Norbert Hort

List of Publications by Year
in descending order

264 papers	11,408 citations	50276 46 h-index	34986 98 g-index
302 all docs	302 docs citations	302 times ranked	5711 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	Biodegradable magnesiumâ€“hydroxyapatite metal matrix composites. Biomaterials, 2007, 28, 2163-2174.	11.4	570
3	Progress and Challenge for Magnesium Alloys as Biomaterials. Advanced Engineering Materials, 2008, 10, B3.	3.5	564
4	Magnesium alloys as implant materials â€“ Principles of property design for Mgâ€“RE alloysâ˜†. Acta Biomaterialia, 2010, 6, 1714-1725.	8.3	503
5	Evaluation of short-term effects of rare earth and other elements used in magnesium alloys on primary cells and cell linesâ˜†. Acta Biomaterialia, 2010, 6, 1834-1842.	8.3	496
6	Recent research and developments on wrought magnesium alloys. Journal of Magnesium and Alloys, 2017, 5, 239-253.	11.9	472
7	A Critical Review of the Stress Corrosion Cracking (SCC) of Magnesium Alloys. Advanced Engineering Materials, 2005, 7, 659-693.	3.5	386
8	Fast escape of hydrogen from gas cavities around corroding magnesium implants. Acta Biomaterialia, 2013, 9, 8714-8721.	8.3	237
9	Intermetallics in Magnesium Alloys. Advanced Engineering Materials, 2006, 8, 235-240.	3.5	204
10	Chemical surface alteration of biodegradable magnesium exposed to corrosion media. Acta Biomaterialia, 2011, 7, 2704-2715.	8.3	174
11	Preparation and properties of high purity Mgâ€“Y biomaterials. Biomaterials, 2010, 31, 398-403.	11.4	170
12	Corrosion behaviour of a nominally high purity Mg ingot produced by permanent mould direct chill casting. Corrosion Science, 2012, 61, 185-207.	6.6	158
13	Current development of creep-resistant magnesium cast alloys: A review. Materials and Design, 2018, 155, 422-442.	7.0	151
14	Interference of magnesium corrosion with tetrazolium-based cytotoxicity assaysâ˜†. Acta Biomaterialia, 2010, 6, 1813-1823.	8.3	150
15	Microstructural Investigations of the Mg-Sn-xCa System. Advanced Engineering Materials, 2006, 8, 359-364.	3.5	125
16	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
17	Evaluation of Magnesium Die-Casting Alloys for Elevated Temperature Applications: Microstructure, Tensile Properties, and Creep Resistance. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3543-3554.	2.2	116
18	Improved cytotoxicity testing of magnesium materials. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 830-834.	3.5	108

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19	Fabrication of a high strength Mgâ€“11Gdâ€“4.5Yâ€“1Ndâ€“1.5Znâ€“0.5Zr (wt%) alloy by thermomechanical treatments. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 622, 121-130.	5.6	97
20	Microstructure, mechanical and corrosion properties of Mgâ€“Dyâ€“Gdâ€“Zr alloys for medical applications. Acta Biomaterialia, 2013, 9, 8499-8508.	8.3	92
21	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
22	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
23	An in vivo study on the metabolism and osteogenic activity of bioabsorbable Mgâ€“1Sr alloy. Acta Biomaterialia, 2016, 29, 455-467.	8.3	85
24	XPS Studies of Magnesium Surfaces after Exposure to Dulbecco's Modified Eagle Medium, Hank's Buffered Salt Solution, and Simulated Body Fluid. Advanced Engineering Materials, 2010, 12, B699.	3.5	83
25	Hot tearing susceptibility of binary Mgâ€“Y alloy castings. Materials & Design, 2013, 47, 90-100.	5.1	76
26	Intramedullary Mg2Ag nails augment callus formation during fracture healing in mice. Acta Biomaterialia, 2016, 36, 350-360.	8.3	75
27	Magnesium Permanent Mold Castings Optimization. Materials Science Forum, 0, 690, 65-68.	0.3	74
28	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
29	Mechanism of grain refinement of Mgâ€“Al alloys by SiC inoculation. Scripta Materialia, 2011, 64, 793-796.	5.2	72
30	In vitro mechanical and corrosion properties of biodegradable Mg-Ag alloys. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 569-576.	1.5	72
31	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
32	Calculation of Schmid factor in Mg alloys: Influence of stress state. Scripta Materialia, 2019, 171, 31-35.	5.2	68
33	Reprint of: Improved cytotoxicity testing of magnesium materials. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1773-1777.	3.5	67
34	Corrosion behavior of Mgâ€“Gdâ€“Zn based alloys in aqueous NaCl solution. Journal of Magnesium and Alloys, 2014, 2, 245-256.	11.9	67
35	Effects of samarium content on microstructure and mechanical properties of Mgâ€“0.5Znâ€“0.5Zr alloy. Journal of Materials Science and Technology, 2019, 35, 1368-1377.	10.7	66
36	Effects of corrosion environment and proteins on magnesium corrosion. Corrosion Engineering Science and Technology, 2012, 47, 335-339.	1.4	63

