

Guosong Wu

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97
papers

3,303
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37
h-index

54
g-index

102
ext. papers

3,799
ext. citations

5.4
avg, IF

5.3
L-index

#	Paper	IF	Citations
97	Surface design of biodegradable magnesium alloys [A review]. <i>Surface and Coatings Technology</i> , 2013 , 233, 2-12	4.4	245
96	Enhanced antimicrobial properties, cytocompatibility, and corrosion resistance of plasma-modified biodegradable magnesium alloys. <i>Acta Biomaterialia</i> , 2014 , 10, 544-56	10.8	157
95	Electrochemical corrosion behavior of biodegradable Mg ₉₂ RE and Mg ₉₂ Zn ₈ alloys in Ringer's solution and simulated body fluid. <i>Corrosion Science</i> , 2015 , 91, 160-184	6.8	129
94	Improvement of corrosion resistance and biocompatibility of rare-earth WE43 magnesium alloy by neodymium self-ion implantation. <i>Corrosion Science</i> , 2015 , 94, 142-155	6.8	112
93	Engineering and functionalization of biomaterials via surface modification. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 2024-2042	7.3	111
92	Effects of zirconium and oxygen plasma ion implantation on the corrosion behavior of ZK60 Mg alloy in simulated body fluids. <i>Corrosion Science</i> , 2014 , 82, 7-26	6.8	80
91	Effect of bias voltage on growth property of Cr-DLC film prepared by linear ion beam deposition technique. <i>Vacuum</i> , 2010 , 85, 231-235	3.7	79
90	Preparation, characterization and properties of Cr-incorporated DLC films on magnesium alloy. <i>Diamond and Related Materials</i> , 2010 , 19, 1307-1315	3.5	77
89	Growth and corrosion of aluminum PVD-coating on AZ31 magnesium alloy. <i>Materials Letters</i> , 2008 , 62, 4325-4327	3.3	69
88	Improving wear resistance and corrosion resistance of AZ31 magnesium alloy by DLC/AlN/Al coating. <i>Surface and Coatings Technology</i> , 2010 , 205, 2067-2073	4.4	67
87	Plasma modified Mg ₉₂ Nd ₈ Zn ₈ alloy with enhanced surface corrosion resistance. <i>Corrosion Science</i> , 2014 , 78, 121-129	6.8	65
86	In situ synthesis of Ni(OH) ₂ /TiO ₂ composite film on NiTi alloy for non-enzymatic glucose sensing. <i>Sensors and Actuators B: Chemical</i> , 2016 , 232, 150-157	8.5	65
85	Effects of tantalum ion implantation on the corrosion behavior of AZ31 magnesium alloys. <i>Journal of Alloys and Compounds</i> , 2007 , 437, 87-92	5.7	63
84	Early oxidation behaviors of Mg alloys at high temperatures. <i>Journal of Alloys and Compounds</i> , 2008 , 460, 368-374	5.7	61
83	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	8.1	60
82	Plasma-modified biomaterials for self-antimicrobial applications. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 2851-60	9.5	59
81	Corrosion behavior of SS316L in simulated and accelerated PEMFC environments. <i>International Journal of Hydrogen Energy</i> , 2011 , 36, 13032-13042	6.7	58

