Alan A Luo

List of Publications by Year
in descending order

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179 papers	7,533 citations	71102 41 h-index	66911 78 g-index
213 all docs	213 docs citations	213 times ranked	3664 citing authors

#	Article	IF	Citations
1	Magnesium casting technology for structural applications. Journal of Magnesium and Alloys, 2013, 1, 2-22.	11.9	682
2	Magnesium: Current and potential automotive applications. Jom, 2002, 54, 42-48.	1.9	330
3	Influence of cerium on the texture and ductility of magnesium extrusions. Scripta Materialia, 2008, 59, 562-565.	5.2	300
4	Influence of {10-12} extension twinning on the flow behavior of AZ31 Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 445-446, 302-309.	5.6	284
5	Creep and microstructure of magnesium-aluminum-calcium based alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 567-574.	2.2	279
6	Twinning-induced softening in polycrystalline AM30 Mg alloy at moderate temperatures. Scripta Materialia, 2006, 54, 771-775.	5.2	259
7	Recent Magnesium Alloy Development for Automotive Powertrain Applications. Materials Science Forum, 2003, 419-422, 57-66.	0.3	199
8	An investigation of the properties of Mg-Zn-Al alloys. Scripta Materialia, 1998, 39, 45-53.	5.2	186
9	Materials for Automotive Lightweighting. Annual Review of Materials Research, 2019, 49, 327-359.	9.3	143
10	Effect of strain ratio and strain rate on low cycle fatigue behavior of AZ31 wrought magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 334-343.	5.6	141
11	Lightweight, strong, moldable wood via cell wall engineering as a sustainable structural material. Science, 2021, 374, 465-471.	12.6	137
12	Strain-Controlled Low-Cycle Fatigue Properties of a Newly Developed Extruded Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 3014-3026.	2.2	134
13	The evolution of technology for materials processing over the last 50 years: The automotive example. Jom, 2007, 59, 48-57.	1.9	117
14	Advanced lightweight materials and manufacturing processes for automotive applications. MRS Bulletin, 2015, 40, 1045-1054.	3.5	117
15	Effect of strontium on the microstructure, mechanical properties, and fracture behavior of AZ31 magnesium alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1333-1341.	2.2	115
16	Precipitation evolution and hardening in Mg Sm Zn Zr alloys. Acta Materialia, 2016, 111, 335-347.	7.9	102
17	In-situ investigation on the microstructure evolution and plasticity of two magnesium alloys during three-point bending. International Journal of Plasticity, 2015, 72, 218-232.	8.8	92
18	Development of a New Wrought Magnesium-Aluminum-Manganese Alloy AM30. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1184-1192.	2.2	88

#	Article	IF	Citations
19	Effect of solute atoms and second phases on the thermal conductivity of Mg-RE alloys: A quantitative study. Journal of Alloys and Compounds, 2018, 747, 431-437.	5.5	86
20	Creep resistant Mg-Al-Ca alloys: Computational thermodynamics and experimental investigation. Jom, 2003, 55, 40-44.	1.9	84
21	Towards high ductility in magnesium alloys - The role of intergranular deformation. International Journal of Plasticity, 2019, 123, 121-132.	8.8	76
22	Material design and development: From classical thermodynamics to CALPHAD and ICME approaches. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2015, 50, 6-22.	1.6	74
23	Magnesium castings for automotive applications. Jom, 1995, 47, 28-31.	1.9	72
24	Solidification Microstructure and Mechanical Properties of Cast Magnesium-Aluminum-Tin Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 360-368.	2.2	70
25	Microstructural, mechanical and corrosion characteristics of heat-treated Mg-1.2Zn-0.5Ca (wt%) alloy for use as resorbable bone fixation material. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 69, 203-212.	3.1	70
26	Ultrahigh strength Mg-Al-Ca-Mn extrusion alloys with various aluminum contents. Journal of Alloys and Compounds, 2019, 792, 130-141.	5.5	70
27	Dependence of the distribution of deformation twins on strain amplitudes in an extruded magnesium alloy after cyclic deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 519, 38-45.	5.6	69
28	Applications of CALPHAD modeling and databases in advanced lightweight metallic materials. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 62, 1-17.	1.6	68
29	Low-pressure die casting of magnesium alloy AM50: Response to process parameters. Journal of Materials Processing Technology, 2008, 205, 224-234.	6.3	67
30	Alloy development and process innovations for light metals casting. Journal of Materials Processing Technology, 2022, 306, 117606.	6.3	66
31	Grain Refinement of AZ31 Magnesium Alloy by Titanium and Low-Frequency Electromagnetic Casting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1358-1366.	2.2	61
32	Interdiffusion and Phase Growth Kinetics in Magnesium-Aluminum Binary System. Journal of Phase Equilibria and Diffusion, 2013, 34, 104-115.	1.4	56
33	Interfacial phenomena in magnesium/aluminum bi-metallic castings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 595, 154-158.	5.6	55
34	Microstructure and mechanical properties of a high ductility Mgâ€“Znâ€“Mnâ€“Ce magnesium alloy. Journal of Magnesium and Alloys, 2013, 1, 283-291.	11.9	53
35	Abnormal texture development in magnesium alloy Mgâ€“3Alâ€“1Zn during large strain electroplastic rolling: Effect of pulsed electric current. International Journal of Plasticity, 2016, 87, 86-99.	8.8	51
36	Fatigue strength dependence on the ultimate tensile strength and hardness in magnesium alloys. International Journal of Fatigue, 2015, 80, 468-476.	5.7	50