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37	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
38	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
39	Microstructural evolution and mechanical properties of Mgâ€“11Gdâ€“4.5Yâ€“1Ndâ€“1.5Znâ€“0.5Zr alloy prepared via pre-ageing and hot extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 624, 23-31.	5.6	62
40	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
41	Influence of cerium additions on the corrosion behaviour of high pressure die cast AM50 alloy. Corrosion Science, 2012, 65, 145-151.	6.6	58
42	Hot working parameters and mechanisms in as-cast Mgâ€“3Snâ€“1Ca alloy. Materials Letters, 2008, 62, 4207-4209.	2.6	57
43	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
44	Unraveling Recrystallization Mechanisms Governing Texture Development from Rare-Earth Element Additions to Magnesium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1809-1829.	2.2	53
45	Influence of composition on hot tearing in binary Mgâ€“Zn alloys. International Journal of Cast Metals Research, 2011, 24, 170-176.	1.0	52
46	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
47	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
48	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
49	Thermodynamic assessment and experimental study of Mgâ€“Gd alloys. Journal of Alloys and Compounds, 2013, 581, 166-177.	5.5	48
50	Microstructures and mechanical properties of a hot-extruded Mgâˆ’8Gdâˆ’3Ybâˆ’1.2Znâˆ’0.5Zr (wt%) alloy. Journal of Alloys and Compounds, 2019, 776, 666-678.	5.5	48
51	Hot tearing mechanisms of B206 aluminumâ€“copper alloy. Materials & Design, 2014, 64, 44-55.	5.1	47
52	Microstructures and mechanical properties of pure Mg processed by rotary swaging. Materials & Design, 2014, 63, 83-88.	5.1	47
53	Achieving enhanced mechanical properties in Mg-Gd-Y-Zn-Mn alloy by altering dynamic recrystallization behavior via pre-ageing treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 790, 139635.	5.6	47
54	Comparison of different in vitro tests for biocompatibility screening of Mg alloys. Acta Biomaterialia, 2013, 9, 8740-8745.	8.3	46

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55	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
56	Hot workability characteristics of cast and homogenized Mgâ€“3Snâ€“1Ca alloy. Journal of Materials Processing Technology, 2008, 201, 359-363.	6.3	45
57	Effect of erbium modification on the microstructure, mechanical and corrosion characteristics of binary Mgâ€“Al alloys. Journal of Alloys and Compounds, 2015, 648, 759-770.	5.5	45
58	Ion release from magnesium materials in physiological solutions under different oxygen tensions. Journal of Materials Science: Materials in Medicine, 2012, 23, 9-24.	3.6	44
59	Developing a die casting magnesium alloy with excellent mechanical performance by controlling intermetallic phase. Journal of Alloys and Compounds, 2019, 795, 436-445.	5.5	43
60	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
61	Effect of yttrium addition on lattice parameter, Young's modulus and vacancy of magnesium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 2106-2109.	5.6	42
62	Experimental and numerical analysis of hot tearing susceptibility for Mgâ€“Y alloys. Journal of Materials Science, 2014, 49, 353-362.	3.7	42
63	Influence of the Microstructure and Silver Content on Degradation, Cytocompatibility, and Antibacterial Properties of Magnesium-Silver Alloys In Vitro. Oxidative Medicine and Cellular Longevity, 2017, 2017, 1-14.	4.0	42
64	Blood triggered corrosion of magnesium alloys. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1761-1766.	3.5	41
65	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
66	Investigations in the Magnesium-Tin System. Materials Science Forum, 2005, 488-489, 135-138.	0.3	40
67	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
68	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
69	Effect of Zn addition on hot tearing behaviour of Mgâ€“0.5Caâ€“xZn alloys. Materials and Design, 2015, 87, 157-170.	7.0	39
70	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
71	The effect of Y addition on recrystallization and mechanical properties of Mgâ€“6Znâ€“xYâ€“0.5Ceâ€“0.4Zr alloys. Vacuum, 2018, 155, 445-455.	3.5	39
72	Evolution of microstructure and hardness of AE42 alloy after heat treatments. Journal of Alloys and Compounds, 2008, 463, 238-245.	5.5	38

