

Fundamentals and advances in magnesium alloy corros

Progress in Materials Science

89, 92-193

DOI: [10.1016/j.pmatsci.2017.04.011](https://doi.org/10.1016/j.pmatsci.2017.04.011)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Microstructure of localized corrosion front on Mg alloys and the relationship with hydrogen evolution. <i>Corrosion Science</i> , 2017, 128, 253-264.	3.0	35
2	Rapid Diffusion and Nanosegregation of Hydrogen in Magnesium Alloys from Exposure to Water. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 38125-38134.	4.0	14
3	Degradation of metallic materials studied by correlative tomography. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017, 219, 012001.	0.3	7
4	Effect of grain size on the electrochemical behavior of pure magnesium anode. <i>Journal of Magnesium and Alloys</i> , 2017, 5, 404-411.	5.5	55
5	Effect of the catalyst concentration, the immersion time and the aging time on the morphology, composition and corrosion performance of TEOS-GPTMS sol-gel coatings deposited on the AZ31 magnesium alloy. <i>Surface and Coatings Technology</i> , 2017, 325, 257-269.	2.2	36
6	Aqueous Electrochemical Activity of the Mg Surface: The Role of Group 14 and 15 Microalloying Elements. <i>Journal of the Electrochemical Society</i> , 2017, 164, C918-C929.	1.3	18
7	In Vitro Degradation of Pure Magnesium—The Effects of Glucose and/or Amino Acid. <i>Materials</i> , 2017, 10, 725.	1.3	43
8	Influence of the Composition of the Hank's Balanced Salt Solution on the Corrosion Behavior of AZ31 and AZ61 Magnesium Alloys. <i>Metals</i> , 2017, 7, 465.	1.0	37
9	First principles calculations on the influence of solute elements and chlorine adsorption on the anodic corrosion behavior of Mg (0001) surface. <i>Surface Science</i> , 2018, 672-673, 68-74.	0.8	20
10	Microstructure and enhanced corrosion resistance of biodegradable Mg-Gd-Cu-Zr alloy by solution treatment. <i>Materials Technology</i> , 2018, 33, 301-310.	1.5	13
11	Deposition of strontium phosphate coatings on magnesium by hydrothermal treatment: Characteristics, corrosion resistance and bioactivity. <i>Journal of Alloys and Compounds</i> , 2018, 745, 725-743.	2.8	56
12	Quasi-in-situ STEM-EDS insight into the role of Ag in the corrosion behaviour of Mg-Gd-Zr alloys. <i>Corrosion Science</i> , 2018, 136, 106-118.	3.0	38
13	Enhanced corrosion resistance of AZ91 magnesium alloy through refinement and homogenization of surface microstructure by friction stir processing. <i>Corrosion Science</i> , 2018, 138, 284-296.	3.0	147
14	An AZ31 magnesium alloy coating for protecting polyimide from erosion-corrosion by atomic oxygen. <i>Corrosion Science</i> , 2018, 138, 170-177.	3.0	20
15	Magnesium degradation under physiological conditions — Best practice. <i>Bioactive Materials</i> , 2018, 3, 174-185.	8.6	177
16	Online monitoring of corrosion behavior in molten metal using laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2018, 142, 68-73.	1.5	22
17	In vitro and in vivo studies on as-extruded Mg- 5.25wt.%Zn-0.6wt.%Ca alloy as biodegradable metal. <i>Science China Materials</i> , 2018, 61, 619-628.	3.5	27
18	Ni-P-MWNTs Composite Coatings on Magnesium Alloys AZ31 Part 1: MWNTs Content in Coating. <i>Minerals, Metals and Materials Series</i> , 2018, , 21-25.	0.3	0

#	ARTICLE	IF	CITATIONS
19	Adding Dimensions to the Immersion Testing of Magnesium Corrosion. Minerals, Metals and Materials Series, 2018, , 31-36.	0.3	2
20	Corrosion Mechanisms in Dissimilar AZ31/AZ80 Friction Stir Welds. Journal of the Electrochemical Society, 2018, 165, C1-C10.	1.3	16
21	Study of the inhibition ability of benzotriazole on the Zn-Mg coated steel corrosion in chloride electrolyte. Corrosion Science, 2018, 132, 56-67.	3.0	28
22	Plasma Electrolytic Oxidation Coating of Dissimilar AZ31/AZ80 Friction Stir Welds. Journal of the Electrochemical Society, 2018, 165, C11-C18.	1.3	3
23	First principles study of the elastic properties of magnesium and iron based bio-resorbable alloys. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 230, 20-23.	1.7	9
24	Effect of Solution Treatment on Microstructure and Corrosion Properties of Mg ₄₀ Gd ₁ Y ₁ Zn _{0.5} Ca ₁ Zr Alloy. Acta Metallurgica Sinica (English Letters), 2018, 31, 865-872.	1.5	17
25	Corrosion Behaviors of Long-Period Stacking Ordered Structure in Mg Alloys Used in Biomaterials: A Review. Advanced Engineering Materials, 2018, 20, 1800017.	1.6	18
26	A Closer Look at the Role of Nanometer Scale Solute-Rich Stacking Faults in the Localized Corrosion of a Magnesium Alloy GZ31K. Journal of the Electrochemical Society, 2018, 165, C310-C316.	1.3	21
27	Double Barrel Microelectrode Assembly to Prevent Electrical Field Effects in Potentiometric SECM Imaging of Galvanic Corrosion Processes. Journal of the Electrochemical Society, 2018, 165, C270-C277.	1.3	16
28	Formation of flower-like structures for optimizing the corrosion resistance of Mg alloy. Materials Letters, 2018, 221, 196-200.	1.3	40
29	Current status, opportunities and challenges in chemical conversion coatings for zinc. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 546, 221-236.	2.3	46
30	Additively manufactured biodegradable porous magnesium. Acta Biomaterialia, 2018, 67, 378-392.	4.1	273
31	Mechanical properties, corrosion, and biocompatibility of Mg-Zr-Sr-Cd alloys for biodegradable implant applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 2425-2434.	1.6	24
32	Reducing the corrosion rate of magnesium via microalloying additions of group 14 and 15 elements. Electrochimica Acta, 2018, 260, 184-195.	2.6	83
33	Composition and microstructure dependent corrosion behaviour of Mg-Li alloys. Electrochimica Acta, 2018, 260, 55-64.	2.6	171
34	Study of dynamic degradation behaviour of porous magnesium under physiological environment of human cancellous bone. Corrosion Science, 2018, 131, 45-56.	3.0	27
35	Enhanced Corrosion Resistance of Anodic Films Containing Alumina Nanoparticles on as-rolled AZ31 alloy. International Journal of Electrochemical Science, 2018, 13, 7157-7174.	0.5	7
36	Corrosion Behaviour of AZ63 Magnesium Alloy in Natural Seawater and 3.5 wt.% NaCl Aqueous Solution. International Journal of Electrochemical Science, 2018, 13, 8084-8093.	0.5	15

#	ARTICLE	IF	CITATIONS
37	Inhibitive impacts extract of Citrus aurantium leaves of carbon steel in corrosive media. Green Chemistry Letters and Reviews, 2018, 11, 559-566.	2.1	9
38	Corrosion performance of AZ31 magnesium alloy treated by ultrasonic impact peening (UIP). Materials Today: Proceedings, 2018, 5, 26687-26692.	0.9	8
39	Synthesis of Mg6Zn-xHAp Biocomposites Using Arc Plasma Sintering. Journal of Physics: Conference Series, 2018, 1120, 012044.	0.3	0
40	A Critical Review of the Application of Electrochemical Techniques for Studying Corrosion of Mg and Mg Alloys: Opportunities and Challenges. , 0, , .		11
41	Hydroxyapatite/Titania Composite Coatings on Biodegradable Magnesium Alloy for Enhanced Corrosion Resistance, Cytocompatibility and Antibacterial Properties. Journal of the Electrochemical Society, 2018, 165, C962-C972.	1.3	38
42	Assessment of Cyclic Corrosion Test Protocols for Magnesium Substrates. SAE International Journal of Materials and Manufacturing, 0, 11, 481-490.	0.3	2
43	High hardness and thermal stability of nanocrystalline Mg-Al alloys synthesized by the high-energy ball milling. Materialia, 2018, 4, 406-416.	1.3	8
44	Investigating the Effect of Ferrous Ions on the Anomalous Hydrogen Evolution on Magnesium in Acidic Ferrous Chloride Solution. Journal of the Electrochemical Society, 2018, 165, C916-C925.	1.3	15
45	A new corrosion-inhibiting strategy for biodegradable magnesium: reduced nicotinamide adenine dinucleotide (NADH). Scientific Reports, 2018, 8, 17743.	1.6	6
46	Obtenci3n y caracterizaci3n de recubrimientos de biovidrio sobre la aleaci3n de Mg AZ31. Revista Materia, 2018, 23, .	0.1	0
47	Modeling and Experimental Studies of Coating Delamination of Biodegradable Magnesium Alloy Cardiovascular Stents. ACS Biomaterials Science and Engineering, 2018, 4, 3864-3873.	2.6	31
48	Turning a native or corroded Mg alloy surface into an anti-corrosion coating in excited CO2. Nature Communications, 2018, 9, 4058.	5.8	76
49	Influences of Na2SiO3 and EDTA-ZnNa2 concentration on properties of zinc-containing coatings on WE43 magnesium alloys. Surface and Coatings Technology, 2018, 356, 108-122.	2.2	16
50	Ambient and elevated temperature mechanical behavior of Mg-Gd-Cu-Zr alloy. Materials Research Express, 2018, 5, 116524.	0.8	2
51	In situ Investigation of the Initial Stages of AZ91D Magnesium Alloy Biodegradation in Simulated Body Fluid. International Journal of Electrochemical Science, 2018, 13, 5141-5150.	0.5	10
52	The corrosion behavior and mechanical property of the Mg-Y-Nd ternary alloys. Journal of Magnesium and Alloys, 2018, 6, 346-355.	5.5	38
53	Corrosion resistant coatings based on synergistic effects of alkaline etching and molybdate treatment for AZ31D magnesium alloy. Transactions of the Institute of Metal Finishing, 2018, 96, 332-337.	0.6	3
54	Anticorrosion Performance of LDH Coating Prepared by CO ₂ Pressurization Method. International Journal of Corrosion, 2018, 2018, 1-10.	0.6	3

#	ARTICLE	IF	CITATIONS
55	The Reduction of Dissolved Oxygen During Magnesium Corrosion. <i>ChemistryOpen</i> , 2018, 7, 664-668.	0.9	66
56	Corrosion of pure magnesium and a WE43 magnesium alloy studied by advanced acoustic emission analysis. <i>Corrosion Science</i> , 2018, 145, 10-15.	3.0	22
57	On the stability of the oxides film formed on a magnesium alloy containing rare-earth elements. <i>Electrochimica Acta</i> , 2018, 290, 586-594.	2.6	85
58	Análisis de la bioactividad de Mg AZ31 recubierta por PEO (Plasma Electrolytic Oxidation). <i>DYNA (Colombia)</i> , 2018, 85, 328-337.	0.2	3
59	In vitro degradation behavior of Mg scaffolds with three-dimensional interconnected porous structures for bone tissue engineering. <i>Corrosion Science</i> , 2018, 144, 301-312.	3.0	36
60	Rietveld refinement of powder X-ray diffraction, microstructural and mechanical studies of magnesium matrix composites processed by high energy ball milling. <i>Journal of Magnesium and Alloys</i> , 2018, 6, 390-398.	5.5	27
61	Discharge and corrosion behaviors of the $\hat{1}\pm$ -Mg and $\hat{1}^2$ -Li based Mg alloys for Mg-air batteries at different current densities. <i>Materials and Design</i> , 2018, 160, 138-146.	3.3	82
62	Study of the Corrosion Process of AZ91D Magnesium Alloy during the First Hours of Immersion in 3.5%wt.% NaCl Solution. <i>International Journal of Corrosion</i> , 2018, 2018, 1-20.	0.6	9
63	A novel material of nanoporous magnesium for hydrogen generation with salt water. <i>Journal of Power Sources</i> , 2018, 395, 8-15.	4.0	44
64	Corrosion behavior of AZ31 magnesium alloy in the chloride solution containing ammonium nitrate. <i>Electrochimica Acta</i> , 2018, 278, 421-437.	2.6	78
65	Viewpoint - Understanding Mg corrosion in the body for biodegradable medical implants. <i>Scripta Materialia</i> , 2018, 154, 92-100.	2.6	156
66	Local pH and Its Evolution Near Mg Alloy Surfaces Exposed to Simulated Body Fluids. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800169.	1.9	63
67	A simple one step cerium conversion coating formation on to magnesium alloy and electrochemical corrosion performance. <i>Surface and Coatings Technology</i> , 2018, 349, 757-772.	2.2	42
68	Self-healing ceria-modified coating for corrosion protection of AZ31 magnesium alloy. <i>Corrosion Science</i> , 2018, 142, 12-21.	3.0	134
69	Simultaneously improving the corrosion resistance and strength of magnesium via low levels of Zn and Ge additions. <i>Corrosion Science</i> , 2018, 140, 18-29.	3.0	54
70	Diagnostics of the thickness of a plasma electrolytic oxidation coating on a nanostructured Mg-Sr alloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 292, 012067.	0.3	2
71	Effect of selective oxidation on corrosion behavior of Mg-Gd-Y-Zn-Zr alloy. <i>Corrosion Science</i> , 2018, 142, 238-248.	3.0	28
72	Role of Segregated Iron at Grain Boundaries on Mg Corrosion. <i>Journal of the Electrochemical Society</i> , 2018, 165, C42-C49.	1.3	41

#	ARTICLE	IF	CITATIONS
73	Influence of particle additions on corrosion and wear resistance of plasma electrolytic oxidation coatings on Mg alloy. <i>Surface and Coatings Technology</i> , 2018, 352, 1-14.	2.2	54
74	Cold-Sprayed AZ91D Coating and SiC/AZ91D Composite Coatings. <i>Coatings</i> , 2018, 8, 122.	1.2	8
75	One-Step Fabrication and Localized Electrochemical Characterization of Continuous Al-Alloyed Intermetallic Surface Layer on Magnesium Alloy. <i>Coatings</i> , 2018, 8, 148.	1.2	9
76	Formation Mechanism and Corrosion Performance of Phosphate Conversion Coatings on AZ91 and Mg-Gd-Y-Zr Alloy. <i>Journal of the Electrochemical Society</i> , 2018, 165, C601-C607.	1.3	26
77	Investigating Corrosion Performance and Corrosive Wear Behavior of Sol-gel/MAO-Coated Mg Alloy. <i>Tribology Letters</i> , 2018, 66, 1.	1.2	23
78	Correlation between corrosion resistance, anodic hydrogen evolution and microhardness in friction stir weldment of AA2198 alloy. <i>Materials Characterization</i> , 2018, 144, 99-112.	1.9	26
79	The light alloy Calphad databases PanAl and PanMg. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2018, 61, 246-263.	0.7	22
80	Machining-induced surface transformations of magnesium alloys to enhance corrosion resistance in human-like environment. <i>CIRP Annals - Manufacturing Technology</i> , 2018, 67, 579-582.	1.7	26
81	Near-threshold fatigue crack growth properties of wrought magnesium alloy <sc>AZ61</sc> in ambient air, dry air, and vacuum. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2018, 41, 1938-1947.	1.7	27
82	Corrosion-resistant fluoridated Ca-Mg-P composite coating on magnesium alloys prepared via hydrothermal assisted sol-gel process. <i>Journal of Materials Research</i> , 2018, 33, 3793-3800.	1.2	5
83	The relation between Mn additions, microstructure and corrosion behavior of new wrought Mg-5Al alloys. <i>Materials Characterization</i> , 2018, 145, 101-115.	1.9	42
84	Unique corrosion resistance of ultrahigh pressure Mg-25Al binary alloys. <i>Corrosion Science</i> , 2018, 143, 229-239.	3.0	25
85	Dynamic recrystallization kinetics and microstructure evolution of an AZ91D magnesium alloy during hot compression. <i>Materials Characterization</i> , 2018, 145, 39-52.	1.9	56
86	Anodic dissolution dictates the negative difference effect (NDE) of magnesium corrosion more in chemical pathway. <i>Materials Letters</i> , 2018, 232, 54-57.	1.3	14
87	<i>In vitro</i> and <i>in vivo</i> assessment of biomedical Mg-Ca alloys for bone implant applications. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2018, 16, 126-136.	0.7	47
88	First-Principles Approach to Model Electrochemical Reactions: Understanding the Fundamental Mechanisms behind Mg Corrosion. <i>Physical Review Letters</i> , 2018, 120, 246801.	2.9	71
89	Fabrication and characterization of nanostructured hydroxyapatite coating on Mg-based alloy by high-velocity oxygen fuel spraying. <i>Ceramics International</i> , 2018, 44, 14667-14676.	2.3	17
90	Improved corrosion resistance of Mg-8Sn-1Zn-1Al alloy subjected to low-temperature indirect extrusion. <i>Corrosion Science</i> , 2018, 141, 203-210.	3.0	22

#	ARTICLE	IF	CITATIONS
91	Clarifying the Dissolution Mechanisms and Electrochemistry of Mg ₂ Si as a Function of Solution pH. <i>Journal of the Electrochemical Society</i> , 2018, 165, C497-C501.	1.3	24
92	Electrochemical Corrosion and In vitro Biocompatibility Performance of AZ31Mg/Al ₂ O ₃ Nanocomposite in Simulated Body Fluid. <i>Journal of Materials Engineering and Performance</i> , 2018, 27, 3419-3428.	1.2	19
93	Physical and Electrochemical Evidence for the Role of a Mg Hydride Species in Mg Alloy Corrosion. <i>Corrosion</i> , 2019, 75, 58-68.	0.5	23
94	Design of tailored biodegradable implants: The effect of voltage on electrodeposited calcium phosphate coatings on pure magnesium. <i>Journal of the American Ceramic Society</i> , 2019, 102, 123-135.	1.9	23
95	Adsorption behaviour of NaCl solution on the surface of MgO: a molecular dynamics study. <i>Molecular Physics</i> , 2019, 117, 267-279.	0.8	5
96	Bioinspired Mechanically Robust Metal-Based Water Repellent Surface Enabled by Scalable Construction of a Flexible Coral-Reef-Like Architecture. <i>Small</i> , 2019, 15, e1901919.	5.2	30
97	A Comparative Study on Microstructure, Mechanical and Tribological Properties of A4, AE41, AS41 and AJ41 Magnesium Alloys. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 4647-4657.	1.2	19
98	Microstructure, mechanical and corrosion properties of novel Mg-Sn-Ce alloys produced by high pressure die casting. <i>Materials Science and Engineering C</i> , 2019, 105, 110064.	3.8	25
99	In vitro corrosion of pure Mg in phosphate buffer solution—Influences of isoelectric point and molecular structure of amino acids. <i>Materials Science and Engineering C</i> , 2019, 105, 110042.	3.8	33
100	First-principles characterization of Mg low-index surfaces: Structure, reconstructions, and surface core-level shifts. <i>Physical Review B</i> , 2019, 100, .	1.1	1
101	Morphological modification and corrosion response of MgO and Mg ₃ (PO ₄) ₂ composite formed on magnesium alloy. <i>Composites Part B: Engineering</i> , 2019, 176, 107225.	5.9	54
102	Unexpected cathodic role of Mg ₄₁ Sm ₅ phase in mitigating localized corrosion of extruded Mg-Sm-Zn-Zr alloy in NaCl solution. <i>Corrosion Science</i> , 2019, 159, 108133.	3.0	79
103	Corrosion behavior of as-cast ZK60 alloy modified with rare earth addition in sodium sulfate medium. <i>Corrosion Science</i> , 2019, 158, 108092.	3.0	14
104	Time-sequential corrosion behaviour observation of micro-alloyed Mg-0.5Zn-0.2Ca alloy via a quasi-in situ approach. <i>Corrosion Science</i> , 2019, 158, 108096.	3.0	38
105	Understanding the enhanced rates of hydrogen evolution on dissolving magnesium. <i>Electrochemistry Communications</i> , 2019, 104, 106482.	2.3	48
106	Recent Development in Friction Stir Processing as a Solid-State Grain Refinement Technique: Microstructural Evolution and Property Enhancement. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2019, 44, 378-426.	6.8	191
107	Insight into the corrosion evolution of Fe-based amorphous coatings under wet-dry cyclic conditions. <i>Electrochimica Acta</i> , 2019, 319, 966-980.	2.6	31
108	Influence of pre-straining on creep behaviors of Mg-2Y alloy sheets. <i>Journal of Alloys and Compounds</i> , 2019, 806, 19-32.	2.8	22

#	ARTICLE	IF	CITATIONS
109	Deposition of fully dense Al-based coatings via in-situ micro-forging assisted cold spray for excellent corrosion protection of AZ31B magnesium alloy. <i>Journal of Alloys and Compounds</i> , 2019, 806, 1116-1126.	2.8	66
110	The Passivating Layer Influence on Mg-Based Anode Corrosion and Implications for Electrochemical Struvite Precipitation. <i>Journal of the Electrochemical Society</i> , 2019, 166, E358-E364.	1.3	18
111	Relationship between microstructure and formation-biodegradation mechanism of fluoride conversion coatings synthesised on the AZ31 magnesium alloy. <i>Surface and Coatings Technology</i> , 2019, 374, 424-436.	2.2	22
112	Degradation Behaviour of Mg _{0.6} Ca and Mg _{0.6} Ca ₂ Ag Alloys with Bioactive Plasma Electrolytic Oxidation Coatings. <i>Coatings</i> , 2019, 9, 383.	1.2	14
113	Mechanical properties and corrosion behaviors of AZ31 alloy with dual-phase glass-crystal coating. <i>Materials Characterization</i> , 2019, 154, 200-211.	1.9	8
114	Developing Improved Mechanical Property and Corrosion Resistance of Mg-9Li Alloy via Solid-Solution Treatment. <i>Metals</i> , 2019, 9, 920.	1.0	16
115	Study on Corrosion Resistance and Wear Resistance of Zn-Al-Mg/ZnO Composite Coating Prepared by Cold Spraying. <i>Coatings</i> , 2019, 9, 505.	1.2	4
116	The influence of the crosslinking degree on the corrosion protection properties of chitosan coatings in simulated body fluid. <i>Progress in Organic Coatings</i> , 2019, 137, 105328.	1.9	15
117	The role of Al ₂ Gd cuboids in the discharge performance and electrochemical behaviors of AZ31-Gd anode for Mg-air batteries. <i>Energy</i> , 2019, 189, 116314.	4.5	53
118	Corrosion Inhibition of AZ31-Mg Alloy by Aqueous Selenite (SeO ₃ ²⁻). <i>Journal of the Electrochemical Society</i> , 2019, 166, C520-C529.	1.3	27
119	Endoscopic submucosal dissection of distal intestinal tumors using grasping forceps for traction. <i>Techniques in Coloproctology</i> , 2019, 23, 1079-1083.	0.8	7
120	Biocorrosion Zoomed In: Evidence for Dealloying of Nanometric Intermetallic Particles in Magnesium Alloys. <i>Advanced Materials</i> , 2019, 31, e1903080.	11.1	29
121	Clarifying the decisive factors for utilization efficiency of Mg anodes for primary aqueous batteries. <i>Journal of Power Sources</i> , 2019, 441, 227201.	4.0	86
122	Magnesium Alloy Effects on Plasma Electrolytic Oxidation Electro-Ceramic and Electro-Coat Formation and Corrosion Resistance. <i>Journal of the Electrochemical Society</i> , 2019, 166, C492-C508.	1.3	12
123	Study on the Process Optimization and Wear Resistance of Electron Beam Cladding WC-CoCr Coating on Inconel 617 Surface. <i>Advances in Materials Science and Engineering</i> , 2019, 2019, 1-10.	1.0	0
124	Influence of laser surface melting on the properties of MB26 and AZ80 magnesium alloys. <i>Surface and Coatings Technology</i> , 2019, 378, 124964.	2.2	17
125	Review of rare-earth-based conversion coatings for magnesium and its alloys. <i>Journal of Materials Research and Technology</i> , 2019, 8, 5012-5035.	2.6	97
126	Effect of Extrusion Temperature and Extrusion Ratio on Microstructure and Biodegradation Behavior of Mg-4.5Zn Binary Alloy. <i>Jom</i> , 2019, 71, 4705-4714.	0.9	5

