Zhongyun Fan

List of Publications by Year
in descending order

221 papers	7,377 citations	66234 42 h-index	74018 75 g-index
240 all docs	240 docs citations	240 times ranked	2849 citing authors

#	Article	IF	Citations
1	Semisolid metal processing. International Materials Reviews, 2002, 47, 49-85.	9.4	790
2	Grain refining mechanism in the Al/Alâ€“Tiâ€“B system. Acta Materialia, 2015, 84, 292-304.	3.8	421
3	Effect of iron on the microstructure and mechanical property of Alâ€“Mgâ€“Siâ€“Mn and Alâ€“Mgâ€“Si diecast alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 130-139.	2.6	231
4	Enhanced heterogeneous nucleation in AZ91D alloy by intensive melt shearing. Acta Materialia, 2009, 57, 4891-4901.	3.8	224
5	Mechanisms of enhanced heterogeneous nucleation during solidification in binary Alâ€“Mg alloys. Acta Materialia, 2012, 60, 1528-1537.	3.8	168
6	Processing of advanced Al/SiC particulate metal matrix composites under intensive shearing â€“ A novel Rheo-process. Composites Part A: Applied Science and Manufacturing, 2009, 40, 144-151.	3.8	150
7	Semi-solid processing of engineering alloys by a twin-screw rheomoulding process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 299, 210-217.	2.6	149
8	An Epitaxial Model for Heterogeneous Nucleation on Potent Substrates. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 1409-1418.	1.1	133
9	Effects of solute content on grain refinement in an isothermal melt. Acta Materialia, 2011, 59, 2704-2712.	3.8	125
10	Mechanisms of grain refinement by intensive shearing of AZ91 alloy melt. Acta Materialia, 2010, 58, 6526-6534.	3.8	122
11	Microstructural evolution of rheo-diecast AZ91D magnesium alloy during heat treatment. Acta Materialia, 2006, 54, 689-699.	3.8	121
12	Microstructure and mechanical properties of rheo-diecast (RDC) aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 412, 298-306.	2.6	113
13	Solidification behaviour of AZ91D alloy under intensive forced convection in the RDC process. Acta Materialia, 2005, 53, 4345-4357.	3.8	112
14	Mechanism for Zr poisoning of Al-Ti-B based grain refiners. Acta Materialia, 2019, 164, 428-439.	3.8	105
15	Advanced operator splitting-based semi-implicit spectral method to solve the binary phase-field crystal equations with variable coefficients. Journal of Computational Physics, 2009, 228, 1612-1623.	1.9	96
16	The effect of Al8Mn5 intermetallic particles on grain size of as-cast Mgâ€“Alâ€“Zn AZ91D alloy. Intermetallics, 2010, 18, 1683-1689.	1.8	93
17	Secondary solidification behaviour of the Alâ€“Siâ€“Mg alloy prepared by the rheo-diecasting process. Acta Materialia, 2007, 55, 1589-1598.	3.8	84
18	Crystallographic effects on the corrosion of twin roll cast AZ31 Mg alloy sheet. Acta Materialia, 2017, 133, 90-99.	3.8	83

