Karl Kainer

List of Publications by Year in descending order

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357 papers	15,153 citations	26630 56 h-index	24982 109 g-index
389 all docs	389 docs citations	389 times ranked	6925 citing authors

#	Article	IF	Citations
1	Degradable biomaterials based on magnesium corrosion. Current Opinion in Solid State and Materials Science, 2008, 12, 63-72.	11.5	1,537
2	Effect of rare earth additions on microstructure and texture development of magnesium alloy sheets. Scripta Materialia, 2010, 63, 725-730.	5.2	643
3	Magnesium alloys as implant materials â€“ Principles of property design for Mgâ€“RE alloysâ˜†. Acta Biomaterialia, 2010, 6, 1714-1725.	8.3	503
4	Recent research and developments on wrought magnesium alloys. Journal of Magnesium and Alloys, 2017, 5, 239-253.	11.9	472
5	Plasma electrolytic oxidation coatings with particle additions â€“ A review. Surface and Coatings Technology, 2016, 307, 1165-1182.	4.8	408
6	A Critical Review of the Stress Corrosion Cracking (SCC) of Magnesium Alloys. Advanced Engineering Materials, 2005, 7, 659-693.	3.5	386
7	General and Localized Corrosion of Magnesium Alloys: A Critical Review. Journal of Materials Engineering and Performance, 2004, 13, 7-23.	2.5	372
8	Review of studies on corrosion of magnesium alloys. Transactions of Nonferrous Metals Society of China, 2006, 16, s763-s771.	4.2	363
9	Effect of rare earth elements on the microstructure and texture development in magnesiumâ€“manganese alloys during extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 7092-7098.	5.6	344
10	Deformation and texture evolution in AZ31 magnesium alloy during uniaxial loading. Acta Materialia, 2006, 54, 549-562.	7.9	302
11	Study of the structure and corrosion behavior of PEO coatings on AM50 magnesium alloy by electrochemical impedance spectroscopy. Surface and Coatings Technology, 2008, 202, 3513-3518.	4.8	245
12	Plasma electrolytic oxidation coatings on Mg alloy with addition of SiO2 particles. Electrochimica Acta, 2016, 187, 20-33.	5.2	219
13	Microstructure and texture development during hydrostatic extrusion of magnesium alloy AZ31. Scripta Materialia, 2005, 53, 259-264.	5.2	212
14	Intermetallics in Magnesium Alloys. Advanced Engineering Materials, 2006, 8, 235-240.	3.5	204
15	Preparation and properties of high purity Mgâ€“Y biomaterials. Biomaterials, 2010, 31, 398-403.	11.4	170
16	Fatigue of Magnesium Alloys. Advanced Engineering Materials, 2004, 6, 281-289.	3.5	163
17	On the influence of the grain size and solute content on the AE response of magnesium alloys tested in tension and compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 462, 302-306.	5.6	154
18	Characterisation of stress corrosion cracking (SCC) of Mgâ€“Al alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 488, 339-351.	5.6	150

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19	The role of anions in the formation and corrosion resistance of the plasma electrolytic oxidation coatings. Surface and Coatings Technology, 2010, 204, 1469-1478.	4.8	149
20	Microstructural Investigations of the Mg-Sn-xCa System. Advanced Engineering Materials, 2006, 8, 359-364.	3.5	125
21	Investigations on microstructures, mechanical and corrosion properties of Mgâ€“Gdâ€“Zn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 595, 224-234.	5.6	120
22	Tensile properties of hot rolled AZ31 Mg alloy sheets at elevated temperatures. Journal of Alloys and Compounds, 2004, 378, 184-187.	5.5	113
23	Corrosion of an extruded magnesium alloy ZK60 componentâ€”The role of microstructural features. Journal of Alloys and Compounds, 2011, 509, 4462-4469.	5.5	111
24	Insights into plasma electrolytic oxidation treatment with particle addition. Corrosion Science, 2015, 101, 201-207.	6.6	107