#	ARTICLE	IF	CITATIONS
127	Polymer-Containing Layers Formed by PEO and Spray-Coating Method. <i>Materials Today: Proceedings</i> , 2019, 11, 150-154.	0.9	22
128	Preparation and characterization of composite coating on Mg-1.74Zn-0.55Ca alloy by micro-arc oxidation combined with sol-gel method. <i>Materials Letters</i> , 2019, 255, 126578.	1.3	21
129	Microstructure evolution and controlled hydrolytic hydrogen generation strategy of Mg-rich Mg-Ni-La ternary alloys. <i>Energy</i> , 2019, 188, 116081.	4.5	40
130	Comparative, real-time in situ monitoring of galvanic corrosion in Mg-Mg ₂ Ca and Mg-MgZn ₂ couples in Hank's solution. <i>Corrosion Science</i> , 2019, 161, 108185.	3.0	38
131	Effect of Annealing and Aging Treatment on Pitting Corrosion Resistance of Fine-Grained Mg-8%Al-0.5%Zn Alloy. <i>Jom</i> , 2019, 71, 4758-4768.	0.9	8
132	Designing a Superhydrophobic Surface for Enhanced Atmospheric Corrosion Resistance Based on Coalescence-Induced Droplet Jumping Behavior. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 38276-38284.	4.0	47
133	Determination of Bimetallic Corrosion Risk Using an Electrochemical Method. <i>Materials Science Forum</i> , 2019, 960, 62-69.	0.3	3
134	Microstructure and mechanical properties of directionally solidified Mg-Zn alloy as a biomaterial. <i>Materials Science and Technology</i> , 2019, 35, 2165-2172.	0.8	3
135	Magnesium Based Biodegradable Metallic Implant Materials: Corrosion Control and Evaluation of Surface Coatings. <i>Innovations in Corrosion and Materials Science</i> , 2019, 9, 3-27.	0.2	1
136	Characterisation of Li in the surface film of a corrosion resistant Mg-Li(-Al-Y-Zr) alloy. <i>Applied Surface Science</i> , 2019, 494, 1066-1071.	3.1	36
137	The influence of alloying and fabrication techniques on the mechanical properties, biodegradability and biocompatibility of zinc: A comprehensive review. <i>Acta Biomaterialia</i> , 2019, 87, 1-40.	4.1	336
138	Low hydrogen release behavior and antibacterial property of Mg-4Zn-xSn alloys. <i>Materials Letters</i> , 2019, 241, 88-91.	1.3	13
139	Enhanced corrosion resistance of Mg-Sn-Zn-Al alloy by Y microalloying. <i>Scripta Materialia</i> , 2019, 163, 125-129.	2.6	24
140	Temporal Evolution of Anodically Activated Cathodic Kinetics on Magnesium Through Atmospheric Exposure. <i>Corrosion</i> , 2019, 75, 687-692.	0.5	1
141	Simultaneously improving corrosion resistance and mechanical properties of a magnesium alloy via equal-channel angular pressing and post water annealing. <i>Materials and Design</i> , 2019, 166, 107621.	3.3	97
142	Development of HA-CNTs composite coating on AZ31 Magnesium alloy by cathodic electrodeposition. Part 2: Electrochemical and in-vitro behavior. <i>Ceramics International</i> , 2019, 45, 11186-11194.	2.3	19
143	Magnesium-Based Bioresorbable Stent Materials: Review of Reviews. <i>Journal of Bio- and Tribo-Corrosion</i> , 2019, 5, 1.	1.2	24
144	Application of 2D Pit Growth Method to Mg Thin Films: Part I. Initiation, Growth and Repassivation. <i>Journal of the Electrochemical Society</i> , 2019, 166, C3254-C3265.	1.3	4

#	ARTICLE	IF	CITATIONS
145	Application of 2D Pit Growth Method to Mg Thin Films: Part II. Salt Film and Hydrogen Evolution. Journal of the Electrochemical Society, 2019, 166, C3266-C3274.	1.3	5
146	Corrosion of metallic biomaterials. , 2019, , 131-152.		6
147	Evolution of surface characteristics of two industrial 7xxx aluminium alloys exposed to humidity at moderate temperature. Surface and Interface Analysis, 2019, 51, 1288-1297.	0.8	9
148	Scanning Electrochemical Cell Microscopy (SECCM) Chronopotentiometry: Development and Applications in Electroanalysis and Electrocatalysis. Analytical Chemistry, 2019, 91, 9229-9237.	3.2	55
149	Fabrication of corrosion-resistant superhydrophobic coating on magnesium alloy by one-step electrodeposition method. Journal of Magnesium and Alloys, 2019, 7, 193-202.	5.5	114
150	Effects of alloying element and cooling rate on properties of AM60 Mg alloy. Materials Research Express, 2019, 6, 096511.	0.8	17
151	Electrochemical Characterization of Certain Mg-Based Alloys in Artificial Perspiration Biofluid for Consumer and Industrial Applications. Journal of Materials Engineering and Performance, 2019, 28, 4379-4392.	1.2	7
152	Effects of Zr Ion Implantation on Surface Mechanical Properties and Corrosion Resistance of Pure Magnesium. Journal of Materials Engineering and Performance, 2019, 28, 2543-2551.	1.2	10
153	Effect of Temperature on the Corrosion Behavior of Biodegradable AZ31B Magnesium Alloy in Ringer's Physiological Solution. Metals, 2019, 9, 591.	1.0	10
154	Multi-barrel electrodes containing an internal micro-reference for the improved visualization of galvanic corrosion processes in magnesium-based materials using potentiometric scanning electrochemical microscopy. Sensors and Actuators B: Chemical, 2019, 296, 126625.	4.0	17
155	Hydrothermal Synthesis of Protective Coating on Mg Alloy for Degradable Implant Applications. Coatings, 2019, 9, 160.	1.2	11
156	The Inhibitive Effect of Artificial Seawater on Magnesium Corrosion. Advanced Engineering Materials, 2019, 21, 1900363.	1.6	21
157	Stress Corrosion Behavior of AM50Gd Magnesium Alloy in Different Environments. Metals, 2019, 9, 616.	1.0	10
158	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.	0.5	18
159	Effect of ECAP Die Angles on Microstructure Mechanical Properties and Corrosion Behavior of AZ80Mg Alloy. Journal of Materials Engineering and Performance, 2019, 28, 2610-2619.	1.2	38
160	Review of the atmospheric corrosion of magnesium alloys. Journal of Materials Science and Technology, 2019, 35, 2003-2016.	5.6	129
161	A Zinc-Rich Coating Fabricated on a Magnesium Alloy by Oxide Reduction. Coatings, 2019, 9, 278.	1.2	5
162	Statistical optimization of stress level in Mg-Li-Al alloys upon hot compression testing. Journal of Magnesium and Alloys, 2019, 7, 203-217.	5.5	29

#	ARTICLE	IF	CITATIONS
163	Improvement of corrosion resistance of AZ91 by lanthanum addition. AIP Conference Proceedings, 2019, , .	0.3	1
164	Surface degradation study of magnesium tested in simulated body fluid. Bio-Medical Materials and Engineering, 2019, 30, 341-348.	0.4	1
165	Anticorrosion Properties of Zn-Al Composite Coating Prepared by Cold Spraying. Coatings, 2019, 9, 210.	1.2	11
166	First-principles search for alloying elements that increase corrosion resistance of Mg with second-phase particles of transition metal impurities. Computational Materials Science, 2019, 165, 154-166.	1.4	29
167	Electroless nickel fabrication on surface modified magnesium substrates. Defence Technology, 2019, 15, 636-644.	2.1	25
168	Modeling Corrosion with First-Principles Electrochemical Phase Diagrams. Annual Review of Materials Research, 2019, 49, 53-77.	4.3	40
169	The Potential of Magnesium Based Materials in Mandibular Reconstruction. Metals, 2019, 9, 302.	1.0	41
170	Effect of pH on Mg(OH) ₂ film evolution on corroding Mg by in situ kinetic Raman mapping (KRM). Corrosion Science, 2019, 153, 272-282.	3.0	72
171	Organic conversion coatings for magnesium and its alloys. Journal of Industrial and Engineering Chemistry, 2019, 75, 20-37.	2.9	71
172	Corrosion inhibition of magnesium alloy in NaCl solution by ionic liquid: Synthesis, electrochemical and theoretical studies. Journal of Alloys and Compounds, 2019, 791, 681-689.	2.8	49
173	On the corrosion mechanism of Mg investigated by electrochemical impedance spectroscopy. Electrochimica Acta, 2019, 306, 61-70.	2.6	163
174	Influence of design and postprocessing parameters on the degradation behavior and mechanical properties of additively manufactured magnesium scaffolds. Acta Biomaterialia, 2019, 98, 23-35.	4.1	101
175	Sacrificial Cathodic Protection of Mg Alloy AZ31B by an Mg-Sn Surface Alloy. Minerals, Metals and Materials Series, 2019, , 183-190.	0.3	0
176	Dissolution Kinetics of Mg ₁₇ Al ₁₂ Eutectic Phase and Its Effect on Corrosion Behavior of As-Cast AZ80 Magnesium Alloy. Jom, 2019, 71, 2209-2218.	0.9	28
177	Electrochemical behavior of a magnesium ZK60 alloy processed by high-pressure torsion. Corrosion Science, 2019, 154, 90-100.	3.0	52
178	Investigations on microstructures, mechanical and corrosion properties of Mg-5.5Zn-0.8Zr alloys with Sm addition. Materials Research Express, 2019, 6, 076550.	0.8	1
179	Magnesium-based composites and alloys for medical applications: A review of mechanical and corrosion properties. Journal of Alloys and Compounds, 2019, 792, 1162-1190.	2.8	184
180	Effect of carbonate and phosphate conversion pretreatments and optimization on corrosion behaviour of subsequent electroless nickel coating on AZ91 alloy. Applied Surface Science, 2019, 483, 334-354.	3.1	21

#	ARTICLE	IF	CITATIONS
181	The effect of small-molecule bio-relevant organic components at low concentration on the corrosion of commercially pure Mg and Mg-0.8Ca alloy: An overall perspective. <i>Corrosion Science</i> , 2019, 153, 258-271.	3.0	76
182	Effect of hot rolling on the corrosion behavior of AZ31 magnesium alloy. <i>Metallurgical Research and Technology</i> , 2019, 116, 109.	0.4	9
183	Electrochemical behaviors and discharge performance of the as-extruded Mg-1.5wt%Ca alloys as anode for Mg-air battery. <i>Journal of Alloys and Compounds</i> , 2019, 790, 822-828.	2.8	66
184	Effect of Sn addition on the mechanical properties and bio-corrosion behavior of cytocompatible Mg-4Zn based alloys. <i>Journal of Magnesium and Alloys</i> , 2019, 7, 15-26.	5.5	68
185	The Influence of Temperature and Medium on Corrosion Response of ZE41 and EZ33. <i>Minerals, Metals and Materials Series</i> , 2019, , 159-167.	0.3	2
186	Performance of Mg-Sn surface alloys for the sacrificial cathodic protection of Mg alloy AZ31B-H24. <i>Corrosion Science</i> , 2019, 149, 195-206.	3.0	22
188	Alloy Design Strategies of the Native Anti-corrosion Magnesium Alloy. <i>Minerals, Metals and Materials Series</i> , 2019, , 169-173.	0.3	4
189	The corrosion of pure Mg accelerated by haze pollutant ammonium sulphate. <i>Corrosion Science</i> , 2019, 150, 161-174.	3.0	37
190	Development of HA-CNTs composite coating on AZ31 magnesium alloy by cathodic electrodeposition. Part 1: Microstructural and mechanical characterization. <i>Ceramics International</i> , 2019, 45, 11174-11185.	2.3	39
191	Enrichment efficiency of noble alloying elements on magnesium and effect on hydrogen evolution. <i>Corrosion Science</i> , 2019, 151, 206-218.	3.0	23
192	Precipitation strengthening in an ultralight magnesium alloy. <i>Nature Communications</i> , 2019, 10, 1003.	5.8	88
193	Exploring environment friendly nickel electrodeposition on AZ91 magnesium alloy: Effect of prior surface treatments and temperature of the bath on corrosion behaviour. <i>Corrosion Science</i> , 2019, 151, 1-19.	3.0	38
194	Effect of solution treatment on microstructure and corrosion behaviour of Mg-9Al-1Zn alloys. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 541, 012008.	0.3	0
195	Microscopic and surface analyses of corroded Mg alloys. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 618, 012092.	0.3	0
196	Simultaneous Electrochemical Nutrient Recovery and Hydrogen Generation from Model Wastewater Using a Sacrificial Magnesium Anode. <i>Journal of the Electrochemical Society</i> , 2019, 166, E576-E583.	1.3	14
197	Effect of electromagnetic casting process on microstructure and properties of AZ31 magnesium alloy. <i>International Journal of Cast Metals Research</i> , 2019, 32, 304-314.	0.5	3
198	Polymethylhydrosiloxane Coating Enhanced Corrosion Resistance of Hydrofluoric Acid Treated Mg Bio-implant Material in Simulated Body Fluid Solution. <i>Innovations in Corrosion and Materials Science</i> , 2019, 9, 41-49.	0.2	0
199	Study on microstructure and dynamic corrosion behavior of degradable Mg-Y-Zn-Zr alloy with different Sr contents. <i>Materials Research Express</i> , 2019, 6, 125418.	0.8	0

#	ARTICLE	IF	CITATIONS
200	Remote Monitoring of Absorbable Cardiovascular Stents using Millimetre Waves. , 2019, , .		0
201	Efficient Measurement of the Influence of Chemical Composition on Corrosion: Analysis of an Mg-Al Diffusion Couple Using Scanning Micropipette Contact Method. Journal of the Electrochemical Society, 2019, 166, C624-C630.	1.3	16
202	Bioactivity enhancement by Sr doped Zn-Ca-P coatings on biomedical magnesium alloy. Journal of Magnesium and Alloys, 2019, 7, 584-596.	5.5	39
203	Effect of Electrolyte Flow on the Corrosion Behavior of Magnesium Alloy AZ31B. Corrosion, 2019, 75, 973-981.	0.5	3
204	Corrosion behavior of AZ31-WC nano-composites. Journal of Magnesium and Alloys, 2019, 7, 681-695.	5.5	38
205	Real-Time Monitoring of Atmospheric Magnesium Alloy Corrosion. Journal of the Electrochemical Society, 2019, 166, C3001-C3009.	1.3	32
206	A paradigm shift towards compositionally zero-sum binderless 3D printing of magnesium alloys via capillary-mediated bridging. Acta Materialia, 2019, 165, 294-306.	3.8	47
207	Improved corrosion resistance of Mg alloy AZ31B induced by selective evaporation of Mg using large pulsed electron beam irradiation. Journal of Materials Science and Technology, 2019, 35, 891-901.	5.6	33
208	Unveiling the inhibition mechanism of an effective inhibitor for AZ91 Mg alloy. Corrosion Science, 2019, 148, 264-271.	3.0	76
209	In-situ formation of a gradient Mg ₂ Si/Mg composite with good biocompatibility. Surface and Coatings Technology, 2019, 361, 255-262.	2.2	10
210	Corrosion Inhibition Study of Mg-Nd-Y High Strength Magnesium Alloy Using Organic Inhibitor. Journal of Materials Engineering and Performance, 2019, 28, 852-862.	1.2	22
211	Influence of surface pretreatment on phosphate conversion coating on AZ91 Mg alloy. Surface and Coatings Technology, 2019, 359, 414-425.	2.2	42
212	Anomalous hydrogen evolution on AZ31, AZ61 and AZ91 magnesium alloys in unbuffered sodium chloride solution. Corrosion Science, 2019, 146, 163-171.	3.0	37
213	The corrosion of solid solution Mg-Sn binary alloys in NaCl solutions. Electrochimica Acta, 2019, 297, 564-575.	2.6	49
214	Hydrogen generation from Mg NdNiMg ₁₅ composites by hydrolysis reaction. International Journal of Hydrogen Energy, 2019, 44, 523-530.	3.8	25
215	Role of Sn in microstructure and corrosion behavior of new wrought Mg-5Al alloy. Journal of Alloys and Compounds, 2019, 777, 835-849.	2.8	27
216	Ultra-rapid transient liquid phase bonding of Mg alloys within 1â€”s in air by ultrasonic assistance. Materials and Design, 2019, 161, 72-79.	3.3	23
217	Research Progress on the Corrosion Behavior of Magnesiumâ€”Lithium-Based Alloys: A Review. Acta Metallurgica Sinica (English Letters), 2019, 32, 1-9.	1.5	61

#	ARTICLE	IF	CITATIONS
218	The role of individual components of simulated body fluid on the corrosion behavior of commercially pure Mg. <i>Corrosion Science</i> , 2019, 147, 81-93.	3.0	97
219	Fabrication of a superhydrophobic Mg-Mn layered double hydroxides coating on pure magnesium and its corrosion resistance. <i>Surface and Coatings Technology</i> , 2019, 361, 75-82.	2.2	51
220	Effects of the combinative Ca, Sm and La additions on the electrochemical behaviors and discharge performance of the as-extruded AZ91 anodes for Mg-air batteries. <i>Journal of Power Sources</i> , 2019, 414, 174-182.	4.0	120
221	Inorganic-metallic bilayer on Mg alloy via wet and dry plasma treatments. <i>Surface and Coatings Technology</i> , 2019, 360, 56-63.	2.2	9
222	Effect of Sm additions on the microstructure and corrosion behavior of magnesium alloy AZ91. <i>Corrosion Science</i> , 2019, 149, 144-152.	3.0	70
223	Incorporation of halloysite nanotubes into forsterite surface layer during plasma electrolytic oxidation of AM50 Mg alloy. <i>Electrochimica Acta</i> , 2019, 299, 772-788.	2.6	45
224	Effect of Ca addition on plastic flow in nanocrystalline magnesium by atomistic simulation. <i>Computational Materials Science</i> , 2019, 156, 411-420.	1.4	6
225	Influence of Zr and Be on microstructure and electrochemical behavior of AZ63 anode. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2019, 70, 633-641.	0.8	5
226	Modification of in vitro degradation behavior of pure iron with ultrasonication treatment: Comparison of two different pseudo-physiological solutions. <i>Materials Science and Engineering C</i> , 2019, 95, 275-285.	3.8	11
227	Study on the effect of mischmetal (La,Ce) on the micro-galvanic corrosion of AZ91 alloy using multiscale methods. <i>Journal of Alloys and Compounds</i> , 2019, 778, 427-438.	2.8	32
228	A black conversion coating produced by hot corrosion of magnesium with deep eutectic solvent membrane. <i>Surface and Coatings Technology</i> , 2019, 357, 833-840.	2.2	16
229	Development of corrosion and wear resistant micro-arc oxidation coating on a magnesium alloy. <i>Surface and Coatings Technology</i> , 2019, 357, 822-832.	2.2	85
230	Investigating the Structure of the Surface Film on a Corrosion Resistant Mg-Li(-Al-Y-Zr) Alloy. <i>Corrosion</i> , 2019, 75, 80-89.	0.5	23
231	Aqueous electrochemistry of the magnesium surface: Thermodynamic and kinetic profiles. <i>Corrosion Science</i> , 2019, 147, 53-68.	3.0	49
232	Effect of Y addition on removal of Fe impurity from magnesium alloys. <i>Scripta Materialia</i> , 2019, 162, 355-360.	2.6	41
233	Technical Note: A High Corrosion-Resistant Al ₂ O ₃ /MgO Composite Coating on Magnesium Alloy AZ33 by Chemical Conversion. <i>Corrosion</i> , 2019, 75, 335-339.	0.5	1
234	Corrosion studies and microstructure of Mg ²⁺ Zn ²⁺ Ca alloys for biomedical applications. <i>Surfaces and Interfaces</i> , 2019, 14, 108-116.	1.5	75
235	Recent advances in biodegradation controls over Mg alloys for bone fracture management: A review. <i>Journal of Materials Science and Technology</i> , 2019, 35, 535-544.	5.6	171

#	ARTICLE	IF	CITATIONS
236	Anodic activation of Mg in the presence of In ³⁺ ions in dilute sodium chloride solution. <i>Electrochimica Acta</i> , 2019, 293, 199-210.	2.6	17
237	Bioactive Glass Containing Coatings by Electrophoretic Deposition: Development and Applications. , 2019, , 3-33.		3
238	Magnesium extrusion alloys: a review of developments and prospects. <i>International Materials Reviews</i> , 2019, 64, 27-62.	9.4	295
239	Effects of external field treatment on the electrochemical behaviors and discharge performance of AZ80 anodes for Mg-air batteries. <i>Journal of Materials Science and Technology</i> , 2020, 38, 47-55.	5.6	60
240	Microstructure, tensile properties, and corrosion resistance of extruded Mg-1Bi-1Zn alloy: The influence of minor Ca addition. <i>Journal of Alloys and Compounds</i> , 2020, 815, 152414.	2.8	39
241	Hydrophobic epoxy resin coating with ionic liquid conversion pretreatment on magnesium alloy for promoting corrosion resistance. <i>Journal of Materials Science and Technology</i> , 2020, 37, 9-18.	5.6	62
242	Corrosion resistance enhancement of magnesium alloy by N-doped graphene quantum dots and polymethyltrimethoxysilane composite coating. <i>Carbon</i> , 2020, 157, 537-548.	5.4	52
243	In silico screening of modulators of magnesium dissolution. <i>Corrosion Science</i> , 2020, 163, 108245.	3.0	38
244	Long-term corrosion kinetics and mechanism of magnesium alloy AZ31 exposed to a dry tropical desert environment. <i>Corrosion Science</i> , 2020, 163, 108274.	3.0	17
245	A comprehensive comparison of the corrosion performance, fatigue behavior and mechanical properties of micro-alloyed MgZnCa and MgZnGe alloys. <i>Materials and Design</i> , 2020, 185, 108285.	3.3	17
246	Genotypic differences in CC224, CC363, CC449 and CC446 of <i>Moraxella catarrhalis</i> isolates based on whole genome SNP, MLST and PFGE typing. <i>International Journal of Medical Microbiology</i> , 2020, 310, 151357.	1.5	3
247	Influence of ultra-fine grain structure on corrosion behaviour of biodegradable Mg-1Ca alloy. <i>Corrosion Science</i> , 2020, 163, 108303.	3.0	62
248	The study on corrosion resistance of superhydrophobic coatings on magnesium. <i>Applied Surface Science</i> , 2020, 501, 144137.	3.1	83
249	Anodic dissolution pattern of magnesium alloy in different media: Effects of solution treatment on its microstructure and corrosion behaviour. <i>Engineering Failure Analysis</i> , 2020, 107, 104234.	1.8	14
250	Effect of grain morphology on the degradation behavior of Mg-4 wt% Zn alloy in Hank's solution. <i>Materials Science and Engineering C</i> , 2020, 106, 110013.	3.8	22
251	Slip behavior and its effect on rolling texture development in a dual-phase Mg-Li alloy. <i>Journal of Alloys and Compounds</i> , 2020, 813, 152117.	2.8	25
252	Aerospace Alloys. <i>Topics in Mining, Metallurgy and Materials Engineering</i> , 2020, , .	1.4	36
253	Tribological behavior of AZ31/ZrO ₂ surface nanocomposites developed by friction stir processing. <i>Tribology International</i> , 2020, 143, 106062.	3.0	62

#	ARTICLE	IF	CITATIONS
254	Local intragranular misorientation accelerates corrosion in biodegradable Mg. <i>Acta Biomaterialia</i> , 2020, 101, 575-585.	4.1	43
255	Reducing the pitting susceptibility of AISI 304 stainless steel using a hybrid treatment of high-power diode laser and large pulsed electron beam irradiation. <i>Surface and Coatings Technology</i> , 2020, 381, 125124.	2.2	6
256	Active protection of Mg alloy by composite PEO coating loaded with corrosion inhibitors. <i>Applied Surface Science</i> , 2020, 504, 144462.	3.1	68
257	Repeated-dose 26-week oral toxicity study of ginsenoside compound K in Beagle dogs. <i>Journal of Ethnopharmacology</i> , 2020, 248, 112323.	2.0	9
258	Thermodynamics and kinetics of phase transformation in rare earth-magnesium alloys: A critical review. <i>Journal of Materials Science and Technology</i> , 2020, 44, 171-190.	5.6	486
259	In-vitro bio-corrosion behavior of friction stir additively manufactured AZ31B magnesium alloy-hydroxyapatite composites. <i>Materials Science and Engineering C</i> , 2020, 109, 110632.	3.8	65
260	New approach to improve polymer-Mg interface in biodegradable PLA/Mg composites through particle surface modification. <i>Surface and Coatings Technology</i> , 2020, 383, 125285.	2.2	28
261	A novel scanning electrochemical microscopy strategy for the investigation of anomalous hydrogen evolution from AZ63 magnesium alloy. <i>Sensors and Actuators B: Chemical</i> , 2020, 308, 127691.	4.0	19
262	Prospects and strategies for magnesium alloys as biodegradable implants from crystalline to bulk metallic glasses and composites-A review. <i>Acta Biomaterialia</i> , 2020, 103, 1-23.	4.1	95
263	Enhancing the biodegradability and surface protective performance of AZ31 Mg alloy using polypyrrole/gelatin composite coatings with anodized Mg surface. <i>Surface and Coatings Technology</i> , 2020, 381, 125139.	2.2	38
264	Hydrogen evolution on bare Mg surfaces using the scratched electrode technique. <i>Corrosion Science</i> , 2020, 164, 108321.	3.0	8
265	Modification of Mn on corrosion and mechanical behavior of biodegradable Mg88Y4Zn2Li5 alloy with long-period stacking ordered structure. <i>Journal of Materials Science and Technology</i> , 2020, 42, 130-142.	5.6	9
266	How nanoparticles and submicron particles adsorb inside coating during plasma electrolytic oxidation of magnesium?. <i>Surface and Coatings Technology</i> , 2020, 383, 125252.	2.2	28
267	The effect of hydrogen on the early stages of oxidation of a magnesium alloy. <i>Corrosion Science</i> , 2020, 165, 108391.	3.0	8
268	Corrosion of Mg alloys EV31A, WE43B, and ZE41A in chloride and sulfate-containing solutions saturated with magnesium hydroxide. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2020, 71, 956-979.	0.8	17
269	The role of the beta-Mg17Al12 phase on the anomalous hydrogen evolution and anodic dissolution of AZ magnesium alloys. <i>Corrosion Science</i> , 2020, 165, 108384.	3.0	38
270	Pre-nucleation at the Interface Between MgO and Liquid Magnesium: An Ab Initio Molecular Dynamics Study. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 788-797.	1.1	25
271	Exploration of natural polymers for use as green corrosion inhibitors for AZ31 magnesium alloy in saline environment. <i>Carbohydrate Polymers</i> , 2020, 230, 115466.	5.1	80