80	Systematic Study of Inherent Antibacterial Properties of Magnesium-based Biomaterials. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 9662-73	9.5	56
79	Effects of silicon plasma ion implantation on electrochemical corrosion behavior of biodegradable Mg ₉₂ RE Alloy. <i>Corrosion Science</i> , 2013 , 69, 158-163	6.8	54
78	Improved corrosion resistance and cytocompatibility of magnesium alloy by two-stage cooling in thermal treatment. <i>Corrosion Science</i> , 2012 , 59, 360-365	6.8	53
77	Influence of interlayers on corrosion resistance of diamond-like carbon coating on magnesium alloy. <i>Surface and Coatings Technology</i> , 2010 , 204, 2193-2196	4.4	52
76	Retardation of surface corrosion of biodegradable magnesium-based materials by aluminum ion implantation. <i>Applied Surface Science</i> , 2012 , 258, 7651-7657	6.7	51
75	Improved surface corrosion resistance of WE43 magnesium alloy by dual titanium and oxygen ion implantation. <i>Thin Solid Films</i> , 2013 , 529, 407-411	2.2	50
74	Self-protection against corrosion of aged magnesium alloy in simulated physiological environment. <i>Corrosion Science</i> , 2013 , 68, 279-285	6.8	50
73	Mitigation of Corrosion on Magnesium Alloy by Predesigned Surface Corrosion. <i>Scientific Reports</i> , 2015 , 5, 17399	4.9	48
72	Characterization of ceramic PVD thin films on AZ31 magnesium alloys. <i>Applied Surface Science</i> , 2006 , 252, 7422-7429	6.7	48
71	Controllable degradation of biomedical magnesium by chromium and oxygen dual ion implantation. <i>Materials Letters</i> , 2011 , 65, 2171-2173	3.3	47
70	Improving corrosion resistance of titanium-coated magnesium alloy by modifying surface characteristics of magnesium alloy prior to titanium coating deposition. <i>Scripta Materialia</i> , 2009 , 61, 269-272	5.6	47
69	Electrochemical properties and corrosion resistance of carbon-ion-implanted magnesium. <i>Corrosion Science</i> , 2014 , 82, 173-179	6.8	46
68	Extracellular Electron Transfer from Aerobic Bacteria to Au-Loaded TiO ₂ Semiconductor without Light: A New Bacteria-Killing Mechanism Other than Localized Surface Plasmon Resonance or Microbial Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 24509-16	9.5	45
67	Plasma Surface Functionalized Polyetheretherketone for Enhanced Osseo-Integration at Bone-Implant Interface. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 3901-11	9.5	44
66	Effects of zirconium and nitrogen plasma immersion ion implantation on the electrochemical corrosion behavior of Mg ₉₂ RE alloy in simulated body fluid and cell culture medium. <i>Corrosion Science</i> , 2014 , 86, 239-251	6.8	40
65	Effects of surface alloying on electrochemical corrosion behavior of oxygen-plasma-modified biomedical magnesium alloy. <i>Surface and Coatings Technology</i> , 2012 , 206, 3186-3195	4.4	40
64	Rapid degradation of biomedical magnesium induced by zinc ion implantation. <i>Materials Letters</i> , 2011 , 65, 661-663	3.3	40
63	Excellent corrosion resistance of P and Fe modified micro-arc oxidation coating on Al alloy. <i>Journal of Alloys and Compounds</i> , 2017 , 710, 452-459	5.7	38

62	The corrosion behavior of Ce-implanted magnesium alloys. <i>Materials Characterization</i> , 2008 , 59, 618-623	3.9	38
61	Formation and electrochemical behavior of Al and O plasma-implanted biodegradable Mg-Y-RE alloy. <i>Materials Chemistry and Physics</i> , 2012 , 132, 187-191	4-4	37
60	Fabrication of Al and Al/Ti coatings on magnesium alloy by sputtering. <i>Materials Letters</i> , 2007 , 61, 3815-3817	3-3	37
59	Preparation and characterization of ceramic/metal duplex coatings deposited on AZ31 magnesium alloy by multi-magnetron sputtering. <i>Materials Letters</i> , 2006 , 60, 674-678	3-3	35
58	Achieving an acid resistant surface on magnesium alloy via bio-inspired design. <i>Applied Surface Science</i> , 2019 , 478, 150-161	6-7	34
57	The effect of interlayer on corrosion resistance of ceramic coating/Mg alloy substrate in simulated physiological environment. <i>Surface and Coatings Technology</i> , 2012 , 206, 4892-4898	4-4	34
56	Corrosion behavior of TiAlN/TiAl duplex coating on AZ31 magnesium alloy in NaCl aqueous solution. <i>Materials Characterization</i> , 2009 , 60, 803-807	3-9	31
55	The effect of Y-ion implantation on the oxidation of AZ31 magnesium alloy. <i>Materials Letters</i> , 2007 , 61, 968-970	3-3	31
54	Improved corrosion resistance on biodegradable magnesium by zinc and aluminum ion implantation. <i>Applied Surface Science</i> , 2012 , 263, 608-612	6-7	28
53	Surface oxidation behavior of MgNd alloys. <i>Applied Surface Science</i> , 2007 , 253, 9017-9023	6-7	28
52	The effects of cerium implantation on the oxidation behavior of AZ31 magnesium alloys. <i>Journal of Alloys and Compounds</i> , 2008 , 456, 384-389	5-7	27
51	Yttrium ion implantation on the surface properties of magnesium. <i>Applied Surface Science</i> , 2006 , 253, 2437-2442	6-7	25
50	Achieving controllable degradation of a biomedical magnesium alloy by anodizing in molten ammonium bifluoride. <i>Surface and Coatings Technology</i> , 2017 , 313, 282-287	4-4	23
49	Surface analysis and oxidation behavior of Y-ion implanted AZ31 magnesium alloys. <i>Applied Surface Science</i> , 2007 , 253, 3574-3580	6-7	23
48	Nickel plasma modification of graphene for high-performance non-enzymatic glucose sensing. <i>Sensors and Actuators B: Chemical</i> , 2017 , 251, 842-850	8-5	22
47	Tension-compression asymmetry of the AZ91 magnesium alloy with multi-heterogenous microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 759, 703-707	5-3	22
46	Supercapacitor Electrodes Based on Hierarchical Mesoporous MnOx/Nitrided TiO2 Nanorod Arrays on Carbon Fiber Paper. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1400446	4-6	21
45	Effects of cerium ion implantation on the corrosion behavior of magnesium in different biological media. <i>Surface and Coatings Technology</i> , 2016 , 306, 6-10	4-4	20

