David StJohn

List of Publications by Year
in descending order

207 papers	14,944 citations	26610 56 h-index	20943 115 g-index
222 all docs	222 docs citations	222 times ranked	5801 citing authors

#	Article	IF	Citations
1	The anodic dissolution of magnesium in chloride and sulphate solutions. Corrosion Science, 1997, 39, 1981-2004.	3.0	767
2	The role of solute in grain refinement of magnesium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 2895-2906.	1.1	646
3	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.	1.1	605
4	Additive manufacturing of ultrafine-grained high-strength titanium alloys. Nature, 2019, 576, 91-95.	13.7	575
5	The electrochemical corrosion of pure magnesium in 1 N NaCl. Corrosion Science, 1997, 39, 855-875.	3.0	541
6	The Interdependence Theory: The relationship between grain formation and nucleant selection. Acta Materialia, 2011, 59, 4907-4921.	3.8	494
7	A model of grain refinement incorporating alloy constitution and potency of heterogeneous nucleant particles. Acta Materialia, 2001, 49, 1867-1878.	3.8	473
8	Promoting the columnar to equiaxed transition and grain refinement of titanium alloys during additive manufacturing. Acta Materialia, 2019, 168, 261-274.	3.8	434
9	Grain structure control during metal 3D printing by high-intensity ultrasound. Nature Communications, 2020, 11, 142.	5.8	416
10	Corrosion resistance of aged die cast magnesium alloy AZ91D. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 366, 74-86.	2.6	399
11	Development of the as-cast microstructure in magnesiumâ€"aluminium alloys. Journal of Light Metals, 2001, 1, 61-72.	0.8	396
12	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.	1.1	316
13	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.	1.1	303
14	Galvanic corrosion of magnesium alloy AZ91D in contact with an aluminium alloy, steel and zinc. Corrosion Science, 2004, 46, 955-977.	3.0	292
15	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
16	Recent advances in grain refinement of light metals and alloys. Current Opinion in Solid State and Materials Science, 2016, 20, 13-24.	5.6	222
17	Potency of high-intensity ultrasonic treatment for grain refinement of magnesium alloys. Scripta Materialia, 2008, 59, 19-22.	2.6	215
18	The effect of zirconium grain refinement on the corrosion behaviour of magnesium-rare earth alloy MEZ. Journal of Light Metals, 2002, 2, 1-16.	0.8	213

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19	Grain Refinement of Magnesium Alloys: A Review of Recent Research, Theoretical Developments, and Their Application. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2935-2949.	1.1	201
20	An analytical model for constitutional supercooling-driven grain formation and grain size prediction. Acta Materialia, 2010, 58, 3262-3270.	3.8	180
21	Rheological behaviour of the mushy zone and its effect on the formation of casting defects during solidification. Acta Materialia, 1998, 47, 31-41.	3.8	176
22	Grain-refinement mechanisms in titanium alloys. Journal of Materials Research, 2008, 23, 97-104.	1.2	165
23	Massive transformation in Tiâ€“6Alâ€“4V additively manufactured by selective electron beam melting. Acta Materialia, 2016, 104, 303-311.	3.8	155
24	The effect of grain refinement and silicon content on grain formation in hypoeutectic Alâ€“Si alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 259, 43-52.	2.6	147
25	Effect of a short solution treatment time on microstructure and mechanical properties of modified Alâ€“7wt.%Siâ€“0.3wt.%Mg alloy. Journal of Light Metals, 2002, 2, 27-36.	0.8	141
26	Grain refinement efficiency and mechanism of aluminium carbide in Mgâ€“Al alloys. Scripta Materialia, 2005, 53, 517-522.	2.6	135
27	Corrosion behaviour of magnesium in ethylene glycol. Corrosion Science, 2004, 46, 1381-1399.	3.0	131
28	Characteristic zirconium-rich coring structures in Mgâ€“Zr alloys. Scripta Materialia, 2002, 46, 649-654.	2.6	129
29	Towards understanding grain nucleation under Additive Manufacturing solidification conditions. Acta Materialia, 2020, 195, 392-403.	3.8	127
30	Improved prediction of the grain size of aluminum alloys that includes the effect of cooling rate. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 486, 8-13.	2.6	123
31	The Contribution of Constitutional Supercooling to Nucleation and Grain Formation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4868-4885.	1.1	123
32	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
33	Native grain refinement of magnesium alloys. Scripta Materialia, 2005, 53, 841-844.	2.6	116
34	Effect of manganese on grain refinement of Mgâ€“Al based alloys. Scripta Materialia, 2006, 54, 1853-1858.	2.6	116
35	Metal injection moulding of titanium and titanium alloys: Challenges and recent development. Powder Technology, 2017, 319, 289-301.	2.1	115
36	Beryllium as a grain refiner in titanium alloys. Journal of Alloys and Compounds, 2009, 481, L20-L23.	2.8	113