#	ARTICLE	IF	CITATIONS
272	The effect of cerium cation on the microstructure and anti-corrosion performance of LDH conversion coatings on AZ31 magnesium alloy. <i>Journal of Alloys and Compounds</i> , 2020, 821, 153248.	2.8	53
273	On the in-situ aqueous stability of an Mg-Li-(Al-Y-Zr) alloy: Role of Li. <i>Corrosion Science</i> , 2020, 164, 108342.	3.0	25
274	In Vitro Degradation and Cytocompatibility of As-Cast Mg-5Zn-xSr Alloys. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 434-446.	1.2	8
275	Analysis of the Open Die Forging Process of the AZ91 Magnesium Alloy. <i>Materials</i> , 2020, 13, 3873.	1.3	5
276	Combinatorial screening of dysprosium-magnesium-zinc alloys for bioresorptive implants. <i>Electrochimica Acta</i> , 2020, 363, 137106.	2.6	3
277	Biocorrosion resistance and biocompatibility of Mg-Al layered double hydroxide/poly(L-lactic acid) hybrid coating on magnesium alloy AZ31. <i>Frontiers of Materials Science</i> , 2020, 14, 426-441.	1.1	10
278	Properties of polydimethylsiloxane hydrophobic modified duplex microarc oxidation/diamond-like carbon coatings on AZ31B Mg alloy. <i>Journal of Magnesium and Alloys</i> , 2020, , .	5.5	25
279	Ellipsometric characterization of surface films on AZ31 magnesium alloy exposed to a Na ₂ SO ₄ solution. <i>Journal of Materials Research and Technology</i> , 2020, 9, 10175-10183.	2.6	1
280	Modification of ASTM B107 AZ31B magnesium alloy by co-doped TiO ₂ for applications in biomaterials. <i>Surfaces and Interfaces</i> , 2020, 21, 100623.	1.5	3
281	Review of Mg alloy corrosion rates. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 989-998.	5.5	212
282	A new environmentally-friendly route to <i>in situ</i> form a high-corrosion-resistant nesquehonite film on pure magnesium. <i>RSC Advances</i> , 2020, 10, 35480-35489.	1.7	9
283	Improved Corrosion Resistance of Magnesium Alloy in Simulated Concrete Pore Solution by Hydrothermal Treatment. <i>Scanning</i> , 2020, 2020, 1-7.	0.7	12
284	Comparison on corrosion resistance and surface film of pure Mg and Mg [~] 14Li alloy. <i>Transactions of Nonferrous Metals Society of China</i> , 2020, 30, 2413-2423.	1.7	16
285	Discharge properties and electrochemical behaviors of AZ80-La-Gd magnesium anode for Mg-air battery. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 2113-2121.	5.5	31
286	A first-principles analysis of the charge transfer in magnesium corrosion. <i>Scientific Reports</i> , 2020, 10, 15006.	1.6	37
287	Clarifying the influence of albumin on the initial stages of magnesium corrosion in Hank's balanced salt solution. <i>Journal of Magnesium and Alloys</i> , 2020, , .	5.5	36
288	Modification of surface hardness, wear resistance and corrosion resistance of cold spray Al coated AZ31B Mg alloy using cold spray double layered Ta/Ti coating in 3.5 wt % NaCl solution. <i>Corrosion Science</i> , 2020, 176, 109029.	3.0	60
289	The impact of brain cell metabolism and extracellular matrix on magnesium degradation. <i>Acta Biomaterialia</i> , 2020, 116, 426-437.	4.1	9

#	ARTICLE	IF	CITATIONS
290	Microstructure and corrosion behaviors of AZ63 magnesium alloy fabricated by accumulative roll bonding process. <i>Materials Research Express</i> , 2020, 7, 066525.	0.8	12
291	<i>In vitro</i> degradation and mechanical behaviour of calcium phosphate coated Mg-Ca alloy. <i>Materials Technology</i> , 2021, 36, 738-746.	1.5	9
292	Effect of trace Ni addition on microstructure, mechanical and corrosion properties of the extruded Mg-Gd-Y-Zr-Ni alloys for dissolvable fracturing tools. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1632-1643.	5.5	50
293	PEO of AZ31 Mg Alloy: Effect of Electrolyte Phosphate Content and Current Density. <i>Metals</i> , 2020, 10, 1521.	1.0	18
294	Surface Characterization and Corrosion Resistance of Biomedical AZ31 Mg Alloy Treated by Microarc Fluorination. <i>Scanning</i> , 2020, 2020, 1-15.	0.7	5
295	Development of texture and grain size during extrusion of ZA63 alloy containing stable quasicrystalline ϵ -phase and its effect on tensile and compression strength. <i>Journal of Alloys and Compounds</i> , 2020, 849, 156340.	2.8	9
296	Enhanced mechanical properties and corrosion resistance of a fine-grained Mg-9Al-1Zn alloy: the role of bimodal grain structure and β -Mg ₁₇ Al ₁₂ precipitates. <i>Materialia</i> , 2020, 13, 100840.	1.3	49
297	Role of second phases on the corrosion resistance of Mg-Nd-Zr alloys. <i>Journal of Alloys and Compounds</i> , 2020, 849, 156619.	2.8	43
298	Effect of Y addition on microstructure and corrosion behavior of extruded Mg-Zn-Nd-Zr alloy. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 640-653.	5.5	35
299	Development of New Wrought Mg Alloys: Improving the Corrosion Resistance by Addition of Alloying Elements. , 0, 27, 50-60.		0
300	GENERATION OF SURFACE COMPOSITES AND CORROSION CHARACTERIZATION OF Mg RZ 5 ALLOY CONTAINING RARE EARTH ELEMENTS. <i>Surface Review and Letters</i> , 2020, 27, 1950200.	0.5	0
301	Hydrolysis properties, corrosion behavior and microhardness of AZ91 ϵ -model alloys. <i>Journal of Alloys and Compounds</i> , 2020, 845, 156283.	2.8	17
302	Electrochemical Analysis and In Vitro Assay of Mg-0.5Ca-xY Biodegradable Alloys. <i>Materials</i> , 2020, 13, 3082.	1.3	12
303	<i>In vitro</i> and <i>in vivo</i> studies on ultrafine-grained biodegradable pure Mg, Mg-Ca alloy and Mg-Sr alloy processed by high-pressure torsion. <i>Biomaterials Science</i> , 2020, 8, 5071-5087.	2.6	35
304	Effect of Multiwalled Carbon Nanotubes (MWCNTs) on the Micro-Hardness and Corrosion Behaviour Mg-Zn Alloy Prepared by Powder Metallurgy. <i>Materials Science Forum</i> , 0, 1000, 115-122.	0.3	3
305	58S and 68S sol-gel glass-like bioactive coatings for enhancing the implant performance of AZ91D magnesium alloy. <i>Surface and Coatings Technology</i> , 2020, 400, 126224.	2.2	30
306	Effects of dynamic recrystallization and strain-induced dynamic precipitation on the corrosion behavior of partially recrystallized Mg-9Al-1Zn alloys. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 1016-1037.	5.5	56
307	High Power Diode Laser (HPDL) surface treatments to improve the mechanical properties and the corrosion behaviour of Mg-Zn-Ca alloys for biodegradable implants. <i>Surface and Coatings Technology</i> , 2020, 402, 126314.	2.2	12

#	ARTICLE	IF	CITATIONS
308	Influence of Heat Treatment on the Microstructure and Corrosion Behavior of Thixo-cast Mg-Y-Nd-Zr. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 6181-6195.	1.2	6
309	Oxidation and electrical properties of chromium-iron alloys in a corrosive molten electrolyte environment. <i>Scientific Reports</i> , 2020, 10, 14833.	1.6	9
310	Microstructure and Corrosion of Cast Magnesium Alloy ZK60 in NaCl Solution. <i>Materials</i> , 2020, 13, 3833.	1.3	11
311	Effect of GelMA Hydrogel Coatings on Corrosion Resistance and Biocompatibility of MAO-Coated Mg Alloys. <i>Materials</i> , 2020, 13, 3834.	1.3	18
312	Experimental investigation to study the effects of processing parameters on developed novel AM(Al-Mn) series alloy. <i>Materials and Manufacturing Processes</i> , 2020, 35, 1842-1851.	2.7	7
313	Phase-Species-Dependent Electrochemical and Corrosion Behaviors of Wrought Mg-Y-Zn-Based Alloys. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 5028-5040.	1.2	3
314	On the early stages of localised atmospheric corrosion of magnesium-aluminium alloys. <i>Scientific Reports</i> , 2020, 10, 20972.	1.6	10
315	The Effect of Ca on In Vitro Behavior of Biodegradable Zn-Fe Alloy in Simulated Physiological Environments. <i>Metals</i> , 2020, 10, 1624.	1.0	10
316	Characteristics of composite magnesium with micro SiC particle for automotive applications with stir casting method. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 902, 012028.	0.3	0
317	High rate oxygen reduction reaction during corrosion of ultra-high-purity magnesium. <i>Npj Materials Degradation</i> , 2020, 4, .	2.6	30
318	Electrochemical and corrosion behaviors of the wrought Mg-Y-Zn based alloys with high Y/Zn mole ratios. <i>Journal of Magnesium and Alloys</i> , 2020, , .	5.5	13
319	Study on heat treatment to improve the microstructure and corrosion behavior of ZK60 magnesium alloy. <i>Journal of Materials Research and Technology</i> , 2020, 9, 11201-11219.	2.6	35
320	The Effect of Electrolytic Solution Composition on the Structure, Corrosion, and Wear Resistance of PEO Coatings on AZ31 Magnesium Alloy. <i>Coatings</i> , 2020, 10, 937.	1.2	43
321	The Effect of Equal-Channel Angular Pressing on Microstructure, Mechanical Properties, and Biodegradation Behavior of Magnesium Alloyed with Silver and Gadolinium. <i>Crystals</i> , 2020, 10, 918.	1.0	10
322	Comparison of the corrosion behavior of AM60 Mg alloy with and without self-healing coating in atmospheric environment. <i>Journal of Magnesium and Alloys</i> , 2020, 9, 1220-1220.	5.5	24
323	Orange peel extracts as biodegradable corrosion inhibitor for magnesium alloy in NaCl solution: Experimental and theoretical studies. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2020, 115, 35-46.	2.7	40
324	Selecting medium for corrosion testing of bioabsorbable magnesium and other metals – A critical review. <i>Corrosion Science</i> , 2020, 171, 108722.	3.0	152
325	A New Method of Edge Crack Suppression in the Rolling Process of Magnesium Alloy Sheet and Study on the Method of Cathodic Protection. <i>Advances in Materials Science and Engineering</i> , 2020, 2020, 1-12.	1.0	1

#	ARTICLE	IF	CITATIONS
326	Characterization of Tantalum Oxide Sol-gel-coated AZ91 Mg Alloys. Transactions of the Indian Institute of Metals, 2020, 73, 1249-1256.	0.7	11
327	Enhancing structural integrity, corrosion resistance and wear properties of Mg alloy by heat treated cold sprayed Al coating. Surface and Coatings Technology, 2020, 394, 125882.	2.2	25
328	Microstructure and corrosion resistance of a Mg ₂ Sn-dispersed Mg alloy subjected to pulsed electron beam treatment. Journal of Magnesium and Alloys, 2020, 8, 345-351.	5.5	18
329	Microstructure and corrosion behavior of ALD Al ₂ O ₃ film on AZ31 magnesium alloy with different surface roughness. Journal of Magnesium and Alloys, 2020, 8, 480-492.	5.5	37
330	What activates the Mg surface? A comparison of Mg dissolution mechanisms. Journal of Materials Science and Technology, 2020, 57, 204-220.	5.6	72
331	New insights on the corrosion mechanism of a peak-aged Mg-9Al-1Zn alloy in a chloride environment. Journal of Alloys and Compounds, 2020, 840, 155786.	2.8	26
332	Spark plasma sintering of a high-energy ball milled Mg-10wt% Al alloy. Journal of Magnesium and Alloys, 2020, 8, 319-328.	5.5	31
333	Enhanced corrosion resistance of cold-sprayed and shot-peened aluminum coatings on LA43M magnesium alloy. Surface and Coatings Technology, 2020, 394, 125865.	2.2	50
334	A study of the corrosion behavior of AZ31 Mg alloy in depth direction after surface nanocrystallization. Surface and Coatings Technology, 2020, 396, 125968.	2.2	26
335	Evaluation of magnesium weldment fatigue data using traction and notch stress methods. International Journal of Fatigue, 2020, 138, 105695.	2.8	20
336	Comparison of corrosion resistance and biocompatibility of magnesium phosphate (MgP), zinc phosphate (ZnP) and calcium phosphate (CaP) conversion coatings on Mg alloy. Surface and Coatings Technology, 2020, 397, 125919.	2.2	57
337	Controlling the dissolution of iron through the development of nanostructured Fe-Mg for biomedical applications. Acta Biomaterialia, 2020, 113, 660-676.	4.1	18
338	Electrochemical Impedance Spectroscopy for the Measurement of the Corrosion Rate of Magnesium Alloys: Brief Review and Challenges. Metals, 2020, 10, 775.	1.0	121
339	A Review of In-Vivo and In-Vitro Real-Time Corrosion Monitoring Systems of Biodegradable Metal Implants. Applied Sciences (Switzerland), 2020, 10, 3141.	1.3	22
340	Corrosion of pure and milled Mg ₁₇ Al ₁₂ in model-seawater solution. International Journal of Hydrogen Energy, 2020, 45, 15805-15813.	3.8	26
341	Laser patterned hydroxyapatite surfaces on AZ31B magnesium alloy for consumable implant applications. Materialia, 2020, 11, 100693.	1.3	12
342	Influence of Crystallographic Texture on the Corrosion Product Morphology and Corrosion Rate of AZ31 Plate in Simulated Body Fluid. Journal of Materials Engineering and Performance, 2020, 29, 3824-3830.	1.2	5
343	Effect of Surface Roughness on Pitting Corrosion of AZ31 Mg Alloy. Metals, 2020, 10, 651.	1.0	26

#	ARTICLE	IF	CITATIONS
344	Nanopatterned silk-coated AZ31 magnesium alloy with enhanced antibacterial and corrosion properties. <i>Materials Science and Engineering C</i> , 2020, 116, 111173.	3.8	23
345	The Effect of Vanadate, Phosphate, Fluoride Compounds on the Aqueous Corrosion of Magnesium Alloy AZ31 in Dilute Chloride Solutions. <i>Materials</i> , 2020, 13, 1325.	1.3	15
346	Self-assembled layers for the temporary corrosion protection of magnesium-AZ31 alloy. <i>Corrosion Science</i> , 2020, 169, 108619.	3.0	17
347	Designing High Corrosion Resistant Peritectic Magnesium Alloys via Sc and Y Addition. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 2509-2522.	1.1	16
348	Tailoring the Mg-air primary battery performance using strong complexing agents as electrolyte additives. <i>Journal of Power Sources</i> , 2020, 453, 227880.	4.0	36
349	In vitro and in vivo degradation behavior of Mg-2Sr-Ca and Mg-2Sr-Zn alloys. <i>Bioactive Materials</i> , 2020, 5, 275-285.	8.6	58
350	Tailoring the Mechanical and Degradation Performance of Mg-2.0Zn-0.5Ca-0.4Mn Alloy Through Microstructure Design. <i>Jom</i> , 2020, 72, 1880-1891.	0.9	6
351	ANTICORROSION PROPERTIES OF Zn-Al-Mg-ZnO COMPOSITE COATING PREPARED BY COLD SPRAYING. <i>Surface Review and Letters</i> , 2020, 27, 1950211.	0.5	2
352	Covalent Surface Functionalization of Bovine Serum Albumin to Magnesium Surface to Provide Robust Corrosion Inhibition and Enhance In Vitro Osteo-Inductivity. <i>Polymers</i> , 2020, 12, 439.	2.0	10
353	Efficient protection of Mg alloy enabled by combination of a conventional anti-corrosion coating and a superamphiphobic coating. <i>Chemical Engineering Journal</i> , 2020, 390, 124562.	6.6	122
354	Microstructure and corrosion behavior of Mg-Sc binary alloys in 3.5 wt.% NaCl solution. <i>Corrosion Science</i> , 2020, 174, 108831.	3.0	90
355	Comparative study on the stress corrosion cracking susceptibility of AZ80 and AZ31 magnesium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 792, 139793.	2.6	25
356	Effect of Sn content on the mechanical properties and corrosion behavior of Mg-3Al-xSn alloys. <i>Materials Research Express</i> , 2020, 7, 076505.	0.8	11
357	Ca/In micro alloying as a novel strategy to simultaneously enhance power and energy density of primary Mg-air batteries from anode aspect. <i>Journal of Power Sources</i> , 2020, 472, 228528.	4.0	76
358	Corrosion behavior of an AZ91D magnesium alloy under a heterogeneous electrolyte layer. <i>PLoS ONE</i> , 2020, 15, e0234981.	1.1	1
359	Effect of strain on degradation behaviors of WE43, Fe and Zn wires. <i>Acta Biomaterialia</i> , 2020, 113, 627-645.	4.1	52
360	The development of β phase Mg-Li alloys for ultralight corrosion resistant applications. <i>Npj Materials Degradation</i> , 2020, 4, .	2.6	22
361	The role of long-period stacking ordered phase on the discharge and electrochemical behaviors of magnesium anode Mg-Zn for the primary Mg-air battery. <i>International Journal of Energy Research</i> , 2020, 44, 8865-8876.	2.2	32

#	ARTICLE	IF	CITATIONS
362	Mechanistic understanding of the corrosion behavior of Mg ₄ Zn _{0.2} Sn alloys: From the perspective view of microstructure. <i>Corrosion Science</i> , 2020, 174, 108863.	3.0	13
363	Micro-arc oxidation behavior of fly ash cenospheres/magnesium alloy degradable composite and corrosion resistance of coatings. <i>Surface and Coatings Technology</i> , 2020, 391, 125693.	2.2	8
364	Synthesis, mechanical properties, and in vitro corrosion behavior of biodegradable Zn–Li–Cu alloys. <i>Journal of Alloys and Compounds</i> , 2020, 844, 156257.	2.8	35
365	A corrosion resistant die-cast Mg-9Al-1Zn anode with superior discharge performance for Mg-air battery. <i>Materials and Design</i> , 2020, 194, 108931.	3.3	35
366	Nanostructured Mg for hydrogen production by hydrolysis obtained by MgH ₂ milling and dehydrating. <i>Journal of Alloys and Compounds</i> , 2020, 827, 154000.	2.8	40
367	Exploration the inhibition mechanism of sodium dodecyl sulfate on Mg alloy. <i>Corrosion Science</i> , 2020, 168, 108559.	3.0	43
368	Mg-Alloys for Forging Applications—A Review. <i>Materials</i> , 2020, 13, 985.	1.3	64
369	Effects of alloying elements on the microstructure and corrosion behavior of Mg–Li–Al–Y alloys. <i>Journal of Alloys and Compounds</i> , 2020, 834, 154344.	2.8	46
370	Advances in coatings on biodegradable magnesium alloys. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 42-65.	5.5	274
371	Study of the matrix-filler interface in PLA/Mg composites manufactured by Material Extrusion using a colloidal feedstock. <i>Additive Manufacturing</i> , 2020, 33, 101142.	1.7	28
372	Study of Polarization Characteristics of Corrosion Films on Magnesium in Sulfate-Containing Electrolytes. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 1406.	1.3	3
373	Biodegradable bone implants in orthopedic applications: a review. <i>Biocybernetics and Biomedical Engineering</i> , 2020, 40, 596-610.	3.3	104
374	Atomic-level insights into nano-salt droplets wetting on the MgO surface using molecular dynamics simulations. <i>Corrosion Science</i> , 2020, 167, 108549.	3.0	11
375	Electrochemical behaviour of the MA8 Mg alloy in minimum essential medium. <i>Corrosion Science</i> , 2020, 168, 108552.	3.0	30
376	Visual Hydrogen Mapping Sensor for Noninvasive Monitoring of Bioresorbable Magnesium Implants In Vivo. <i>Jom</i> , 2020, 72, 1851-1858.	0.9	6
377	In vitro and in vivo biodegradation and biocompatibility of an MMT/BSA composite coating upon magnesium alloy AZ31. <i>Journal of Materials Science and Technology</i> , 2020, 47, 52-67.	5.6	55
378	Fabrication and characterization of dicalcium phosphate coatings deposited on magnesium substrates by a chemical conversion route. <i>Surface and Coatings Technology</i> , 2020, 386, 125505.	2.2	13
379	Corrosivity of haze constituents to pure Mg. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 150-162.	5.5	9

#	ARTICLE	IF	CITATIONS
380	Impact of rare-earth elements on the corrosion performance of binary magnesium alloys. Journal of Alloys and Compounds, 2020, 829, 154569.	2.8	62
381	Corrosion behavior of Al ₂ O ₃ -reinforced graphene encapsulated Al composite coating fabricated by low pressure cold spraying. Surface and Coatings Technology, 2020, 386, 125486.	2.2	26
382	Inhibited corrosion activity of biomimetic graphene-based coating on Mg alloy through a cerium intermediate layer. Carbon, 2020, 161, 577-589.	5.4	23
383	Effect of crystal orientation and http://www.w3.org/1998/Math/MathML altimg="si1.svg" 10 twins on the corrosion behaviour of AZ31 magnesium alloy. Journal of Alloys and Compounds, 2020, 827, 154096.	2.8	19
384	Effect of microalloyed Ca on the microstructure and corrosion behavior of extruded Mg alloy AZ31. Journal of Alloys and Compounds, 2020, 823, 153844.	2.8	43
385	The Functional Properties of Mg-Zn-X Biodegradable Magnesium Alloys. Materials, 2020, 13, 544.	1.3	18
386	Improved corrosion response of squeeze-cast SiC nanoparticles reinforced AZ91-2.0Ca-0.3Sb alloy. Corrosion Science, 2020, 166, 108444.	3.0	24
387	In situ surface film evolution during Mg aqueous corrosion in presence of selected carboxylates. Corrosion Science, 2020, 171, 108484.	3.0	32
388	Formulation of corrosion rate of magnesium alloys using microstructural parameters. Journal of Magnesium and Alloys, 2020, 8, 134-149.	5.5	107
389	Degradation, wettability and surface characteristics of laser surface modified Mg-Zn-Gd-Nd alloy. Journal of Materials Science: Materials in Medicine, 2020, 31, 42.	1.7	2
390	Localized currents and pH distribution studied during corrosion of MA8 Mg alloy in the cell culture medium. Corrosion Science, 2020, 170, 108689.	3.0	47
391	Improved Adhesion and Corrosion Resistant Performance of Polyurethane Coatings on Anodized Mg Alloy for Aerospace Applications. Journal of Materials Engineering and Performance, 2020, 29, 2586-2596.	1.2	14
392	Novel smart and self-healing cerium phosphate-based corrosion inhibitor for AZ31 magnesium alloy. Corrosion Science, 2020, 170, 108648.	3.0	85
393	ATR-FTIR in Kretschmann configuration integrated with electrochemical cell as in situ interfacial sensitive tool to study corrosion inhibitors for magnesium substrates. Electrochimica Acta, 2020, 345, 136166.	2.6	37
394	Microstructural Characteristics, Mechanical and Corrosion Properties of an Extruded Low-Alloyed Mg-Bi-Al-Zn Alloy. Frontiers in Materials, 2020, 7, .	1.2	3
395	Comparative Study of the Structure, Properties, and Corrosion Behavior of Sr-Containing Biocoatings on Mg _{0.8} Ca. Materials, 2020, 13, 1942.	1.3	14
396	A self-healing superamphiphobic coating for efficient corrosion protection of magnesium alloy. Journal of Colloid and Interface Science, 2020, 575, 140-149.	5.0	80
397	Tailoring electrolyte additives for controlled Mg-Ca anode activity in aqueous Mg-air batteries. Journal of Power Sources, 2020, 460, 228106.	4.0	37