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37	Interphase boundary segregation of silver and enhanced precipitation of Mg17Al12 Phase in a Mg-Al-Sn-Ag alloy. Scripta Materialia, 2018, 154, 192-196.	5.2	49
38	A new magnesium sheet alloy and its multi-stage homogenization for simultaneously improved ductility and strength at room temperature. Scripta Materialia, 2019, 171, 92-97.	5.2	49
39	A novel aluminum surface treatment for improved bonding in magnesium/aluminum bimetallic castings. Scripta Materialia, 2014, 86, 52-55.	5.2	47
40	Enhanced rollability of Mg 3Al 1Zn alloy by pulsed electric current: a comparative study. Materials and Design, 2016, 100, 204-216.	7.0	47
41	Effect of Zn on the microstructure evolution of extruded Mgâ€“3Nd (â€“Zn)â€“Zr (wt.%) alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 543, 12-21.	5.6	46
42	Constitutive behavior and processing maps of a new wrought magnesium alloy ZE20 (Mg-2Zn-0.2Ce). Journal of Magnesium and Alloys, 2020, 8, 111-126.	11.9	44
43	Towards high strength cast Mg-RE based alloys: Phase diagrams and strengthening mechanisms. Journal of Magnesium and Alloys, 2022, 10, 1401-1427.	11.9	43
44	Microstructure and Mechanical Properties of Extruded Magnesium-Aluminum-Cerium Alloy Tubes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 2662-2674.	2.2	42
45	A low-cost and high-strength Ti-Al-Fe-based cast titanium alloy for structural applications. Scripta Materialia, 2018, 157, 124-128.	5.2	42
46	Thermodynamics modeling of the Mgâ€“Sr and Caâ€“Mgâ€“Sr systems. Journal of Alloys and Compounds, 2006, 421, 172-178.	5.5	41
47	Bendability of the wrought magnesium alloy AM30 tubes using a rotary draw bender. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 486, 596-601.	5.6	41
48	A quantitative model for describing crystal nucleation in pressurized solidification during squeeze casting. Scripta Materialia, 2012, 66, 215-218.	5.2	40
49	A Formation Map of Iron-Containing Intermetallic Phases in Recycled Cast Aluminum Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5945-5956.	2.2	40
50	Lightweight AlCrTiV high-entropy alloys with dual-phase microstructure via microalloying. Journal of Materials Science, 2019, 54, 2271-2277.	3.7	40
51	Magnesium Alloy Development for Automotive Applications. Materials Science Forum, 0, 706-709, 69-82.	0.3	39
52	Three-Dimensional Phase-Field Simulation and Experimental Validation of Î²-Mg17Al12 Phase Precipitation in Mg-Al-Based Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 948-962.	2.2	39
53	Phase formations in low density high entropy alloys. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2017, 56, 19-28.	1.6	38
54	Dynamic precipitation and enhanced mechanical properties of ZK60 magnesium alloy achieved by low temperature extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 829, 142143.	5.6	38