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37	The mechanism of grain refinement of titanium by silicon. Scripta Materialia, 2008, 58, 1050-1053.	2.6	111
38	The role of ultrasonic treatment in refining the as-cast grain structure during the solidification of an Alâ€“2Cu alloy. Journal of Crystal Growth, 2014, 408, 119-124.	0.7	108
39	Microstructure and Mechanical Properties of Long Ti-6Al-4V Rods Additively Manufactured by Selective Electron Beam Melting Out of a Deep Powder Bed and the Effect of Subsequent Hot Isostatic Pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3824-3834.	1.1	99
40	Effect of iron on grain refinement of high-purity Mgâ€“Al alloys. Scripta Materialia, 2004, 51, 125-129.	2.6	93
41	Mechanism for grain refinement of magnesium alloys by superheating. Scripta Materialia, 2007, 56, 633-636.	2.6	92
42	Heterogeneous nuclei size in magnesiumâ€“zirconium alloys. Scripta Materialia, 2004, 50, 1115-1119.	2.6	90
43	The peritectic reaction. Acta Metallurgica Et Materialia, 1990, 38, 631-636.	1.9	87
44	The effect of solute on ultrasonic grain refinement of magnesium alloys. Journal of Crystal Growth, 2010, 312, 2267-2272.	0.7	83
45	The role of iron in the formation of porosity in Al-Si-Cu-based casting alloys: Part I. Initial experimental observations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 1643-1650.	1.1	80
46	Settling of undissolved zirconium particles in pure magnesium melts. Journal of Light Metals, 2001, 1, 157-165.	0.8	78
47	A simple prediction of the rate of the peritectic transformation. Acta Metallurgica, 1987, 35, 171-174.	2.1	77
48	Heterogeneous nucleation of Mgâ€“Al alloys. Scripta Materialia, 2006, 54, 2197-2201.	2.6	72
49	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.	1.1	72
50	Corrosion of magnesium alloys in commercial engine coolants. Materials and Corrosion - Werkstoffe Und Korrosion, 2005, 56, 15-23.	0.8	70
51	Revealing the Mechanisms of Grain Nucleation and Formation During Additive Manufacturing. Jom, 2020, 72, 1065-1073.	0.9	66
52	Segregation and grain refinement in cast titanium alloys. Journal of Materials Research, 2009, 24, 1529-1535.	1.2	64
53	A New Analytical Approach to Reveal the Mechanisms of Grain Refinement. Advanced Engineering Materials, 2007, 9, 739-746.	1.6	63
54	The peritectic transformation. Acta Metallurgica, 1977, 25, 77-81.	2.1	60