#	ARTICLE	IF	CITATIONS
398	Effect of NaCl Concentration on the Galvanic Corrosion Behavior of a Magnesium AZX611/Aluminum A6N01 Alloy Joint. <i>Journal of the Electrochemical Society</i> , 2020, 167, 061501.	1.3	10
399	Biodegradable metal-derived magnesium and sodium enhances bone regeneration by angiogenesis aided osteogenesis and regulated biological apatite formation. <i>Chemical Engineering Journal</i> , 2021, 410, 127616.	6.6	22
400	Microstructure and corrosion properties of Mg ^{0.5} Zn ^{0.2} Ca ^{0.2} Ce alloy with different processing conditions. <i>Rare Metals</i> , 2021, 40, 1924-1931.	3.6	10
401	Sustainability through alloy design: Challenges and opportunities. <i>Progress in Materials Science</i> , 2021, 117, 100722.	16.0	58
402	Rational Design of Effective Mg Degradation Modulators. <i>Corrosion</i> , 2021, 77, 204-208.	0.5	9
403	Application and use of different aluminium alloys with respect to workability, strength and welding parameter optimization. <i>Ain Shams Engineering Journal</i> , 2021, 12, 1143-1152.	3.5	90
404	Surface characterization and corrosion behavior of calcium phosphate (Ca-P) base composite layer on Mg and its alloys using plasma electrolytic oxidation (PEO): A review. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 21-40.	5.5	82
405	Structural characterization and corrosion behaviour of AA 2024 reinforced with carbon nanotubes and silicon hybrid metal matrix nanocomposites. <i>Materials Today: Proceedings</i> , 2021, 43, 1132-1140.	0.9	1
406	Tailoring the degradation rate of magnesium through biomedical nano-porous titanate coatings. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 336-350.	5.5	14
407	Synergistic effect of deep ball burnishing and HA coating on surface integrity, corrosion and immune response of biodegradable AZ31B Mg alloys. <i>Materials Science and Engineering C</i> , 2021, 118, 111459.	3.8	29
408	Effect of lithium content on the mechanical and corrosion behaviors of HCP binary Mg ^{Li} alloys. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 569-580.	5.5	73
409	Towards developing Mg alloys with simultaneously improved strength and corrosion resistance via RE alloying. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 41-56.	5.5	217
410	Investigations on chip formation of turned novel AM alloy. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 2021, 235, 332-341.	1.4	6
411	The effect of PEO parameters on the properties of biodegradable Mg alloys: a review. <i>Surface Innovations</i> , 2021, 9, 184-198.	1.4	13
412	Role of trace additions of Mn and Y in improving the corrosion resistance of Mg ^{3Al} 1Zn alloy. <i>Corrosion Science</i> , 2021, 178, 108998.	3.0	35
413	Achieving a high corrosion resistant and high strength magnesium alloy using multi directional forging. <i>Journal of Alloys and Compounds</i> , 2021, 856, 158077.	2.8	30
414	A chemical-free sealing method for Micro-arc oxidation coatings on AZ31 Mg alloy. <i>Surface and Coatings Technology</i> , 2021, 406, 126655.	2.2	39
415	Approaching "stainless magnesium" by Ca micro-alloying. <i>Materials Horizons</i> , 2021, 8, 589-596.	6.4	76

#	ARTICLE	IF	CITATIONS
416	Inhibitive effect of sodium carbonate on corrosion of AZ31 magnesium alloy in NaCl solution. Corrosion Science, 2021, 179, 109131.	3.0	49
417	Stabilization of AZ31 Mg alloy in sea water via dual incorporation of MgO and WO ₃ during micro-arc oxidation. Journal of Alloys and Compounds, 2021, 853, 157036.	2.8	43
418	Advances in LDH coatings on Mg alloys for biomedical applications: A corrosion perspective. Applied Clay Science, 2021, 202, 105948.	2.6	52
419	Nano-indentation and Corrosion Characteristics of Ultrasonic Vibration Assisted Stir-Cast AZ31â€“WCâ€“Graphite Nano-composites. International Journal of Metalcasting, 2021, 15, 1058-1072.	1.5	21
420	Designing for the ceriumâ€“based conversion coating with excellent corrosion resistance on Mgâ€“4Yâ€“2Al magnesium alloy. Materials and Corrosion - Werkstoffe Und Korrosion, 2021, 72, 925-935.	0.8	4
421	Revealing anti-corrosion behavior of magnesium alloy in simulated concrete pore solution. Materials Letters, 2021, 285, 129047.	1.3	19
422	Microstructure and corrosion resistance of a duplex structured Mgâ€“7.5Liâ€“3Alâ€“1Zn. Journal of Magnesium and Alloys, 2021, 9, 467-477.	5.5	34
423	Structural, Vibrational, Electronic and Thermodynamical properties of B2â€“HgMg amalgam: A DFT study. Physica B: Condensed Matter, 2021, 601, 412605.	1.3	4
424	Magnesium alloys for biomedical application: Advanced corrosion control through surface coating. Surface and Coatings Technology, 2021, 405, 126521.	2.2	64
425	Recent progress in surface modification of metals coated by plasma electrolytic oxidation: Principle, structure, and performance. Progress in Materials Science, 2021, 117, 100735.	16.0	282
426	Effect of the Content and Morphology of Î²â€“Compounds and Precipitation on the Corrosion Behavior of Biodegradable Magnesium Alloys. Advanced Engineering Materials, 2021, 23, .	1.6	4
427	Toward a Physical Description of the Role of Germanium in Moderating Cathodic Activation of Magnesium. Corrosion, 2021, 77, 134-147.	0.5	6
428	Relation Between Zn Additions, Microstructure and Corrosion Behavior of New Wrought Mg-5Al Alloys. Metals and Materials International, 2021, 27, 1493-1505.	1.8	7
429	Effect of Addition of Silver and Chilled Casting on Corrosion Behavior of AZ91 Magnesium Alloy. International Journal of Metalcasting, 2021, 15, 1184-1196.	1.5	7
430	Biodegradable alloys. , 2021, , 189-228.		0
431	Effect of MgO Content on Mechanical Properties of Directionally Solidified Pure Magnesium. Materials Research, 2021, 24, .	0.6	2
432	Microstructural, Electrochemical and In Vitro Analysis of Mg-0.5Ca-xGd Biodegradable Alloys. Applied Sciences (Switzerland), 2021, 11, 981.	1.3	15
433	Effect of Mn Addition on Melt Purification and Fe Tolerance in Mg Alloys. Jom, 2021, 73, 892-902.	0.9	24

#	ARTICLE	IF	CITATIONS
434	Metallic Implants for Biomedical Applications. Inorganic Materials Series, 2021, , 1-98.	0.5	12
435	Enhanced Corrosion Resistance of a Double Ceramic Composite Coating Deposited by a Novel Method on Magnesium-Lithium Alloy (LA43M) Substrates. Journal of Thermal Spray Technology, 2021, 30, 680-693.	1.6	1
436	Respirometric In Situ Methods for Real-Time Monitoring of Corrosion Rates: Part II. Immersion. Journal of the Electrochemical Society, 2021, 168, 011502.	1.3	18
437	Corrosion Protective Film Formation on Mg Alloy AZ31 by Exposure to Dilute Selenite Solutions. Materials, 2021, 14, 286.	1.3	10
438	The Role of Native Oxides on the Corrosion Mechanism of Laves Phases in Mg-Al-Ca Composites. Minerals, Metals and Materials Series, 2021, , 217-225.	0.3	0
439	Does Expanding or Contracting MgO Lattice Really Help with Corrosion Resistance of Mg Surface: Insights from Molecular Dynamics Simulations. ACS Omega, 2021, 6, 1099-1107.	1.6	1
440	Improving electrochemical corrosion properties of ZE41A magnesium alloy via hydrothermal treatment. E3S Web of Conferences, 2021, 261, 02031.	0.2	2
441	Extrusion-based 3D printed magnesium scaffolds with multifunctional MgF ₂ and MgF ₂ -CaP coatings. Biomaterials Science, 2021, 9, 7159-7182.	2.6	16
442	Electrodeposited Hydroxyapatite-Based Biocoatings: Recent Progress and Future Challenges. Coatings, 2021, 11, 110.	1.2	74
443	Experimental and DFT studies of gadolinium decorated graphene oxide materials for their redox properties and as a corrosion inhibition barrier layer on Mg AZ13 alloy in a 3.5% NaCl environment. RSC Advances, 2021, 11, 22095-22105.	1.7	6
444	Corrosion behaviour of PEO coating sealed by water based preservative containing corrosion inhibitors. Transportation Research Procedia, 2021, 55, 752-759.	0.8	2
445	A Review on LDH-Smart Functionalization of Anodic Films of Mg Alloys. Nanomaterials, 2021, 11, 536.	1.9	25
446	Microstructure and Properties of Cold Sprayed NiCrAl Coating on AZ91D Magnesium Alloy. Coatings, 2021, 11, 193.	1.2	7
447	Understanding pitting corrosion behavior of AZ91 alloy and its MAO coating in 3.5% NaCl solution by cyclic potentiodynamic polarization. Journal of Magnesium and Alloys, 2022, 10, 1368-1380.	5.5	26
448	The effect of powder size on the mechanical and corrosion properties and the ignition temperature of WE43 alloy prepared by spark plasma sintering. Journal of Magnesium and Alloys, 2021, 9, 1349-1362.	5.5	18
449	Different role of second phase in the micro-galvanic corrosion of WE43 Mg alloy in NaCl and Na ₂ SO ₄ solution. Journal of Magnesium and Alloys, 2022, 10, 1598-1608.	5.5	29
450	Crack initiation of an industrial 7XXX aluminum alloy in humid air analyzed via slow strain rate testing and constant displacement testing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 804, 140776.	2.6	12
451	Effect of Weld Currents on Microstructure, Corrosion Behavior of AZ31 Magnesium Alloy. Journal of Bio- and Tribo-Corrosion, 2021, 7, 1.	1.2	2

#	ARTICLE	IF	CITATIONS
452	Multi-physics analysis of the galvanic corrosion of Mg-steel couple under the influence of time-dependent anisotropic deposition film. <i>Journal of Magnesium and Alloys</i> , 2021, , .	5.5	6
453	Effect of area ratio on the galvanic corrosion of AZX611 magnesium alloy / A6N01 aluminum alloy joint. <i>KeikinZoku/Journal of Japan Institute of Light Metals</i> , 2021, 71, 82-88.	0.1	1
454	Influence of Glucose on Corrosion Fatigue and Cytocompatibility of Mgâ€Znâ€Zrâ€Y Alloy. <i>Advanced Engineering Materials</i> , 2021, 23, 2001451.	1.6	4
455	An Electrochemical Study of Ammonium Dihydrogen Phosphate on Mg and Mg Alloy Electrodes. <i>Electrocatalysis</i> , 2021, 12, 251-263.	1.5	6
456	Does acid pickling of Mg-Ca alloy enhance biomineralization?. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1028-1038.	5.5	19
457	Galvanic corrosion behavior of friction stir welded AZ31B magnesium alloy and 6N01 aluminum alloy dissimilar joints. <i>Corrosion Science</i> , 2021, 180, 109203.	3.0	27
458	Tuning of the Mg Alloy AZ31 Anodizing Process for Biodegradable Implants. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 12866-12876.	4.0	36
459	Nanoscale insight on the initial hydration mechanism of magnesium phosphate cement. <i>Construction and Building Materials</i> , 2021, 276, 122213.	3.2	12
460	Laserâ€Guided Corrosion Control: A New Approach to Tailor the Degradation of Mgâ€Alloys. <i>Small</i> , 2021, 17, 2100924.	5.2	3
461	Valorization of AZ91 by the hydrolysis reaction for hydrogen production (Electrochemical approach). <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1942-1953.	5.5	7
462	Titania-zinc phosphate/nanocrystalline zinc composite coatings for corrosion protection of biomedical WE43 magnesium alloy. <i>Surface and Coatings Technology</i> , 2021, 410, 126940.	2.2	18
463	Dynamic self-propelling condensed microdroplets over super-hydrophobic surface: An exceptional atmospheric corrosion inhibition strategy. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 613, 126055.	2.3	7
464	Corrosion resistance and electrical contact resistance of a thin permanganate conversion coating on dual-phase LZ91 Mgâ€Li alloy. <i>Journal of Materials Research and Technology</i> , 2021, 11, 1953-1968.	2.6	24
465	Performance Assessment of Magnesium Anodes Manufactured by Sintering Process. <i>Metals</i> , 2021, 11, 406.	1.0	2
466	Synthesis of ZIF-67@ZIF-8 with Core-shell Structure for Enhancing Epoxy Coating Corrosion Protection Property on Magnesium Alloy. <i>International Journal of Electrochemical Science</i> , 2021, 16, 210328.	0.5	3
467	Communicationâ€In Situ Hydrogen Evolution Detection from Mg Electrode During Anodic Potentiodynamic Polarization Measurement with Gas-Chromatographic Analysis. <i>Journal of the Electrochemical Society</i> , 2021, 168, 031510.	1.3	4
468	Exceptional atmospheric corrosion inhibition performance of super-hydrophobic films based on the self-propelled jumping behavior of water droplets. <i>Corrosion Communications</i> , 2021, 1, 40-46.	2.7	13
469	Enhanced anticorrosive and antibacterial performances of silver nanoparticles/polyethyleneimine/MAO composite coating on magnesium alloys. <i>Journal of Materials Research and Technology</i> , 2021, 11, 2354-2364.	2.6	25

#	ARTICLE	IF	CITATIONS
470	Recent progress on the corrosion characterization of magnesium (Mg) prepared by powder metallurgy technique. IOP Conference Series: Materials Science and Engineering, 2021, 1068, 012004.	0.3	2
471	Effect of Indium on the Negative Difference Effect for Magnesium Alloy. Journal of the Electrochemical Society, 2021, 168, 031515.	1.3	6
472	On the role of pre-exposure time and corrosion products in stress-corrosion cracking of ZK60 and AZ31 magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 806, 140876.	2.6	15
473	The Video Microscopy-Linked Electrochemical Cell: An Innovative Method to Improve Electrochemical Investigations of Biodegradable Metals. Materials, 2021, 14, 1601.	1.3	5
474	Achieving Yield Symmetry in an Extruded Mg-Zn-Y Alloy by More Effective Dispersion of Quasicrystalline ϵ -Phase. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2185-2194.	1.1	4
475	In vitro corrosion properties of HTHEed Mg-Zn-Y-Nd alloy microtubes for stent applications: Influence of second phase particles and crystal orientation. Journal of Magnesium and Alloys, 2022, 10, 1286-1295.	5.5	21
476	Enhanced hydrogen generation from hydrolysis of MgLi doped with expanded graphite. Journal of Magnesium and Alloys, 2021, 9, 2185-2193.	5.5	12
477	Solidification microstructure-dependent hydrogen generation behavior of Al-Sn and Al-Fe alloys in alkaline medium. International Journal of Hydrogen Energy, 2021, 46, 12654-12671.	3.8	6
478	Significantly improved corrosion resistance of Zn layer coated Mg alloy prepared by friction stir processing. Materials Letters, 2021, 289, 129389.	1.3	6
479	STUDY OF HARDNESS AND CORROSION RATE OF COPPER IONS IRRADIATED Mg-Al-Zn ALLOY IN RINGER LACTATE SOLUTION. Surface Review and Letters, 2021, 28, 2150054.	0.5	2
480	Exploring key ionic interactions for magnesium degradation in simulated body fluid – A data-driven approach. Corrosion Science, 2021, 182, 109272.	3.0	22
481	Lab Case Study of Microbiologically Influenced Corrosion and Rietveld Quantitative Phase Analysis of X-ray Powder Diffraction Data of Deposits from a Refinery. ACS Omega, 2021, 6, 11822-11831.	1.6	2
482	Investigation of Electro-chemical performance of AZ31 Magnesium alloy – CaSiO ₃ Metal Matrix Composites in different environments. IOP Conference Series: Materials Science and Engineering, 2021, 1112, 012002.	0.3	0
483	Electrochemical Characterization of a Novel Mg ₇₀ Al ₁₈ Zn ₆ Ca ₄ Y ₂ Low Entropy Alloy in Different Aqueous Environments. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2549-2563.	1.1	7
484	Strength and corrosion resistance of Al-alloying layer on AZ31B magnesium alloy fabricated in situ by reactive friction stir processing. Materials Characterization, 2021, 174, 111024.	1.9	5
485	A novel method of preparing the silver chloride cathode for the magnesium seawater activated primary cell. Journal of Power Sources, 2021, 490, 229549.	4.0	8
486	Quantitative relation of discontinuous and continuous Mg ₁₇ Al ₁₂ precipitates with corrosion rate of AZ91D magnesium alloy. Materials Characterization, 2021, 174, 111015.	1.9	14
487	Optimizing the mechanical properties of a Mg-Y-Nd-Zr alloy via interrupted compression with an intermediate annealing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 812, 141102.	2.6	19

#	ARTICLE	IF	CITATIONS
488	Biodegradable magnesium-based biomaterials: An overview of challenges and opportunities. <i>MedComm</i> , 2021, 2, 123-144.	3.1	77
489	Synergistic inhibition effect of L-Phenylalanine and zinc salts on chloride-induced corrosion of magnesium alloy: Experimental and theoretical investigation. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2021, 121, 48-60.	2.7	11
490	Control of the Mg alloy biodegradation via PEO and polymer-containing coatings. <i>Corrosion Science</i> , 2021, 182, 109254.	3.0	46
491	The Role of Recrystallization and Local Misorientation on the Biodegradation Behavior of Mg. <i>Jom</i> , 2021, 73, 1754-1764.	0.9	2
492	Influence of melt treatment of AZ91D alloy on phase morphology and corrosion behaviour in Hank's solution. <i>Corrosion Engineering Science and Technology</i> , 2021, 56, 504-512.	0.7	2
493	Influence of heat treatment on corrosion behavior of hot rolled Mg5Gd alloys. <i>Transactions of Nonferrous Metals Society of China</i> , 2021, 31, 939-951.	1.7	22
494	Effect of sterilization on 3-point dynamic response to in vitro bending of an Mg implant. <i>Biomaterials Research</i> , 2021, 25, 9.	3.2	1
495	Exploring the interconnectivity of biomimetic hierarchical porous Mg scaffolds for bone tissue engineering: Effects of pore size distribution on mechanical properties, degradation behavior and cell migration ability. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1954-1966.	5.5	27
496	Bioresorbable Magnesium-Based Alloys as Novel Biomaterials in Oral Bone Regeneration: General Review and Clinical Perspectives. <i>Journal of Clinical Medicine</i> , 2021, 10, 1842.	1.0	31
497	Controlled biodegradation of magnesium alloy in physiological environment by metal organic framework nanocomposite coatings. <i>Scientific Reports</i> , 2021, 11, 8645.	1.6	26
498	Bioactivity and corrosion behavior of magnesium barrier membranes. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2022, 73, 8-19.	0.8	1
499	Microstructural effects on mechanical properties and degradation behavior of Mg-Cu alloy. <i>Materialia</i> , 2021, 16, 101089.	1.3	9
500	Composite Coatings Formed on PEO Pretreated MA8 Magnesium Alloy in Aqueous Suspension of PTFE. <i>Key Engineering Materials</i> , 0, 885, 95-102.	0.4	0
501	Electrochemical Corrosion Behavior of API 5L X60 steel Exposed to Different Concentration of NaCl Solution. <i>International Journal of Electrochemical Science</i> , 0, , ArticleID:21055.	0.5	0
502	Corrosion Behavior and Osteogenic Activity of a Biodegradable Orthopedic Implant Mg-Si Alloy with a Gradient Structure. <i>Metals</i> , 2021, 11, 781.	1.0	7
503	Influence of surface condition on the degradation behaviour and biocompatibility of additively manufactured WE43. <i>Materials Science and Engineering C</i> , 2021, 124, 112016.	3.8	29
504	Surface Modification of Mg0.8Ca Alloy via Wollastonite Micro-Arc Coatings: Significant Improvement in Corrosion Resistance. <i>Metals</i> , 2021, 11, 754.	1.0	10
505	Utilizing Synchrotron Radiation for the Characterization of Biodegradable Magnesium Alloys-From Alloy Development to the Application as Implant Material. <i>Advanced Engineering Materials</i> , 2021, 23, 2100197.	1.6	19

#	ARTICLE	IF	CITATIONS
506	Development and assessment of a multifunctional chitosan-based coating applied on AZ31 magnesium alloy: Corrosion resistance and antibacterial performance against <i>Klebsiella Pneumoniae</i> . <i>Journal of Magnesium and Alloys</i> , 2021, 9, 2133-2144.	5.5	8
507	Enhancing corrosion and wear performance of PEO coatings on Mg alloys using graphene and graphene oxide additions: A review. <i>FlatChem</i> , 2021, 27, 100241.	2.8	64
508	Mg ions incorporated phytic acid (PA) and zoledronic acid (ZA) of metal-organic complex coating on biodegradable magnesium for orthopedic implants application. <i>Surface and Coatings Technology</i> , 2021, 413, 127075.	2.2	12
509	Corrosion behaviour of Mg-Gd-Y-Zn-Ag alloy components with different sizes after cooling. <i>Transactions of Nonferrous Metals Society of China</i> , 2021, 31, 1291-1302.	1.7	13
510	Self-generating construction of applicable corrosion-resistant surface structure of magnesium alloy. <i>Corrosion Science</i> , 2021, 184, 109378.	3.0	20
511	Ultrasound-triggered on-demand drug delivery using hydrogel microbeads with release enhancer. <i>Materials and Design</i> , 2021, 203, 109580.	3.3	46
512	Corrosion inhibition of Schiff bases for Mg-Zn-Y-Nd alloy in normal saline: Experimental and theoretical investigations. <i>Corrosion Science</i> , 2021, 184, 109268.	3.0	42
513	Low-Cost Biobased Coatings for AM60 Magnesium Alloys for Food Contact and Harsh Environment Applications. <i>International Journal of Molecular Sciences</i> , 2021, 22, 4915.	1.8	3
514	A burnished and Al-alloyed magnesium surface with improved mechanical and corrosion properties. <i>Corrosion Science</i> , 2021, 184, 109395.	3.0	22
515	The role and significance of Magnesium in modern day research-A review. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1-61.	5.5	222
516	Alloying design strategy for biodegradable zinc alloys based on first-principles study of solid solution strengthening. <i>Materials and Design</i> , 2021, 204, 109676.	3.3	27
517	Corrosion and tribocorrosion resistance of MAO-based composite coating on AZ31 magnesium alloy. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 3406-3417.	5.5	32
518	Magnesium alloys as anodes for neutral aqueous magnesium-air batteries. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1861-1883.	5.5	66
519	Effect of Ag on cathodic activation and corrosion behaviour of Mg-Mn-Ag alloys. <i>Corrosion Science</i> , 2021, 185, 109408.	3.0	31
520	The anodically polarized Mg surface products and accelerated hydrogen evolution. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 230-248.	5.5	18
521	Tailoring adaptive bioresorbable Mg-based scaffolds with directed plasma nanosynthesis for enhanced osseointegration and tunable resorption. <i>Applied Surface Science</i> , 2021, 550, 149388.	3.1	7
522	Role of microalloyed Sm in enhancing the corrosion resistance of hot-rolled Mg-8Sn-1Al-1Zn alloy. <i>Corrosion Science</i> , 2021, 185, 109425.	3.0	19
523	Effects of current output modes on the growth kinetics and corrosion resistance of micro-arc oxidation coatings on magnesium alloy. <i>Materials Research Express</i> , 2021, 8, 066407.	0.8	6

#	ARTICLE	IF	CITATIONS
524	Characterization and Corrosion Properties of Fluoride Conversion Coating Prepared on AZ31 Magnesium Alloy. <i>Coatings</i> , 2021, 11, 675.	1.2	12
525	Recent advances and directions in the development of bioresorbable metallic cardiovascular stents: Insights from recent human and in vivo studies. <i>Acta Biomaterialia</i> , 2021, 127, 1-23.	4.1	55
526	Promising Methods for Corrosion Protection of Magnesium Alloys in the Case of Mg-Al, Mg-Mn-Ce and Mg-Zn-Zr: A Recent Progress Review. <i>Metals</i> , 2021, 11, 1133.	1.0	31
527	Research Progress on Corrosion Resistance of Magnesium Alloys with Bio-inspired Water-repellent Properties: A Review. <i>Journal of Bionic Engineering</i> , 2021, 18, 735-763.	2.7	18
528	Improving Corrosion Resistance of Magnesium Alloy in Cl- Containing Simulated Concrete Pore Solution by Ultrasound-Assisted Chemical Deposition. <i>Scanning</i> , 2021, 2021, 1-8.	0.7	13
529	Lean Wrought Magnesium Alloys. <i>Materials</i> , 2021, 14, 4282.	1.3	3
530	In Situ Preparation of Mg-Al-Co Layered Double Hydroxides on Microarc Oxidation Ceramic Coating of LA103Z Magnesium-Lithium Alloy for Enhanced Corrosion Resistance. <i>Journal of Materials Engineering and Performance</i> , 2021, 30, 8490-8499.	1.2	9
531	Corrosion behavior of AZ91 Mg alloy with a heterogeneous structure produced by ECAP. <i>Corrosion Science</i> , 2021, 187, 109517.	3.0	45
532	Thermal oxidation and its effect on the wear of Mg alloy AZ31B. <i>Wear</i> , 2021, 476, 203673.	1.5	12
533	Insight into physical interpretation of high frequency time constant in electrochemical impedance spectra of Mg. <i>Corrosion Science</i> , 2021, 187, 109501.	3.0	64
534	Effects of Indium on corrosion behavior of Mg-Al-Cu alloy. <i>Materials Characterization</i> , 2021, 177, 111157.	1.9	15
535	Impacts of artificial aging state on the creep resistance of a rolled Mg-3.5Nd alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 819, 141491.	2.6	12
536	Insights into corrosion behaviour of uncoated Mg alloys for biomedical applications in different aqueous media. <i>Journal of Materials Research and Technology</i> , 2021, 13, 1908-1922.	2.6	8
537	The composition-dependent oxidation film formation in Mg-Li-Al alloys. <i>Corrosion Science</i> , 2021, 187, 109508.	3.0	14
538	Effect of Ca Addition on Corrosion Behavior of Wrought AM60 Magnesium Alloy in Alkaline Solutions. <i>Metals</i> , 2021, 11, 1172.	1.0	6
539	Nucleation and growth behavior of coating film on Mg-Al-Zn alloy with different surface topographies via plasma electrolytic oxidation. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2185-2192.	5.5	3
540	Investigation of the Influence of Open-Die Forging Parameters on the Flow Kinetics of AZ91 Magnesium Alloy. <i>Materials</i> , 2021, 14, 4010.	1.3	4
541	Towards Mg Based Light Materials of Future: Properties, Applications, Problems, and Their Mitigation. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2022, 144, .	1.3	7