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73	Quantitative Determination on Hot Tearing in Mg-Al Binary Alloys. Materials Science Forum, 0, 618-619, 533-540.	0.3	38
74	In vivo assessment of biodegradable magnesium alloy ureteral stents in a pig model. Acta Biomaterialia, 2020, 116, 415-425.	8.3	38
75	Unexpected formation of hydrides in heavy rare earth containing magnesium alloys. Journal of Magnesium and Alloys, 2016, 4, 173-180.	11.9	37
76	Microstructure and degradation performance of biodegradable Mg-Si-Sr implant alloys. Materials Science and Engineering C, 2017, 71, 25-34.	7.3	37
77	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
78	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
79	In situ synchrotron diffraction of the solidification of Mg4Y3Nd. Materials Letters, 2013, 102-103, 62-64.	2.6	33
80	Thermal behavior of short fiber reinforced AlSi12CuMgNi piston alloys. Composites Part A: Applied Science and Manufacturing, 2004, 35, 249-263.	7.6	32
81	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
82	Formation mechanism of the abnormal texture during extrusion in Mg-Y-Sm-Zn-Zr alloy. Journal of Alloys and Compounds, 2020, 821, 153477.	5.5	32
83	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
84	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
85	Corrosion of experimental magnesium alloys in blood and PBS: A gravimetric and microscopic evaluation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1797-1801.	3.5	30
86	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
87	Microstructure and mechanical properties of large-scale Mg-Gd-Y-Zn-Mn alloys prepared through semi-continuous casting. Journal of Materials Science and Technology, 2020, 52, 72-82.	10.7	30
88	Hot tearing characteristics of Mgâ€“2Caâ€“xZn alloys. Journal of Materials Science, 2016, 51, 2687-2704.	3.7	28
89	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
90	Abnormal extrusion texture and reversed yield asymmetry in a Mgâ€“Y-Sm-Zn-Zr alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 760, 426-430.	5.6	27

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91	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
92	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
93	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
94	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
95	Enhancement of Workability in AZ31 Alloy â€“ Processing Maps: Partâ€‰I, Cast Material. Advanced Engineering Materials, 2006, 8, 966-973.	3.5	25
96	Simulation of Stresses during Casting of Binary Magnesium-Aluminum Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 3196-3207.	2.2	25
97	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
98	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
99	Dynamic tensile properties and microstructural evolution of extruded EW75 magnesium alloy at high strain rates. Journal of Magnesium and Alloys, 2020, 8, 849-859.	11.9	25
100	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
101	Effects of extrusion ratio and annealing treatment on the mechanical properties and microstructure of a Mgâ€“11Gdâ€“4.5Yâ€“1Ndâ€“1.5Znâ€“0.5Zr (wt%) alloy. Journal of Materials Science, 2017, 52, 6670-6686.	3.7	24
102	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
103	Microhardness and In Vitro Corrosion of Heat-Treated Mgâ€“Yâ€“Ag Biodegradable Alloy. Materials, 2017, 10, 55.	2.9	23
104	Hot working mechanisms and texture development in Mg-3Sn-2Ca-0.4Al alloy. Materials Chemistry and Physics, 2012, 136, 1081-1091.	4.0	22
105	High temperature mechanical behavior of an extruded Mgâ€“11Gdâ€“4.5Yâ€“1Ndâ€“1.5Znâ€“0.5Zr (wt%) alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 645, 213-224.	5.6	22
106	Influence of Precipitation Hardening in Mg-Y-Nd on Mechanical and Corrosion Properties. Jom, 2016, 68, 1183-1190.	1.9	22
107	Evaluation of Magnesium Dieâ€Casting Alloys for Elevated Temperature Applications: Castability. Advanced Engineering Materials, 2016, 18, 953-962.	3.5	22
108	Effect of biaxial compressive stress state on the microstructure evolution and deformation compatibility of rolled sheet Mg alloy AZ31 at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 789, 139599.	5.6	22

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109	Corrosion Behaviour of Magnesium Alloys with RE Additions in Sodium Chloride Solutions. Materials Science Forum, 2003, 419-422, 867-872.	0.3	21
110	Polycrystalline and amorphous MgZnCa thin films. Corrosion Science, 2012, 63, 234-238.	6.6	21
111	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
112	New Development in Magnesium Technology for Light Weight Structures in Transportation Industries. Materials Science Forum, 2003, 426-432, 153-160.	0.3	20
113	Investigations on thermal fatigue of aluminum- and magnesium-alloy based composites. International Journal of Fatigue, 2006, 28, 1399-1405.	5.7	20
114	High Temperature Deformation Behaviour of a New Magnesium Alloy. Key Engineering Materials, 2007, 340-341, 89-94.	0.4	19
115	Three-dimensional microstructural analysis of Mgâ€“Alâ€“Zn alloys by synchrotron-radiation-based microtomography. Scripta Materialia, 2008, 58, 453-456.	5.2	19
116	High ductile as-cast Mgâ€“RE based alloys at room temperature. Materials Letters, 2012, 83, 209-212.	2.6	19
117	Bulk and local textures of pure magnesium processed by rotary swaging. Journal of Magnesium and Alloys, 2013, 1, 341-345.	11.9	19
118	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
119	Utilizing Synchrotron Radiation for the Characterization of Biodegradable Magnesium Alloysâ€”From Alloy Development to the Application as Implant Material. Advanced Engineering Materials, 2021, 23, 2100197.	3.5	19
120	Microstructural investigations of interfaces in short fiber reinforced AlSi12CuMgNi composites. Acta Materialia, 2005, 53, 3913-3923.	7.9	18
121	Hot Deformation Mechanisms in AZ31 Magnesium Alloy Extruded at Different Temperatures: Impact of Texture. Metals, 2012, 2, 292-312.	2.3	18
122	Review on Hot Working Behavior and Strength of Calciumâ€Containing Magnesium Alloys. Advanced Engineering Materials, 2018, 20, 1701102.	3.5	18
123	Identification of unexpected hydrides in Mgâ€“20â€…wt% Dy alloy by high-brilliance synchrotron radiation. Journal of Applied Crystallography, 2012, 45, 17-21.	4.5	17
124	Effects of Sn segregation and precipitates on creep response of Mgâ€Sn alloys. Fatigue and Fracture of Engineering Materials and Structures, 2013, 36, 308-315.	3.4	16
125	Compressive strength and hot deformation mechanisms in as-cast Mg-4Al-2Ba-2Ca (ABaX422) alloy. Philosophical Magazine, 2013, 93, 4364-4377.	1.6	16
126	Study of the Solidification of AS Alloys Combining <i>In Situ</i> Synchrotron Diffraction and Differential Scanning Calorimetry. Materials Science Forum, 0, 765, 286-290.	0.3	16