25	Comparison of the linearly increasing stress test and the constant extension rate test in the evaluation of transgranular stress corrosion cracking of magnesium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 472, 97-106.	5.6	106
26	Surface modification of magnesium alloy AZ31 by hydrofluoric acid treatment and its effect on the corrosion behaviour. Thin Solid Films, 2010, 518, 5209-5218.	1.8	98
27	Metallographische GefÃ¼geuntersuchungen von Magnesiumlegierungen / The Metallographical Examination of Magnesium Alloys. Praktische Metallographie/Practical Metallography, 2004, 41, 233-246.	0.3	96
28	Microstructure, mechanical and corrosion properties of Mgâ€“Dyâ€“Gdâ€“Zr alloys for medical applications. Acta Biomaterialia, 2013, 9, 8499-8508.	8.3	92
29	Investigation of the formation mechanisms of plasma electrolytic oxidation coatings on Mg alloy AM50 using particles. Electrochimica Acta, 2016, 196, 680-691.	5.2	91
30	Degradation behavior of PEO coating on AM50 magnesium alloy produced from electrolytes with clay particle addition. Surface and Coatings Technology, 2015, 269, 155-169.	4.8	90
31	Fundamentals of magnesium alloy metallurgy. , 2013, , .		89
32	Calcium and zirconium as texture modifiers during rolling and annealing of magnesiumâ€“zinc alloys. Materials Characterization, 2015, 101, 144-152.	4.4	88
33	Evaluation of the delayed hydride cracking mechanism for transgranular stress corrosion cracking of magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 466, 18-31.	5.6	87
34	Element distribution in the corrosion layer and cytotoxicity of alloy Mgâ€“10Dy during in vitro biodegradation. Acta Biomaterialia, 2013, 9, 8475-8487.	8.3	87
35	Mechanical and corrosion properties of binary Mgâ€“Dy alloys for medical applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1827-1834.	3.5	86
36	Corrosion protection of magnesium alloy AZ31 sheets by spin coating process with poly(ether imide) [PEI]. Corrosion Science, 2010, 52, 2066-2079.	6.6	85

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37	Corrosion of friction stir welded magnesium alloy AM50. Corrosion Science, 2009, 51, 1738-1746.	6.6	83
38	Anisotropic Properties of Magnesium Sheet AZ31. Materials Science Forum, 2003, 419-422, 315-320.	0.3	79
39	Influence of inorganic acid pickling on the corrosion resistance of magnesium alloy AZ31 sheet. Corrosion Science, 2009, 51, 2544-2556.	6.6	77
40	Hot tearing susceptibility of binary Mgâ€“Y alloy castings. Materials & Design, 2013, 47, 90-100.	5.1	76
41	Magnesium Permanent Mold Castings Optimization. Materials Science Forum, 0, 690, 65-68.	0.3	74
42	Role of multi-microalloying by rare earth elements in ductilization of magnesium alloys. Journal of Magnesium and Alloys, 2014, 2, 1-7.	11.9	74
43	3D reconstruction of plasma electrolytic oxidation coatings on Mg alloy via synchrotron radiation tomography. Corrosion Science, 2018, 139, 395-402.	6.6	74
44	Fracture toughness behaviour of a magnesium alloy metal-matrix composite produced by the infiltration technique. Composites, 1991, 22, 456-462.	0.7	72
45	Mechanism of grain refinement of Mgâ€“Al alloys by SiC inoculation. Scripta Materialia, 2011, 64, 793-796.	5.2	72
46	In vitro mechanical and corrosion properties of biodegradable Mg-Ag alloys. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 569-576.	1.5	72
47	Phase equilibria, thermodynamics and solidification microstructures of Mgâ€“Snâ€“Ca alloys, Part 2: Prediction of phase formation in Mg-rich Mgâ€“Snâ€“Ca cast alloys. Intermetallics, 2008, 16, 316-321.	3.9	68
48	Corrosion behavior of Mgâ€“Gdâ€“Zn based alloys in aqueous NaCl solution. Journal of Magnesium and Alloys, 2014, 2, 245-256.	11.9	67
49	Magnesium global development: Outcomes from the TMS 2007 annual meeting. Jom, 2007, 59, 39-42.	1.9	66