#	ARTICLE	IF	CITATIONS
542	Corrosion Behavior of Stannate Conversion Coatings on AZ31B Alloys and Their Initial Discharge Performance as Anodes for Seawater Batteries. <i>Journal of the Electrochemical Society</i> , 2021, 168, 080513.	1.3	11
543	Sodium dodecyl sulfate (SDS) as an effective corrosion inhibitor for Mg-8Li-3Al alloy in aqueous NaCl: A combined experimental and theoretical investigation. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 287-300.	5.5	12
544	Investigation on the corrosion resistance of the Mg-10Al-xMn alloys based on thermodynamic calculations. <i>Corrosion Science</i> , 2021, 189, 109631.	3.0	15
545	Investigation of anomalous hydrogen evolution from anodized magnesium using a polarization routine for scanning electrochemical microscopy. <i>Journal of Electroanalytical Chemistry</i> , 2021, 895, 115538.	1.9	4
546	Sacrificial protection of Mg-based resorbable implant alloy by magnetron sputtered Mg5Gd alloy coating: A short-term study. <i>Corrosion Science</i> , 2021, 189, 109590.	3.0	9
547	First-principles study of water decomposition and hydrogen evolution on MgZn ₂ Laves phase. <i>Computational Materials Science</i> , 2021, 196, 110532.	1.4	5
548	In vitro and in vivo degradation assessment and preventive measures of biodegradable Mg alloys for biomedical applications. <i>Journal of Biomedical Materials Research - Part A</i> , 2022, 110, 462-487.	2.1	29
549	Galvanic corrosion behavior between AZ91D magnesium alloy and copper in distilled water. <i>Corrosion Science</i> , 2021, 188, 109562.	3.0	33
550	Design and Fabrication of a Sandwichlike Zn/Cu/Alâ€“Zr Coating for Superior Anticorrosive Protection Performance of ZM5 Mg Alloy. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 41120-41130.	4.0	11
551	Designing highly ductile magnesium alloys: current status and future challenges. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2022, 47, 194-281.	6.8	33
552	Integrated corrosionâ€“resistant system for AZ31B Mg alloy via plasma electrolytic oxidation (PEO) and solâ€“gel processes. <i>International Journal of Applied Glass Science</i> , 2021, 12, 519-530.	1.0	8
553	Enhanced Corrosion Resistance and In Vitro Biocompatibility of Mg-Zn Alloys by Carbonate Apatite Coating. <i>ACS Applied Bio Materials</i> , 2021, 4, 6881-6892.	2.3	10
554	Synergistic effect of solute and strain on the electrochemical degradation in representative Zn-based and Mg-based alloys. <i>Corrosion Science</i> , 2021, 188, 109539.	3.0	4
555	Effect of the pre-homogenization on the precipitation behaviors, mechanical and corrosion properties of as-extruded Mg Y binary alloys. <i>Materials Characterization</i> , 2021, 178, 111307.	1.9	6
556	Modeling Atmospheric Corrosion under Dynamic Thin Film Electrolyte. <i>Journal of the Electrochemical Society</i> , 2021, 168, 081506.	1.3	17
557	Effect of chain length on the anticorrosion property of bis[3â€“(triethoxysilyl)propyl]tetrasulfide/trimethoxysilane dualâ€“component silane film on the AZ31B Mg alloy surface. <i>Surface and Interface Analysis</i> , 2021, 53, 1059-1068.	0.8	5
558	Improved corrosion response of squeeze-cast AZ91 magnesium alloy with calcium and bismuth additions. <i>Journal of Alloys and Compounds</i> , 2021, 873, 159600.	2.8	18
559	Exploring the corrosion behavior of Mn-implanted biomedical Mg. <i>Journal of Alloys and Compounds</i> , 2021, 873, 159739.	2.8	27

#	ARTICLE	IF	CITATIONS
560	Developing super-hydrophobic and corrosion-resistant coating on magnesium-lithium alloy via one-step hydrothermal processing. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 1422-1439.	5.5	20
561	Micro-Alloyed Mg-Al-Mn-La Anode for Mg-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090526.	1.3	7
562	The Corrosion Resistance of Al Film on AZ31 Magnesium Alloys by Magnetron Sputtering. <i>Metals</i> , 2021, 11, 1522.	1.0	6
563	Microstructure and Corrosion Resistance of Plasma Electrolytic Oxidized Recycled Mg Alloy. <i>Acta Metallurgica Sinica (English Letters)</i> , 2022, 35, 961-974.	1.5	13
564	In Vitro Investigation on Degradable Mg-Based Biomaterial under the Impact of the Serum Glycoprotein Fetuin. <i>Materials</i> , 2021, 14, 5005.	1.3	3
565	New approach to formation of coatings on Mg-Al-Mn-Ce alloy using a combination of plasma treatment and spraying of fluoropolymers. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1033-1050.	5.5	19
566	Incorporation of LDH nanocontainers into plasma electrolytic oxidation coatings on Mg alloy. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 1236-1246.	5.5	19
567	Investigations of High-Strength Mg-Al-Ca-Mn Alloys with a Broad Range of Ca+Al Contents. <i>Materials</i> , 2021, 14, 5439.	1.3	11
568	Effects of alloying elements on performance of biodegradable magnesium alloy. <i>Materials Today: Proceedings</i> , 2022, 56, 2443-2450.	0.9	15
569	On the evaluation of ALD TiO ₂ , ZrO ₂ and HfO ₂ coatings on corrosion and cytotoxicity performances. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1806-1819.	5.5	25
570	Dual-Layer Corrosion-Resistant Conversion Coatings on Mg-9Li Alloy via Hydrothermal Synthesis in Deionized Water. <i>Metals</i> , 2021, 11, 1396.	1.0	6
571	Effects of strontium-substitution in sputter deposited calcium phosphate coatings on the rate of corrosion of magnesium alloys. <i>Surface and Coatings Technology</i> , 2021, 421, 127446.	2.2	14
572	Effect of cell structure on mechanical and bio-corrosion behavior of biodegradable Mg-Zn-Ca foam. <i>Materials Today Communications</i> , 2021, 28, 102715.	0.9	4
573	Influence of indentation size on the corrosion behaviour of a phosphate conversion coated AZ80 magnesium alloy. <i>Journal of Materials Research and Technology</i> , 2021, 14, 1739-1753.	2.6	14
574	Critical review on fusion welding of magnesium alloys: metallurgical challenges and opportunities. <i>Science and Technology of Welding and Joining</i> , 2021, 26, 559-580.	1.5	9
575	Highly reliable double-layer coatings on magnesium alloy surfaces for robust superhydrophobicity, chemical durability and electrical property. <i>Ceramics International</i> , 2021, 47, 35037-35047.	2.3	20
576	Modified Microstructures and Corrosion Behaviors of Mg-Gd-Cu Alloys through Annealing Treatment. <i>Journal of the Electrochemical Society</i> , 2021, 168, 101503.	1.3	3
577	Multimodal ex vivo methods reveal that Gd-rich corrosion byproducts remain at the implant site of biodegradable Mg-Gd screws. <i>Acta Biomaterialia</i> , 2021, 136, 582-591.	4.1	8

#	ARTICLE	IF	CITATIONS
578	Evaluation of the biodegradation product layer on Mg-1Zn alloy during dynamical strain. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1820-1833.	5.5	8
579	Aqueous molybdate provides effective corrosion inhibition of WE43 magnesium alloy in sodium chloride solutions. <i>Corrosion Science</i> , 2021, 190, 109664.	3.0	54
580	Effects of MgF ₂ coating on the biodegradation and biological properties of magnesium. <i>Surface and Coatings Technology</i> , 2021, 422, 127552.	2.2	14
581	Anti-corrosive coatings of magnesium: A review. <i>Materials Today: Proceedings</i> , 2022, 48, 1842-1848.	0.9	12
582	New insights on the influence of aluminum on the anomalous hydrogen evolution of anodized magnesium using scanning electrochemical microscopy. <i>Electrochimica Acta</i> , 2021, 391, 138915.	2.6	7
583	Effect of cerium-based conversion coating on corrosion behavior of squeeze cast Mg-4wt% Y alloy in 0.1M NaCl solution. <i>Surface and Coatings Technology</i> , 2021, 421, 127451.	2.2	38
584	Regulation of corrosion damage of magnesium alloys through the use of vacuum zirconium coatings. <i>Letters on Materials</i> , 2021, 11, 357-362.	0.2	2
585	Electronic work function, surface energy and electronic properties of binary Mg-Y and Mg-Al alloys: A DFT study. <i>Surface Science</i> , 2021, 712, 121880.	0.8	18
586	Improving mechanical properties of lean Mg-Zn-Ca alloy for absorbable implants via Double Equal Channel Angular Pressing (D-ECAP). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 826, 142002.	2.6	25
587	Effect of heat treatment on microstructure and corrosion behavior of Mg-5Al-1Zn-1Sn magnesium alloy. <i>Corrosion Science</i> , 2021, 191, 109759.	3.0	39
588	Hydrogen generation by hydrolysis reaction using magnesium alloys with long period stacking ordered structure. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 35161-35171.	3.8	8
589	Clinical translation and challenges of biodegradable magnesium-based interference screws in ACL reconstruction. <i>Bioactive Materials</i> , 2021, 6, 3231-3243.	8.6	28
590	Microstructural basis for improved corrosion resistance of laser surface processed AZ31 Mg alloy. <i>Corrosion Science</i> , 2021, 191, 109707.	3.0	20
591	Deteriorated corrosion performance of micro-alloyed Mg-Zn alloy after heat treatment and mechanical processing. <i>Journal of Materials Science and Technology</i> , 2021, 92, 214-224.	5.6	11
592	Substantial improvement in cold formability of concentrated Mg-Al-Zn-Ca alloy sheets by high temperature final rolling. <i>Acta Materialia</i> , 2021, 220, 117328.	3.8	43
593	Corrosion resistance of WE43 Mg alloy in sodium chloride solution. <i>Materials Chemistry and Physics</i> , 2021, 272, 124930.	2.0	31
594	Adverse effect of 2,5PDC corrosion inhibitor on PEO coated magnesium. <i>Corrosion Science</i> , 2021, 192, 109830.	3.0	21
595	Revealing joining mechanism in refill friction stir spot welding of AZ31 magnesium alloy to galvanized DP600 steel. <i>Materials and Design</i> , 2021, 209, 109997.	3.3	26

#	ARTICLE	IF	CITATIONS
596	Dual self-healing composite coating on magnesium alloys for corrosion protection. <i>Chemical Engineering Journal</i> , 2021, 424, 130551.	6.6	64
597	Evolution of gradient structured layer on AZ91D magnesium alloy and its corrosion behaviour. <i>Journal of Alloys and Compounds</i> , 2021, 882, 160659.	2.8	18
598	Real-time in situ observation of the corrosion process of die-cast AZ91D magnesium alloy in NaCl solutions under galvanostatic polarization. <i>Corrosion Science</i> , 2021, 192, 109834.	3.0	10
599	Machine learning to predict aluminum segregation to magnesium grain boundaries. <i>Scripta Materialia</i> , 2021, 204, 114150.	2.6	18
600	Fluid-induced corrosion behavior of degradable zinc for stent application. <i>Journal of Materials Science and Technology</i> , 2021, 91, 134-147.	5.6	12
601	Application of dehumidification as anti-corrosion technology on suspension bridges: A review. <i>Applied Thermal Engineering</i> , 2021, 199, 117549.	3.0	12
602	Regulating corrosion reactions to enhance the anti-corrosion and self-healing abilities of PEO coating on magnesium. <i>Corrosion Science</i> , 2021, 192, 109840.	3.0	26
603	High-energy and durable aqueous magnesium batteries: Recent advances and perspectives. <i>Energy Storage Materials</i> , 2021, 43, 238-247.	9.5	54
604	Advances in coatings on magnesium alloys for cardiovascular stents – A review. <i>Bioactive Materials</i> , 2021, 6, 4729-4757.	8.6	93
605	Preparation of photo-crosslinked aliphatic polycarbonate coatings with predictable degradation behavior on magnesium-alloy stents by electrophoretic deposition. <i>Chemical Engineering Journal</i> , 2022, 427, 131596.	6.6	22
606	Effect of Ce content on performance of AZ31 magnesium alloy anode in air battery. <i>Journal of Alloys and Compounds</i> , 2022, 891, 161914.	2.8	16
607	Improved discharge performance of equal-channel-angular-pressed AZ61-Mg alloys as anodes for seawater-activated batteries. <i>Journal of Alloys and Compounds</i> , 2022, 890, 161809.	2.8	4
608	Self-healing performance and corrosion resistance of phytic acid/cerium composite coating on microarc-oxidized magnesium alloy. <i>Chemical Engineering Journal</i> , 2022, 428, 131198.	6.6	70
609	Rational fabrication of superhydrophobic surfaces with coalescence-induced droplet jumping behavior for atmospheric corrosion protection. <i>Chemical Engineering Journal</i> , 2022, 428, 132029.	6.6	35
610	Enhancement of discharge performance for aqueous Mg-air batteries in 2,6-dihydroxybenzoate-containing electrolyte. <i>Chemical Engineering Journal</i> , 2022, 429, 132369.	6.6	22
611	Electrochemical Surface Treatments for Mg Alloys. , 2022, , 87-112.		1
612	Magnetron sputtered magnesium-based thin film metallic glasses for bioimplants. <i>Biointerphases</i> , 2021, 16, 011005.	0.6	3
613	A review on the corrosion process in magnesium. <i>AIP Conference Proceedings</i> , 2021, , .	0.3	3

#	ARTICLE	IF	CITATIONS
615	Corrosion and chemical behavior of Mg97Zn1Y2-1wt.%SiC under different corrosion solutions. China Foundry, 2021, 18, 68-74.	0.5	2
616	In Vitro Macrophage Immunomodulation by Poly(μ -caprolactone) Based-Coated AZ31 Mg Alloy. International Journal of Molecular Sciences, 2021, 22, 909.	1.8	17
617	Biodegradable Mg-Ca-Zn alloys synthesized by powder metallurgy. AIP Conference Proceedings, 2021, , .	0.3	0
618	Alloys for Aircraft Structures. Topics in Mining, Metallurgy and Materials Engineering, 2020, , 41-127.	1.4	7
619	Statistical Analysis of Dry Sliding Wear Process Parameters for AZ91 Alloy Processed by RD-ECAP Using Response Surface Methodology. Metals and Materials International, 2021, 27, 2879-2897.	1.8	25
620	A detailed microstructural and corrosion analysis of magnesium alloy WE43 manufactured by selective laser melting. Additive Manufacturing, 2020, 35, 101321.	1.7	34
621	Effects of combined addition of Ca and Y on the corrosion behaviours of die-cast AZ91D magnesium alloy. Corrosion Science, 2020, 166, 108451.	3.0	56
622	A kinetic model explaining the enhanced rates of hydrogen evolution on anodically polarized magnesium in aqueous environments. Electrochemistry Communications, 2017, 84, 36-39.	2.3	35
623	The influence of samarium (Sm) on the discharge and electrochemical behaviors of the magnesium alloy AZ80 as an anode for the Mg-air battery. Electrochimica Acta, 2020, 348, 136315.	2.6	60
624	Partially biodegradable Ti-based composites for biomedical applications subjected to intense and cyclic loading. Journal of Alloys and Compounds, 2020, 839, 155663.	2.8	11
625	Investigation of rapidly decomposable AZ91-RE-xCu (x=0, 1, 2, 3, 4) alloys for petroleum fracturing balls. Journal of Physics and Chemistry of Solids, 2020, 144, 109499.	1.9	14
626	The quasicrystal of Mg-Zn-Y on discharge and electrochemical behaviors as the anode for Mg-air battery. Journal of Power Sources, 2020, 451, 227807.	4.0	95
627	In vitro and in vivo studies on the degradation and biosafety of Mg-Zn-Ca-Y alloy hemostatic clip with the carotid artery of SD rat model. Materials Science and Engineering C, 2020, 115, 111093.	3.8	13
628	Recent Advancements in Corrosion Protection of Magnesium Alloys by Silane-Based Sol-Gel Coatings. Industrial & Engineering Chemistry Research, 2020, 59, 19840-19857.	1.8	36
629	The marine atmospheric corrosion of pure Mg and Mg alloys in field exposure and lab simulation. Corrosion Engineering Science and Technology, 2020, 55, 609-621.	0.7	7
630	The effect of pH upon corrosion rate of aircraft component type MD 80 on fuselage part. IOP Conference Series: Materials Science and Engineering, 0, 732, 012089.	0.3	1
631	New insights on the influence of low frequency pulsed current on the characteristics of PEO coatings formed on AZ31B. Materials Research Express, 2020, 7, 016539.	0.8	6
632	Effects of zirconium addition on electrochemical and mechanical properties of Mg-3Zn-1Ca-1RE alloy. Anti-Corrosion Methods and Materials, 2020, 67, 583-591.	0.6	5

#	ARTICLE	IF	CITATIONS
633	Corrosion of Commercial Mg-Al Alloys: AZ31B, AM60, and AZ91D. Journal of the Electrochemical Society, 2020, 167, 101510.	1.3	2
634	Effect of Microstructure on the Corrosion Behavior of as-cast and Extruded Mg-Sn-Y Alloys. Journal of the Electrochemical Society, 2020, 167, 121503.	1.3	9
635	Inhibition of Mg Corrosion by Sulfur Blocking of the Hydrogen Evolution Reaction on Iron Impurities. Journal of the Electrochemical Society, 2020, 167, 121504.	1.3	17
636	Effect of TIG Welding and Rare Earth Elements Alloying on Corrosion Resistance of Magnesium Alloys. Journal of the Electrochemical Society, 2020, 167, 131504.	1.3	15
637	Effects of Texture and Discharge Products on the Discharge Performance of Mg Anodes for Mg Air Batteries. Journal of the Electrochemical Society, 2020, 167, 130528.	1.3	14
638	Performance Improvement of Underwater Mg-Oxygen Battery with Parameter Optimization. Journal of the Electrochemical Society, 2020, 167, 140548.	1.3	6
639	Scanning Electrochemical Microscopy (SECM) Study of the Electrochemical Behavior of Anodized AZ31B Magnesium Alloy in Simulated Body Fluid. Materials Research, 2019, 22, .	0.6	3
640	Corrosion resistance of AZ31 magnesium alloy treated by plasma electrolytic oxidation. Korozje A Ochrana Materialu, 2019, 63, 65-71.	0.4	4
641	AZ Serisi Mg Alaşımın Korozyon Davranışlarındaki Fazların Rolü. Düzce Üniversitesi Bilim Ve Teknoloji Dergisi, 2018, 6, 1139-1162.	0.2	4
642	Evolution of Recrystallized Grain and Texture of Cold-Drawn Pure Mg Wire and Their Effect on Mechanical Properties. Materials, 2020, 13, 427.	1.3	4
643	Hydrogen Evolution Ability of Selected Pure Metals and Galvanic Corrosion Behavior between the Metals and Magnesium. Journal of Electrochemical Science and Technology, 0, , .	0.9	3
644	Surface protection of Mg alloys in automotive applications: A review. AIMS Materials Science, 2019, 6, 567-600.	0.7	32
645	Degradation behaviour of magnesium alloy and its composite used as a biomaterial. E3S Web of Conferences, 2021, 309, 01085.	0.2	4
646	Effect of Zn content on corrosion behavior of Mg-Y-Zn alloys. Journal of Mining and Metallurgy, Section B: Metallurgy, 2022, 58, 51-61.	0.3	3
647	Microstructure and battery performance of Mg-Zn-Sn alloys as anodes for magnesium-air battery. Journal of Magnesium and Alloys, 2021, 9, 1967-1976.	5.5	49
648	Designing strategy for corrosion-resistant Mg alloys based on film-free and film-covered models. Journal of Magnesium and Alloys, 2023, 11, 3120-3129.	5.5	4
649	The influence of Ga alloying on Mg-Al-Zn alloys as anode material for Mg-air primary batteries. Electrochimica Acta, 2022, 401, 139372.	2.6	19
650	Simultaneous enhancement of mechanical properties and corrosion resistance of as-cast Mg-5Zn via microstructural modification by friction stir processing. Journal of Magnesium and Alloys, 2023, 11, 1931-1943.	5.5	13

#	ARTICLE	IF	CITATIONS
651	Effect of crystallographic texture and twinning on the corrosion behavior of Mg alloys: A review. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 313-325.	5.5	77
652	A comprehensive review on biocompatible Mg-based alloys as temporary orthopaedic implants: Current status, challenges, and future prospects. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 627-669.	5.5	96
653	A Mg alloy with no hydrogen evolution during dissolution. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 2084-2095.	5.5	13
654	Laser machined micropatterns as corrosion protection of both hydrophobic and hydrophilic magnesium. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 125, 104920.	1.5	8
655	Improving the electrochemical stability of AZ31 Mg alloy in a 3.5wt.% NaCl solution via the surface functionalization of plasma electrolytic oxidation coating. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1311-1325.	5.5	35
656	Influence of Anodization on the Fatigue and Corrosion-Fatigue Behaviors of the AZ31B Magnesium Alloy. <i>Metals</i> , 2021, 11, 1573.	1.0	8
657	Quasi-in vivo corrosion behavior of AZ31B Mg alloy with hybrid MWCNTs-PEO/PCL based coatings. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 3217-3233.	5.5	19
658	Effect of atomic layer plasma treatment on TALD-ZrO ₂ film to improve the corrosion protection of Mg-Ca alloy. <i>Surface and Coatings Technology</i> , 2021, 427, 127811.	2.2	3
659	Evolution of metastable phases during Mg metal corrosion: An <i>in situ</i> cryogenic x-ray photoelectron spectroscopy study. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021, 39, .	0.9	3
660	Nanosecond, picosecond and femtosecond laser surface treatment of magnesium alloy: role of pulse length. <i>Surface and Coatings Technology</i> , 2021, 427, 127802.	2.2	28
661	A thermodynamic assessment of the Mg-Sn-Sb ternary system. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2021, 75, 102361.	0.7	9
662	Evolution of the dicalcium phosphate-dihydrate (DCPD) coating created by large amplitude sinusoidal voltammetry (LASV) on corrosion resistance of the ZW3 magnesium alloy in chloride containing environment. <i>Koroze A Ochrana Materialu</i> , 2018, 62, 14-18.	0.4	0
663	Electrochemical Characterization of Az31 Magnesium Alloy Treated by Ultrasonic Impact Peening (Uip). <i>Communications - Scientific Letters of the University of Zilina</i> , 2018, 20, 24-29.	0.3	1
664	71/4Žç”ÿă1/2“ç””ăfžă,ăfă,ă, ăfăé†ă@è...éžÿè©•ă¾¼jă•èj”éçæ”1è3ă. <i>Denki Kagaku</i> , 2018, 86, 236-241.	0.0	0
665	Influence of the Treatment Time on the Surface Chemistry and Corrosion Behavior of Cerium-Based Conversion Coatings on the AZ91D Magnesium Alloy. <i>Materials Research</i> , 2019, 22, .	0.6	4
666	Iron Content in Relationship with Alloying Elements and Corrosion Behaviour of Mg3Al Alloys. <i>Minerals, Metals and Materials Series</i> , 2019, , 145-150.	0.3	0
667	Silicone-covered biodegradable magnesium stent for treating benign esophageal stricture in a rabbit model. <i>World Journal of Gastroenterology</i> , 2019, 25, 3207-3217.	1.4	4
668	Dendritic structure formation of magnesium alloys for the manipulation of corrosion properties: Part 2 â€“ corrosion. <i>International Journal of Materials Research</i> , 2019, 110, 703-714.	0.1	0

#	ARTICLE	IF	CITATIONS
669	Toz Metal 1/4 rjisi Y 1 ntemi 1 le 1 1 ceretilmil 1 1 Magnezyum Matrisli Kompozitlerin Korozyon Duyarl 1 1 lar 1 1 . Bitlis Eren 1 1 1 niversitesi Fen Bilimleri Dergisi, 2019, 8, 914-920.	0.1	5
670	AZ91 Mg ALA 1 1 zIMLARINDA KOROZYON DAVRANI 1 1 zil-Fe TOLERANS SINIRI ARASINDAKI 1 1 1 1 L 1 1 1 zK 1 1 N 1 1 N ARA 1 1 zTIRILMASI. Konya Journal of Engineering Sciences, 2019, 7, 654-662.	0.1	1
671	Measurement of the Degradation Rate of Anodized AZ91 Magnesium Temporary Implants Using Digital Image Processing Techniques. IFMBE Proceedings, 2020, , 290-297.	0.2	0
672	Design of the Magnesium Composite with High Corrosion Resistance and High Deformability. Minerals, Metals and Materials Series, 2020, , 231-234.	0.3	0
673	Corrosion of metallic biomaterials. , 2020, , 469-515.		4
674	The effect of surface finishing and aluminium thin film coating on corrosion behaviour of AZ31 alloy. AIP Conference Proceedings, 2020, , .	0.3	0
675	On the corrosion, stress corrosion and cytocompatibility performances of ALD TiO2 and ZrO2 coated magnesium alloys. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104945.	1.5	18
676	Potential bioactive coating system for high-performance absorbable magnesium bone implants. Bioactive Materials, 2022, 12, 42-63.	8.6	42
677	Improving the electrochemical behaviors and discharge performance of as-rolled Mg-4Li alloys through multicomponent alloying. Journal of Alloys and Compounds, 2022, 895, 162536.	2.8	11
678	Polyphenylene sulfide hydrophobic composite coating with high stability, corrosion resistance and antifouling performance. Surfaces and Interfaces, 2021, 27, 101577.	1.5	9
679	First-principles investigation of the phase stability and early stages of precipitation in Mg-Sn alloys. Physical Review Materials, 2020, 4, .	0.9	4
681	Development of Ultra Lightweight, Corrosion Resistant Mg Alloys. Minerals, Metals and Materials Series, 2020, , 43-48.	0.3	1
682	Two-Stage Settling Approach to Purify Mg Alloy. Minerals, Metals and Materials Series, 2020, , 55-59.	0.3	1
683	Anomalous Hydrogen Evolution on Magnesium. Minerals, Metals and Materials Series, 2020, , 215-216.	0.3	0
684	Advanced Immersion Testing of Model Mg-Alloys for Biomedical Applications. Minerals, Metals and Materials Series, 2020, , 235-242.	0.3	0
685	Bioresorbable composites based on hybrid phosphate-silicate coatings on Mg0.8Ca alloy. AIP Conference Proceedings, 2020, , .	0.3	0
686	Review on Magnesium Alloy Processing. Lecture Notes in Mechanical Engineering, 2020, , 421-428.	0.3	1
687	Effect of Zr Content on the Distribution Characteristic of the 14H and 18R LPSO Phases. Materials Research, 2020, 23, .	0.6	1