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127	Effect of silicon content on hot working, processing maps, and microstructural evolution of cast TX32â€“0.4Al magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 606, 11-23.	5.6	16
128	Microstructure evolution of Mgâ€“11Gdâ€“4.5Yâ€“1Ndâ€“1.5Znâ€“0.5Zr (wt%) alloy during deformation and its effect on strengthening. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 657, 259-268.	5.6	16
129	Effect of Microstructural Inhomogeneity on Creep Response of Mg-Sn Alloys. Key Engineering Materials, 0, 345-346, 561-564.	0.4	15
130	Status of the Development of Creep Resistant Magnesium Materials for Automotive Applications. Materials Science Forum, 0, 638-642, 73-80.	0.3	15
131	Effect of fetal calf serum on the corrosion behaviour of magnesium alloys. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1746-1755.	3.5	14
132	Nucleation mechanism of Mg17Al12-precipitates in binary Mgâ€“7wt.% Al alloy. Journal of Alloys and Compounds, 2013, 557, 73-76.	5.5	14
133	Properties and processing of magnesium-tin-calcium alloys. Metallic Materials, 2011, 49, 163-177.	0.3	14
134	Histological Comparison of New Biodegradable Magnesium-Based Implants for Maxillofacial Applications. Journal of Maxillofacial and Oral Surgery, 2015, 14, 637-645.	1.4	13
135	Corrosion behaviour of as-cast ZK40 with CaO and Y additions. Transactions of Nonferrous Metals Society of China, 2018, 28, 427-439.	4.2	13
136	Microscopic deformation compatibility during biaxial tension in AZ31 Mg alloy rolled sheet at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 756, 1-10.	5.6	13
137	Cytotoxicity of the Ga-containing coatings on biodegradable magnesium alloys. Surface Innovations, 2015, 3, 10-19.	2.3	12
138	Precipitation Hardening on Mechanical and Corrosion Properties of Extruded Mg10Gd Modified with Nd and La. Metals, 2018, 8, 640.	2.3	12
139	Influences of Y Additions on the Hot Tearing Susceptibility of Mg-1.5wt.%Zn Alloys. Materials Science Forum, 0, 765, 306-310.	0.3	11
140	In situ synchrotron radiation diffraction study of the role of Gd, Nd on the elevated temperature compression behavior of ZK40. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 640, 129-136.	5.6	11
141	In situ synchrotron radiation diffraction investigation of the compression behaviour at 350Â°C of ZK40 alloys with addition of CaO and Y. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 664, 2-9.	5.6	11
142	Microstructure and mechanical characterization of cast Mg-Ca-Si alloys. Journal of Alloys and Compounds, 2017, 694, 767-776.	5.5	11
143	In vivo degradability and biocompatibility of a rheo-formed Mgâ€“Znâ€“Sr alloy for ureteral implantation. Journal of Magnesium and Alloys, 2022, 10, 1631-1639.	11.9	11
144	Recycling of magnesium drive train components. Science in China Series D: Earth Sciences, 2009, 52, 148-154.	0.9	10