#	ARTICLE	IF	CITATIONS
19	Oxidation of Aluminium Alloy Melts and Inoculation by Oxide Particles. Transactions of the Indian Institute of Metals, 2012, 65, 653-661.	0.7	82
20	A generalized law of mixtures. Journal of Materials Science, 1994, 29, 141-150.	1.7	81
21	Development of a super ductile diecast Alâ€"Mgâ€"Si alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 556, 824-833.	2.6	80
22	Microstructural evolution of the in situ Al-15wt.%Mg2Si composite with extra Si contents. Scripta Materialia, 2000, 42, 1101-1106.	2.6	79
23	Morphological development of solidification structures under forced fluid flow: a Monte-Carlo simulation. Acta Materialia, 2002, 50, 4571-4585.	3.8	77
24	Development of the rheo-diecasting process for magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 72-78.	2.6	69
25	Effect of heat treatment and Fe content on the microstructure and mechanical properties of die-cast Alâ€"Siâ€"Cu alloys. Materials and Design, 2015, 85, 823-832.	3.3	68
26	Characterisation of magnesium oxide and its interface with Î±-Mg in Mgâ€"Al-based alloys. Philosophical Magazine Letters, 2011, 91, 516-529.	0.5	67
27	Effect of Mg level on the microstructure and mechanical properties of die-cast Alâ€"Siâ€"Cu alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 340-350.	2.6	66
28	Processing of Aluminum-Graphite Particulate Metal Matrix Composites by Advanced Shear Technology. Journal of Materials Engineering and Performance, 2009, 18, 1230-1240.	1.2	64
29	Development of a high strength Alâ€"Mg2Siâ€"Mgâ€"Zn based alloy for high pressure die casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 165-174.	2.6	61
30	Effects of intensive forced melt convection on the mechanical properties of Fe containing Alâ€"Si based alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 445-446, 65-72.	2.6	60
31	Refining grain structure and porosity of an aluminium alloy with intensive melt shearing. Scripta Materialia, 2011, 64, 209-212.	2.6	60
32	Solidification behavior of Sn-15 wt pct Pb alloy under a high shear rate and high intensity of turbulence during semisolid processing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 3511-3520.	1.1	58
33	Microstructure and mechanical properties of rheo-diecast AZ91D magnesium alloy. Journal of Materials Science, 2006, 41, 3631-3644.	1.7	58
34	Effect of solutes on grain refinement. Progress in Materials Science, 2022, 123, 100809.	16.0	57
35	Effect of traces of silicon on the formation of Fe-rich particles in pure magnesium and the corrosion susceptibility of magnesium. Journal of Alloys and Compounds, 2015, 619, 396-400.	2.8	53
36	A new concept for growth restriction during solidification. Acta Materialia, 2018, 152, 248-257.	3.8	52

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37	Modelling of rheological behaviour of semisolid metal slurries Part 1 â€“ Theory. Materials Science and Technology, 2002, 18, 237-242.	0.8	48
38	Structureâ€“property analysis of in-situ Alâ€“MgAl2O4 metal matrix composites synthesized using ultrasonic cavitation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 628, 30-40.	2.6	48
39	Corrosion Behavior of Pure Magnesium with Low Iron Content in 3.5 wt% NaCl Solution. Journal of the Electrochemical Society, 2015, 162, C362-C368.	1.3	48
40	Microstructural Evolution and Solidification Behavior of Al-Mg-Si Alloy in High-Pressure Die Casting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3185-3197.	1.1	47
41	Fabrication of biodegradable nano-sized Î²-TCP/Mg composite by a novel melt shearing technology. Materials Science and Engineering C, 2012, 32, 1253-1258.	3.8	46
42	Shear enhanced heterogeneous nucleation in some Mg- and Al-alloys. International Journal of Cast Metals Research, 2009, 22, 318-322.	0.5	45
43	Rheo-processing of an alloy specifically designed for semi-solid metal processing based on the Alâ€"Mgâ€"Si system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 476, 341-349.	2.6	44
44	Investigation of the microstructure and the influence of iron on the formation of Al8Mn5 particles in twin roll cast AZ31 magnesium alloy. Journal of Alloys and Compounds, 2015, 628, 195-198.	2.8	43
45	Prenucleation Induced by Crystalline Substrates. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2766-2777.	1.1	42
46	Effect of Substrate Chemistry on Prenucleation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 6231-6242.	1.1	42
47	Solidification behaviour under intensive forced convection. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 229-235.	2.6	40
48	The Role of Intermetallics on the Corrosion Initiation of Twin Roll Cast AZ31 Mg Alloy. Journal of the Electrochemical Society, 2015, 162, C442-C448.	1.3	40
49	Microstructural refinement of AZ91D die-cast alloy by intensive shearing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2929-2934.	2.6	39
50	Atomic ordering in liquid aluminium induced by substrates with misfits. Computational Materials Science, 2014, 85, 1-7.	1.4	38
51	Influence of porosity characteristics on the variability in mechanical properties of high pressure die casting (HPDC) AlSi7MgMn alloys. Journal of Manufacturing Processes, 2020, 56, 500-509.	2.8	38
52	Melt conditioning by advanced shear technology (MCAST) for refining solidification microstructures. International Journal of Cast Metals Research, 2009, 22, 103-107.	0.5	37
53	Solidification of Al-Sn-Cu Based Immiscible Alloys under Intense Shearing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 2202-2211.	1.1	37
54	Grain refinement in a AlZnMgCuTi alloy by intensive melt shearing: A multi-step nucleation mechanism. Journal of Crystal Growth, 2011, 314, 285-292.	0.7	37