#	ARTICLE	IF	CITATIONS
688	Preparation and characterization of silane/Mg(OH) ₂ composite films prepared on flame-retardant Mg-4%Al-1%Ca alloy by steam and spin coatings. Keikinzoku/Journal of Japan Institute of Light Metals, 2020, 70, 91-96.	0.1	0
689	Overview of magnesium-ceramic composites: mechanical, corrosion and biological properties. Journal of Materials Research and Technology, 2021, 15, 6034-6066.	2.6	56
690	The effect of carboxylate compounds on Volta potential and corrosion inhibition of Mg containing different levels of iron. Corrosion Science, 2022, 194, 109937.	3.0	25
691	Local enhancement of hydrogen production by the hydrolysis of Mg ₁₇ Al ₁₂ with Mg model-material. Journal of Alloys and Compounds, 2022, 895, 162560.	2.8	10
692	Development of corrosion-resistant electroplating on AZ91 Mg alloy by employing air and water-stable eutectic based ionic liquid bath. Surface and Coatings Technology, 2021, 428, 127881.	2.2	13
693	Effect of polyaniline and aluminum tri-polyphosphate particles addition on the protective properties of Mg-rich epoxy coating on AZ91D magnesium alloy. International Journal of Electrochemical Science, 0, , ArticleID:211239.	0.5	0
694	Temporal Evolution of Corrosion Film Nano-Porosity and Magnesium Alloy Hydrogen Penetration in NaCl Solution. Journal of the Electrochemical Society, 2020, 167, 131513.	1.3	5
695	Beyond two-center tight binding: Models for Mg and Zr. Physical Review Materials, 2020, 4, .	0.9	0
696	Local Electrochemical Behavior of Friction Stir Welded Mg-Al-Mn Alloy Joints. Corrosion, 2021, 77, 183-191.	0.5	3
697	Multi-Method Approach to Assess the Corrosion Behavior of a Coated WE43 Mg Alloy. Corrosion, 2021, 77, 209-217.	0.5	1
698	Corrosion Behavior and Hardness of Binary Mg Alloys Produced via High-Energy Ball-Milling and Subsequent Spark Plasma Sintering. Corrosion, 2021, 77, 228-241.	0.5	4
699	Insight into the Effect of Mg(OH) ₂ Films vs. Noble Element Enrichment on the Global and Local Cathodic Activation of Corroding Mg. Corrosion, 2021, 77, 115-133.	0.5	4
700	Localized Atmospheric Corrosion of Magnesium-Aluminum Alloys Produced by Semisolid Casting: A 2D and 3D Investigation. Corrosion, 2021, 77, 242-253.	0.5	3
701	Rapid screening alloying elements for improved corrosion resistance on the Mg(0001) surface using first principles calculations. Physical Chemistry Chemical Physics, 2021, 23, 26887-26901.	1.3	9
702	Development of a BV-TDDFT model for metal corrosion in aqueous solution. Chemical Engineering Science, 2022, 248, 117267.	1.9	2
703	Study on the microstructure and corrosion behavior of Mg-4%Al-0.2%Gd-2Zn (0.2, 4 wt%) alloy. Materials and Corrosion - Werkstoffe Und Korrosion, 2022, 73, 602-612.	0.8	1
704	Microgalvanic Corrosion of Mg-Ca and Mg-Al-Ca Alloys in NaCl and Na ₂ SO ₄ Solutions. Materials, 2021, 14, 7140.	1.3	7
705	Effects of inorganic ions, organic particles, blood cells, and cyclic loading on in vitro corrosion of Mg Al alloys. Journal of Magnesium and Alloys, 2023, 11, 2429-2441.	5.5	4

#	ARTICLE	IF	CITATIONS
706	Machine Learning-Driven High-Throughput Screening of Alloy-Based Catalysts for Selective CO ₂ Hydrogenation to Methanol. ACS Applied Materials & Interfaces, 2021, 13, 56151-56163.	4.0	52
707	A concise review on corrosion inhibitors: types, mechanisms and electrochemical evaluation studies. Journal of Coatings Technology Research, 2022, 19, 241-268.	1.2	55
708	Factors affecting biocompatibility and biodegradation of magnesium based alloys. Materials Today: Proceedings, 2022, 52, 1092-1107.	0.9	6
709	Novel Mg-0.5Ca-xMn Biodegradable Alloys Intended for Orthopedic Application: An In Vitro and In Vivo Study. Materials, 2021, 14, 7262.	1.3	1
710	Achieving Ultrahigh Anodic Efficiency via Single-Phase Design of Mg-Zn Alloy Anode for Mg-Air Batteries. ACS Applied Materials & Interfaces, 2021, 13, 58737-58745.	4.0	11
711	A novel nanoporous Mg-Li material for efficient hydrogen generation. Journal of Magnesium and Alloys, 2022, 10, 3054-3063.	5.5	6
712	Effect of Area Ratio on the Galvanic Corrosion of AZX611 Magnesium Alloy/A6N01 Aluminum Alloy Joint. Materials Transactions, 2021, 62, 1764-1770.	0.4	5
713	Processing and properties of PLA/Mg filaments for 3D printing of scaffolds for biomedical applications. Rapid Prototyping Journal, 2022, 28, 884-894.	1.6	21
714	Harnessing superhydrophobic coatings for enhancing the surface corrosion resistance of magnesium alloys. Journal of Materials Chemistry B, 2021, 9, 9893-9899.	2.9	15
715	Printability, mechanical and degradation properties of Mg-(x)Zn elemental powder mixes processed by laser powder bed fusion. Additive Manufacturing Letters, 2022, 2, 100025.	0.9	4
716	Surface modification of magnesium with a novel composite coating for application in bone tissue engineering. Surface and Coatings Technology, 2022, 433, 128078.	2.2	3
717	The Potential of the Superhydrophobic State to Protect Magnesium Alloy against Corrosion. Coatings, 2022, 12, 74.	1.2	15
718	Bilayer coatings for temporary and long-term corrosion protection of magnesium AZ31 alloy. Progress in Organic Coatings, 2022, 163, 106608.	1.9	7
719	Quantifying the influence of secondary phases on corrosion in multicomponent Mg alloys using X-ray computed microtomography. Corrosion Science, 2022, 195, 110010.	3.0	14
720	Electrochemical nutrient removal from natural wastewater sources and its impact on water quality. Water Research, 2022, 210, 118001.	5.3	11
721	Low interfacial pH discloses the favorable biodegradability of several Mg alloys. Corrosion Science, 2022, 197, 110059.	3.0	9
722	Effect of Different Microstructure on Corrosion Behavior of Magnesium Alloy Sheets. International Journal of Electrochemical Science, 2020, 15, 9796-9810.	0.5	0
723	Tek eksenli sıcak presleme tekniği ile imal edilen magnezyum matrisli kompozit malzemelerin korozyon davranışlarının incelenmesi. Gazi Üni. Fen Bilimleri Enst. Dergisi, 0, , .	0.0	1

#	ARTICLE	IF	CITATIONS
724	Metallurgical, mechanical and tribological behavior of Reinforced magnesium-based composite developed Via Friction stir processing. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2022, 236, 1440-1451.	1.4	13
725	Rare Earth Based Magnesium Alloys—A Review on WE Series. Frontiers in Materials, 2022, 8, .	1.2	28
726	Black Mn-containing layered double hydroxide coated magnesium alloy for osteosarcoma therapy, bacteria killing, and bone regeneration. Bioactive Materials, 2022, 17, 394-405.	8.6	40
727	Optimizing microstructure and mechanical properties of biomedical Mg–Y–Zn–Mn alloy with LPSO phases by solution treatment plus equal-channel angular pressing. Journal of Materials Research and Technology, 2022, 16, 968-976.	2.6	9
728	The effect of deep cryogenic treatment on the wear properties of AZ91 magnesium alloy in dry and in 0.9wt% NaCl medium. Sadhana - Academy Proceedings in Engineering Sciences, 2022, 47, 1.	0.8	6
730	Effect of aging treatment on corrosion behavior of Mg-4Nd-2Gd-0.5Zr alloy. Materials Research Express, 2022, 9, 016503.	0.8	1
731	Modification of Biocorrosion and Cellular Response of Magnesium Alloy WE43 by Multiaxial Deformation. Metals, 2022, 12, 105.	1.0	1
732	A Focused Review on Engineering Application of Multi-Principal Element Alloy. Frontiers in Materials, 2022, 8, .	1.2	4
734	Role of Alloyed Sc on the Corrosion Behavior of Mg. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 741-746.	1.1	6
735	Al-Mn Intermetallics in High Pressure Die Cast AZ91 and Direct Chill Cast AZ80. Metals, 2022, 12, 266.	1.0	1
736	Development and screening of (Ca-P-Si-F)-PEO coatings for biodegradability control of Mg-Zn-Ca alloys. Journal of Magnesium and Alloys, 2022, 10, 2220-2237.	5.5	13
737	On the Corrosion Fatigue of Magnesium Alloys Aimed at Biomedical Applications: New Insights from the Influence of Testing Frequency and Surface Modification of the Alloy ZK60. Materials, 2022, 15, 567.	1.3	11
738	Biodegradable properties of AZ31-0.5Ca magnesium alloy. Materials Technology, 2022, 37, 2230-2241.	1.5	7
739	Hydroxy Benzene/Phenolic Acids and Carboxylic/Fatty Acid Conversion Coatings. , 2022, , 279-296.		1
740	Microstructure and corrosion behavior of as-homogenized and as-extruded Mg _x Li ₃ Al ₂ Zn _{0.5} Y alloys (x=4, 8, 12). Transactions of Nonferrous Metals Society of China, 2022, 32, 134-146.	1.7	6
741	An Enhanced Understanding of the Powder Bed Fusion—Laser Beam Processing of Mg-3.9wt%-Nd3wt%-Zr0.5wt% (WE43) Alloy through Thermodynamic Modeling and Experimental Characterization. Materials, 2022, 15, 417.	1.3	5
742	In Situ Atomic Force Microscopy Analysis of the Corrosion Processes at the Buried Interface of an Epoxy-like Model Organic Film and AA2024-T3 Aluminum Alloy. Advanced Engineering Materials, 0, , 2101342.	1.6	1
745	Al–Mn–Fe intermetallic formation in AZ91 magnesium alloys: Effects of impurity iron. Intermetallics, 2022, 142, 107465.	1.8	12

#	ARTICLE	IF	CITATIONS
746	TiCN nanoparticle-induced corrosion inhibition mechanisms of AZ91 alloy. <i>Corrosion Science</i> , 2022, 198, 110109.	3.0	2
750	High-throughput calculations combining machine learning to investigate the corrosion properties of binary Mg alloys. <i>Journal of Magnesium and Alloys</i> , 2022, , .	5.5	7
751	Electrochemically-driven struvite recovery: Prospect and challenges for the application of magnesium sacrificial anode. <i>Separation and Purification Technology</i> , 2022, 288, 120653.	3.9	23
752	<i>In situ</i> study on the effect of stress on corrosion behavior of AZ91 magnesium alloy. <i>Anti-Corrosion Methods and Materials</i> , 2022, 69, 204-213.	0.6	5
753	New insights on the different corrosion mechanisms of Mg alloys with solute-enriched stacking faults or long period stacking ordered phase. <i>Corrosion Science</i> , 2022, 198, 110163.	3.0	91
754	Enhanced Long-Term Corrosion Resistance of Mg Alloys by Superhydrophobic and Self-Healing Composite Coating. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
755	Enhanced Corrosion Resistance of Az31 Mg Alloy by One-Step Formation of Peo / Mg-Al Ldh Composite Coating. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
757	The Role of Silane Sol-Gel Coatings on the Corrosion Protection of Magnesium Alloys. , 0, , .		1
759	Improved Corrosion Resistance Achieved in a Friction Stir Processed Mg-5zn-0.3ca Alloy with Fragmented Precipitates. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
760	Nanoindentation and Nano-Scratching of Hydroxyapatite Coatings for Resorbable Magnesium Alloy Bone Implant Applications. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
761	Corrosion Resistance and Anti-Soiling Performance of Mao/Go/Sa Superhydrophobic Composite Coating on Mg Alloy. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
762	Corrosion of Mg Alloys with Long Period Stacking Ordered Structure. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
763	Effect of Y Content on Performance of Az31 Magnesium Alloy Anode in Air Battery. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
764	In Situ Characterization of Corrosion Processes of As-Extruded Pure Magnesium Using X-Ray Computed Microtomography. <i>Corrosion</i> , 2022, 78, 350-358.	0.5	0
765	Effect of La/Nd Ratio on the Microstructure and Corrosion Behaviors of Squeeze-Cast Mg-Al-Zn-La-Nd Alloys. <i>International Journal of Metalcasting</i> , 2023, 17, 248-262.	1.5	5
766	Biocorrosion studies of a novel Mg70Al18Zn6Ca4Y2 low entropy multicomponent alloy in different simulated body fluids. <i>Journal of Applied Electrochemistry</i> , 0, , 1.	1.5	1
767	Mechanical properties and corrosion behavior of a friction stir processed magnesium alloy composite AZ31-Ba-SiC. <i>Materialpruefung/Materials Testing</i> , 2022, 64, 314-322.	0.8	7
768	Effect of Phosphorous Ion Implantation on the Surface, Crystal Structure, Mechanical, and Electrochemical Properties of Bioresorbable Magnesium for Biomedical Applications. <i>Journal of Materials Engineering and Performance</i> , 2022, 31, 7695-7704.	1.2	5

#	ARTICLE	IF	CITATIONS
769	Fabrication of Superhydrophobic Zn-Ni Coatings on LA43M Magnesium Alloy. <i>Journal of Materials Engineering and Performance</i> , 2022, 31, 5333-5339.	1.2	8
770	Critical review of superplastic magnesium alloys with emphasis on tensile elongation behavior and deformation mechanisms. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1133-1153.	5.5	24
771	Advances in bioorganic molecules inspired degradation and surface modifications on Mg and its alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 670-688.	5.5	33
772	Silver, Copper, Magnesium and Zinc Contained Electroactive Mesoporous Bioactive S53P4 Glass-Ceramics Nanoparticle for Bone Regeneration: Bioactivity, Biocompatibility and Antibacterial Activity. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2022, 32, 2309-2321.	1.9	3
773	Corrosion Behavior of Gravity Cast and High-Pressure Die-Cast AM60 Mg Alloys with Ca and Y Addition. <i>Metals</i> , 2022, 12, 495.	1.0	0
774	Biodegradable Mg-Zn-Ca-Based Metallic Glasses. <i>Materials</i> , 2022, 15, 2172.	1.3	15
775	Recent progress of self-healing coatings for magnesium alloys protection. <i>Journal of Coatings Technology Research</i> , 2022, 19, 757-774.	1.2	13
776	Effects of Inorganic Metabolites of Sulphate-Reducing Bacteria on the Corrosion of AZ31B and AZ63B Magnesium Alloy in 3.5 wt.% NaCl Solution. <i>Materials</i> , 2022, 15, 2212.	1.3	2
777	Tailoring of Biodegradable Magnesium Alloy Surface with Schiff Base Coating via Electrostatic Spraying for Better Corrosion Resistance. <i>Metals</i> , 2022, 12, 471.	1.0	10
778	A novel composite protective coating with UV and corrosion resistance: Load floating and self-cleaning performance. <i>Ceramics International</i> , 2022, 48, 17308-17318.	2.3	10
779	Corrosion Behavior of an Mg ₂ Sn Alloy. <i>Materials</i> , 2022, 15, 2025.	1.3	6
780	Understanding the Corrosion Behavior of the AZ91D Alloy in Simulated Body Fluid through the Use of Dynamic EIS. <i>ACS Omega</i> , 2022, 7, 11929-11938.	1.6	7
781	Zinc chloride hydroxide - A recyclable diffusion source for fabrication of zinc rich coatings on magnesium alloys. <i>Journal of Cleaner Production</i> , 2022, 344, 131066.	4.6	4
782	Combining peridynamic and finite element simulations to capture the corrosion of degradable bone implants and to predict their residual strength. <i>International Journal of Mechanical Sciences</i> , 2022, 220, 107143.	3.6	28
783	Exploring the effect of sodium salt of Ethylenediaminetetraacetic acid as an electrolyte additive on electrochemical behavior of a commercially pure Mg in primary Mg-air batteries. <i>Journal of Power Sources</i> , 2022, 527, 231176.	4.0	13
784	Quantitative analysis of rare earth elements in Mg-Zn-RE(Ce, Y, Gd)-Zr alloy. <i>Materials Research Express</i> , 2022, 9, 046518.	0.8	1
785	Ag distribution and corrosion behaviour of the plasma electrolytic oxidized antibacterial Mg-Ag alloy. <i>Electrochimica Acta</i> , 2022, 411, 140089.	2.6	16
786	Corrosion resistant and high-strength dual-phase Mg-Li-Al-Zn alloy by friction stir processing. <i>Communications Materials</i> , 2022, 3, .	2.9	31

#	ARTICLE	IF	CITATIONS
787	Inhibitive effect of sodium molybdate on corrosion of AZ31 magnesium alloy in chloride solutions. <i>Electrochimica Acta</i> , 2022, 414, 140175.	2.6	27
788	Pyrazole ionic liquid corrosion inhibitor for magnesium alloy: Synthesis, performances and theoretical explore. <i>Journal of Molecular Liquids</i> , 2022, 353, 118769.	2.3	12
789	Mechanical properties and in vitro biodegradation behavior of GASAR porous Mg-Ag alloy. <i>Materials Letters</i> , 2022, 315, 131920.	1.3	5
790	On the effect of trace Si on accelerating the corrosion of Mg-Mn alloys. <i>Corrosion Science</i> , 2022, 201, 110258.	3.0	7
791	Self-assembled ferric oxyhydroxide nanosheet on PEO-coated magnesium alloy with photocatalytic/photothermal antibacterial and enhanced osteogenesis activities. <i>Chemical Engineering Journal</i> , 2022, 437, 135257.	6.6	27
792	Influence of 2,6-dihydroxybenzoic acid on the corrosion behavior and discharge performance of AZ31 Mg alloy. <i>Vacuum</i> , 2022, 200, 111031.	1.6	3
793	The detailed corrosion performance of bioresorbable Mg-0.8Ca alloy in physiological solutions. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1326-1350.	5.5	40
794	Mechanical Properties and Degradation Behaviors of Zn-xMg Alloy Fine Wires for Biomedical Applications. <i>Scanning</i> , 2021, 2021, 1-12.	0.7	3
795	Corrosion behavior of Mg-Zn-Zr-RE alloys under physiological environment – Impact on mechanical integrity and biocompatibility. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1542-1572.	5.5	20
796	Inhibition of Corrosion of Mg90 Alloy with Compositions Based on Sodium Oleate. Part I. Salts of Higher Alkenyl and Aryl Carboxylates. <i>Protection of Metals and Physical Chemistry of Surfaces</i> , 2021, 57, 1336-1343.	0.3	0
797	Corrosion resistance of pulsed laser modified AZ31 Mg alloy surfaces. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 756-768.	5.5	16
798	Effects of dynamic flow rates on degradation deposition behavior of Mg scaffold. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 2054-2060.	5.5	1
799	Corrosion protection properties of poly(4-vinyl pyridine) containing multilayer polymeric coatings on magnesium alloy AZ31. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2022, 73, 427-435.	0.8	6
800	Electrochemical behaviors and discharge performance of Mg-Sn binary alloys as anodes for Mg-air batteries. <i>Materials Research Express</i> , 2021, 8, 126531.	0.8	12
801	Tuning the near room temperature oxidation behavior of high-entropy alloy nanoparticles. <i>Nano Research</i> , 2022, 15, 3569-3574.	5.8	6
802	Understanding the effects of excimer laser treatment on corrosion behavior of biodegradable Mg-1Ca alloy in simulated body fluid. <i>Journal of Magnesium and Alloys</i> , 2021, , .	5.5	9
803	Effect of Galvanic Corrosion on the Degradability of Biomedical Magnesium. <i>Frontiers in Materials</i> , 2021, 8, .	1.2	5
804	Severe plastic deformation (SPD) of biodegradable magnesium alloys and composites: A review of developments and prospects. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 938-955.	5.5	64

#	ARTICLE	IF	CITATIONS
805	Study on Strengthening and Toughening of Mechanical Properties of Mg-Li Alloy by Adding Non-Rare-Earth Elements Al and Si. <i>Jom</i> , 2022, 74, 2554-2565.	0.9	6
806	The influence of SrCl ₂ on the corrosion behavior of magnesium. <i>International Journal of Materials Research</i> , 2022, 113, 537-545.	0.1	0
807	Hybrid Epoxy-Alkyl Sol-Gel Coatings Reinforced with SiO ₂ Nanoparticles for Corrosion Protection of Anodized AZ31B Mg Alloy. <i>Gels</i> , 2022, 8, 242.	2.1	11
808	Annealing and Coating Influence on the Mechanical Properties, Microstructure, and Corrosion Properties of Biodegradable Mg Alloy (AZ91). <i>Journal of Bio- and Tribo-Corrosion</i> , 2022, 8, 1.	1.2	7
809	Characterization and corrosion behavior of vanadium-based conversion coating on AZ31 magnesium alloy. <i>Materials Today: Proceedings</i> , 2022, 62, 611-614.	0.9	5
810	An additively manufactured magnesium-aluminium alloy withstands seawater corrosion. <i>Npj Materials Degradation</i> , 2022, 6, .	2.6	5
811	Micro Raman and XPS surface analysis to understand the electrochemical behaviour of AZ31 and AZ91 magnesium alloys as temporary implant materials.. <i>Materials Today Communications</i> , 2022, 31, 103557.	0.9	2
812	Enhanced Corrosion Resistance of hot-dip Galvanized Zinc Coating on AZ31 Magnesium Alloy with Cu Interlayer. <i>International Journal of Electrochemical Science</i> , 2022, 17, 220531.	0.5	1
813	Enhanced Corrosion and Wear Resistance of AZ91 Magnesium Alloy by Fabrication of Galvanized Zn-Al-Mg Coating in Chloride Solution. <i>International Journal of Electrochemical Science</i> , 2022, 17, 220563.	0.5	2
815	Features of Composite Layers Created Using an Aqueous Suspension of a Fluoropolymer. <i>SSRN Electronic Journal</i> , 0, , .	0.4	2
816	Microstructure and Electrochemical Properties of As-Rolled Mg-Hg-Ga Anode Materials. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
817	Novel Porous β -TCP/Mg-Zn Scaffolds with Suitable Mechanical Properties and Corrosion Resistance Designed Via Statistical Optimization and Function Modelling. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
818	Investigation on microstructure and corrosion behavior of rolled Mg-1.5Zn-xCa-xCe alloy. <i>Anti-Corrosion Methods and Materials</i> , 2022, ahead-of-print, .	0.6	1
819	Influence of pH value and Zn/Ce cations ratio on the microstructures and corrosion resistance of LDH coating on AZ31. <i>Corrosion Communications</i> , 2022, 5, 73-86.	2.7	13
820	Effect of Texture and Phase Composition on the Corrosion Properties of Magnesium Alloys. <i>Russian Metallurgy (Metally)</i> , 2022, 2022, 368-374.	0.1	0
821	Effects of Orientations, Roughnesses, and Cavities on Stress-Corrosion Coupled Damage in Magnesium. <i>Crystals</i> , 2022, 12, 635.	1.0	1
822	Effect of Plasma Electrolytic Oxidation on the Short-Term Corrosion Behaviour of AZ91 Magnesium Alloy in Aggressive Chloride Environment. <i>Coatings</i> , 2022, 12, 566.	1.2	14
823	Influence of chloride ion concentration on initial corrosion of AZ63 magnesium alloy. <i>Transactions of Nonferrous Metals Society of China</i> , 2022, 32, 1133-1143.	1.7	7