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145	Magnesium (Mg) corrosion: a challenging concept for degradable implants. , 2011, , 403-425.		10
146	Magnesium Melt Protection. Materials Science Forum, 0, 828-829, 78-81.	0.3	10
147	Effects of Intermetallic Microstructure on Degradation of Mg-5Nd Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5498-5515.	2.2	10
148	Characterization of an Extruded Mg-Dy-Nd Alloy during Stress Corrosion with C-Ring Tests. Metals, 2020, 10, 584.	2.3	10
149	Mechanical behaviors of extruded Mg alloys with high Gd and Nd content. Progress in Natural Science: Materials International, 2021, 31, 591-598.	4.4	10
150	Effects of segregation of primary alloying elements on the creep response in magnesium alloys. Scripta Materialia, 2008, 58, 894-897.	5.2	9
151	Effect of Minor Additions of Al and Si on the Mechanical Properties of Cast Mg-3Sn-2Ca Alloys in Low Temperature Range. Materials Science Forum, 2010, 654-656, 635-638.	0.3	9
152	Effect of thermal and mechanical treatments on the hot working response of Mg-3Sn-1Ca alloy. International Journal of Materials Research, 2010, 101, 300-306.	0.3	9
153	Development of High Performance Singleâ€Phase Solid Solution Magnesium Alloy at Low Temperature. Advanced Engineering Materials, 2012, 14, 178-184.	3.5	9
154	High Strength Magnesium Alloys Through Precipitation Hardening and Micro Alloying: Considerations for Alloy Design. Jom, 2015, 67, 2427-2432.	1.9	9
155	In vivo degradation of binary magnesium alloys â€“ a long-term study. BioNanoMaterials, 2016, 17, .	1.4	9
156	Hot Deformation Behavior and Processing Map of Mg-3Sn-2Ca-0.4Al-0.4Zn Alloy. Metals, 2018, 8, 216.	2.3	9
157	Interdiffusion and atomic mobility in hcp Mgâ€“Alâ€“Sn alloys. Journal of Alloys and Compounds, 2021, 871, 159517.	5.5	9
158	Powder Metallurgically Manufactured Metal Matrix Composites. , 2006, , 243-276.		8
159	Numerical Determination of Heat Distribution and Castability Simulations of as Cast Mgâ€”Al Alloys. Advanced Engineering Materials, 2009, 11, 162-168.	3.5	8
160	Development of a magnesium secondary alloy system for mixed magnesium post-consumer scrap. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 576, 222-230.	5.6	8
161	Mechanical properties and corrosion behaviour of freestanding, precipitate-free magnesium WE43 thin films. International Journal of Materials Research, 2013, 104, 286-292.	0.3	8
162	Powder Metallurgical Synthesis of Biodegradable Mg-Hydroxyapatite Composites for Biomedical Applications. Materials Science Forum, 0, 828-829, 165-171.	0.3	8

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163	Identification and description of intermetallic compounds in Mgâ€“Siâ€“Sr cast and heat-treated alloys. Journal of Alloys and Compounds, 2016, 669, 123-133.	5.5	8
164	High Temperature Strength and Hot Working Technology for As-Cast Mgâ€“1Znâ€“1Ca (ZX11) Alloy. Metals, 2017, 7, 405.	2.3	8
165	Mg Alloys: Challenges and Achievements in Controlling Performance, and Future Application Perspectives. Minerals, Metals and Materials Series, 2018, , 3-14.	0.4	8
166	Microstructure and mechanical properties of Mg-3Sn-1Ca reinforced with AlN nano-particles. Journal of Magnesium and Alloys, 2023, 11, 259-269.	11.9	8
167	Investigations on the tensile deformation of pure Mg and Mgâ€“15Gd alloy by in-situ X-ray synchrotron radiation and visco-plastic self-consistent modeling. Journal of Magnesium and Alloys, 2023, 11, 607-613.	11.9	8
168	In vivo urinary compatibility of Mg-Sr-Ag alloy in swine model. Bioactive Materials, 2022, 7, 254-262.	15.6	8
169	Compression Creep at 240Â°C of Extruded Magnesium Alloys Containing Gadolinium. Materials Science Forum, 0, 690, 270-273.	0.3	7
170	Hot Tearing Susceptibility of Magnesiumâ€“Gadolinium Binary Alloys. Transactions of the Indian Institute of Metals, 2012, 65, 701-706.	1.5	7
171	High Temperature Deformation and Microstructural Features of TXA321 Magnesium Alloy: Correlations with Processing Map. Advanced Engineering Materials, 2013, 15, 761-766.	3.5	7
172	Effect of aluminum on microstructural evolution during hot deformation of TX32 magnesium alloy. Journal of Materials Science, 2014, 49, 5885-5898.	3.7	7
173	Comparative study of microstructure and texture of cast and homogenized TX32 magnesium alloy after hot deformation. Metals and Materials International, 2015, 21, 134-146.	3.4	7
174	Comparison on Hot Tearing Behavior of Binary Mgâ€“Al, Mgâ€“Y, Mgâ€“Gd, Mgâ€“Zn, and Mgâ€“Ca Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 2986-3001.	2.2	7
175	Micro-Strain Induced by Thermal Cycling in Short Fiber Reinforced AlSi12CuMgNi Piston Alloy and AE42 Magnesium Alloy. Advanced Engineering Materials, 2004, 6, 883-888.	3.5	6
176	Corrosion Behavior of As-Cast Binary Mg-Dy Alloys. Materials Science Forum, 2011, 690, 417-421.	0.3	6
177	Twinning Assisted Crack Propagation of Magnesium-Rare Earth Casting and Wrought Alloys under Bending. Materials Science Forum, 2015, 828-829, 311-317.	0.3	6
178	Mechanism of Dynamic Recrystallization and Evolution of Texture in the Hot Working Domains of the Processing Map for Mg-4Al-2Ba-2Ca Alloy. Metals, 2017, 7, 539.	2.3	6
179	Enhancement of Strength and Hot Workability of AZX312 Magnesium Alloy by Disintegrated Melt Deposition (DMD) Processing in Contrast to Permanent Mold Casting. Metals, 2018, 8, 437.	2.3	6
180	Influence of Torsion on Precipitation and Hardening Effects during Aging of an Extruded AZ91 Alloy. Journal of Materials Engineering and Performance, 2019, 28, 4403-4414.	2.5	6

