Mark A Easton

List of Publications by Year
in descending order

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112 papers	6,914 citations	109321 35 h-index	62596 80 g-index
119 all docs	119 docs citations	119 times ranked	4016 citing authors

#	Article	IF	Citations
1	Effects of Laser Surface Remelting on Microstructure and Corrosion Properties of Mg-12Dy-1.1Ni Alloy. Journal of Materials Engineering and Performance, 2023, 32, 2587-2597.	2.5	2
2	Effect of process parameters and grain refinement on hot tearing susceptibility of high strength aluminum alloy 2139 in laser powder bed fusion. Progress in Additive Manufacturing, 2022, 7, 887-901.	4.8	14
3	Exceptional grain refinement of Mg-Zr master alloy treated by tungsten inert gas arc re-melting with ultra-high frequency pulses. Scripta Materialia, 2022, 215, 114700.	5.2	40
4	Effect of alloy composition and laser powder bed fusion parameters on the defect formation and mechanical properties of Inconel 625. International Journal of Advanced Manufacturing Technology, 2021, 114, 915-927.	3.0	18
5	TPMS Designer: A tool for generating and analyzing triply periodic minimal surfaces. Software Impacts, 2021, 10, 100167.	1.4	22
6	Effect of Cooling Rate on the Grain Refinement of Mg-Y-Zr Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 482-496.	2.2	22
7	Influence of delay strategies and residual heat on in-situ tempering in the laser metal deposition of 300M high strength steel. Surface and Coatings Technology, 2020, 383, 125279.	4.8	16
8	A comparative study of the role of solute, potent particles and ultrasonic treatment during solidification of pure Mg, Mgâ€“Zn and Mgâ€“Zr alloys. Journal of Magnesium and Alloys, 2020, , .	11.9	23
9	A rational interpretation of solidification microstructures in the Mg-rich corner of the Mgâ€“Alâ€“La system. Journal of Alloys and Compounds, 2020, 844, 156068.	5.5	4
10	The effect of heat treatment on the abrasive and erosive wear behaviour of laser metal deposited Feâ€“28Crâ€“2.7C alloy. Wear, 2020, 458-459, 203410.	3.1	8
11	Towards understanding grain nucleation under Additive Manufacturing solidification conditions. Acta Materialia, 2020, 195, 392-403.	7.9	127
12	Refining prior-Î² grains of Tiâ€“6Alâ€“4V alloy through yttrium addition. Journal of Alloys and Compounds, 2020, 841, 155733.	5.5	24
13	The effect of pre-heat temperature on the microstructure and abrasive wear properties of laser metal deposited near-eutectic Fe-28Cr-2.9C alloy. Journal of Laser Applications, 2020, 32, .	1.7	3
14	Grain refinement in laser remelted Mg-3Nd-1Gd-0.5Zr alloy. Scripta Materialia, 2020, 183, 12-16.	5.2	35
15	Grain Refinement of Alloys in Fusion-Based Additive Manufacturing Processes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4341-4359.	2.2	115
16	Revealing the Mechanisms of Grain Nucleation and Formation During Additive Manufacturing. Jom, 2020, 72, 1065-1073.	1.9	66
17	Active gap capacitance electrical discharge machining of polycrystalline diamond. Journal of Materials Processing Technology, 2020, 280, 116598.	6.3	23
18	Selective laser melting of Inconel 625 alloy with reduced defect formation. Journal of Laser Applications, 2020, 32, .	1.7	12