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55	Formation of the Fe-Containing Intermetallic Compounds during Solidification of Al-5Mg-2Si-0.7Mn-1.1Fe Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2173-2181.	1.1	37
56	Impeding Nucleation for More Significant Grain Refinement. Scientific Reports, 2020, 10, 9448.	1.6	37
57	Atomic ordering in the liquid adjacent to an atomically rough solid surface. Computational Materials Science, 2018, 153, 73-81.	1.4	35
58	Microstructure evolution and mechanical properties of new die-cast Al-Si-Mg-Mn alloys. Materials and Design, 2020, 187, 108394.	3.3	35
59	Simultaneous Primary Si Refinement and Eutectic Modification in Hypereutectic Alâ€“Si Alloys. Transactions of the Indian Institute of Metals, 2012, 65, 663-667.	0.7	34
60	Investigation on the microstructural refinement of an Mgâ€“6wt.% Zn alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 419, 349-356.	2.6	33
61	Semisolid processing characteristics of AM series Mg alloys by rheo-diecasting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 779-787.	1.1	33
62	High shear dispersion technology prior to twin roll casting for high performance magnesium/SiC p metal matrix composite strip fabrication. Composites Part A: Applied Science and Manufacturing, 2016, 90, 349-358.	3.8	32
63	Tracking of immiscible interfaces in multiple-material mixing processes. Computational Materials Science, 2004, 29, 103-118.	1.4	31
64	Isothermal coarsening of fine and spherical particles in semisolid slurry of Mgâ€“9Alâ€“1Zn alloy under low shear. Scripta Materialia, 2006, 55, 971-974.	2.6	30
65	Heterogeneous Nucleation of Î±-Al Grain on Primary Î±-AlFeMnSi Intermetallic Investigated Using 3D SEM Ultramicrotomy and HRTEM. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3971-3980.	1.1	30
66	The Nature of Native MgO in Mg and Its Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2957-2974.	1.1	30
67	Microstructural evaluation of melt conditioned twin roll cast Alâ€“Mg alloy. Materials Science and Technology, 2011, 27, 1833-1839.	0.8	29
68	Melt Conditioning of Light Metals by Application of High Shear for Improved Microstructure and Defect Control. Jom, 2017, 69, 1071-1076.	0.9	29
69	Numerical modelling of melt-conditioned direct-chill casting. Applied Mathematical Modelling, 2020, 77, 1310-1330.	2.2	29
70	Mechanism for Si Poisoning of Al-Ti-B Grain Refiners in Al Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5743-5757.	1.1	29
71	Modelling of rheological behaviour of semisolid metal slurries Part 2 â€“ Steady state behaviour. Materials Science and Technology, 2002, 18, 243-249.	0.8	28
72	Effects of rheo-die casting process on the microstructure and mechanical properties of AM50 magnesium alloy. Materials Science and Technology, 2005, 21, 1019-1024.	0.8	28

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73	The impact of melt conditioning on microstructure, texture and ductility of twin roll cast aluminium alloy strips. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 650, 365-373.	2.6	28
74	Extremely fine and uniform microstructure of magnesium AZ91D alloy sheets produced by melt conditioned twin roll casting. Materials Science and Technology, 2009, 25, 599-606.	0.8	27
75	Competitive Heterogeneous Nucleation Between Zr and MgO Particles in Commercial Purity Magnesium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2182-2192.	1.1	27
76	A New Atomistic Mechanism for Heterogeneous Nucleation in the Systems with Negative Lattice Misfit: Creating a 2D Template for Crystal Growth. Metals, 2021, 11, 478.	1.0	27
77	Effect of short T6 heat treatment on the microstructure and the mechanical properties of newly developed die-cast Alâ€“Siâ€“Mgâ€“Mn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 788, 139610.	2.6	27
78	The effects of rheo-diecasting on the integrity and mechanical properties of Mgâ€“6Alâ€“1Zn. Scripta Materialia, 2006, 54, 207-211.	2.6	26
79	Rheo-diecasting of Alâ€“Siâ€“Pb immiscible alloys. Scripta Materialia, 2006, 54, 789-793.	2.6	26
80	High modulus Al Si Mg Cu/Mg2Si TiB2 hybrid nanocomposite: Microstructural characteristics and micromechanics-based analysis. Journal of Alloys and Compounds, 2017, 694, 313-324.	2.8	26
81	Prenucleation at the Interface Between MgO and Liquid Magnesium: An Ab Initio Molecular Dynamics Study. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 788-797.	1.1	25
82	Microstructural refinement of Alâ€“10.2%Si alloy by intensive shearing. Materials Letters, 2010, 64, 671-673.	1.3	24
83	Grain Refinement of Deoxidized Copper. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 4988-5011.	1.1	24
84	Improve mechanical properties of high pressure die cast Al9Si3Cu alloy via dislocation enhanced precipitation. Journal of Alloys and Compounds, 2019, 785, 1015-1022.	2.8	24
85	Heterogeneous nucleation in Mgâ€“Zr alloy under die casting condition. Materials Letters, 2015, 160, 263-267.	1.3	23
86	The Impact of Melt-Conditioned Twin-Roll Casting on the Downstream Processing of an AZ31 Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1035-1047.	1.1	22
87	Grain Refinement and Improvement of Solidification Defects in Direct-Chill Cast Billets of A4032 Alloy by Melt Conditioning. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 2481-2492.	1.0	22
88	Improved degassing efficiency and mechanical properties of A356 aluminium alloy castings by high shear melt conditioning (HSMC) technology. Journal of Materials Processing Technology, 2021, 294, 117146.	3.1	22
89	Effect of heat treatment on microstructure and tensile properties of die-cast Al-Cu-Si-Mg alloys. Journal of Alloys and Compounds, 2021, 881, 160559.	2.8	22
90	Modelling of rheological behaviour of semisolid metal slurries Part 4 â€“ Effects of particle morphology. Materials Science and Technology, 2002, 18, 258-267.	0.8	21