#	Article	IF	Citations
181	Magnesium: An essential nutrient for a good biomaterial. Jom, 2011, 63, 99-99.	1.9	5
182	Mechanical Behaviour and Corrosion Performance of Thin Film Magnesium WE Alloys. Materials Science Forum, 2011, 690, 286-289.	0.3	5
183	Investigation of biodegradation behaviour of an Mgâ€1Ca alloy influenced by heat treatment and applying plasmaâ€chemical oxidation layers. Materials and Corrosion - Werkstoffe Und Korrosion, 2013, 64, 578-584.	1.5	5
184	Tailoring properties of cast Mg10Gd by alloying Nd and heat treatment. Emerging Materials Research, 2013, 2, 229-238.	0.7	5
185	The interaction of precipitation and deformation in a binary Mgâ€“Ca alloy at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 609, 116-124.	5.6	5
186	A Study on the Hot Deformation Behavior of Cast Mg-4Sn-2Ca (TX42) Alloy. Jom, 2014, 66, 322-328.	1.9	5
187	Forging of cast Mg-3Sn-2Ca-0.4Al-0.4Si magnesium alloy using processing map. Journal of Mechanical Science and Technology, 2016, 30, 2699-2705.	1.5	5
188	Magnesium-Based Metal Matrix Nanocompositesâ€”Processing and Properties. Minerals, Metals and Materials Series, 2018, , 679-691.	0.4	5
189	Phase Formation during Solidification of Mg-Nd-Zn Alloys: An In Situ Synchrotron Radiation Diffraction Study. Materials, 2018, 11, 1637.	2.9	5
190	The Video Microscopy-Linked Electrochemical Cell: An Innovative Method to Improve Electrochemical Investigations of Biodegradable Metals. Materials, 2021, 14, 1601.	2.9	5
191	Novel Magnesium Based Materials: Are They Reliable Drone Construction Materials? A Mini Review. Frontiers in Materials, 2021, 8, .	2.4	5
192	Microstructural Development in Tension and Compression Creep of Magnesium Alloy AE42. Materials Science Forum, 2005, 482, 271-274.	0.3	4
193	Influence of Processing Route on the Properties of Magnesium Alloys. Solid State Phenomena, 0, 141-143, 43-48.	0.3	4
194	Cyclic Deformation of Newly Developed Magnesium Cast Alloys in Corrosive Environment. Materials Science Forum, 0, 690, 495-498.	0.3	4
195	Microstructure, Mechanical and Corrosion Properties of Mg-Gd-Zn Alloys. Materials Science Forum, 2013, 765, 28-32.	0.3	4
196	Effect of Grain Size and Structure, Solid Solution Elements, Precipitates and Twinning on Nanohardness of Mg-RE Alloys. Materials Science Forum, 0, 765, 491-495.	0.3	4
197	Twin-Roll Casting after Intensive Melt Shearing and Subsequent Rolling of an AM30 Magnesium Alloy with Addition of CaO and SiC. Materials Science Forum, 0, 828-829, 35-40.	0.3	4
198	Optimization of Thermo-Mechanical Processing for Forging of Newly Developed Creep-Resistant Magnesium Alloy ABaX633. Metals, 2017, 7, 513.	2.3	4