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19	Revisiting the intermetallic phases in high-pressure die-cast Mgâ€“4Alâ€“4Ce and Mgâ€“4Alâ€“4La alloys. Materials Characterization, 2019, 156, 109839.	4.4	12
20	Selective Laser Melting of Duplex Stainless Steel 2205: Effect of Post-Processing Heat Treatment on Microstructure, Mechanical Properties, and Corrosion Resistance. Materials, 2019, 12, 2468.	2.9	73
21	An Analysis of the Tensile Deformation Behavior of Commercial Die-Cast Magnesium-Aluminum-Based Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 3827-3841.	2.2	13
22	Compressive Creep Behavior of High-Pressure Die-Cast Aluminum-Containing Magnesium Alloys Developed for Elevated Temperature Applications. Frontiers in Materials, 2019, 6, .	2.4	14
23	Effect of geometry on the mechanical properties of Ti-6Al-4V Gyroid structures fabricated via SLM: A numerical study. Materials and Design, 2019, 184, 108165.	7.0	134
24	Microstructure, abrasive wear and corrosion characterisation of laser metal deposited Fe-30Cr-6Mo-10Ni-2.2C alloy. Wear, 2019, 438-439, 203070.	3.1	14
25	Microstructure and mechanical properties of an extruded Mg-Dy-Ni alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 760, 246-257.	5.6	29
26	Quench Sensitivity in a Dispersoid-Containing Al-Mg-Si Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1957-1969.	2.2	18
27	Additive manufacturing of ultrafine-grained high-strength titanium alloys. Nature, 2019, 576, 91-95.	27.8	575
28	Solidification path and microstructure evolution of Mg-3Al-14La alloy: Implications for the Mg-rich corner of the Mg-Al-La phase diagram. Journal of Alloys and Compounds, 2019, 784, 527-534.	5.5	7
29	Recent advances in biodegradation controls over Mg alloys for bone fracture management: A review. Journal of Materials Science and Technology, 2019, 35, 535-544.	10.7	171
30	A History of the Global Light Metals Alliance. Minerals, Metals and Materials Series, 2019, , 1687-1696.	0.4	0
31	Influence of macrosegregation on solidification cracking in laser clad ultra-high strength steels. Surface and Coatings Technology, 2018, 340, 126-136.	4.8	59
32	Refining As-cast Î²-Ti Grains Through ZrN Inoculation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1444-1449.	2.2	19
33	Development of Magnesium-Rare Earth Die-Casting Alloys. Minerals, Metals and Materials Series, 2018, , 329-336.	0.4	5
34	Metal Alloys for Fusionâ€Based Additive Manufacturing. Advanced Engineering Materials, 2018, 20, 1700952.	3.5	126
35	In-situ quench and tempering for microstructure control and enhanced mechanical properties of laser cladded AISI 420 stainless steel powder on 300M steel substrates. Surface and Coatings Technology, 2018, 333, 210-219.	4.8	46
36	Effect of building direction on porosity and fatigue life of selective laser melted AlSi12Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 729, 76-85.	5.6	38

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37	(Al,Mg)₃La: a new phase in the Mgâ€“Alâ€“La system. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2018, 74, 370-375.	1.1	11
38	Strain-rate sensitivity of die-cast magnesium-aluminium based alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 699, 239-246.	5.6	18
39	Anelasticity of die-cast magnesium-aluminium based alloys under different strain rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 101-109.	5.6	13
40	Modeling and simulation of microstructural evolution in Zr based Bulk Metallic Glass Matrix Composites during solidification. MRS Advances, 2017, 2, 3591-3606.	0.9	8
41	Microstructure and hardness characterisation of laser coatings produced with a mixture of AISI 420 stainless steel and Fe-C-Cr-Nb-B-Mo steel alloy powders. Surface and Coatings Technology, 2016, 296, 76-87.	4.8	20
42	Proof stress measurement of die-cast magnesium alloys. Materials and Design, 2016, 112, 402-409.	7.0	32
43	Evaluation of Magnesium Dieâ€Casting Alloys for Elevated Temperature Applications: Castability. Advanced Engineering Materials, 2016, 18, 953-962.	3.5	22
44	The Influence of Individual Rare Earth Elements (La, Ce, or Nd) on Creep Resistance of Dieâ€Cast Magnesium Alloy AE44. Advanced Engineering Materials, 2016, 18, 932-937.	3.5	38
45	Selective laser melting (SLM) of AlSi12Mg lattice structures. Materials and Design, 2016, 98, 344-357.	7.0	355
46	Effects of quench rate and natural ageing on the age hardening behaviour of aluminium alloy AA6060. Materials Characterization, 2016, 111, 43-52.	4.4	36
47	An Initial Assessment of the Effects of Increased Ni and V Content in A356 and AA6063 Alloys. Minerals, Metals and Materials Series, 2016, , 39-45.	0.4	0
48	Evaluation of Magnesium Die-Casting Alloys for Elevated Temperature Applications: Microstructure, Tensile Properties, and Creep Resistance. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3543-3554.	2.2	116
49	Characterization and Formation of Rod-Shaped (Al,Si)3Ti Particles in an Al-7Si-0.35Mg-0.12Ti (WtÂPct) Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3723-3731.	2.2	8
50	The Influence of the Effect of Solute on the Thermodynamic Driving Force on Grain Refinement of Al Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 505-515.	2.2	29
51	Deformation Behavior of the Percolating Eutectic Intermetallic in HPDC and Squeeze-Cast Mg Alloys. Jom, 2014, 66, 2086-2094.	1.9	13
52	Crystallographic study of grain refinement of Al by Nb addition. Journal of Applied Crystallography, 2014, 47, 770-779.	4.5	32
53	Microstructure and property evaluation of high-pressure die-cast Mgâ€“Laâ€“rare earth (Nd, Y or Gd) alloys. Journal of Alloys and Compounds, 2014, 597, 21-29.	5.5	34
54	Crystallographic study of Al3Zr and Al3Nb as grain refiners for Al alloys. Transactions of Nonferrous Metals Society of China, 2014, 24, 2034-2040.	4.2	50