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91	Recycling of high grade die casting AM series magnesium scrap with the melt conditioned high pressure die casting (MC-HPDC) process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 2664-2669.	2.6	21
92	Twin Roll Casting of Al-Mg Alloy with High Added Impurity Content. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 2842-2854.	1.1	21
93	Processing of immiscible metallic alloys by rheomixing process. Materials Science and Technology, 2001, 17, 837-842.	0.8	20
94	Improvement of mechanical properties of Al-Si alloy with effective grain refinement by in-situ integrated Al2.2Ti1B-Mg refiner. Journal of Alloys and Compounds, 2017, 710, 166-171.	2.8	20
95	Prenucleation at the liquid-Al/Î±-Al2O3 and the liquid-Al/MgO interfaces. Computational Materials Science, 2020, 171, 109258.	1.4	20
96	Microstructure and Mechanical Properties of a Rheo-Diecast Mg–10Zn–4.5Al Alloy. Materials Transactions, 2005, 46, 2221-2228.	0.4	19
97	Weibull statistical analysis of the effect of melt conditioning on the mechanical properties of AM60 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 566, 119-125.	2.6	19
98	Effect of solutionising and ageing on the microstructure and mechanical properties of a high strength die-cast Alâ€"Mgâ€"Znâ€"Si alloy. Materials Chemistry and Physics, 2015, 167, 88-96.	2.0	19
99	Crystallographic study of nucleation in SiC particulate reinforced magnesium matrix composite. Journal of Alloys and Compounds, 2017, 706, 430-437.	2.8	19
100	Solidification behavior of the remnant liquid in the sheared semisolid slurry of Snâ€"15 wt.%Pb alloy. Scripta Materialia, 2002, 46, 205-210.	2.6	18
101	Effect of melt conditioning on heat treatment and mechanical properties of AZ31 alloy strips produced by twin roll casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 620, 223-232.	2.6	18
102	A physical approach to the direct recycling of Mg-alloy scrap by the rheo-diecasting process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 472, 251-257.	2.6	17
103	Continuous Twin Screw Rheo-Extrusion of an AZ91D Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4331-4344.	1.1	17
104	An Analytical Model for Solute Segregation at Liquid Metal/Solid Substrate Interface. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 5508-5516.	1.1	17
105	Effects of Mg addition on the Al6(Fe,Mn) intermetallic compounds and the grain refinement of Î±-Al in Al-Fe-Mn alloys. Materials Characterization, 2021, 171, 110758.	1.9	17
106	Modelling of rheological behaviour of semisolid metal slurries Part 3 â€" Transient state behaviour. Materials Science and Technology, 2002, 18, 250-257.	0.8	16
107	Development of the Rheo-Diecasting Process for Mg-Alloys. Materials Science Forum, 2005, 488-489, 405-412.	0.3	16
108	Processing of Ultrafine-Size Particulate Metal Matrix Composites by Advanced Shear Technology. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 691-701.	1.1	16