50	Effects of organic acid pickling on the corrosion resistance of magnesium alloy AZ31 sheet. Corrosion Science, 2010, 52, 2143-2154.	6.6	65
51	Influence of incorporating Si3N4 particles into the oxide layer produced by plasma electrolytic oxidation on AM50 Mg alloy on coating morphology and corrosion properties. Journal of Magnesium and Alloys, 2013, 1, 267-274.	11.9	64
52	Fractography of Stress Corrosion Cracking of Mg-Al Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 1157-1173.	2.2	62
53	Optimum parameters and rate-controlling mechanisms for hot working of extruded Mgâ€“3Snâ€“1Ca alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 502, 25-31.	5.6	62
54	Microstructure and corrosion behavior of Mg-Sn-Ca alloys after extrusion. Transactions of Nonferrous Metals Society of China, 2009, 19, 40-44.	4.2	62

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55	Orientation effects on acoustic emission during tensile deformation of hot rolled magnesium alloy AZ31. Journal of Alloys and Compounds, 2004, 378, 207-213.	5.5	61
56	Basics of Metal Matrix Composites. , 2006, , 1-54.		59
57	Influence of ageing treatment on microstructure, mechanical and bio-corrosion properties of Mgâ€“Dy alloys. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 13, 36-44.	3.1	59
58	Influence of cerium additions on the corrosion behaviour of high pressure die cast AM50 alloy. Corrosion Science, 2012, 65, 145-151.	6.6	58
59	Hot working parameters and mechanisms in as-cast Mgâ€“3Snâ€“1Ca alloy. Materials Letters, 2008, 62, 4207-4209.	2.6	57
60	Testing of General and Localized Corrosion of Magnesium Alloys: A Critical Review. Journal of Materials Engineering and Performance, 2004, 13, 517-529.	2.5	56
61	Investigation of minimum creep rates and stress exponents calculated from tensile and compressive creep data of magnesium alloy AE42. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 510-511, 382-386.	5.6	56
62	Corrosion protection of magnesium AZ31 alloy using poly(ether imide) [PEI] coatings prepared by the dip coating method: Influence of solvent and substrate pre-treatment. Corrosion Science, 2011, 53, 338-346.	6.6	56
63	Strain induced GdH2 precipitate in Mgâ€“Gd based alloys. Intermetallics, 2011, 19, 382-389.	3.9	55
64	Magnesium secondary alloys: Alloy design for magnesium alloys with improved tolerance limits against impurities. Corrosion Science, 2010, 52, 2452-2468.	6.6	54
65	Waste Mg-Al based alloys for hydrogen storage. International Journal of Hydrogen Energy, 2018, 43, 16738-16748.	7.1	54
66	Influence of particle additions on corrosion and wear resistance of plasma electrolytic oxidation coatings on Mg alloy. Surface and Coatings Technology, 2018, 352, 1-14.	4.8	54
67	Influence of microstructure on tensile properties and fatigue crack growth in extruded magnesium alloy AM60. International Journal of Fatigue, 2010, 32, 411-419.	5.7	52
68	Influence of composition on hot tearing in binary Mgâ€“Zn alloys. International Journal of Cast Metals Research, 2011, 24, 170-176.	1.0	52
69	Measurement and calculation of the viscosity of metalsâ€”a review of the current status and developing trends. Measurement Science and Technology, 2014, 25, 062001.	2.6	52
70	Influence of surface pre-treatment on the deposition and corrosion properties of hydrophobic coatings on a magnesium alloy. Corrosion Science, 2016, 112, 483-494.	6.6	52
71	Effects of Gd solutes on hardness and yield strength of Mg alloys. Progress in Natural Science: Materials International, 2018, 28, 724-730.	4.4	51
72	Texture and microstructure evolution in ultrafine-grained AZ31 processed by EX-ECAP. Journal of Materials Science, 2010, 45, 4665-4671.	3.7	50

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73	Influence of Rolling Conditions on the Microstructure and Mechanical Properties of Magnesium Sheet AZ31. Advanced Engineering Materials, 2003, 5, 891-896.	3.5	49