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55	Structureâ€“property relations of cyclic damage in a wrought magnesium alloy. Scripta Materialia, 2010, 63, 751-756.	5.2	37
56	Computational phase equilibria and experimental investigation of magnesiumâ€“aluminumâ€“calcium alloys. Intermetallics, 2012, 24, 22-29.	3.9	37
57	Predicting and controlling interfacial microstructure of magnesium/aluminum bimetallic structures for improved interfacial bonding. Journal of Magnesium and Alloys, 2020, 8, 578-586.	11.9	37
58	Directional Solidification and Microsegregation in a Magnesium-Aluminum-Calcium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3239-3248.	2.2	36
59	Athermal influence of pulsed electric current on the twinning behavior of Mgâ€“3Alâ€“1Zn alloy during rolling. Scripta Materialia, 2016, 114, 151-155.	5.2	36
60	Development of Creep-Resistant Magnesium Alloys for Powertrain Applications: Part 1 of 2. , 0, , .		35
61	Hot deformation behavior of as-cast Mgâ€“Znâ€“Mnâ€“Ce alloy in compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 560, 492-499.	5.6	35
62	Study on Pressurized Solidification Behavior and Microstructure Characteristics of Squeeze Casting Magnesium Alloy AZ91D. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 328-336.	2.1	35
63	High Cycle Fatigue of Cast Mg-3Nd-0.2Zn Magnesium Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5202-5215.	2.2	33
64	Precipitation sequence and kinetics in a Mg-4Sm-1Zn-0.4Zr (wt%) alloy. Journal of Alloys and Compounds, 2015, 649, 649-655.	5.5	33
65	Twinning behavior and lattice rotation in a Mgâ€“Gdâ€“Yâ€“Zr alloy under ballistic impact. Journal of Alloys and Compounds, 2015, 650, 622-632.	5.5	33
66	Microstructure and hot deformation behavior of a new aluminumâ€“lithiumâ€“copper based AA2070 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 777, 139048.	5.6	33
67	AM30 porthole die extrusionsâ€”A comparison with circular seamless extruded tubes. Journal of Materials Processing Technology, 2009, 209, 6010-6020.	6.3	29
68	A phase field model for simulating the precipitation of multi-variant Î²-Mg17Al12 in Mgâ€“Al-based alloys. Scripta Materialia, 2013, 68, 691-694.	5.2	29
69	An experimental and numerical study of necking initiation in aluminium alloy tubes during hydroforming. International Journal of Mechanical Sciences, 2004, 46, 1727-1746.	6.7	28
70	An analysis of localized necking in aluminium alloy tubes during hydroforming using a continuum damage model. International Journal of Mechanical Sciences, 2007, 49, 200-209.	6.7	28
71	Improved bending fatigue and corrosion properties of a Mgâ€“Alâ€“Mn alloy by super vacuum die casting. Scripta Materialia, 2012, 67, 879-882.	5.2	28
72	Microstructure and Mechanical Properties of Mg-7Al-2Sn Alloy Processed by Super Vacuum Die-Casting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4788-4799.	2.2	28

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73	Fatigue behavior and life prediction of cast magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 647, 113-126.	5.6	28
74	Predicting grain structure in high pressure die casting of aluminum alloys: A coupled cellular automaton and process model. Computational Materials Science, 2019, 161, 64-75.	3.0	28
75	Inclusions in molten magnesium and potential assessment techniques. Jom, 1996, 48, 47-51.	1.9	27
76	Thermodynamic modeling and experimental investigation of the magnesiumâ€“neodymiumâ€“zinc alloys. Intermetallics, 2011, 19, 1720-1726.	3.9	27
77	A combined electron backscattered diffraction and visco-plastic self-consistent analysis on the anisotropic deformation behavior in a Mg-Gd-Y alloy. Materials and Design, 2017, 122, 164-171.	7.0	27
78	Predicting gas and shrinkage porosity in solidification microstructure: A coupled three-dimensional cellular automaton model. Journal of Materials Science and Technology, 2020, 49, 91-105.	10.7	27
79	Cu redistribution study during the corrosion of AZ91 using a rotating ring-disk collection experiment. Corrosion Science, 2016, 112, 760-764.	6.6	26
80	Quantitative Study of Microstructure-Dependent Thermal Conductivity in Mg-4Ce-xAl-0.5Mn Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1970-1984.	2.2	26
81	Microstructure and Corrosion Characterization of Squeeze Cast AM50 Magnesium Alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2010, 41, 1375-1383.	2.1	25
82	Basal slip dominant fatigue damage behavior in a cast Mg-8Gd-3Y-Zr alloy. International Journal of Fatigue, 2019, 118, 104-116.	5.7	25
83	A new fatigue life model for thermally-induced cracking in H13 steel dies for die casting. Journal of Materials Processing Technology, 2019, 271, 444-454.	6.3	25
84	Large-scale three-dimensional phase-field simulation of multi-variant Î²-Mg17Al12 in Mgâ€“Al-based alloys. Computational Materials Science, 2015, 101, 248-254.	3.0	24
85	Thermodynamic modeling and experimental investigation of the magnesiumâ€“zincâ€“samarium alloys. Journal of Alloys and Compounds, 2014, 593, 71-78.	5.5	23
86	Deformation microstructure and thermomechanical processing maps of homogenized AA2070 aluminum alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 834, 142619.	5.6	23
87	Fatigue characteristics of sand-cast AZ91D magnesium alloy. Journal of Magnesium and Alloys, 2017, 5, 1-12.	11.9	22
88	Enhanced ductility in high-pressure die casting Mg-4Ce-xAl-0.5Mn alloys via modifying second phase. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 773, 138870.	5.6	22
89	A new magnesium sheet alloy with high tensile properties and room-temperature formability. Scientific Reports, 2020, 10, 10044.	3.3	22
90	Three-dimensional visualization and quantification of microporosity in aluminum castings by X-ray micro-computed tomography. Journal of Materials Science and Technology, 2021, 65, 99-107.	10.7	21