#	ARTICLE	IF	CITATIONS
824	Towards high strength cast Mg-RE based alloys: Phase diagrams and strengthening mechanisms. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1401-1427.	5.5	43
825	A review on properties of magnesium-based alloys for biomedical applications. <i>Biomedical Physics and Engineering Express</i> , 2022, 8, 042002.	0.6	7
826	Recent progress and perspectives in additive manufacturing of magnesium alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 1511-1541.	5.5	75
827	Traditional Chinese medicine extracts as novel corrosion inhibitors for AZ91 magnesium alloy in saline environment. <i>Scientific Reports</i> , 2022, 12, 7367.	1.6	3
828	Degradation of differently processed Mg-based implants leads to distinct foreign body reactions (FBRs) through dissimilar signaling pathways. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 2106-2124.	5.5	0
829	Microstructures, mechanical properties and degradability of Mg-2Gd-0.5(Cu/Ni) alloys: A comparison study. <i>Journal of Materials Science and Technology</i> , 2022, 128, 44-58.	5.6	20
830	Enhancing controlled and uniform degradation of Fe by incorporating Mg and Zn aimed for bio-degradable material applications. <i>Materials Chemistry and Physics</i> , 2022, 285, 126171.	2.0	8
831	Improved corrosion resistance on Mg-2Ca alloy with TiO ₂ nanoparticles embedded in a polycaprolactone (PCL) coating. <i>Applied Surface Science Advances</i> , 2022, 9, 100257.	2.9	4
832	Synergistic corrosion inhibition of sodium phosphate and sodium dodecyl sulphate on magnesium alloy AZ91 in 3.5Åwt% NaCl solution. <i>Materials Today Communications</i> , 2022, 31, 103568.	0.9	7
833	Anisotropy investigation of an ECAP-processed Mg-Al-Ca-Mn alloy with synergistically enhanced mechanical properties and corrosion resistance. <i>Journal of Alloys and Compounds</i> , 2022, 911, 165046.	2.8	19
834	Exploring the corrosion inhibition mechanism of 8-hydroxyquinoline for a PEO-coated magnesium alloy. <i>Corrosion Science</i> , 2022, 203, 110344.	3.0	24
835	Investigating the electrical discharge micro drilling for porous architecture in magnesium alloy. <i>International Journal of Lightweight Materials and Manufacture</i> , 2022, 5, 339-351.	1.3	4
836	Monitoring system for the tests of the Mg implants. , 2020, 2608, 70-78.		0
837	Anionic assisted incorporation of WO ₃ nanoparticles for enhanced electrochemical properties of AZ31 Mg alloy coated via plasma electrolytic oxidation. <i>Journal of Alloys and Compounds</i> , 2022, 916, 165445.	2.8	31
838	Design and fabrication of enhanced corrosion-resistant LDH-Zn-G/Ni dual-layer structural coatings on magnesium alloys. <i>Journal of Alloys and Compounds</i> , 2022, 917, 165475.	2.8	11
839	Galvanic Corrosion and Electric Field in Lithium Anode Passivation Films: Effects on Self-Discharge. <i>Journal of Physical Chemistry C</i> , 2022, 126, 8565-8580.	1.5	13
840	Studies on Microstructure, Mechanical Properties, and Corrosion Behavior, of Partially Open-Cell Magnesium Foam through Powder Metallurgy Route. <i>Journal of Materials Engineering and Performance</i> , 0, , .	1.2	1
841	Hydrothermal Sealing of Plasma Electrolytic Oxidation Coatings Developed on AZ31 Alloy. <i>Journal of Materials Engineering and Performance</i> , 2022, 31, 9768-9776.	1.2	2

#	ARTICLE	IF	CITATIONS
842	Layered materials as nanocontainers for active corrosion protection: A brief review. <i>Applied Clay Science</i> , 2022, 225, 106537.	2.6	17
843	Corrosion Resistance and Anomalous Hydrogen Evolution in Chloride Containing Solutions of Extruded Cast and Powder Metallurgical Mg-1zn Alloy. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
844	Enhanced Mechanical Behaviour and Corrosion Resistance of Az61 Magnesium Alloy Realized Through an Extrusion-Shear Process. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
845	Preparation of Superhydrophobic Li-Al-Ala Ldh/Sa Film with Enhanced Corrosion Resistance and Mechanical Stability on Az91d Mg Alloy. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
846	Corrosion properties and biocompatibility of strontium doped calcium phosphate coated magnesium prepared by electrodeposition. <i>Materials Today Communications</i> , 2022, 31, 103759.	0.9	4
847	Corrosion mechanisms of AZ31 magnesium alloy: Importance of starting pH and its evolution. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 0, , .	0.8	7
848	Enhanced corrosion resistance of AZ31 Mg alloy by one-step formation of PEO/Mg-Al LDH composite coating. <i>Corrosion Communications</i> , 2022, 6, 67-83.	2.7	24
849	Review on the phosphate-based conversion coatings of magnesium and its alloys. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2022, 29, 1435-1452.	2.4	14
850	Structure and Interactions at the Mg(0001)/Water Interface: An ab initio Study. <i>Journal of Chemical Physics</i> , 0, , .	1.2	2
851	Aging Hardening and Precipitation Characteristics of Extruded Mgâ€“9Alâ€“0.8Znâ€“0.2Mnâ€“0.3Caâ€“0.2Y Alloy. <i>Metals and Materials International</i> , 2023, 29, 381-389.	1.8	5
852	Biodegradable phytic acid conversion coatings on magnesium alloy for temporary orthopedic implant: A review. <i>Progress in Organic Coatings</i> , 2022, 169, 106920.	1.9	4
853	Processing and mechanical properties of novel biodegradable poly-lactic acid/Zn 3D printed scaffolds for application in tissue regeneration. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 132, 105290.	1.5	13
854	Reduction of Experimental Error by Surface Treatment in the Measurement of Polarization Curves of Magnesium Alloys. <i>Materials Transactions</i> , 2022, , .	0.4	0
855	Smart composite antibacterial coatings with active corrosion protection of magnesium alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 3589-3611.	5.5	52
856	Influence of Sc on the microstructure, degradation behavior, biocompatibility in vitro and mechanical property of Mg-2Zn-0.2Zr alloy. <i>Materials and Design</i> , 2022, 221, 110863.	3.3	10
857	Microstructure, Mechanical and Ignition Characteristics of Si3N4 Reinforced Magnesium Matrix Nanocomposites. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 6138.	1.3	11
858	Impedance Analysis of Electrochemical Systems. <i>Chemical Reviews</i> , 2022, 122, 11131-11168.	23.0	161
859	A novel Mg-Gd-Y-Zn-Cu-Ni alloy with excellent combination of strength and dissolution via peak-aging treatment. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 720-734.	5.5	14

#	ARTICLE	IF	CITATIONS
860	Mitigating the detrimental effects of galvanic corrosion by nanoscale composite architecture design. <i>Npj Materials Degradation</i> , 2022, 6, .	2.6	4
861	Stress-corrosion coupled damage localization induced by secondary phases in bio-degradable Mg alloys: phase-field modeling. <i>Journal of Magnesium and Alloys</i> , 2024, 12, 361-383.	5.5	1
862	Preparation of a novel robustness mineralized layer on surface of AZ80-0.38Nd (wt. %) alloy and investigation of its properties. <i>Applied Surface Science</i> , 2022, 600, 153970.	3.1	4
863	Effect of saline environment on the fatigue crack growth resistance of WE43 Mg alloy. <i>Materials Today Communications</i> , 2022, 31, 103788.	0.9	1
864	Influence of boron carbide content on dry sliding wear performances of AZ91D magnesium alloy. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2023, 237, 746-756.	1.0	2
865	Enhanced long-term corrosion resistance of Mg alloys by superhydrophobic and self-healing composite coating. <i>Chemical Engineering Journal</i> , 2022, 449, 137778.	6.6	32
866	Advanced prediction of organicâ€metal interactions through DFT study and electrochemical displacement approach. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 301-316.	5.5	6
867	Effect of Corrosive Medium and Surface Defect-Energy on Corrosion Behavior of Rolled ZK61M Alloy. <i>Materials</i> , 2022, 15, 4091.	1.3	2
868	A mathematical model describing the surface evolution of Mg anode during discharge of aqueous Mg-air battery. <i>Journal of Power Sources</i> , 2022, 542, 231745.	4.0	6
869	Advanced protective layer design on the surface of Mg-based metal and application in batteries: Challenges and progress. <i>Journal of Power Sources</i> , 2022, 542, 231755.	4.0	20
870	Nanoindentation and nano-scratching of hydroxyapatite coatings for resorbable magnesium alloy bone implant applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 133, 105306.	1.5	12
871	Experimental and theoretical approach of the hydrolysis of pelleted magnesium alloys scraps. <i>Journal of Alloys and Compounds</i> , 2022, 919, 165784.	2.8	7
872	Microstructure and discharge performance of Mg-La alloys as the anodes for primary magnesium-air batteries. <i>Journal of Alloys and Compounds</i> , 2022, 918, 165803.	2.8	19
873	Designing Methodology Yields Cu-Containing Mg Alloys with Good Mechanical Properties and Corrosion Resistance. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
874	Designing Methodology Yields Cu-Containing Mg Alloys with Good Mechanical Properties and Corrosion Resistance. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
875	Corrosion Behaviour of Aluminium Film Protected Az31 Magnesium Alloy. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
876	Synergistic Effect of Ionic Liquid (II) Cation and Anion Inhibits Negative Difference Effect on Mg in Water - II Mixtures. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
877	Insights on Spark Plasma Sintering of Magnesium Composites: A Review. <i>Nanomaterials</i> , 2022, 12, 2178.	1.9	10

#	ARTICLE	IF	CITATIONS
878	Improving the Surface Friction and Corrosion Resistance of Magnesium Alloy AZ31 by Ion Implantation and Ultrasonic Rolling. <i>Coatings</i> , 2022, 12, 899.	1.2	6
879	Cross-Disciplinary Application for Qualitative Magnesium Corrosion Assays. <i>Bioinorganic Chemistry and Applications</i> , 2022, 2022, 1-10.	1.8	0
880	Microstructure and corrosion behaviors of as-rolled Mg-Zn-Er alloy sheets. <i>Transactions of Nonferrous Metals Society of China</i> , 2022, 32, 1881-1895.	1.7	1
881	Dissimilar Joining of Al/Mg Light Metals by Centrifugal Compound Casting Process. <i>International Journal of Metalcasting</i> , 2023, 17, 998-1007.	1.5	7
882	Brittle and ductile characteristics of intermetallic compounds in magnesium alloys: A large-scale screening guided by machine learning. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 392-404.	5.5	4
883	A novel electrolytic process using a Cu cathode for the production of Mg metal from MgO. <i>Journal of Applied Electrochemistry</i> , 2022, 52, 1535-1549.	1.5	6
884	The Flow-Induced Degradation and Vascular Cellular Response Study of Magnesium-Based Materials. <i>Frontiers in Bioengineering and Biotechnology</i> , 0, 10, .	2.0	0
885	The Role of the Sol-Gel Synthesis Process in the Biomedical Field and Its Use to Enhance the Performance of Bioabsorbable Magnesium Implants. <i>Gels</i> , 2022, 8, 426.	2.1	7
886	Microstructural Origins of the Corrosion Resistance of a Mg-Y-Nd-Zr Alloy Processed by Powder Bed Fusion " Laser Beam. <i>Frontiers in Bioengineering and Biotechnology</i> , 0, 10, .	2.0	1
887	A new look on the corrosion mechanism of magnesium: An EIS investigation at different pH. <i>Corrosion Science</i> , 2022, 205, 110463.	3.0	22
888	Enhanced corrosion resistance of magnesium-neodymium alloy in simulated concrete pore solution by pre-designed corrosion product. <i>Materials Today Communications</i> , 2022, 32, 104027.	0.9	2
889	Novel Mg-Ca-La alloys for guided bone regeneration: Mechanical performance, stress corrosion behavior and biocompatibility. <i>Materials Today Communications</i> , 2022, 32, 103949.	0.9	4
890	A method of removal of nickel impurity from electrolytic magnesium. <i>Vacuum</i> , 2022, 203, 111310.	1.6	3
891	Enhanced super-hydrophobicity and corrosion resistance of the one-step hydrothermal synthesized coating on the Mg-9Li alloy: Role of the solid-solution treated substrate. <i>Journal of Alloys and Compounds</i> , 2022, 921, 166044.	2.8	16
892	Microstructure and electrochemical properties of as-rolled Mg-Hg-Ga anode materials. <i>Journal of Alloys and Compounds</i> , 2022, 922, 166084.	2.8	2
893	Tribological Characterization of Ball Burnished Magnesium Alloy by Wear-Burnishing Maps, Wear Maps and Artificial Intelligence Technique. <i>Arabian Journal for Science and Engineering</i> , 2023, 48, 3111-3131.	1.7	3
894	Effect of residual tensile stress and crystallographic structure on corrosion behavior of AZ31 Mg alloy rolled sheets. <i>Materials Today Communications</i> , 2022, 32, 104065.	0.9	1
895	Cerium conversion coating and sol-gel coating for corrosion protection of the WE43 Mg alloy. <i>Corrosion Science</i> , 2022, 206, 110527.	3.0	24

#	ARTICLE	IF	CITATIONS
896	Corrosion behaviors of hot-extruded Mg96Y2Zn2 alloy in transverse and longitudinal directions: Guidance for parameters selection. Journal of Alloys and Compounds, 2022, 923, 166405.	2.8	4
897	Corrosion in additively manufactured cold spray metallic deposits. , 2022, , 289-331.		0
898	Influence of Sodium 5-Sulfosalicylate as a Corrosion Inhibitor in NaCl Electrolyte on Enhanced Performances of Mg-Air Batteries. SSRN Electronic Journal, 0, , .	0.4	0
899	Chemical, Electrochemical, and Surface Morphological Studies of the Corrosion Behavior of the AZ31 Alloy in Simulated Body Fluid: Effect of NaOH and H ₂ O ₂ Surface Pretreatments on the Corrosion Resistance Property. ACS Omega, 2022, 7, 26687-26700.	1.6	2
900	The Effect of Mn on the Mechanical Properties and In Vitro Behavior of Biodegradable Zn-2%Fe Alloy. Metals, 2022, 12, 1291.	1.0	5
901	Utilizing biodegradable alloys as guided bone regeneration (GBR) membrane: Feasibility and challenges. Science China Materials, 2022, 65, 2627-2646.	3.5	12
902	In-situ AFM and quasi-in-situ studies for localized corrosion in Mg-9Al-1Fe-(Gd) alloys under 3.5Åwt.% NaCl environment. Journal of Magnesium and Alloys, 2022, , .	5.5	3
903	Microstructure and Corrosion Resistance of LaNi ₅ -xMg _x Alloys. Micromachines, 2022, 13, 1192.	1.4	1
904	Discharge Behavior and Mechanism of Solid-Solution-Treated Alloy Anodes for Magnesium-Air Batteries. ACS Applied Energy Materials, 2022, 5, 9657-9667.	2.5	7
905	Preparation of superhydrophobic Li-Al-Ala LDH/SA film with enhanced corrosion resistance and mechanical stability on AZ91D Mg alloy. Journal of Materials Science, 2022, 57, 14780-14798.	1.7	6
906	Sustainable aqueous metal-air batteries: An insight into electrolyte system. Energy Storage Materials, 2022, 52, 573-597.	9.5	43
907	Corrosion Behavior of Mg-Zn-RE Alloys (RE= Gd, Y, Nd). Journal of Materials Engineering and Performance, 2023, 32, 2840-2852.	1.2	3
908	THE PREPARATION AND CHARACTERIZATION OF A CERIUM-BASED RARE EARTH CONVERSION COATING ON MAGNESIUM ALLOY AZ91D AND ITS DEGRADATION IN 3.5% NaCl SOLUTION. Surface Review and Letters, 0, , .	0.5	1
909	Aluminum Electroplating on AZ31 Magnesium Alloy with Acetic Anhydride Pretreatment. Acta Metallurgica Sinica (English Letters), 2022, 35, 1996-2006.	1.5	4
910	Corrosion Characteristics of AZ31-B4C Composites. Transactions of the Indian Institute of Metals, 0, , .	0.7	1
911	The Initial Corrosion Behavior of AZ31B Magnesium Alloy in Chloride and Sulfate Solutions. Journal of the Electrochemical Society, 2022, 169, 081504.	1.3	2
912	Early biomimetic degradation of Mg-2Ca alloy reveals the impact of β -phases at the interface of this biomaterial on a micro-scale level. Corrosion Science, 2022, 207, 110526.	3.0	6
913	First-principles prediction of electrochemical polarization and mechanical behavior in Mg based intermetallics. Computational Materials Science, 2022, 214, 111667.	1.4	5

#	ARTICLE	IF	CITATIONS
914	Structuring of Surface Films Formed on Magnesium in Hot Chlorobenzotriazole Vapors. <i>Materials</i> , 2022, 15, 6625.	1.3	2
915	Tailoring the microstructure and enhancing the corrosion resistance of extruded dilute Mg-0.6Al-0.5Mn-0.25Ca alloy by adding trace Ce. <i>Corrosion Science</i> , 2022, 207, 110605.	3.0	16
916	Effect of friction stir processing on the corrosion behavior of an Mg-Zn-Ca composite containing 1.0Åwt% MgO. <i>Materials Characterization</i> , 2022, 192, 112249.	1.9	7
917	Incorporation of magnesium phosphate into magnesium oxide on Mg Ag alloy through plasma electrolytic oxidation. <i>Surface and Coatings Technology</i> , 2022, 447, 128822.	2.2	4
918	Pitting resistance of reduced graphene oxide-layered double hydroxide reinforced aluminum composite coating deposited by cold spraying. <i>Surface and Coatings Technology</i> , 2022, 448, 128878.	2.2	1
919	Preparation of anticorrosion, biocompatible and antibacterial dicalcium phosphate dihydrate/polycaprolactone-titania composite coating on Mg alloy. <i>Progress in Organic Coatings</i> , 2022, 172, 107133.	1.9	5
920	Corrosion failure process of organic conductive coating on Mg-RE alloy with PEO in the simulated Xisha atmospheric solution. <i>Materials Chemistry and Physics</i> , 2022, 291, 126771.	2.0	6
921	In-vitro corrosion behaviors of extruded Mgâ€“Ca alloys in alpha minimum essential medium. <i>Corrosion Science</i> , 2022, 208, 110621.	3.0	4
922	Improved corrosion resistance achieved in a friction stir processed Mg-5Zn-0.3Ca alloy with fragmented precipitates. <i>Corrosion Science</i> , 2022, 208, 110675.	3.0	11
923	Insight into synergistic corrosion inhibition of 3-amino-1,2,4-triazole-5-thiol (ATT) and NaF on magnesium alloy: Experimental and theoretical approaches. <i>Corrosion Science</i> , 2022, 208, 110618.	3.0	8
924	Corrosion resistance and anomalous hydrogen evolution in chloride containing solutions of extruded cast and powder metallurgical Mg-1Zn alloy. <i>Corrosion Science</i> , 2022, 208, 110635.	3.0	4
925	Electrochemical studies on ammonium magnesium carbonate tetrahydrate/calcium carbonate composite coating on AZ91D magnesium alloy. <i>Materials Chemistry and Physics</i> , 2022, 292, 126787.	2.0	2
926	Combination of severe plastic deformation and heat treatment for enhancing the corrosion resistance of a new Magnesium alloy. <i>Journal of Alloys and Compounds</i> , 2022, 927, 166939.	2.8	13
927	Improving the Mechanical and Corrosion Properties of Pure Magnesium by Parts-Per-Million-Level Alloying. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
928	Effect of Cu on M Icrostructure and C Orrosion B Ehavior of Mg-10zn-5al-0.1sb a Lloy. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
929	Electrochemical Corrosion Behavior of 6061 Aluminum Alloy at High Rotating Speed Submerged Friction Stir Processing. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
930	Anodic Role of Mg12nd in the Micro-Galvanic Corrosion of Binary Mgâ€“Nd Alloys. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
931	Design of single-phased magnesium alloys with typically high solubility rare earth elements for biomedical applications: Concept and proof. <i>Bioactive Materials</i> , 2023, 22, 180-200.	8.6	3

#	ARTICLE	IF	CITATIONS
932	Applications of Biodegradable Magnesium-Based Materials in Reconstructive Oral and Maxillofacial Surgery: A Review. <i>Molecules</i> , 2022, 27, 5529.	1.7	14
933	Effect of yttrium and calcium additions on electrochemical behaviors and discharge performance of AZ80 anodes for Mg-air battery. <i>Transactions of Nonferrous Metals Society of China</i> , 2022, 32, 2510-2526.	1.7	9
934	In Vitro Degradation Behavior, Mechanical Properties, and Cytocompatibility of Biodegradable Mg-1Zn-xSn Alloys. <i>Crystals</i> , 2022, 12, 1219.	1.0	3
935	A review on recent advancements in biodegradable Mg-Ca alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2094-2117.	5.5	26
936	Surface modification of magnesium alloys using thermal and solid-state cold spray processes: Challenges and latest progresses. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2025-2061.	5.5	37
937	Mg Corrosion—Recent Progress. <i>Corrosion and Materials Degradation</i> , 2022, 3, 566-597.	1.0	12
938	A review of effective strides in amelioration of the biocompatibility of PEO coatings on Mg alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2354-2383.	5.5	41
939	Electrochemical response of MgO/Co ₃ O ₄ oxide layers produced by plasma electrolytic oxidation and post treatment using cobalt nitrate. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 1057-1073.	5.5	18
940	Molecular dynamics study of structure and reactions at the hydroxylated Mg(0001)/bulk water interface. <i>Journal of Chemical Physics</i> , 2022, 157, .	1.2	1
941	Investigation of the Effect of La and Ti Addition to Mg-4Sn-2Al Alloy on Microstructure, Mechanical and Corrosion Properties. <i>International Journal of Metalcasting</i> , 0, , .	1.5	1
942	Effect of Varying Ce Content on the Mechanical Properties and Corrosion Resistance of Low-Elastic-Modulus Mg-Zn-Ce Amorphous Alloys. <i>Metals</i> , 2022, 12, 1637.	1.0	0
943	Characterization of Prepared Superhydrophobic Surfaces on AZ31 and AZ91 Alloys Etched with ZnCl ₂ and SnCl ₂ . <i>Coatings</i> , 2022, 12, 1414.	1.2	9
944	Influence of ammonium sulfate on the corrosion behavior of AZ31 magnesium alloy in chloride environment. <i>Journal of Magnesium and Alloys</i> , 2022, , .	5.5	4
945	Corrosion Inhibition Effects of Corrosion Products on High-purity Mg and AZ91D under Thin Electrolyte Layers. <i>Journal of the Electrochemical Society</i> , 2022, 169, 091502.	1.3	3
946	A new anodic properties evaluation indicator for the magnesium-based anodes of magnesium-air batteries: The apparent valence. <i>International Journal of Energy Research</i> , 2022, 46, 24645-24653.	2.2	4
947	Remarkably slow corrosion rate of high-purity Mg microalloyed with 0.05wt% Sc. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 991-997.	5.5	4
948	Improving corrosion resistance of high strength Mg-Zn-Y alloy through Ca addition. <i>Corrosion Engineering Science and Technology</i> , 2022, 57, 789-795.	0.7	2
949	Towards development of a high-strength stainless Mg alloy with Al-assisted growth of passive film. <i>Nature Communications</i> , 2022, 13, .	5.8	42

#	ARTICLE	IF	CITATIONS
950	Synergistic effect of ionic liquid (IL) cation and anion inhibits negative difference effect on Mg in water - IL mixtures. <i>Corrosion Science</i> , 2022, 209, 110723.	3.0	1
951	Aggregation multiplicative rule for ranking of Mg-Al-Sn anodic alloys for metal-air batteries. <i>Materials Today: Proceedings</i> , 2023, 72, 2300-2305.	0.9	2
952	Influence of layer thickness on formation quality, microstructure, mechanical properties, and corrosion resistance of WE43 magnesium alloy fabricated by laser powder bed fusion. <i>Journal of Magnesium and Alloys</i> , 2022, , .	5.5	2
953	Microstructure and corrosion behavior of PEO-LDHs-SDS superhydrophobic composite film on magnesium alloy. <i>Corrosion Science</i> , 2022, 208, 110699.	3.0	21
954	Closed die forging of a Mg-Al-Ca-Mn-Zn lean alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 857, 144079.	2.6	5
955	Improving the mechanical and corrosion properties of pure magnesium by parts-per-million-level alloying. <i>Acta Materialia</i> , 2022, 241, 118393.	3.8	18
956	Challenges in the use of Fe-based materials for bone scaffolds applications: Perspective from in vivo biocorrosion. <i>Materials Today Communications</i> , 2022, 33, 104564.	0.9	6
957	Comparative Investigation of the Corrosion Behavior and Biocompatibility of the Different Chemical Conversion Coatings on the Magnesium Alloy Surfaces. <i>Metals</i> , 2022, 12, 1644.	1.0	8
958	The Role of Microparticles of β -TCP and Wollastonite in the Creation of Biocoatings on Mg0.8Ca Alloy. <i>Metals</i> , 2022, 12, 1647.	1.0	2
959	Simulating microgalvanic corrosion in alloys using the PRISMS phase-field framework. <i>MRS Communications</i> , 2022, 12, 1050-1059.	0.8	2
960	Electrochemical investigation of the anodic hydrogen evolution on MgZn ₂ , Mg ₂ Si, and Al ₄ Cu ₂ Mg ₈ Si ₇ intermetallic phases. <i>Journal of Solid State Electrochemistry</i> , 2023, 27, 111-123.	1.2	4
961	Investigating local corrosion processes of magnesium alloys with scanning probe electrochemical techniques: A review. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2997-3030.	5.5	13
962	Potential dependence of OER/EOP performance on heteroatom-doped carbon materials by grand canonical density functional theory. <i>Journal of Chemical Physics</i> , 2022, 157, .	1.2	4
963	Preparation of chitosan/phosphate composite coating on Mg alloy (AZ31B) via one-step chemical conversion method. , 2023, 2, 39-48.		1
964	Role of Solvent Used in Development of Graphene Oxide Coating on AZ31B Magnesium Alloy: Corrosion Behavior and Biocompatibility Analysis. <i>Nanomaterials</i> , 2022, 12, 3745.	1.9	10
965	Unraveling the role of micro-arc oxidation process factors on the corrosion resistance of magnesium alloy microtubes. <i>Materials Today: Proceedings</i> , 2023, 72, 2450-2455.	0.9	2
966	Corrosion behavior of severely plastically deformed Mg and Mg alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2607-2648.	5.5	45
967	A REVIEW ON UNDERSTANDING OF CORROSION AND PROTECTION STRATEGIES OF MAGNESIUM AND ITS ALLOYS. <i>Surface Review and Letters</i> , 2022, 29, .	0.5	2