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55	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.	1.1	60
56	The Interdependence model of grain nucleation: A numerical analysis of the Nucleation-Free Zone. Acta Materialia, 2013, 61, 5914-5927.	3.8	60
57	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
58	Understanding the refinement of grains in laser surface remelted Alâ€“Cu alloys. Scripta Materialia, 2020, 178, 447-451.	2.6	59
59	New apparatus for characterising tensile strength development and hot cracking in the mushy zone. International Journal of Cast Metals Research, 2000, 12, 441-456.	0.5	57
60	Trace Carbon Addition to Refine Microstructure and Enhance Properties of Additive-Manufactured Ti-6Al-4V. Jom, 2018, 70, 1670-1676.	0.9	57
61	The role of iron in the formation of porosity in Al-Si-Cu-based casting alloys: Part II. A phase-diagram approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 1651-1655.	1.1	56
62	Metal injection moulding of surgical tools, biomaterials and medical devices: A review. Powder Technology, 2020, 364, 189-204.	2.1	55
63	Nucleation and grain formation of pure Al under Pulsed Magneto-Oscillation treatment. Materials Letters, 2014, 130, 48-50.	1.3	53
64	Evaluation of the BEASY program using linear and piecewise linear approaches for the boundary conditions. Materials and Corrosion - Werkstoffe Und Korrosion, 2004, 55, 845-852.	0.8	52
65	Degradation of the surface appearance of magnesium and its alloys in simulated atmospheric environments. Corrosion Science, 2007, 49, 1245-1265.	3.0	51
66	The Loss of Dissolved Zirconium in Zirconium-Refined Magnesium Alloys after Remelting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2470-2479.	1.1	51
67	The breakdown of dense iron layers on wustite in CO/CO2 and H2/H2O systems. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1984, 15, 701-708.	0.5	50
68	Observation of crack initiation during hot tearing. International Journal of Cast Metals Research, 2006, 19, 59-65.	0.5	50
69	Simulation of convective flow and thermal conditions during ultrasonic treatment of an Al-2Cu alloy. Computational Materials Science, 2017, 134, 116-125.	1.4	49
70	The shear behaviour of partially solidified Alâ€“Siâ€“Cu alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 289, 18-29.	2.6	48
71	Alloying of pure magnesium with Mg 33.3 wt-%Zr master alloy. Materials Science and Technology, 2003, 19, 156-162.	0.8	47
72	Ultrasound Assisted Casting of an AM60 Based Metal Matrix Nanocomposite, Its Properties, and Recyclability. Metals, 2017, 7, 388.	1.0	47

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73	An in situ investigation of the solute suppressed nucleation zone in an Al-15â€¯wt% Cu alloy inoculated by Al-Ti-B. Scripta Materialia, 2019, 167, 6-10.	2.6	47
74	Surface alloying of AZ91E alloy by Alâ€“Zn packed powder diffusion coating. Surface and Coatings Technology, 2011, 206, 425-433.	2.2	46
75	Role of ultrasonic treatment, inoculation and solute in the grain refinement of commercial purity aluminium. Scientific Reports, 2017, 7, 9729.	1.6	46
76	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
77	The role of iron in the formation of porosity in Al-Si-Cu-based casting alloys: Part III. A microstructural model. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 1657-1662.	1.1	45
78	A real-time synchrotron X-ray study of primary phase nucleation and formation in hypoeutectic Alâ€“Si alloys. Journal of Crystal Growth, 2015, 430, 122-137.	0.7	45
79	Semisolid microstructural evolution of AlSi7Mg alloy during partial remelting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 368, 159-167.	2.6	44
80	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.	1.6	44
81	Equiaxed solidification of Alâ€“Si alloys. Materials Science and Technology, 1999, 15, 495-500.	0.8	43
82	Effect of melt cleanliness on the formation of porosity defects in automotive aluminium high pressure die castings. Journal of Materials Processing Technology, 2002, 122, 82-93.	3.1	43
83	Grain nucleation and formation in Mgâ€“Zr alloys. International Journal of Cast Metals Research, 2009, 22, 256-259.	0.5	40
84	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.	1.1	39
85	The effects of impurity elements on the reduction of wustite and magnetite to iron in CO/CO2 and H2/H2O gas mixtures. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1990, 21, 743-751.	0.5	37
86	Effect of ultrasonic treatment on the alloying and grain refinement efficiency of a Mg â€“ Zr master alloy added to magnesium at hypo- and hyper-peritectic compositions. Journal of Crystal Growth, 2019, 512, 20-32.	0.7	37
87	Partitioning of titanium during solidification of aluminium alloys. Materials Science and Technology, 2000, 16, 993-1000.	0.8	35
88	Grain refinement in laser remelted Mg-3Nd-1Gd-0.5Zr alloy. Scripta Materialia, 2020, 183, 12-16.	2.6	35
89	Real time synchrotron X-ray observations of solidification in hypoeutectic Alâ€“Si alloys. Materials Characterization, 2013, 85, 134-140.	1.9	34
90	Synchrotron X-ray tomographic quantification of microstructural evolution in ice cream â€“ a multi-phase soft solid. RSC Advances, 2017, 7, 15561-15573.	1.7	34