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91	Self-Pierce Riveting of Magnesium to Aluminum Alloys. SAE International Journal of Materials and Manufacturing, 0, 4, 158-165.	0.3	19
92	Texture and mechanical behavior evolution of age-hardenable Mgâ€“Ndâ€“Zn extrusions during aging treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 529, 151-155.	5.6	19
93	Ceramic coating for delayed degradation of Mg-1.2Zn-0.5Ca-0.5Mn bone fixation and instrumentation. Thin Solid Films, 2019, 687, 137456.	1.8	19
94	Examination of Dendritic Growth During Solidification of Ternary Alloys via a Novel Quantitative 3D Cellular Automaton Model. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 123-135.	2.1	19
95	Wrought Magnesium Alloys and Manufacturing Processes for Automotive Applications. , 0, , .		18
96	Plastic flow behavior of a high-strength magnesium alloy NZ30K. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 532, 616-622.	5.6	18
97	Controlling Particle/Metal Interactions in Metal Matrix Composites During Solidification: The Role of Melt Viscosity and Cooling Rate. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 3736-3747.	2.2	18
98	CALPHAD-Based Modeling and Experimental Validation of Microstructural Evolution and Microsegregation in Magnesium Alloys During Solidification. Journal of Phase Equilibria and Diffusion, 2019, 40, 495-507.	1.4	18
99	The effects of grain size and heat treatment on the deformation heterogeneities and fatigue behaviors of GW83K magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 246-257.	5.6	18
100	Improved Interfacial Bonding in Magnesium/Aluminum Overcasting Systems by Aluminum Surface Treatments. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 2495-2503.	2.1	17
101	Microscopic deformation compatibility during monotonic loading in a Mg-Gd-Y alloy. Materials Characterization, 2016, 119, 195-199.	4.4	17
102	Formation of a new incoherent twin boundary in a Mgâ€“3Gd alloy. Scripta Materialia, 2016, 112, 136-139.	5.2	17
103	Experimental investigation and simulation of precipitation evolution in Mg-3Nd-0.2Zn alloy. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 60, 58-67.	1.6	17
104	Effect of heat treatment on strainâ€“controlled fatigue behavior of cast Mgâ€“Ndâ€“Znâ€“Zr alloy. Journal of Materials Science and Technology, 2018, 34, 2091-2099.	10.7	17
105	Predicting primary dendrite arm spacing in Alâ€“Siâ€“Mg alloys: effect of Mg alloying. Journal of Materials Science, 2019, 54, 9907-9920.	3.7	17
106	Prediction of location specific mechanical properties of aluminum casting using a new CA-FEA (cellular automaton-finite element analysis) approach. Materials and Design, 2020, 194, 108929.	7.0	17
107	Assessing phase equilibria and atomic mobility of intermetallic compounds in aluminum-magnesium alloy system. Journal of Alloys and Compounds, 2020, 825, 153962.	5.5	17
108	Phase equilibria and microstructure investigation of Mg-Gd-Y-Zn alloy system. Journal of Magnesium and Alloys, 2022, 10, 689-696.	11.9	17