#	ARTICLE	IF	CITATIONS
968	In vitro characterization of anodized magnesium alloy as a potential biodegradable material for biomedical applications. <i>Electrochimica Acta</i> , 2023, 437, 141463.	2.6	7
969	Laser Arc Hybrid Cladding of Al-Mg Alloy Coating on AZ80 Mg Alloy: Effect of Laser Beam Oscillations Amplitude. <i>Materials</i> , 2022, 15, 7272.	1.3	3
970	The Influence of Plasma Treatment on the Corrosion and Biocompatibility of Magnesium. <i>Materials</i> , 2022, 15, 7405.	1.3	2
971	Microstructure and Properties of Micro-Alloyed Mg-2.0Nd-0.2Sr by Heat Treatment and Extrusion. <i>Acta Metallurgica Sinica (English Letters)</i> , 0, , .	1.5	1
972	In-situ observation on filiform corrosion propagation and its dependence on Zr distribution in Mg alloy WE43. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 4282-4300.	5.5	5
973	Electrochemical corrosion resistance of hydrophobic coatings on ZE41A magnesium alloy synthesized by hydrothermal method. <i>Journal of Physics: Conference Series</i> , 2022, 2355, 012066.	0.3	0
974	Tuning Corrosion Properties of the Bio-Inspired AZ-Series Mg Alloys Using Electrochemical Surface Treatment under Varying Experimental Regimes. <i>Coatings</i> , 2022, 12, 1617.	1.2	3
975	A review on magnesium alloys for application of degradable fracturing tools. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2649-2672.	5.5	26
976	Exploring the contribution of oxygen reduction reaction to Mg corrosion by modeling assisted local analysis. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 100-109.	5.5	15
977	First-principle study of the basal-plane stacking fault energies of ternary Mg alloys. <i>Journal of Materials Science</i> , 2022, 57, 18417-18436.	1.7	5
978	Features of Composite Layers Created Using an Aqueous Suspension of a Fluoropolymer. <i>Polymers</i> , 2022, 14, 4667.	2.0	13
979	Influence of sodium 5-sulfosalicylate as a corrosion inhibitor in NaCl electrolyte on enhanced performances of Mg-air batteries. <i>Electrochimica Acta</i> , 2022, 435, 141360.	2.6	0
980	Tailoring biodegradation rate of AZ31 magnesium alloy. <i>Electrochimica Acta</i> , 2022, 435, 141403.	2.6	3
981	Inhibition of Mg corrosion in physiological fluids by carbonate coating. <i>Corrosion Science</i> , 2022, 209, 110775.	3.0	9
982	A novel sol-gel coating via catechol/lysine polymerization for long-lasting corrosion protection of Mg alloy AZ31. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2023, 656, 130361.	2.3	16
983	Structure, cytocompatibility and biodegradation of nanocrystalline coated Mg-Ca-Zn alloys. <i>Vacuum</i> , 2023, 207, 111630.	1.6	9
984	Bio-inspired self-healing MXene/polyurethane coating with superior active/passive anticorrosion performance for Mg alloy. <i>Chemical Engineering Journal</i> , 2023, 454, 140187.	6.6	14
985	Investigating the Synergic Effects of WS ₂ and ECAP on Degradation Behavior of AZ91 Magnesium Alloy. <i>Coatings</i> , 2022, 12, 1710.	1.2	12

#	ARTICLE	IF	CITATIONS
986	Observation of morphology and compositional changes of magnesium alloy using liquid cell TEM. <i>Journal of Materials Research and Technology</i> , 2022, 21, 4548-4557.	2.6	3
987	Research on Dynamic Marine Atmospheric Corrosion Behavior of AZ31 Magnesium Alloy. <i>Metals</i> , 2022, 12, 1886.	1.0	5
988	In silico studies of magnesium-based implants: A review of the current stage and challenges. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 2968-2996.	5.5	6
989	A Study of Early-Stage Corrosion Behavior of AZ91 Alloy and MAO-Coated Alloy in 3.5% NaCl Solutions. <i>Materials</i> , 2022, 15, 7909.	1.3	0
990	Finite element analysis of pitting pit on residual strength of magnesium alloy welded joint. <i>AIP Advances</i> , 2022, 12, 115313.	0.6	0
991	Interaction of elements in dilute Mg alloys: a DFT and machine learning study. <i>Journal of Materials Research and Technology</i> , 2022, 21, 4512-4525.	2.6	10
992	Effect of alloying elements on the dissolution behavior of iron in magnesium melt. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2022, 79, 102503.	0.7	2
993	Oxygen-sensitive nanoparticles reveal the spatiotemporal dynamics of oxygen reduction during magnesium implant biodegradation. <i>Npj Materials Degradation</i> , 2022, 6, .	2.6	2
994	Insight into synergetic effects of serum albumin and glucose on the biodegradation behavior of WE43 alloy in simulated body fluid. <i>Biomedical Materials (Bristol)</i> , 2023, 18, 015011.	1.7	4
995	Magnesium-Based Nanocomposites: An Overview of Applications and Challenges. <i>Powder Metallurgy and Metal Ceramics</i> , 2022, 61, 205-220.	0.4	2
996	First-principles modeling of the anodic and cathodic polarization to predict the corrosion behavior of Mg and its alloys. <i>Acta Materialia</i> , 2023, 244, 118562.	3.8	5
997	Role of alloyed Al on the microstructure and corrosion behavior of as-cast dilute Mg-2Zn-xAl-0.5Ca alloys. <i>Corrosion Science</i> , 2023, 211, 110861.	3.0	5
998	The effect of the secondary phases on the corrosion of AZ31B and WE43-T5 Mg alloys. <i>Corrosion Science</i> , 2023, 211, 110920.	3.0	9
999	Hydrogen generation performances and electrochemical properties of Mg alloys with 14Å long period stacking ordered structure. <i>Journal of Alloys and Compounds</i> , 2023, 937, 168154.	2.8	2
1000	Effect of CO ₂ on the microstructure and corrosion mechanism of Mg-Nd-Zn-Ca plasma electrolytic oxidation coatings. <i>Materials Today Communications</i> , 2023, 34, 105081.	0.9	0
1001	Chromate-Free Corrosion Protection Strategies for Magnesium Alloys—A Review: Part II—PEO and Anodizing. <i>Materials</i> , 2022, 15, 8515.	1.3	14
1002	Photoluminescent and Photocatalytic Properties of Eu ³⁺ -Doped MgAl Oxide Coatings Formed by Plasma Electrolytic Oxidation of AZ31 Magnesium Alloy. <i>Coatings</i> , 2022, 12, 1830.	1.2	8
1003	Effect of Pre-Heat Treatment on Microstructure and Properties of As-Extruded AZ91-CaO Alloy. <i>Metals</i> , 2022, 12, 2060.	1.0	2

#	ARTICLE	IF	CITATIONS
1004	Self-assembly of coumarin molecules on plasma electrolyzed layer for optimizing the electrochemical performance of AZ31 Mg alloy. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 1618-1628.	5.5	14
1005	AM60-AlN Nanocomposite and AM60 Alloy Corrosion Activity in Simulated Marine-Coastal Ambience. <i>Metals</i> , 2022, 12, 1997.	1.0	1
1006	Insights on Anti-corrosion Coating of Magnesium Alloy: A Review. <i>Journal of Bio- and Tribo-Corrosion</i> , 2023, 9, .	1.2	3
1007	Chromate-Free Corrosion Protection Strategies for Magnesium Alloys—A Review: Part III—Corrosion Inhibitors and Combining Them with Other Protection Strategies. <i>Materials</i> , 2022, 15, 8489.	1.3	9
1008	Comparative study of corrosion behaviors of die cast LA42 and AZ91 alloys. <i>Journal of Magnesium and Alloys</i> , 2022, , .	5.5	2
1009	Roles of β phase on AZ91D Magnesium Alloy Pit Corrosion: In Situ Study by Electrochemical Noise Analysis and Scanning Electrochemical Microscopy. <i>International Journal of Electrochemical Science</i> , 2022, 17, 221243.	0.5	0
1011	Effect of air-formed film on corrosion behavior of magnesium-lithium alloys. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 4325-4337.	5.5	3
1012	Fabrication of a model specimen for understanding micro-galvanic corrosion at the boundary of β -Mg and β -Mg17Al12. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 137-153.	5.5	3
1013	Additive Manufactured Magnesium-Based Scaffolds for Tissue Engineering. <i>Materials</i> , 2022, 15, 8693.	1.3	15
1014	Atmospheric Corrosion Resistance of a Diecast Mg-Al-Ca-Si Magnesium Alloy with Continuous Intermetallic Phases. <i>Journal of Materials Engineering and Performance</i> , 2023, 32, 2813-2823.	1.2	1
1015	Research on the degradation behaviors of biomedical Mg-2 wt.% Zn alloy under a biliary environment in vitro and in vivo. <i>Journal of Magnesium and Alloys</i> , 2022, , .	5.5	3
1016	Overcoming challenges in using magnesium-based materials for industrial applications using friction-stir engineering. <i>Materials Science and Technology</i> , 2023, 39, 1039-1049.	0.8	2
1017	Non-Wetting and Non-Reactive Behavior of Liquid Pure Magnesium on Pure Tungsten Substrates. <i>Materials</i> , 2022, 15, 9024.	1.3	4
1018	Review of bioresorbable AZ91, AZ31 and Mg–Zn–Ca implants and their manufacturing methods. <i>Materials Science and Technology</i> , 2023, 39, 901-925.	0.8	5
1019	Recent Advances in the Development of Magnesium-Based Alloy Guided Bone Regeneration (GBR) Membrane. <i>Metals</i> , 2022, 12, 2074.	1.0	4
1020	Self-healing and superhydrophobic dual-function composite coating for active protection of magnesium alloys. <i>Surface and Coatings Technology</i> , 2023, 454, 129146.	2.2	5
1021	Formation of carbon and oxygen rich surface layer on high purity magnesium by atmospheric carbon dioxide plasma. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 88-99.	5.5	2
1022	Development of smart self-healing coating for the corrosion protection of magnesium alloys: a brief review. <i>Journal of Adhesion Science and Technology</i> , 2023, 37, 2537-2555.	1.4	1

#	ARTICLE	IF	CITATIONS
1023	Tailored Surfaces on Biomedical Magnesium Alloys via Novel Beam and Friction Based Manufacturing Processes: A Review. , 0, , .		0
1024	Mechanical strength and corrosion resistance of Al-additive friction stir welded AZ31B joints. Journal of Magnesium and Alloys, 2023, 11, 1519-1535.	5.5	4
1025	Modeling of Galvanic Corrosion in three-metal Systems Consisting of ZM5 Magnesium Alloy, 6XXX Series Aluminium Alloy and 304 Stainless Steel under Thin Electrolyte Layer by Numerical Simulation, Electrochemical and Salt Spray Test. International Journal of Electrochemical Science, 0, , ArticleID:221297.	0.5	1
1026	Research hotspots and trends of biodegradable magnesium and its alloys. Smart Materials in Medicine, 2023, 4, 468-479.	3.7	12
1027	Corrosion of Mg Alloy AM60B Micro-Alloyed with As. , 2023, , 231-236.		0
1028	In Situ Interfacial Passivation in Aqueous Electrolyte for Mg-Air Batteries with High Anode Utilization and Specific Capacity. ChemSusChem, 2023, 16, .	3.6	3
1029	Composite Coatings of AMg3 Alloy Formed by a Combination of Plasma Electrolytic Oxidation and Fluoropolymer Spraying. Molecules, 2023, 28, 465.	1.7	2
1030	Advanced Corrosion Protection through Coatings and Surface Rebuilding. Coatings, 2023, 13, 180.	1.2	2
1031	Facile fabrication of robust superhydrophobic coating for enhanced corrosion protection on AZ91 magnesium alloy by electroless Ni-B/GO plating. Surface and Coatings Technology, 2023, 455, 129213.	2.2	20
1032	Thermodynamic description of Mg-Zn-Sb system supported by experimental work and extrapolation to the Mg-Zn-Al-Sb quaternary system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2023, 80, 102525.	0.7	0
1033	Effects of MgO nano particles on the mechanical properties and corrosion behavior of Mg-Zn-Ca alloy. Materials Chemistry and Physics, 2023, 297, 127380.	2.0	9
1034	The effect of time dependent native oxide surface conditions on the electrochemical corrosion resistance of Mg and Mg-Al-Ca alloys. Corrosion Science, 2023, 212, 110925.	3.0	9
1035	Enhancing color tunability, corrosion resistance, and hardness of AlN/Al coatings on magnesium alloys via sputtering a Si interlayer. Vacuum, 2023, 209, 111772.	1.6	5
1036	Comparative study of conversion treated magnesium alloy in the presence of Mn/adipic acid additives before and after application of epoxy coating: Anti-corrosion, surface, and adhesion properties. Materials Today Communications, 2023, 34, 105330.	0.9	0
1037	A durable superhydrophobic polyphenylene sulfide composite coating with high corrosion resistance and good self-cleaning ability. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 660, 130856.	2.3	11
1038	Electrochemical Impedance Spectroscopy (EIS) of parylene coated magnesium stents in organic solvent to study early corrosion control. Corrosion Science, 2023, 213, 110932.	3.0	8
1039	Effects of solute redistribution during heat treatment on micro-galvanic corrosion behavior of dilute Mg-Al-Ca-Mn alloy. Corrosion Science, 2023, 213, 110971.	3.0	9
1040	A study on the influence of WEDM parameters on surface roughness, kerf width, and corrosion behavior of AZ31B Mg alloy. Materials Today: Proceedings, 2022, , .	0.9	2

#	ARTICLE	IF	CITATIONS
1041	Terminalia catappa as Effective Corrosion Resistance in Acidic Medium for Medical Stainless Steel via Experimental and Computational Approaches. Chemistry Africa, 0, , .	1.2	0
1042	Effects of Altering Magnesium Metal Surfaces on Degradation In Vitro and In Vivo during Peripheral Nerve Regeneration. Materials, 2023, 16, 1195.	1.3	2
1043	Recent advances in surface endothelialization of the magnesium alloy stent materials. Journal of Magnesium and Alloys, 2023, 11, 48-77.	5.5	5
1044	Usage of phosphoric acid plant's circulate pond waters in struvite precipitationâ€”Effect of conditions. Water and Environment Journal, 0, , .	1.0	0
1045	A Comparative Study About Hydroxyapatite Coated AZ31 and AZ91 Mg Alloys. Minerals, Metals and Materials Series, 2023, , 81-84.	0.3	0
1046	Corrosion resistance and mechanisms of smart micro-arc oxidation/epoxy resin coatings on AZ31 Mg alloy: Strategic positioning of nanocontainers. Journal of Magnesium and Alloys, 2023, 11, 4562-4574.	5.5	4
1047	Study of Microstructure and Corrosion Behavior of Cast Znâ€”Alâ€”Mg Alloys. International Journal of Metalcasting, 2023, 17, 2794-2807.	1.5	5
1048	Magnezyum ve Magnezyum Esaslı Malzemelerde Korozyon. Düzce Üniversitesi Bilim Ve Teknoloji Dergisi, 0, , 41-56.	0.2	0
1049	Breaking the trade off between corrosion resistance and fatigue lifetime of the coated Mg alloy through cold spraying submicron-grain Al alloy coatings. Journal of Magnesium and Alloys, 2023, , .	5.5	8
1050	Carbon quantum dots as corrosion inhibitors. , 2023, , 187-209.		0
1051	The Influence of magnesium alloy surface roughness on Ce salt conversion film corrosion resistance. , 2023, 9, 011108-011108.		0
1052	MWCNTs-TiO2 Incorporated-Mg Composites to Improve the Mechanical, Corrosion and Biological Characteristics for Use in Biomedical Fields. Materials, 2023, 16, 1919.	1.3	5
1053	Effect of Specific Second Phases Induced by Minor Y Addition on Corrosion Behaviors of As-Cast Mg-3Zn-1Mn-xY Alloys. Journal of Materials Engineering and Performance, 2024, 33, 1626-1639.	1.2	0
1054	Electrochemical corrosion behavior of 6061 Al alloy under high rotating speed submerged friction stir processing. Corrosion Science, 2023, 215, 111029.	3.0	14
1055	In-situ observation of environmentally assisted crack initiation and short crack growth behaviour of new-generation 7xxx series alloys in humid air. Corrosion Science, 2023, 216, 111051.	3.0	6
1056	Operando kinetics of hydrogen evolution and elemental dissolution â€¦: A time resolved mass-charge balance during the anodic dissolution of magnesium with variable iron content. Corrosion Science, 2023, 217, 111095.	3.0	5
1057	Reflective microscopy for mechanistic insights in corrosion research. Current Opinion in Electrochemistry, 2023, 39, 101259.	2.5	4
1058	Study of microstructure and mechanical properties of Mgâ€”3Y-1REmOn composites by Y-REmOn (RE=La,) Tj ETQq1 1 0.784314 rgBT (2.6	1

#	ARTICLE	IF	CITATIONS
1059	Dopamine self-polymerized sol-gel coating for corrosion protection of AZ31 Mg Alloy. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2023, 666, 131283.	2.3	6
1060	Simultaneously improving mechanical and anti-corrosion properties of extruded Mg-Al dilute alloy via trace Er addition. <i>Journal of Materials Science and Technology</i> , 2023, 150, 49-64.	5.6	28
1061	The implications of pulsating anode potential on the electrochemical recovery of phosphate as magnesium ammonium phosphate hexahydrate (struvite). <i>Chemical Engineering Journal</i> , 2023, 459, 141522.	6.6	3
1062	Poly-lactic acid coatings on the biomedical WE43 Mg alloy: Protection mechanism and ion permeation effects. <i>Progress in Organic Coatings</i> , 2023, 177, 107427.	1.9	4
1063	An Impact of the Recent Developments in Coating Materials and Techniques on the Corrosion Response of AZ91D Alloy: A Review. <i>Advanced Engineering Materials</i> , 2023, 25, .	1.6	6
1064	Research of Dynamic Corrosion Behavior, Microstructure, and Biocompatibility of Mg–Zn–Ca–Zr Alloys in Simulated Body Fluid Solution Induced by Zn Element Addition. <i>Advanced Engineering Materials</i> , 2023, 25, .	1.6	1
1065	Optimization of the Microstructure and Performance of Aluminum Alloy Cold Spray Coatings on Magnesium Alloy Substrates. <i>Minerals, Metals and Materials Series</i> , 2023, , 49-51.	0.3	1
1066	Stability of Mg-based anode in electrochemical struvite precipitation using pure Mg vs. AZ31 vs. AZ91D. <i>Journal of Water Process Engineering</i> , 2023, 52, 103524.	2.6	2
1067	Detection of Hydrogen Gas Generated upon Magnesium Dissolution Using a Gas Chromatograph–Channel Flow Electrode System. <i>Journal of the Electrochemical Society</i> , 2023, 170, 021509.	1.3	1
1068	Formation and characterization analysis of a chromium-free conversion coating on Mg alloy prepared in a Mo-Mn-V based weak acid solution. <i>Surface and Coatings Technology</i> , 2023, 458, 129313.	2.2	6
1069	Review on magnesium and magnesium-based alloys as biomaterials for bone immobilization. <i>Journal of Materials Research and Technology</i> , 2023, 23, 4396-4419.	2.6	24
1070	Microstructural, Mechanical, and Corrosion Properties of AZXX Magnesium Alloy: A Review of Processing Methods. <i>Crystals</i> , 2023, 13, 344.	1.0	1
1071	Tribo- and Tribocorrosion Properties of Magnesium AZ31 Alloy. <i>Coatings</i> , 2023, 13, 448.	1.2	3
1072	Twin suppression by atomic scale engineering of precipitate-matrix interfaces. <i>Acta Materialia</i> , 2023, 248, 118797.	3.8	4
1073	Study on Material Design and Corrosion Resistance Based on Multi-Principal Component Alloying Theory. <i>Materials</i> , 2023, 16, 1939.	1.3	1
1074	Insight into mitigation of corrosion behavior of novel chalcone derivative for AZ91 Mg alloy in saline solution: synthesis, characterization, electrochemical and adsorption studies. <i>Journal of Electroanalytical Chemistry</i> , 2023, 934, 117304.	1.9	6
1075	Biodegradation mechanisms of pure Mg in presence of glucose, vitamin C, and citric acid. , 2023, 1, 100014.		2
1076	Corrosion-resistant coating on AZ91D magnesium alloy based on one-step hydrothermal. <i>Corrosion Engineering Science and Technology</i> , 2023, 58, 364-371.	0.7	0

#	ARTICLE	IF	CITATIONS
1077	Advances in the Modification of Silane-Based Sol-Gel Coating to Improve the Corrosion Resistance of Magnesium Alloys. <i>Molecules</i> , 2023, 28, 2563.	1.7	7
1078	Technical note on the determination of degradation rates of biodegradable magnesium implants. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 0, , .	0.8	0
1079	Recent research advances on corrosion mechanism and protection, and novel coating materials of magnesium alloys: a review. <i>RSC Advances</i> , 2023, 13, 8427-8463.	1.7	17
1080	Effect of Plasma Argon Pretreatment on the Surface Properties of AZ31 Magnesium Alloy. <i>Materials</i> , 2023, 16, 2327.	1.3	0
1081	Comparison of Corrosion Behavior of WE43 and AZ80 Alloys in NaCl and Na ₂ SO ₄ Solutions. <i>Crystals</i> , 2023, 13, 506.	1.0	2
1082	Production of WE43 magnesium alloy by powder metallurgy and the effect of glucose on wear resistance in biocorrosive wear. <i>Biointerphases</i> , 2023, 18, 021002.	0.6	0
1083	Corrosion and Mechanical Behavior of the As-Cast and Solid-Solution-Treated AM50 Magnesium Alloy in Different Media. <i>Materials</i> , 2023, 16, 2406.	1.3	3
1084	Effect of Y content on performance of AZ31 magnesium alloy anode in air battery. <i>Ionics</i> , 2023, 29, 1901-1911.	1.2	1
1085	A Rapidly Degradable Extruded Mg-Al-Zn-Ni Alloy for Fracturing Tool Applications. <i>Advanced Engineering Materials</i> , 0, , .	1.6	0
1086	Microstructure, mechanical and corrosion behaviours in friction stir welding of dissimilar magnesium alloys. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2023, 74, 1217-1232.	0.8	2
1087	Synthesis and Characterisation of CeO ₂ Coatings on the AZ31 Alloy for Corrosion Protection and In Vitro Biocompatibility of MC3T3-E1 Pre-Osteoblasts. <i>Metals</i> , 2023, 13, 653.	1.0	1
1088	Predicting thermodynamic stability of magnesium alloys in machine learning. <i>Computational Materials Science</i> , 2023, 223, 112111.	1.4	5
1089	Metallurgical and Bio-corrosion Attributes of Thermo-mechanically Processed $\hat{\mu}$ -Magnesium-Lithium Alloy for Bio-implant Application. <i>Jom</i> , 2023, 75, 2338-2350.	0.9	1
1090	Corrosion inhibition of magnesium alloy AZ31 in chloride-containing solutions by aqueous permanganate. <i>Journal of Solid State Electrochemistry</i> , 2023, 27, 1847-1860.	1.2	6
1091	Comparative study on the microgalvanic corrosion phenomena of WE43 alloy in Cl ⁻ / HCO ₃ ⁻ / CO ₃ ²⁻ environments. <i>International Journal of Electrochemical Science</i> , 2023, 18, 100139.	0.5	1
1092	Investigation of Intermetallic Phase Fractions and Dry-corrosive Wear Properties in Mg-Al-Si Ternary Alloy. <i>International Journal of Metalcasting</i> , 2024, 18, 331-342.	1.5	1
1093	Corrosion resistance and anti-soiling performance of micro-arc oxidation/graphene oxide/stearic acid superhydrophobic composite coating on magnesium alloys. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2023, 30, 1128-1139.	2.4	5
1094	Environment-assisted cracking of AZ31 magnesium alloy in a borate buffer solution containing ammonium thiocyanate under various potentials. <i>Corrosion Science</i> , 2023, 218, 111195.	3.0	1

#	ARTICLE	IF	CITATIONS
1095	Corrosion resistance of multistep doped graphene oxide/lanthanum-based/silane composite coatings on the magnesium alloys. <i>Molecular Crystals and Liquid Crystals</i> , 0, , 1-13.	0.4	0
1115	The application of electrochemical impedance spectroscopy to study the corrosion of magnesium alloys. , 2024, , 550-564.		0
1127	Recent Advances in Magnesium-Based Metal Matrix Surface Composites Developed via Friction Stir Processing Route—An Overview. <i>Metallography, Microstructure, and Analysis</i> , 2023, 12, 385-400.	0.5	5
1254	Investigation of Machining Parameters and Surface Quality of AZ-31 Magnesium Alloy Subjected to Spark Machining. , 0, , .		0