44	Formation by reactive magnetron sputtering of TiN coating on Ti-implanted magnesium alloy. <i>Materials Letters</i> , 2006 , 60, 2252-2255	3.3	20
43	Nonleaching Antibacterial Concept Demonstrated by In Situ Construction of 2D Nanoflakes on Magnesium. <i>Advanced Science</i> , 2020 , 7, 1902089	13.6	20
42	Structure and elastic recovery of Cr ₂ C:H films deposited by a reactive magnetron sputtering technique. <i>Applied Surface Science</i> , 2010 , 257, 244-248	6.7	19
41	Effects of silver plasma immersion ion implantation on the surface characteristics and cytocompatibility of titanium nitride films. <i>Surface and Coatings Technology</i> , 2015 , 279, 166-170	4.4	17
40	Corrosion behavior of chromium and oxygen plasma-modified magnesium in sulfate solution and simulated body fluid. <i>Applied Surface Science</i> , 2012 , 258, 8273-8278	6.7	17
39	Persistent photoconductivity in ZnO nanostructures induced by surface oxygen vacancy. <i>Physica Status Solidi - Rapid Research Letters</i> , 2012 , 6, 117-119	2.5	17
38	Plasma and ion-beam modification of metallic biomaterials for improved anti-bacterial properties. <i>Surface and Coatings Technology</i> , 2016 , 306, 140-146	4.4	16
37	Hafnium-implanted WE43 magnesium alloy for enhanced corrosion protection and biocompatibility. <i>Surface and Coatings Technology</i> , 2016 , 306, 11-15	4.4	16
36	Dual Ti and C ion-implanted stainless steel bipolar plates in polymer electrolyte membrane fuel cells. <i>Surface and Coatings Technology</i> , 2012 , 206, 2914-2921	4.4	15
35	Robust electrodes based on coaxial TiC/C-MnO ₂ core/shell nanofiber arrays with excellent cycling stability for high-performance supercapacitors. <i>Small</i> , 2015 , 11, 1847-56	11	15
34	Effects of carbon dioxide plasma immersion ion implantation on the electrochemical properties of AZ31 magnesium alloy in physiological environment. <i>Applied Surface Science</i> , 2013 , 286, 257-260	6.7	14
33	In vitro corrosion inhibition on biomedical shape memory alloy by plasma-polymerized allylamine film. <i>Materials Letters</i> , 2012 , 89, 51-54	3.3	13
32	Wear mechanism and tribological characteristics of porous NiTi shape memory alloy for bone scaffold. <i>Journal of Biomedical Materials Research - Part A</i> , 2013 , 101, 2586-601	5.4	13
31	Improved corrosion resistance of Mg-Y-RE alloy coated with niobium nitride. <i>Thin Solid Films</i> , 2014 , 572, 85-90	2.2	12
30	Fabrication of Cr coating on AZ31 magnesium alloy by magnetron sputtering. <i>Transactions of Nonferrous Metals Society of China</i> , 2008 , 18, s329-s333	3.3	12
29	Magnetron-sputtered fluorocarbon polymeric film on magnesium for corrosion protection. <i>Surface and Coatings Technology</i> , 2018 , 352, 437-444	4.4	11
28	Effects of diamond-like carbon film on the corrosion behavior of NdFeB permanent magnet. <i>Surface and Coatings Technology</i> , 2017 , 312, 66-74	4.4	11
27	Rare-earth-incorporated polymeric vector for enhanced gene delivery. <i>Biomaterials</i> , 2014 , 35, 479-88	15.6	10