74	Hot deformation behavior of Mgâ€“2Snâ€“2Ca alloy in as-cast condition and after homogenization. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 552, 444-450.	5.6	48
75	Thermodynamic assessment and experimental study of Mgâ€“Gd alloys. Journal of Alloys and Compounds, 2013, 581, 166-177.	5.5	48
76	Hot tearing mechanisms of B206 aluminumâ€“copper alloy. Materials & Design, 2014, 64, 44-55.	5.1	47
77	Microstructures and mechanical properties of pure Mg processed by rotary swaging. Materials & Design, 2014, 63, 83-88.	5.1	47
78	High cycle fatigue behaviour of magnesium alloys. Procedia Engineering, 2010, 2, 743-750.	1.2	46
79	Mechanical properties and corrosion behavior of Mgâ€“Gdâ€“Caâ€“Zr alloys for medical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 47, 38-48.	3.1	46
80	Influence of electrical parameters on particle uptake during plasma electrolytic oxidation processing of AM50 Mg alloy. Surface and Coatings Technology, 2016, 289, 179-185.	4.8	46
81	Hot workability characteristics of cast and homogenized Mgâ€“3Snâ€“1Ca alloy. Journal of Materials Processing Technology, 2008, 201, 359-363.	6.3	45
82	Stress corrosion cracking behaviour of a surface-modified magnesium alloy. Scripta Materialia, 2008, 59, 43-46.	5.2	45
83	Magnesium-base hybrid composites prepared by liquid infiltration. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 135, 33-36.	5.6	44
84	Role of deformation mechanisms and grain growth in microstructure evolution during recrystallization of Mg-Nd based alloys. Scripta Materialia, 2019, 166, 53-57.	5.2	44
85	Hydrostatic extrusion of commercial magnesium alloys at 100Â°C and its influence on grain refinement and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 424, 223-229.	5.6	42
86	Effect of Heat Treatment on the Microstructure and Creep Behavior of Mg-Sn-Ca Alloys. Materials Science Forum, 0, 546-549, 69-72.	0.3	42
87	Wrought magnesium alloys for structural applications. Materials Science and Technology, 2008, 24, 991-996.	1.6	42
88	Experimental and numerical analysis of hot tearing susceptibility for Mgâ€“Y alloys. Journal of Materials Science, 2014, 49, 353-362.	3.7	42
89	Spray Forming of Magnesium Alloys and Composites. Powder Metallurgy, 1997, 40, 126-130.	1.7	41
90	Stress Relaxation in AX41 Magnesium Alloy Studied at Elevated Temperatures. Advanced Engineering Materials, 2007, 9, 370-374.	3.5	41

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91	Hot Tearing Characteristics of Binary Mg-Gd Alloy Castings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2285-2298.	2.2	41
92	Investigations in the Magnesium-Tin System. Materials Science Forum, 2005, 488-489, 135-138.	0.3	40
93	Hot tearing behaviour of binary Mgâ€“1Al alloy using a contraction force measuring method. International Journal of Cast Metals Research, 2009, 22, 331-334.	1.0	40
94	Investigation of the mechanical behaviour of magnesium composites. Composites, 1994, 25, 296-302.	0.7	39
95	Tensile and compressive creep behaviour of Al2O3 (SaffilÂ®) short fiber reinforced magnesium alloy AE42. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 85-88.	5.6	39
96	New Perspectives for Wrought Magnesium Alloys. Materials Science Forum, 2007, 546-549, 1-10.	0.3	39
97	Influence of aging on damping of the magnesiumâ€“aluminiumâ€“zinc series. Journal of Alloys and Compounds, 2007, 437, 127-132.	5.5	39
98	Stress corrosion cracking in magnesium alloys: Characterization and prevention. Jom, 2007, 59, 49-53.	1.9	39
99	Mg sheet: the effect of process parameters and alloy composition on texture and mechanical properties. Jom, 2009, 61, 38-42.	1.9	39
100	Effect of Zn addition on hot tearing behaviour of Mgâ€“0.5Caâ€“xZn alloys. Materials and Design, 2015, 87, 157-170.	7.0	39