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91	Metal injection moulding of non-spherical titanium powders: Processing, microstructure and mechanical properties. Journal of Manufacturing Processes, 2018, 31, 416-423.	2.8	34
92	Grain refinement of hypoeutectic Al-7wt.%Si alloy induced by an Alâ€"Vâ€"B master alloy. Journal of Alloys and Compounds, 2020, 812, 152022.	2.8	34
93	Uptake of iron and its effect on grain refinement of pure magnesium by zirconium. Materials Science and Technology, 2004, 20, 585-592.	0.8	33
94	Abrasive wear study of selected white cast irons as liner materials for the mining industry. Wear, 1993, 162-164, 820-832.	1.5	32
95	The effect of grain refinement on the formation of casting defects in alloy 356 castings. International Journal of Cast Metals Research, 2000, 12, 393-408.	0.5	32
96	Determination of Strain during Hot Tearing by Image Correlation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2503-2512.	1.1	32
97	Halo formation in directional solidification. Acta Materialia, 2002, 50, 2837-2849.	3.8	31
98	The Effect of Ultrasonic Melt Treatment on Macro-Segregation and Peritectic Transformation in an Al-19Si-4Fe Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5579-5590.	1.1	31
99	Revealing the mechanisms for the nucleation and formation of equiaxed grains in commercial purity aluminum by fluid-solid coupling induced by a pulsed magnetic field. Acta Materialia, 2021, 208, 116747.	3.8	30
100	An Hydrogen Evolution Method for the Estimation of the Corrosion Rate of Magnesium Alloys. , 2016, , 565-572.		29
101	Grain refinement of stainless steel in ultrasound-assisted additive manufacturing. Additive Manufacturing, 2021, 37, 101632.	1.7	29
102	Effect of solution treatment temperature on tensile properties of Al-7Si-O.3Mg (wt-%) alloy. Materials Science and Technology, 1998, 14, 619-625.	0.8	28
103	Grain Morphology of As-Cast Wrought Aluminium Alloys. Materials Transactions, 2011, 52, 842-847.	0.4	28
104	On grain coarsening and refining of the Mgâ€"3Al alloy by Sm. Journal of Alloys and Compounds, 2016, 663, 387-394.	2.8	28
105	The influence of ternary alloying elements on the Alâ€"Si eutectic microstructure and the Si morphology. Journal of Crystal Growth, 2016, 433, 63-73.	0.7	27
106	Grain coarsening of magnesium alloys by beryllium. Scripta Materialia, 2004, 51, 647-651.	2.6	26
107	The corrosion performance of magnesium alloy AM-SC1 in automotive engine block applications. Jom, 2005, 57, 54-56.	0.9	26
108	Current understanding of the origin of equiaxed grains in pure metals during ultrasonic solidification and a comparison of grain formation processes with low frequency vibration, pulsed magnetic and electric-current pulse techniques. Journal of Materials Science and Technology, 2021, 65, 38-53.	5.6	26