#	Article	IF	Citations
199	Effects of Y Additions on the Microstructures and Mechanical Behaviours of as Cast Mgâ€“xYâ€“0.5Zr Alloys. Advanced Engineering Materials, 2022, 24, .	3.5	4
200	Mechanical Properties and Corrosion Performance of AZ-Mg Alloy Modified with Ca and Sr. SAE International Journal of Materials and Manufacturing, 0, 1, 103-110.	0.3	3
201	Influence of Strontium, Silicon and Calcium Additions on the Properties of the AM50 Alloy. Materials Science Forum, 2009, 618-619, 459-462.	0.3	3
202	Investigation of hot workability behavior of as-cast Mgâ€“5Snâ€“2Ca (TX52) magnesium alloy through processing map. Production and Manufacturing Research, 2014, 2, 241-252.	1.5	3
203	Influence of Nd in Extruded Mg10Gd Base Alloys on Fatigue Strength. Materials Science Forum, 0, 783-786, 419-424.	0.3	3
204	Mechanical and Corrosive Properties of Two Magnesium Wires: Mg4Gd and Mg6Ag. , 2015, , 393-398.		3
205	3D Microstructural Evolution on Solidifying Mgâ€“5Ndâ€“5Zn Alloy Observed via In Situ Synchrotron Tomography. Minerals, Metals and Materials Series, 2017, , 605-612.	0.4	3
206	Microstructure and Mechanical Properties of Mg-Gd Alloys as Biodegradable Implant Materials. Minerals, Metals and Materials Series, 2018, , 253-262.	0.4	3
207	Connected Process Design for Hot Working of a Creep-Resistant Mgâ€“4Alâ€“2Baâ€“2Ca Alloy (ABaX422). Metals, 2018, 8, 463.	2.3	3
208	Grain refinements of magnesium alloys inoculated by additions of external SiC particles. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012049.	0.6	3
209	Effect of Nd Additions on the Mechanical Properties of Mg Binary Alloys. Jom, 2020, 72, 517-525.	1.9	3
210	Effects of Mn and Zn Solutes on Grain Refinement of Commercial Pure Magnesium. Minerals, Metals and Materials Series, 2017, , 191-198.	0.4	3
211	Voltammetric Studies of Extruded Pure Magnesium in Different Electrolytes and Its Corrosion Morphology. Minerals, Metals and Materials Series, 2017, , 429-437.	0.4	3
212	Revisiting the tolerance limit of Fe impurity in biodegradable magnesium. Scripta Materialia, 2022, 212, 114509.	5.2	3
213	Observations of Microstructure-Oriented Crack Growth in a Cast Mg-Al-Ba-Ca Alloy under Tension, Compression and Fatigue. Metals, 2022, 12, 613.	2.3	3
214	Characterization of the deformation state of magnesium by electrical resistance. Scripta Materialia, 2022, 215, 114712.	5.2	3
215	Some Studies on Mg Alloy Reinforced with Ceramic Discontinuous Phases. Materials Science Forum, 2003, 419-422, 837-844.	0.3	2
216	High Temperature Deformation Mechanisms and Processing Map for Hot Working of Cast-Homogenized Mg-3Sn-2Ca Alloy. Materials Science Forum, 2010, 638-642, 3616-3621.	0.3	2

#	Article	IF	Citations
217	Influence of Cerium on the Formation of Micro-Galvanic Corrosion Elements of AZ91. Materials Science Forum, 0, 690, 381-384.	0.3	2
218	Castability of some Magnesium Alloys in a Novel Castability Die. Materials Science Forum, 0, 690, 61-64.	0.3	2
219	The formation of Sr6.33Mg16.67Si13 in magnesium alloy AM50 and its effect on mechanical properties. Journal of Materials Science, 2012, 47, 5461-5469.	3.7	2
220	Zone coulometry and ion-release analysis of degradable magnesium alloys. Emerging Materials Research, 2013, 2, 248-262.	0.7	2
221	Modification of Magnesium Alloys by Ceramic Particles in Gravity Die Casting. International Journal of Metals, 2014, 2014, 1-7.	0.3	2
222	Mechanical Properties and Microstructures of Nano SiC Reinforced ZE10 Composites Prepared with Ultrasonic Vibration. Advanced Materials Research, 0, 1019, 169-176.	0.3	2
223	The Role of Zn on the Elevated Temperature Compression Behavior of Mg5Nd: An In Situ Synchrotron Radiation Diffraction Study. Jom, 2016, 68, 3051-3056.	1.9	2
224	Strengthening and ductilizing of magnesium alloying with heavy rare earth elements. MATEC Web of Conferences, 2018, 188, 03021.	0.2	2
225	Influences of AlN/Al Nanoparticles on the Creep Properties of Elektron21 Prepared by High Shear Dispersion Technology. Jom, 2019, 71, 2245-2252.	1.9	2
226	Unexpected Expansion Behavior of Mg-Al Alloys During Isothermal Ageing. Jom, 2019, 71, 2906-2912.	1.9	2
227	Crack Propagation in As-Extruded and Heat-Treated Mg-Dy-Nd-Zn-Zr Alloy Explained by the Effect of LPSO Structures and Their Micro- and Nanohardness. Materials, 2021, 14, 3686.	2.9	2
228	In Situ Synchrotron Radiation Diffraction of the Solidification of Mg-Dy(-Zr) Alloys. , 2016, , 17-21.		2
229	Investigations on Hot Tearing of Mg-Zn-(Al) Alloys. , 2011, , 125-130.		2
230	Effects of Gadolinium and Neodymium Addition on Youngâ€™s Modulus of Magnesium-Based Binary Alloys. Minerals, Metals and Materials Series, 2017, , 341-347.	0.4	2
231	In Situ Investigation of Microstructure Evolution during Solidification of Mg10CaxGd (x=5, 10, 20) Alloys. Acta Physica Polonica A, 2015, 128, 606-611.	0.5	2
232	Influence of Heat Treatment on Microstructure of Hot Extruded AZ31. Materials Science Forum, 2003, 419-422, 297-302.	0.3	1
233	Effect of Thermal Treatment on Thermal Expansion Behaviour of Magnesium Alloy Based Hybrid Composites. Materials Science Forum, 2003, 426-432, 2027-2032.	0.3	1
234	Development of a Magnesium Recycling Alloy Based on AM50. Materials Science Forum, 2007, 539-543, 108-113.	0.3	1