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109	A CALPHAD (CALculation of PHAse Diagrams)-based viscosity model for Al-Ni-Fe-Co melt system. Journal of Molecular Liquids, 2019, 291, 111271.	4.9	16
110	Tensile Creep and Microstructure of Magnesium-Aluminum-Calcium Based Alloys for Powertrain Applications - Part 2 of 2. , 2001, , .		15
111	Characterization of Magnesium Automotive Components Produced by Super-Vacuum Die Casting Process. Materials Science Forum, 0, 618-619, 381-386.	0.3	15
112	First conductive atomic force microscopy investigation on the oxide-film removal mechanism by chloride fluxes in aluminum brazing. Scripta Materialia, 2017, 138, 12-16.	5.2	15
113	Interface formation in magnesium/aluminium bimetallic castings with a nickel interlayer. International Journal of Cast Metals Research, 2016, 29, 338-343.	1.0	14
114	Modeling Precipitation Hardening and Yield Strength in Cast Al-Si-Mg-Mn Alloys. Metals, 2020, 10, 1356.	2.3	14
115	First-Principles Investigation of Laves Phases in Mg-Al-Ca System. Materials Science Forum, 2005, 488-489, 169-176.	0.3	13
116	Development of a Moderate Temperature Bending Process for Magnesium Alloy Extrusions. Materials Science Forum, 2005, 488-489, 477-482.	0.3	13
117	CALPHAD modeling and experimental assessment of Ti-Al-Mn ternary system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 63, 126-133.	1.6	13
118	Three-dimensional cellular automaton simulation of coupled hydrogen porosity and microstructure during solidification of ternary aluminum alloys. Scientific Reports, 2019, 9, 13099.	3.3	13
119	Order-disorder transition and its mechanical effects in lightweight AlCrTiV high entropy alloys. Scripta Materialia, 2022, 210, 114462.	5.2	13
120	Particle-Stimulated Nucleation of Dynamic Recrystallization in AZ31 Alloy at Elevated Temperatures. Materials Science Forum, 2005, 488-489, 261-264.	0.3	12
121	Development of Corrosion Testing Protocols for Magnesium Alloys and Magnesium-Intensive Subassemblies. SAE International Journal of Materials and Manufacturing, 0, 6, 242-247.	0.3	12
122	Fatigue Properties of Cast Magnesium Wheels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 4239-4257.	2.2	12
123	A New Recycled Alâ€“Siâ€“Mg Alloy for Sustainable Structural Die Casting Applications. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 2861-2873.	2.2	12
124	Hot deformation behavior and workability of pre-extruded ZK60A magnesium alloy. Transactions of Nonferrous Metals Society of China, 2015, 25, 1822-1830.	4.2	11
125	Investigation of the non-equilibrium solidification microstructure of a Mgâ€“4Alâ€“2RE (AE42) alloy. Journal of Materials Science, 2016, 51, 6287-6294.	3.7	11
126	A phase field model coupled with pressure-effect-embedded thermodynamic modeling for describing microstructure and microsegregation in pressurized solidification of a ternary magnesium alloy. Computational Materials Science, 2017, 136, 264-270.	3.0	11

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127	â€œEffect of Zn content and aging temperature on the in-vitro properties of heat-treated and Ca/P ceramic-coated Mg-0.5%Ca-x%Zn alloysâ€• Materials Science and Engineering C, 2019, 103, 109700.	7.3	11
128	Microstructural evolution of Mg-Al-Re alloy reinforced with alumina fibers. Journal of Magnesium and Alloys, 2020, 8, 565-577.	11.9	11
129	Calibrating material parameters to model the thin-walled components made of die cast AM60B magnesium alloy. International Journal of Crashworthiness, 2012, 17, 540-552.	1.9	10
130	Microstructure evolution of Mg-3%Al-1%Zn alloy tube during warm bending. Journal of Materials Science, 2012, 47, 3801-3807.	3.7	10
131	In-mold oxidation behavior of Mgâ€“4.32Yâ€“2.83Ndâ€“0.41Zr alloy. Journal of Materials Science, 2018, 53, 11091-11103.	3.7	10
132	Multi-component numerical simulation and experimental study of dendritic growth during solidification processing. Journal of Materials Processing Technology, 2020, 286, 116829.	6.3	10
133	Co-free CuFeMnNi high-entropy alloy with tunable tensile properties by thermomechanical processing. Journal of Materials Science, 2021, 56, 7670-7680.	3.7	10
134	On the interactions between molten aluminum and high entropy alloy particles during aluminum matrix composite processing. Journal of Alloys and Compounds, 2022, 895, 162712.	5.5	10
135	Characterization and modeling of concurrent precipitation in Mg-Al-Sn alloys using an improved Kampmann-Wagner numerical (KWN) model. Materialia, 2022, 21, 101348.	2.7	10
136	Microstructure and fatigue properties of hydroformed aluminum alloys 6063 and 5754. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2549-2557.	2.2	9
137	The Effects of Silicon Addition on the Microstructure and Mechanical Properties of a Mg-Al-Sn Alloy Produced by Vacuum Assisted High Pressure Die Casting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1522-1533.	2.2	8
138	Cellular automaton simulation and experimental validation of eutectic transformation during solidification of Al-Si alloys. Npj Computational Materials, 2022, 8, .	8.7	8
139	Size Effect on Magnesium Alloy Castings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 2686-2704.	2.2	7
140	The melt protection mechanism of an SO2/CO2 gas mixture for a magnesium-rare-earth based alloy. Journal of Alloys and Compounds, 2017, 722, 101-107.	5.5	7
141	Inhibiting Brittle Intermetallic Layer in Magnesium/Aluminum Bimetallic Castings via In Situ Formation of Mg2Si Phase. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 1547-1552.	2.1	7
142	The effect of microstructure on the plastic strain localization and fatigue crack initiation in cast Mgâ€“8Gdâ€“3Yâ€“0.5Zr alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140383.	5.6	7
143	Removing the oxide layer on the A380 substrate of AM60/A380 bimetallic castings by the zincate process followed with galvanizing. Vacuum, 2018, 148, 127-130.	3.5	6
144	Study on the response of dendritic growth to periodic increaseâ€“decrease pressure in solidification via in situ observation using succinonitrile. Journal of Crystal Growth, 2018, 498, 85-92.	1.5	6

