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	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
2	Laser additive manufacturing of steels. International Materials Reviews, 2022, 67, 487-573.	9.4	45
3	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
4	Highly ductile hypereutectic Al-Si alloys fabricated by selective laser melting. Journal of Materials Science and Technology, 2022, 110, 84-95.	5.6	13
5	In Situ Observation of Liquid Solder Alloys and Solid Substrate Reactions Using High-Voltage Transmission Electron Microscopy. Materials, 2022, 15, 510.	1.3	3
6	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
7	Controlling the distribution of porosity during transient liquid phase bonding of Sn-based solder joint. Materials Today Communications, 2022, 31, 103248.	0.9	1
8	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
9	Efficient modelling of permanent magnet field distribution for deep learning applications. Journal of Magnetism and Magnetic Materials, 2022, 559, 169521.	1.0	1
10	A cost-effective Fe-rich compositionally complicated alloy with superior high-temperature oxidation resistance. Corrosion Science, 2021, 180, 109190.	3.0	28
11	Challenges in laser-assisted milling of titanium alloys. International Journal of Extreme Manufacturing, 2021, 3, 015001.	6.3	20
12	Eliminating segregation defects during additive manufacturing of high strength Î²-titanium alloys. Additive Manufacturing, 2021, 39, 101855.	1.7	6
13	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
14	Data â€“ Driven modelling of the interaction force between permanent magnets. Journal of Magnetism and Magnetic Materials, 2021, 532, 167869.	1.0	3
15	Improved biodegradable magnesium alloys through advanced solidification processing. Scripta Materialia, 2020, 177, 234-240.	2.6	20
16	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
17	Grain structure control during metal 3D printing by high-intensity ultrasound. Nature Communications, 2020, 11, 142.	5.8	416
18	Titanium sponge as a source of native nuclei in titanium alloys. Journal of Alloys and Compounds, 2020, 818, 153353.	2.8	3

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19	Additively manufactured iron-manganese for biodegradable porous load-bearing bone scaffold applications. Acta Biomaterialia, 2020, 103, 346-360.	4.1	111
20	Selective laser melting Fe and Fe-35Mn for biodegradable implants. International Journal of Modern Physics B, 2020, 34, 2040034.	1.0	5
21	Eutectic modification of Fe-enriched high-entropy alloys through minor addition of boron. Journal of Materials Science, 2020, 55, 14571-14587.	1.7	14
22	Spheroidization behaviour of a Fe-enriched eutectic high-entropy alloy. Journal of Materials Science and Technology, 2020, 51, 173-179.	5.6	26
23	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
24	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
25	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
26	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
27	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
28	Sintering and biocompatibility of blended elemental Ti-xNb alloys. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 104, 103691.	1.5	27
29	Revealing the Mechanisms of Grain Nucleation and Formation During Additive Manufacturing. Jom, 2020, 72, 1065-1073.	0.9	66
30	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
31	Understanding solid solution strengthening at elevated temperatures in a creep-resistant Mgâ€"Gdâ€"Ca alloy. Acta Materialia, 2019, 181, 185-199.	3.8	71
32	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
33	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
34	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
35	A new approach to nuclei identification and grain refinement in titanium alloys. Journal of Alloys and Compounds, 2019, 794, 268-284.	2.8	24
36	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

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37	Promoting the columnar to equiaxed transition and grain refinement of titanium alloys during additive manufacturing. Acta Materialia, 2019, 168, 261-274.	3.8	434
38	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
39	Novel cost-effective Fe-based high entropy alloys with balanced strength and ductility. Materials and Design, 2019, 162, 24-33.	3.3	58
40	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
41	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
42	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
43	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
44	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
45	Porous Titanium Scaffolds Fabricated by Metal Injection Moulding for Biomedical Applications. Materials, 2018, 11, 1573.	1.3	16
46	Insights into Machining of a Î² Titanium Biomedical Alloy from Chip Microstructures. Metals, 2018, 8, 710.	1.0	10
47	Metallurgical features of direct laser-deposited Ti6Al4V with trace boron. Journal of Manufacturing Processes, 2018, 35, 651-656.	2.8	40
48	Trace Carbon Addition to Refine Microstructure and Enhance Properties of Additive-Manufactured Ti-6Al-4V. Jom, 2018, 70, 1670-1676.	0.9	57
49	Current development of creep-resistant magnesium cast alloys: A review. Materials and Design, 2018, 155, 422-442.	3.3	151
50	Manufacturing of biocompatible porous titanium scaffolds using a novel spherical sugar pellet space holder. Materials Letters, 2017, 195, 92-95.	1.3	34
51	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
52	Manufacturing of graded titanium scaffolds using a novel space holder technique. Bioactive Materials, 2017, 2, 248-252.	8.6	21
53	Metal injection moulding of titanium and titanium alloys: Challenges and recent development. Powder Technology, 2017, 319, 289-301.	2.1	115
54	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

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55	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
56	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
57	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
58	Tool life and wear mechanisms in laser assisted milling Tiâ€“6Alâ€“4V. Wear, 2015, 322-323, 151-163.	1.5	74
59	Laser-assisted milling strategies with different cutting tool paths. International Journal of Advanced Manufacturing Technology, 2014, 74, 1487-1494.	1.5	36
60	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
61	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
62	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
63	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
64	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
65	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
66	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
67	Processing considerations for cast Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn biomedical alloys. Materials Science and Engineering C, 2011, 31, 1520-1525.	3.8	14
68	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
69	The effect of boron on the refinement of microstructure in cast cobalt alloys. Journal of Materials Research, 2011, 26, 951-956.	1.2	16
70	Effects of boron on microstructure in cast zirconium alloys. Journal of Materials Research, 2010, 25, 1695-1700.	1.2	14
71	Titanium as an endogenous grain-refining nucleus. Philosophical Magazine, 2010, 90, 699-715.	0.7	20
72	Latest Developments in Understanding the Grain Refinement of Cast Titanium. Materials Science Forum, 2009, 618-619, 315-318.	0.3	7

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73	Segregation and grain refinement in cast titanium alloys. Journal of Materials Research, 2009, 24, 1529-1535.	1.2	64
74	Beryllium as a grain refiner in titanium alloys. Journal of Alloys and Compounds, 2009, 481, L20-L23.	2.8	113
75	The mechanism of grain refinement of titanium by silicon. Scripta Materialia, 2008, 58, 1050-1053.	2.6	111
76	Effects of boron on microstructure in cast titanium alloys. Scripta Materialia, 2008, 59, 538-541.	2.6	147
77	Grain-refinement mechanisms in titanium alloys. Journal of Materials Research, 2008, 23, 97-104.	1.2	165
78	Effect of Oxygen on the Î²-Grain Size of Cast Titanium. Materials Science Forum, 0, 654-656, 1472-1475.	0.3	9
79	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
80	A Brief History of the Grain Refinement of Cast Light Alloys. Materials Science Forum, 0, 765, 123-129.	0.3	3
81	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
82	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