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109	The Accurate Determination of Heat Transfer Coefficient and its Evolution with Time During High Pressure Die Casting of Alâ€9â€‰%Siâ€3â€‰%Cu and Mgâ€9â€‰%Alâ€1â€‰%Zn Alloys. Advanced Engineering Materials, 2007, 9, 995-999.	1.6	25
110	Revealing the microstructural stability of a three-phase soft solid (ice cream) by 4D synchrotron X-ray tomography. Journal of Food Engineering, 2018, 237, 204-214.	2.7	25
111	Niobium nanoparticle-enabled grain refinement of a crack-free high strength Al-Zn-Mg-Cu alloy manufactured by selective laser melting. Journal of Alloys and Compounds, 2022, 900, 163427.	2.8	25
112	Corrosion performance of magnesium alloys MEZ and AZ91. International Journal of Cast Metals Research, 2000, 12, 327-334.	0.5	24
113	Identifying the Stages during Ultrasonic Processing that Reduce the Grain Size of Aluminum with Added Al3Ti1B Master Alloy. Advanced Engineering Materials, 2017, 19, 1700264.	1.6	24
114	The effect of ultrasonic treatment on the mechanisms of grain formation in as-cast high purity zinc. Journal of Crystal Growth, 2018, 495, 20-28.	0.7	24
115	A new approach to nuclei identification and grain refinement in titanium alloys. Journal of Alloys and Compounds, 2019, 794, 268-284.	2.8	24
116	Refining prior-Î² grains of Tiâ€“6Alâ€“4V alloy through yttrium addition. Journal of Alloys and Compounds, 2020, 841, 155733.	2.8	24
117	An empirical analysis of trends in mechanical properties of T6 heat treated Al-Si-Mg casting alloys. International Journal of Cast Metals Research, 2000, 12, 419-430.	0.5	23
118	Corrosion behaviour of a pressure die cast magnesium alloy. International Journal of Cast Metals Research, 2005, 18, 174-180.	0.5	23
119	The effect of aluminium content on the eutectic morphology of high pressure die cast magnesiumâ€“aluminium alloys. Journal of Alloys and Compounds, 2010, 492, L64-L68.	2.8	23
120	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, , .	5.5	23
121	An investigation of the mechanical behaviour of fine tubes fabricated from a Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn alloy. Materials and Design, 2015, 85, 256-265.	3.3	22
122	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.	1.1	22
123	Morphological features of interfacial intermetallics and interfacial reaction rate in Al-11Si-2.5Cu-(0.15/0.60)Fe cast alloy/die steel couples. Journal of Materials Science, 2004, 39, 519-528.	1.7	21
124	Influence of Chemical Composition of Mg Alloys on Surface Alloying by Diffusion Coating. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1621-1628.	1.1	21
125	Titanium as an endogenous grain-refining nucleus. Philosophical Magazine, 2010, 90, 699-715.	0.7	20
126	Heterogeneous nucleation of pure Al on MgO single crystal substrate accompanied by a MgAl2O4 buffer layer. Journal of Alloys and Compounds, 2018, 753, 543-550.	2.8	20

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127	Effect of ultrasonic melt treatment on intermetallic phase formation in a manganese-modified Al-17Si-2Fe alloy. Journal of Materials Processing Technology, 2019, 271, 346-356.	3.1	20
128	Improved biodegradable magnesium alloys through advanced solidification processing. Scripta Materialia, 2020, 177, 234-240.	2.6	20
129	Suppression of Cu3Sn in the Sn-10Cu peritectic alloy by the addition of Ni. Journal of Alloys and Compounds, 2018, 766, 1003-1013.	2.8	19
130	Effect of solute on the growth rate and the constitutional undercooling ahead of the advancing interface during solidification of an alloy and the implications for nucleation. Journal of Materials Research, 2006, 21, 2470-2479.	1.2	18
131	New approach to analysis of grain refinement. International Journal of Cast Metals Research, 2007, 20, 131-135.	0.5	18
132	Subsurface Deformation After Dry Machining of Grade 2 Titanium. Advanced Engineering Materials, 2008, 10, 85-88.	1.6	18
133	The cold-rolling behaviour of AZ31 tubes for fabrication of biodegradable stents. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 292-303.	1.5	18
134	The effect of solidification rate on the structure of magnesium-aluminium eutectic grains. International Journal of Cast Metals Research, 2000, 13, 1-7.	0.5	16
135	The effect of boron on the refinement of microstructure in cast cobalt alloys. Journal of Materials Research, 2011, 26, 951-956.	1.2	16
136	Real-time synchrotron x-ray observations of equiaxed solidification of aluminium alloys and implications for modelling. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012014.	0.3	16
137	Evolution of the microstructure and mechanical properties during fabrication of mini-tubes from a biomedical Î²-titanium alloy. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 42, 207-218.	1.5	16
138	Porous Titanium Scaffolds Fabricated by Metal Injection Moulding for Biomedical Applications. Materials, 2018, 11, 1573.	1.3	16
139	A practical method for identifying intermetallic phase particles in aluminium alloys by electron probe microanalysis. Journal of Light Metals, 2001, 1, 187-193.	0.8	15
140	Grain Refinement and Hot Tearing of Aluminium Alloys - How to Optimise and Minimise. Materials Science Forum, 0, 630, 213-221.	0.3	15
141	Techniques for the preparation and examination of partially reduced oxides. Metallography, 1985, 18, 367-379.	0.4	14
142	Effects of boron on microstructure in cast zirconium alloys. Journal of Materials Research, 2010, 25, 1695-1700.	1.2	14
143	Processing considerations for cast Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn biomedical alloys. Materials Science and Engineering C, 2011, 31, 1520-1525.	3.8	14
144	Ultrasonic Processing for Structure Refinement: An Overview of Mechanisms and Application of the Interdependence Theory. Materials, 2019, 12, 3187.	1.3	14

