assisted Machining of Ti6Al4V Alloy. Materials Science Forum, 0, 765, 343-347.	0.3	4
77	A Brief History of the Grain Refinement of Cast Light Alloys. Materials Science Forum, 0, 765, 123-129.	0.3	3
78	Titanium sponge as a source of native nuclei in titanium alloys. Journal of Alloys and Compounds, 2020, 818, 153353.	2.8	3
79	Data â€“ Driven modelling of the interaction force between permanent magnets. Journal of Magnetism and Magnetic Materials, 2021, 532, 167869.	1.0	3
80	In Situ Observation of Liquid Solder Alloys and Solid Substrate Reactions Using High-Voltage Transmission Electron Microscopy. Materials, 2022, 15, 510.	1.3	3
81	Controlling the distribution of porosity during transient liquid phase bonding of Sn-based solder joint. Materials Today Communications, 2022, 31, 103248.	0.9	1
82	Efficient modelling of permanent magnet field distribution for deep learning applications. Journal of Magnetism and Magnetic Materials, 2022, 559, 169521.	1.0	1