101	Influence of the amount of intermetallics on the degradation of Mg-Nd alloys under physiological conditions. Acta Biomaterialia, 2021, 121, 695-712.	8.3	39
102	The Effect of Grain Size on the Deformation Behaviour of Magnesium Alloys Investigated by the Acoustic Emission Technique. Advanced Engineering Materials, 2006, 8, 422-427.	3.5	38
103	Evolution of microstructure and hardness of AE42 alloy after heat treatments. Journal of Alloys and Compounds, 2008, 463, 238-245.	5.5	38
104	Quantitative Determination on Hot Tearing in Mg-Al Binary Alloys. Materials Science Forum, 0, 618-619, 533-540.	0.3	38
105	Controlled degradation of a magnesium alloy in simulated body fluid using hydrofluoric acid treatment followed by polyacrylonitrile coating. Corrosion Science, 2012, 62, 83-89.	6.6	38
106	Acoustic emission during stress relaxation of pure magnesium and AZ magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 462, 307-310.	5.6	37
107	Study on the interface of PVDF coatings and HF-treated AZ31 magnesium alloy: Determination of interfacial interactions and reactions with self-healing properties. Corrosion Science, 2011, 53, 712-719.	6.6	37
108	Unexpected formation of hydrides in heavy rare earth containing magnesium alloys. Journal of Magnesium and Alloys, 2016, 4, 173-180.	11.9	37

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109	Influence of heat treatment on the properties of short-fibre-reinforced magnesium composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 135, 243-246.	5.6	36
110	Microstructure and mechanical properties of as-cast Mgâ€“Snâ€“Ca alloys and effect of alloying elements. Transactions of Nonferrous Metals Society of China, 2013, 23, 3604-3610.	4.2	36
111	General and Localized Corrosion of Magnesium Alloys: A Critical Review. Journal of Materials Engineering and Performance, 2013, 22, 2875-2891.	2.5	36
112	Deformation mechanisms in an AZ31 cast magnesium alloy as investigated by the acoustic emission technique. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 462, 297-301.	5.6	34
113	Study of hot forging behavior of as-cast Mgâ€“3Alâ€“1Znâ€“2Ca alloy towards optimization of its hot workability. Materials & Design, 2014, 57, 697-704.	5.1	34
114	In situ synchrotron diffraction of the solidification of Mg4Y3Nd. Materials Letters, 2013, 102-103, 62-64.	2.6	33
115	Thermal behavior of short fiber reinforced AlSi12CuMgNi piston alloys. Composites Part A: Applied Science and Manufacturing, 2004, 35, 249-263.	7.6	32
116	Creep behavior of AE42 based hybrid composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 460-461, 268-276.	5.6	32
117	Stress Corrosion Cracking (SCC) in Mgâ€Al Alloys Studied using Compact Specimens. Advanced Engineering Materials, 2008, 10, 453-458.	3.5	31
118	Influence of Ce addition on microstructure and mechanical properties of high pressure die cast AM50 magnesium alloy. Transactions of Nonferrous Metals Society of China, 2013, 23, 66-72.	4.2	31
119	As cast microstructures on the mechanical and corrosion behaviour of ZK40 modified with Gd and Nd additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 238-247.	5.6	31
120	Resistivity Changes Due to Precipitation Effects in Fibre Reinforced Mgâ€“Alâ€“Znâ€“Mn Alloy. Physica Status Solidi A, 1997, 161, 85-95.	1.7	30
121	An Investigation on Hot Tearing of Mg-4.5Zn-(0.5Zr) Alloys with Y Additions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 2108-2118.	2.2	30
122	Microstructure evolution and tensile properties of friction-stir-welded AM50 magnesium alloy. Transactions of Nonferrous Metals Society of China, 2008, 18, s76-s80.	4.2	29
123	Influence of the Processing of Magnesium Alloys AZ31 and ZE10 on the Sheet Formability at Elevated Temperature. Key Engineering Materials, 2011, 473, 335-342.	0.4	29