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55	Effects of Cooling Rate and Solute Content on the Grain Refinement of Mg-Gd-Y Alloys by Aluminum. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4665-4678.	2.2	24
56	An A Priori Hot-Tearing Indicator Applied to Die-Cast Magnesium-Rare Earth Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3586-3595.	2.2	55
57	Strengthening Micromechanisms in Cold-Chamber High-Pressure Die-Cast Mg-Al Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4117-4128.	2.2	16
58	The Strength of the Spatially Interconnected Eutectic Network in HPDC Mg-La, Mg-Nd, and Mg-La-Nd Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4386-4397.	2.2	18
59	Strengthening by the percolating intergranular eutectic in an HPDC Mgâ€“Ce alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 599, 204-211.	5.6	23
60	Precipitation process in a Mgâ€“Gdâ€“Y alloy grain-refined by Al addition. Materials Characterization, 2014, 88, 7-14.	4.4	21
61	The grain refinement mechanism of cast aluminium by zirconium. Acta Materialia, 2013, 61, 5636-5645.	7.9	184
62	Hot Tear Susceptibility of Al-Mg-Si-Fe Alloys with Varying Iron Contents. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5396-5407.	2.2	39
63	A new multi-zone model for porosity distribution in Alâ€“Si alloy castings. Acta Materialia, 2013, 61, 3037-3049.	7.9	30
64	Heat treatment, microstructure and mechanical properties of a Mgâ€“Gdâ€“Y alloy grain-refined by Al additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 576, 298-305.	5.6	57
65	Influences of Nickel and Vanadium Impurities on Microstructure of Aluminum Alloys. Jom, 2013, 65, 584-592.	1.9	20
66	Double-layered manganese phosphate conversion coating on magnesium alloy AZ91D: Insights into coating formation, growth and corrosion resistance. Surface and Coatings Technology, 2013, 217, 147-155.	4.8	107
67	Grain Refinement of Magnesium Alloys by Mgâ€“Zr Master Alloys: The Role of Alloy Chemistry and Zr Particle Number Density. Advanced Engineering Materials, 2013, 15, 373-378.	3.5	44
68	Revisiting the role of peritectics in grain refinement of Al alloys. Acta Materialia, 2013, 61, 360-370.	7.9	164
69	The Effect of Solidification Dynamics on the Formation of the Skin in Die Cast Mgâ€“Al and Mgâ€“RE Alloys. Advanced Engineering Materials, 2013, 15, 302-307.	3.5	11
70	Grain refinement of Mgâ€“10Gd alloy by Al additions. Journal of Materials Research, 2012, 27, 2790-2797.	2.6	49
71	Observation and Prediction of the Hot Tear Susceptibility of Ternary Al-Si-Mg Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3227-3238.	2.2	60
72	Phase analysis of Mgâ€“Laâ€“Nd and Mgâ€“Laâ€“Ce alloys. Intermetallics, 2012, 28, 92-101.	3.9	33