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109	Solidification behaviour of an AA5754 Al alloy ingot cast with high impurity content. International Journal of Materials Research, 2012, 103, 1228-1234.	0.1	16
110	Improved Defect Control and Mechanical Property Variation in High-Pressure Die Casting of A380 Alloy by High Shear Melt Conditioning. Jom, 2018, 70, 2726-2730.	0.9	16
111	A novel approach to optimize mechanical properties for aluminium alloy in High pressure die casting (HPDC) process combining experiment and modelling. Journal of Materials Processing Technology, 2021, 296, 117193.	3.1	16
112	A molecular dynamics study of heterogeneous nucleation in generic liquid/substrate systems with positive lattice misfit. Materials Research Express, 2020, 7, 126501.	0.8	16
113	Influence of Intensive Melt Shearing on the Microstructure and Mechanical Properties of an Al-Mg Alloy with High Added Impurity Content. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3141-3149.	1.1	15
114	Melt Protection of Mg-Al Based Alloys. Metals, 2016, 6, 131.	1.0	15
115	Grain refinement of DC cast magnesium alloys with intensive melt shearing. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012043.	0.3	14
116	Understanding the Thermodynamics and Crystal Structure of Complex Fe Containing Intermetallic Phases Formed on Solidification of Aluminium Alloys. Jom, 2019, 71, 1731-1736.	0.9	14
117	Influence of reinforcing particle distribution on the casting characteristics of Al-SiCp composites. Journal of Materials Processing Technology, 2020, 279, 116580.	3.1	14
118	Microstructure and mechanical properties of new die-cast quaternary Al-Cu-Si-Mg alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140357.	2.6	14
119	Morphological development of solidification structures under forced fluid flow: experimental observation. Materials Science and Technology, 2003, 19, 573-580.	0.8	13
120	Melt Conditioned Direct Chill (MC-DC) Casting of Al Alloys. Transactions of the Indian Institute of Metals, 2013, 66, 117-121.	0.7	13
121	Degassing LM25 aluminium alloy by novel degassing technology with intensive melt shearing. International Journal of Cast Metals Research, 2013, 26, 16-21.	0.5	13
122	Atomic Ordering at the Liquid-Al/MgAl2O4 Interfaces from Ab Initio Molecular Dynamics Simulations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 6318-6326.	1.1	13
123	Crystal chemistry and electronic structure of the Î²-AlFeSi phase from first-principles. Journal of Solid State Chemistry, 2021, 299, 122199.	1.4	13
124	Interfacial characterisation of overcasting a cast Al-Si-Mg (A356) alloy on a wrought Al-Mg-Si (AA6060) alloy. Journal of Materials Processing Technology, 2017, 243, 197-204.	3.1	12
125	Thermomechanical Treatment of High-Shear Melt-Conditioned Twin-Roll Cast Strip of Recycled AA5754 Alloy. Jom, 2019, 71, 2018-2024.	0.9	12
126	Si solution in Î¸-Al13Fe4 from first-principles. Intermetallics, 2020, 126, 106939.	1.8	12

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127	Interfacial interaction and prenucleation at liquid-Al/Î³-Al₂O₃{1 1 1} interfaces. Journal of Physics Communications, 2021, 5, 015007.	0.5	12
128	Solidification Behavior of Intensively Sheared Hypoeutectic Al-Si Alloy Liquid. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 1117-1126.	1.1	11
129	Effect of Al-5Ti-1B Grain Refiner Addition on the Formation of Intermetallic Compounds in Al-Mg-Si-Mn-Fe Alloys. Materials Science Forum, 2015, 828-829, 53-57.	0.3	11
130	Identification of key liquid metal flow features in the physical conditioning of molten aluminium alloy with high shear processing. Computational Materials Science, 2017, 131, 35-43.	1.4	11
131	Characterization of AlN Inclusion Particles Formed in Commercial Purity Aluminum. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2519-2526.	1.1	11
132	Effective Degassing for Reduced Variability in High-Pressure Die Casting Performance. Jom, 2019, 71, 824-830.	0.9	11
133	Hydrodynamic analysis of binary immiscible metallurgical flow in a novel mixing process: rheomixing. Applied Physics A: Materials Science and Processing, 2005, 81, 549-559.	1.1	10
134	Direct chill rheocasting (DCRC) of AZ31 Mg alloy. Materials Science and Technology, 2006, 22, 1489-1498.	0.8	10
135	Solidification Behavior and Microstructural Evolution of Near-Eutectic Zn-Al Alloys under Intensive Shear. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 185-195.	1.1	10
136	An ab initio study on stacking and stability of TiAl3 phases. Computational Materials Science, 2018, 153, 309-314.	1.4	10
137	Variation improvement of mechanical properties of Mg-9Al-1Zn alloy with melt conditioned high pressure die casting. Materials Characterization, 2018, 144, 498-504.	1.9	10
138	Towards directly formable thin gauge AZ31 Mg alloy sheet production by melt conditioned twin roll casting. Materials and Design, 2019, 179, 107887.	3.3	10
139	Solidification processing of scrap Al-alloys containing high levels of Fe. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012059.	0.3	10
140	Effect of Nucleant Particle Agglomeration on Grain Size. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 810-822.	1.1	10
141	Fluid flow aspects of twin-screw extruder process: numerical simulations of TSE rheomixing. Modelling and Simulation in Materials Science and Engineering, 2003, 11, 771-790.	0.8	9
142	Effect of high shear rate on solidification microstructure of semisolid AZ91D alloy. Transactions of Nonferrous Metals Society of China, 2010, 20, s868-s872.	1.7	9
143	Surface oxidation of molten AZ91D magnesium alloy in air. International Journal of Cast Metals Research, 2014, 27, 167-175.	0.5	9
144	Effect of MgO on Phase Selection in Alâ€“Mgâ€“Siâ€“Feâ€“Mn Alloys. Transactions of the Indian Institute of Metals, 2015, 68, 1167-1172.	0.7	9