124	Current Status and Recent Developments in Porous Magnesium Fabrication. Advanced Engineering Materials, 2018, 20, 1700562.	3.5	29
125	Enhancing the creep resistance of AlN/Al nanoparticles reinforced Mg-2.85Nd-0.92Gd-0.41Zr-0.29Zn alloy by a high shear dispersion technique. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 755, 18-27.	5.6	29
126	Acoustic emission during tensile testing of magnesium AZ alloys. Journal of Alloys and Compounds, 2004, 378, 214-219.	5.5	28

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127	Hot tearing characteristics of Mgâ€“2Caâ€“xZn alloys. Journal of Materials Science, 2016, 51, 2687-2704.	3.7	28
128	Influence of Dy in solid solution on the degradation behavior of binary Mg-Dy alloys in cell culture medium. Materials Science and Engineering C, 2017, 75, 1351-1358.	7.3	28
129	Microstructure Changes in Isochronally Annealed Alumina Fibre Reinforced Mgâ€“Agâ€“Ndâ€“Zr Alloy. Physica Status Solidi A, 1997, 164, 709-723.	1.7	27
130	Magnesium powder injection moulding for biomedical application. Powder Metallurgy, 2014, 57, 331-340.	1.7	27
131	Experimental and numerical crushing analyses of thin-walled magnesium profiles. International Journal of Crashworthiness, 2015, 20, 177-190.	1.9	27
132	Some studies on the thermal-expansion behavior of C-fiber, SiC p , and In-situ Mg2Si-reinforced AZ31 Mg alloy-based hybrid composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 1167-1176.	2.2	26
133	Corrosion of AZ 91 Secondary Magnesium Alloy. Advanced Engineering Materials, 2005, 7, 1134-1142.	3.5	26
134	Compressive strength and hot deformation behavior of TX32 magnesium alloy with 0.4% Al and 0.4% Si additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 6964-6970.	5.6	26
135	CaO dissolution during melting and solidification of a Mgâ€“10 wt.% CaO alloy detected with in situ synchrotron radiation diffraction. Journal of Alloys and Compounds, 2015, 618, 64-66.	5.5	26
136	Influence of Nd or Ca addition on the dislocation activity and texture changes of Mgâ€“Zn alloy sheets under uniaxial tensile loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 761, 138053.	5.6	26
137	Analysis of instantaneous thermal expansion coefficient curve during thermal cycling in short fiber reinforced AlSi12CuMgNi composites. Composites Science and Technology, 2005, 65, 137-147.	7.8	25
138	Enhancement of Workability in AZ31 Alloy â€“ Processing Maps: Partâ€‰I, Cast Material. Advanced Engineering Materials, 2006, 8, 966-973.	3.5	25
139	Effect of calcium addition on the hot working behavior of as-cast AZ31 magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 588, 272-279.	5.6	25
140	Hot workability analysis with processing map and texture characteristics of as-cast TX32 magnesium alloy. Journal of Materials Science, 2013, 48, 5236-5246.	3.7	25
141	The effect of zirconium addition on sintering behaviour, microstructure and creep resistance of the powder metallurgy processed alloy Tiâ€“45Alâ€“5Nbâ€“0.2Bâ€“0.2C. Materials and Design, 2015, 84, 87-94.	7.0	25
142	Investigation of electrode distance impact on PEO coating formation assisted by simulation. Applied Surface Science, 2016, 388, 304-312.	6.1	25
143	Interrupted creep behaviour of Mg alloys developed for powertrain applications. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2289-2296.	5.6	24
144	Understanding effects of microstructural inhomogeneity on creep response â€“ New approaches to improve the creep resistance in magnesium alloys. Journal of Magnesium and Alloys, 2014, 2, 124-132.	11.9	24

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145	Formation of photocatalytic plasma electrolytic oxidation coatings on magnesium alloy by incorporation of TiO2 particles. Surface and Coatings Technology, 2016, 307, 287-291.	4.8	24