#	Article	IF	Citations
235	Aluminium-Rich Coring Structures in Mg-Al Alloys with Carbon Inoculation. Materials Science Forum, 2010, 654-656, 675-678.	0.3	1
236	Biodegradable Magnesium Implants - How Do They Corrode in-vivo?. , 2011, , 17-17.		1
237	Deformation-Induced Dynamic Precipitation during Creep in Magnesium-Tin Alloys. Key Engineering Materials, 2014, 627, 365-368.	0.4	1
238	Hot Forging of Cast Magnesium Alloy TX31 Using Semi-Closed Die and its Finite Element Simulation. Materials Science Forum, 0, 783-786, 449-454.	0.3	1
239	In Vitro Corrosion and Cytocompatibility Properties of Mg-2Gd-X(Ag, Ca) Alloys. , 2016, , 347-351.		1
240	Deformation Mechanisms and Formability Window for As-Cast Mg-6Al-2Ca-1Sn-0.3Sr Alloy (MRI 230D). Journal of Materials Engineering and Performance, 2018, 27, 1440-1449.	2.5	1
241	Influences of Yttrium Content on Microstructure and Mechanical Properties of as-cast Mgâ€“Caâ€“Yâ€“Zr Alloys. Minerals, Metals and Materials Series, 2018, , 91-97.	0.4	1
242	Microstructures, Corrosion and Mechanical Properties of Mgâ€“Si Alloys as Biodegradable Implant Materials. Minerals, Metals and Materials Series, 2019, , 151-157.	0.4	1
243	Influences of SiC Particle Additions on the Grain Refinement of Mgâ€“Zn Alloys. Minerals, Metals and Materials Series, 2019, , 331-338.	0.4	1
244	Restoration Mechanisms at Moderate Temperatures for As-Cast ZK40 Magnesium Alloys Modified with Individual Ca and Gd Additions. Crystals, 2020, 10, 1140.	2.2	1
245	Effect of LPSO Phases on Crack Propagation in an Extruded Mgâ€“Dyâ€“Ndâ€“Znâ€“Zr Alloy Influenced by Heat Treatment. Minerals, Metals and Materials Series, 2021, , 45-55.	0.4	1
246	Effect of Heat Treatment on the Microstructure and Creep Behavior of Mg-Sn-Ca Alloys. Materials Science Forum, 0, , 69-72.	0.3	1
247	Biodegradable Magnesium Implants â€" How do They Corrode in-Vivo?. , 2011, , 17-17.		1
248	Advances in Manufacturing Processes for Magnesium Alloys. , 2016, , 19-24.		1
249	Bolt Load Retention and Creep Response of AS41 Alloyed with 0.15 % Ca. SAE International Journal of Materials and Manufacturing, 2010, 3, 202-210.	0.3	0
250	In Situ Studies of Light Metals with Synchrotron Radiation and Neutrons. Materials Science Forum, 2011, 690, 192-197.	0.3	0
251	Modeling Bolt Load Retention of Ca Modified AS41 Using Compliance-Creep Method. Materials Science Forum, 0, 690, 278-281.	0.3	0
252	Deformation Microstructures and Textures of Cast Mg-3Sn-2Ca Alloy under Uniaxial Hot Compression. Applied Mechanics and Materials, 2012, 152-154, 322-325.	0.2	0

#	Article	IF	Citations
253	Residual Stresses in the Hot Sprues of as-cast Mg-Zn Alloys Investigated by STRESS-SPEC Neutron Diffractometer. Materials Science Forum, 2013, 768-769, 428-432.	0.3	0
254	Residual Stresses of the As-Cast Mg-xCa Alloys with Hot Sprues by Neutron Diffraction. Advanced Materials Research, 0, 996, 592-597.	0.3	0
255	Microstructure and Compression Creep Strength of the Newly Developed Magnesium Alloy DieMag422. Advanced Materials Research, 2014, 1019, 177-183.	0.3	0
256	Intermetallic Phase Characteristics in the Mgâ€“Ndâ€“Zn System. Minerals, Metals and Materials Series, 2018, , 391-397.	0.4	0
257	Study on Mgâ€“Siâ€“Sr Ternary Alloys for Biomedical Applications. Minerals, Metals and Materials Series, 2018, , 413-424.	0.4	0
258	Mechanical and Corrosion Properties of as-cast and Extruded MG10GD alloy for Biomedical Application. , 2012, , 253-259.		0
259	A new magnesium alloy system: TEXAS. , 2013, , 231-235.		0
260	Crack Propagation Under Bending in Cast Mg10GdxNd-T4 Alloys. , 2014, , 77-82.		0
261	Powder Metallurgical Synthesis of Biodegradable Mg-Hydroxyapatite Composites for Biomedical Applications. , 2015, , 425-429.		0
262	Hot Tearing Susceptibility of Mg-5Nd-xZn Alloys. , 2016, , 129-134.		0
263	Elevated Temperature and Varied Load Response of AS41 at Bolted Joint. , 2016, , 511-516.		0
264	Solid Solution Strengthening in Mg-Gd Alloys. , 2016, , 135-139.		0