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73	Feeding and Distribution of Porosity in Cast Al-Si Alloys as Function of Alloy Composition and Modification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4846-4858.	2.2	30
74	Microstructural characterization of high pressure die cast Mg-Zn-Al-RE alloys. Materials Characterization, 2012, 65, 28-36.	4.4	30
75	The influence of Zn additions on the microstructure and creep resistance of high pressure die cast magnesium alloy AE44. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 539, 177-184.	5.6	30
76	Casting Defects and Mechanical Properties of High Pressure Die Cast Mgâ€Znâ€Alâ€RE Alloys. Advanced Engineering Materials, 2012, 14, 68-76.	3.5	38
77	Thermodynamic Analysis of As-cast and Heat Treated Microstructures of Mg-Ce-Nd Alloys. , 2011, , 167-167.		0
78	Relating Quench Sensitivity to Microstructure in 6000 Series Aluminium Alloys. Materials Transactions, 2011, 52, 914-919.	1.2	50
79	Grain Morphology of As-Cast Wrought Aluminium Alloys. Materials Transactions, 2011, 52, 842-847.	1.2	28
80	Thermodynamic analysis of as-cast and heat-treated microstructures of Mgâ€“Ceâ€“Nd alloys. Acta Materialia, 2011, 59, 613-622.	7.9	33
81	Effect of Alloy Composition on the Dendrite Arm Spacing of Multicomponent Aluminum Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 1528-1538.	2.2	72
82	Failure modes during uniaxial deformation of magnesium alloy AZ31B tubes. International Journal of Mechanical Sciences, 2010, 52, 1634-1645.	6.7	35
83	The Skin Effect in an Mg-RE High Pressure Die Cast Alloy. Materials Science Forum, 2010, 654-656, 691-694.	0.3	2
84	The Influence of Eutectic Morphology on the Impact Properties of High Pressure Die Cast Mg-Rare-Earth Alloys. Materials Science Forum, 2010, 654-656, 683-686.	0.3	4
85	Cross-Sectional Geometry and the Intermetallics Structure in a High Pressure Die Cast Mg-Al Alloy. Materials Science Forum, 2010, 638-642, 1579-1584.	0.3	1
86	On the Creep Resistance of HPDC Mg-RE Based Alloys. Materials Science Forum, 2009, 618-619, 453-458.	0.3	5
87	Role of Solute Content on the Intermetallic Structure Development in HPDC Mg-Al Binary Alloys. Materials Science Forum, 2009, 618-619, 479-482.	0.3	6
88	Solute Content and the Grain Microstructure of High Pressure Diecast Magnesiumâ€“Aluminium Alloys. Advanced Engineering Materials, 2009, 11, 912-919.	3.5	35
89	Performance of wrought aluminium and magnesium alloy tubes in three-point bending. Materials & Design, 2009, 30, 2316-2322.	5.1	50
90	Compressive strain-rate sensitivity of magnesiumâ€“aluminum die casting alloys. Materials & Design, 2009, 30, 642-648.	5.1	81

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91	Calculated phase diagrams and the corrosion of die-cast Mgâ€“Al alloys. Corrosion Science, 2009, 51, 602-619.	6.6	296
92	Magnesium alloy applications in automotive structures. Jom, 2008, 60, 57-62.	1.9	266
93	A comparison of the deformation of magnesium alloys with aluminium and steel in tension, bending and buckling. Materials & Design, 2006, 27, 935-946.	5.1	54
94	Grain refinement of Mgâ€“Al(â€“Mn) alloys by SiC additions. Scripta Materialia, 2006, 55, 379-382.	5.2	110
95	Grain refinement of magnesium alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1669-1679.	2.2	580
96	An analysis of the relationship between grain size, solute content, and the potency and number density of nucleant particles. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1911-1920.	2.2	316
97	Grain refinement of aluminum alloys: Part I. the nucleant and solute paradigmsâ€”a review of the literature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 1613-1623.	2.2	605
98	Grain refinement of aluminum alloys: Part II. Confirmation of, and a mechanism for, the solute paradigm. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 1625-1633.	2.2	303
99	Influence of SiC Particles on the Grain Refinement of an Mg-Al Alloy. Materials Science Forum, 0, 618-619, 445-448.	0.3	12
100	Grain Refinement and Hot Tearing of Aluminium Alloys - How to Optimise and Minimise. Materials Science Forum, 0, 630, 213-221.	0.3	15
101	Dispersoid Phases in 6xxx Series Aluminium Alloys. Materials Science Forum, 0, 654-656, 926-929.	0.3	23
102	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
103	Hot Tearing in Al-Mg-Si Alloys with Minor Additions of Cu or Mn. Materials Science Forum, 0, 693, 217-223.	0.3	11
104	Effects of Heat Treatment on a High-Pressure Die-Cast Mg-La-Y Alloy. Materials Science Forum, 0, 690, 210-213.	0.3	1
105	Control and Removal of Impurities from Al Melts: A Review. Materials Science Forum, 0, 693, 149-160.	0.3	21
106	Castability of some Magnesium Alloys in a Novel Castability Die. Materials Science Forum, 0, 690, 61-64.	0.3	2
107	A Brief History of the Grain Refinement of Cast Light Alloys. Materials Science Forum, 0, 765, 123-129.	0.3	3
108	Modelling Eutectic Growth in Unmodified and Modified Near-Eutectic Al-Si Alloy. Materials Science Forum, 0, 765, 160-164.	0.3	0

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109	Practical Considerations on the Application of Ultrasonic Treatment to Mg-Al Shape Castings. Materials Science Forum, 0, 765, 255-259.	0.3	0
110	The Grain Refinement of Al-Si Alloys and the Cause of Si Poisoning: Insights Revealed by the Interdependence Model. Materials Science Forum, 0, 794-796, 161-166.	0.3	12
111	Achievements in Magnesium Alloy Research. Materials Science Forum, 0, 828-829, 3-8.	0.3	2
112	On the Solute Diffusion Length in the Interdependence Model: Dendritic versus Non-Dendritic Interface. Materials Science Forum, 0, 828-829, 461-467.	0.3	0