146	Acoustic Emission and Dilatometry for Non-Destructive Characterisation of Microstructural Changes in Mg Based Metal Matrix Composites Submitted to Thermal Cycling. Scripta Materialia, 1997, 38, 81-87.	5.2	23
147	Analysis of thermal cycling curves of short fibre reinforced Mg-MMCs. Composites Science and Technology, 2003, 63, 1805-1814.	7.8	23
148	In situ measurements of texture variations during a tensile loading of Mg-alloy AM20 using synchrotron X-ray radiation. Scripta Materialia, 2004, 51, 455-460.	5.2	23
149	Microstructure and creep behaviour of magnesium hybrid composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 462, 220-224.	5.6	23
150	Hot Tearing Susceptibility of Mg-Ca Binary Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 6003-6017.	2.2	23
151	Processing Effects on the Formability of Magnesium Alloy Sheets. Metals, 2018, 8, 147.	2.3	23
152	Thermal diffusivity of short-fibre reinforced Mg-Al-Zn-Mn alloy. Scripta Materialia, 1998, 40, 57-62.	5.2	22
153	Magnesium â€“ der Zukunftswerkstoff fÃ¼r die Automobilindustrie?. Materialwissenschaft Und Werkstofftechnik, 2007, 38, 91-96.	0.9	22
154	Hot working mechanisms and texture development in Mg-3Sn-2Ca-0.4Al alloy. Materials Chemistry and Physics, 2012, 136, 1081-1091.	4.0	22
155	Influence of Process Parameters on Twin Roll Cast Strip of the Alloy AZ31. Materials Science Forum, 0, 765, 205-209.	0.3	22
156	A model describing the growth of a PEO coating on AM50 Mg alloy under constant voltage mode. Electrochimica Acta, 2017, 251, 461-474.	5.2	22
157	Corrosion Behaviour of Magnesium Alloys with RE Additions in Sodium Chloride Solutions. Materials Science Forum, 2003, 419-422, 867-872.	0.3	21
158	Synchrotron Radiation Investigation of Twinning in Extruded Magnesium Alloy AZ3l. Materials Science Forum, 2005, 495-497, 1633-1638.	0.3	21
159	Polycrystalline and amorphous MgZnCa thin films. Corrosion Science, 2012, 63, 234-238.	6.6	21
160	Creep behavior of Mgâ€“10Gdâ€“xZn (x=2 and 6 wt%) alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 649, 158-167.	5.6	21
161	On the Direct Extrusion of Magnesium Wires from Mg-Al-Zn Series Alloys. Metals, 2020, 10, 1208.	2.3	21
162	New Development in Magnesium Technology for Light Weight Structures in Transportation Industries. Materials Science Forum, 2003, 426-432, 153-160.	0.3	20

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163	Investigations on thermal fatigue of aluminum- and magnesium-alloy based composites. International Journal of Fatigue, 2006, 28, 1399-1405.	5.7	20
164	Influence of electrolyte constituents on corrosion behaviour of PEO coatings on magnesium alloys. Surface Engineering, 2010, 26, 321-327.	2.2	20
165	On the degradation mechanism of corrosion protective poly(ether imide) coatings on magnesium AZ31 alloy. Corrosion Science, 2010, 52, 3155-3157.	6.6	20
166	Effect of Ca and Nd on the microstructural development during dynamic and static recrystallization of indirectly extruded Mgâ€“Zn based alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 793, 139527.	5.6	20
167	High Temperature Deformation Behaviour of a New Magnesium Alloy. Key Engineering Materials, 2007, 340-341, 89-94.	0.4	19
168	High ductile as-cast Mgâ€“RE based alloys at room temperature. Materials Letters, 2012, 83, 209-212.	2.6	19
169	Bulk and local textures of pure magnesium processed by rotary swaging. Journal of Magnesium and Alloys, 2013, 1, 341-345.	11.9	19
170	Effect of aluminium and calcium on the microstructure, texture, plastic deformation and related acoustic emission of extruded magnesiumâ€“manganese alloys. Journal of Alloys and Compounds, 2014, 617, 253-264.	5.5	19
171	The Effect of Solid Solute and Precipitate Phase on Young's Modulus of Binary Mgâ€“RE Alloys. Advanced Engineering Materials, 2018, 20, 1800271.	3.5	19
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