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145	Melt Conditioned Direct Chill (MC-DC) Casting of AA-6111 Aluminium Alloy Formulated from Incinerator Bottom Ash (IBA). Recycling, 2019, 4, 37.	2.3	9
146	Intrinsic defects in and electronic properties of Î¸-Al13Fe4: an ab initio DFT study. JPhys Materials, 2019, 2, 015004.	1.8	9
147	Segregation of Ca at the Mg/MgO interface and its effect on grain refinement of Mg alloys. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012048.	0.3	9
148	Macro-heterogeneities in microstructures, concentrations, defects and tensile properties of die cast Alâ€"Mgâ€"Si alloys. Materials Science and Technology, 2017, 33, 2223-2233.	0.8	9
149	A Monte Carlo simulation of solidification structure formation under melt shearing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 365, 330-335.	2.6	8
150	Effect of intensive shearing on morphology of primary silicon and properties of hypereutectic Alâ€"Si alloy. Materials Science and Technology, 2010, 26, 975-980.	0.8	8
151	Degassing of LM24 Al alloy by intensive melt shearing. International Journal of Cast Metals Research, 2011, 24, 307-313.	0.5	8
152	Grain refinement of DHP copper by elemental additions. International Journal of Cast Metals Research, 2015, 28, 248-256.	0.5	8
153	Influence of intensive melt shearing on subsequent hot rolling and the mechanical properties of twin roll cast AZ31 strips. Materials Letters, 2015, 144, 54-57.	1.3	8
154	Fe-Rich Intermetallic Formation and Mechanical Properties of Recycled AA6111 Alloy Strips Produced by Melt Conditioning Twin Roll Casting. Jom, 2020, 72, 3753-3759.	0.9	8
155	Heterogeneous Nucleation of Eutectic Structure in Al-Mg-Si Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2697-2702.	1.1	8
156	Twin Roll Casting and Melt Conditioned Twin-Roll Casting of Magnesium. Solid State Phenomena, 0, 141-143, 195-200.	0.3	7
157	Extruded microstructure of Znâ€"5 wt-Al eutectic alloy processed by twin screw extrusion. Materials Science and Technology, 2012, 28, 1287-1294.	0.8	7
158	Molecular dynamic simulation of the atomic structure of aluminum solidâ€"liquid interfaces. Materials Research Express, 2014, 1, 025705.	0.8	7
159	Repeatability of tensile properties in high pressure die-castings of an Al-Mg-Si-Mn alloy. Metals and Materials International, 2015, 21, 936-943.	1.8	7
160	In-situ microstructural control of A6082 alloy to modify second phase particles by melt conditioned direct chill (MC-DC) casting process â€" A novel approach. Journal of Materials Processing Technology, 2021, 295, 117170.	3.1	7
161	Crystal Chemistry and Electronic Properties of the Al-Rich Compounds, Al2Cu, Ï‰-Al7Cu2Fe and Î¸-Al13Fe4 with Cu Solution. Metals, 2022, 12, 329.	1.0	7
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