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145	The Role of Ultrasonically Induced Acoustic Streaming in Developing Fine Equiaxed Grains During the Solidification of an Al-2ÂPct Cu Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5253-5263.	1.1	14
146	The effect of sulfur on the gaseous reduction of solid calciowustites. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1986, 17, 383-393.	0.5	13
147	Enhanced Heterogeneous Nucleation by Pulsed Magnetoâ€Oscillation Treatment of Liquid Aluminum Containing Al3Ti1B Additions. Advanced Engineering Materials, 2015, 17, 1465-1469.	1.6	13
148	Grain Refinement of an Al-2 wt%Cu Alloy by Al3Ti1B Master Alloy and Ultrasonic Treatment. IOP Conference Series: Materials Science and Engineering, 2016, 117, 012050.	0.3	13
149	Peritectic phase formation kinetics of directionally solidifying Sn-Cu alloys within a broad growth rate regime. Acta Materialia, 2021, 220, 117295.	3.8	13
150	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
151	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
152	The influence of ternary Cu additions on the nucleation of eutectic grains in a hypoeutectic Al-10 wt.%Si alloy. Journal of Alloys and Compounds, 2015, 646, 699-705.	2.8	12
153	The thermal stability of Ni-11 wt% P metallic glass. Journal of Materials Science, 1990, 25, 3008-3016.	1.7	11
154	Scratch adhesion testing of soft metallic coatings on glass. Surface and Coatings Technology, 1990, 41, 135-146.	2.2	11
155	A yttrium-containing high-temperature titanium alloy additively manufactured by selective electron beam melting. Journal of Central South University, 2015, 22, 2857-2863.	1.2	11
156	A Rationale for the Acoustic Monitoring of Surface Deformation in Ti6Al4V Alloys during Machining. Advanced Engineering Materials, 2007, 9, 1000-1004.	1.6	10
157	Modeling of grain refinement: Part III. Alâ€“7Siâ€“0.3Mg aluminum alloy. Journal of Materials Research, 2008, 23, 1301-1306.	1.2	9
158	Ultrasonic Processing of Aluminumâ€“Magnesium Alloys. Materials, 2018, 11, 1994.	1.3	9
159	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
160	Modelling of grain size transition with alloy concentration in solidified Alâ€“Si alloys. Journal of Materials Science, 2007, 42, 9756-9764.	1.7	8
161	Casting of Light Alloys. , 2017, , 109-156.		8
162	Grain Refinement of Magnesium. , 2016, , 247-254.		8

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163	Latest Developments in Understanding the Grain Refinement of Cast Titanium. Materials Science Forum, 2009, 618-619, 315-318.	0.3	7
164	Evolution of the Asâ€Cast Grain Microstructure of an Ultrasonically Treated Alâ€“2Cu Alloy. Advanced Engineering Materials, 2018, 20, 1800521.	1.6	7
165	The Poisoning Effect of Al and Be on Mgâ€"1 wt.% Zr Alloy and the Role of Ultrasonic Treatment on Grain Refinement. Frontiers in Materials, 2019, 6, .	1.2	7
166	Demonstrating the roles of solute and nucleant in grain refinement of additively manufactured aluminium alloys. Additive Manufacturing, 2022, 49, 102516.	1.7	7
167	A New Zirconium-Rich Master Alloy for the Grain Refinement of Magnesium Alloys. , 2005, , 706-712.		6
168	Modeling of grain refinement: Part I. Effect of the solute titanium for aluminum. Journal of Materials Research, 2008, 23, 1282-1291.	1.2	6
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