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145	Biocompatibility of a novel heat-treated and ceramic-coated magnesium alloy (Mgâ€“1.2Znâ€“0.5Caâ€“0.5Mn) for resorbable skeletal fixation devices. MRS Communications, 2020, 10, 467-474.	1.8	6
146	On the exceptionally high ductility of Mgâ€“2Zn-0.3Ca-0.2Ce-0.1Mn alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 819, 141484.	5.6	6
147	Influence of Cerium on Texture and Ductility of Magnesium Extrusions. , 2016, , 363-368.		6
148	Magnesium Front End Research and Development: A Canada-China-USA Collaboration. , 2016, , 41-48.		5
149	Mechanical and Thermophysical Properties of Magnesium Alloy Extrusions. , 0, , .		4
150	A Statistics-Based Cracking Criterion of Resin-Bonded Silica Sand for Casting Process Simulation. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 260-267.	2.1	4
151	Aluminum Tube Hydroforming: Formability and Mechanical Properties. , 2005, , .		3
152	Phase-field modelling on effect of pressure on growth kinetics of Mgâ€“Alâ€“Sn alloy. Materials Science and Technology, 2018, 34, 1362-1369.	1.6	3
153	Development of Mg-Al-Sn-Si Alloys Using a Calphad Approach. , 2016, , 79-82.		3
154	A Novel Mgâ€“CaMgSn Master Alloy for Grain Refinement in Mgâ€“Al-Based Alloys. Metals, 2021, 11, 1722.	2.3	3
155	The Effect of Heat-Treatment on Mechanical, Microstructural, and Corrosion Characteristics of a Magnesium Alloy With Potential Application in Resorbable Bone Fixation Hardware. , 2016, , .		2
156	Microstructure and Mechanical Properties of High Pressure Die Cast Mgâ€“Alâ€“Snâ€“Si Alloys. Minerals, Metals and Materials Series, 2017, , 289-295.	0.4	2
157	Oxidation and Ignition Behaviors of Molten Mg-Nd-Zr Alloy in Resin-Sand Mold. Journal of Materials Engineering and Performance, 2019, 28, 5344-5351.	2.5	2
158	A New Model for Predicting Oxide-Related Defects in Aluminum Castings. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 1989-2002.	2.1	2
159	Advanced Metal Casting. , 2022, , 13-26.		2
160	Application of Computational Thermodynamics and Calphad in Magnesium Alloy Development. , 2013, , 3-8.		2
161	Application of Computational Thermodynamics and CALPHAD in Magnesium Alloy Development. , 0, , 1-8.		2
162	Low-Cyclic Fatigue Behavior of Peak-Aged Mgâ€“Nd-Based Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 754-761.	2.2	2

#	Article	IF	Citations
163	Development and Validation of Extrusion Limit Diagram for AZ31 and AM30 Magnesium Alloys. Materials Science Forum, 2007, 546-549, 327-332.	0.3	1
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