26	Surface microstructurization of a sputtered magnesium thin film via a solution immersion route. <i>Materials Letters</i> , 2010 , 64, 475-478	3.3	10
25	Formation of a novel nanocrystalline coating on AZ31 magnesium alloy by bias sputtering. <i>Materials Letters</i> , 2007 , 61, 4019-4022	3.3	10
24	Praseodymium-surface-modified magnesium alloy: Retardation of corrosion in artificial hand sweat. <i>Materials Letters</i> , 2016 , 163, 85-89	3.3	9
23	Effects of chromium ion implantation voltage on the corrosion resistance and cytocompatibility of dual chromium and oxygen plasma-ion-implanted biodegradable magnesium. <i>Surface and Coatings Technology</i> , 2013 , 235, 875-880	4.4	9
22	Unusual anti-bacterial behavior and corrosion resistance of magnesium alloy coated with diamond-like carbon. <i>RSC Advances</i> , 2016 , 6, 14756-14762	3.7	8
21	Cyclic oxidation behaviour of cerium implanted AZ31 magnesium alloys. <i>Materials Letters</i> , 2007 , 61, 1429-1432	3.3	8
20	Developing a high-performance Mg-5.7Gd-1.9Ag wrought alloy via hot rolling and aging. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 803, 140707	5.3	8
19	Effect of hierarchical precipitates on corrosion behavior of fine-grain magnesium-gadolinium-silver alloy. <i>Corrosion Science</i> , 2021 , 194, 109924	6.8	7
18	Plasma-target surface interaction during non-equilibrium plasma irradiation at atmospheric pressure: Generation of dusty plasma. <i>Laser and Particle Beams</i> , 2014 , 32, 69-78	0.9	5
17	Oxidation kinetics of magnesium alloys treated by tantalum ions implantation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007 , 263, 401-406	1.2	5
16	Formation of self-layered hydrothermal coating on magnesium aided by titanium ion implantation: Synergistic control of corrosion resistance and cytocompatibility. <i>Surface and Coatings Technology</i> , 2020 , 401, 126251	4.4	5
15	Revealing anti-corrosion behavior of magnesium alloy in simulated concrete pore solution. <i>Materials Letters</i> , 2021 , 285, 129047	3.3	5
14	Improved Corrosion Resistance of Magnesium Alloy in Simulated Concrete Pore Solution by Hydrothermal Treatment. <i>Scanning</i> , 2020 , 2020, 4860256	1.6	3
13	Electrochemical degradation and extraction capability of magnesium wastes in sewage treatment. <i>Materials and Design</i> , 2016 , 111, 537-540	8.1	3
12	Achieving gradient heterogeneous structure in Mg alloy for excellent strength-ductility synergy. <i>Journal of Magnesium and Alloys</i> , 2021 ,	8.8	2
11	Tuning strength-ductility combination on selective laser melted 316L stainless steel through gradient heterogeneous structure. <i>Additive Manufacturing</i> , 2021 , 48, 102373	6.1	2
10	Antibacterial Biomaterials: Nonleaching Antibacterial Concept Demonstrated by In Situ Construction of 2D Nanoflakes on Magnesium (Adv. Sci. 1/2020). <i>Advanced Science</i> , 2020 , 7, 2070006	13.6	2
9	Investigation of Indenter-Size-Dependent Nanoplasticity of Silicon by Molecular Dynamics Simulation. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 3039-3047	4	2

8	Enhancing corrosion resistance of hydrothermally-treated magnesium-aluminum alloys by preprocessed metallurgical microstructure. <i>Thin Solid Films</i> , 2022 , 752, 139247	2.2	2
7	Impact responses of a multi-element quartz shock gauge. <i>Sensors and Actuators A: Physical</i> , 2008 , 141, 353-358	3.9	1
6	Improving Corrosion Resistance of Magnesium Alloy in Cl Containing Simulated Concrete Pore Solution by Ultrasound-Assisted Chemical Deposition. <i>Scanning</i> , 2021 , 2021, 5462741	1.6	1
5	Mediating the strength, ductility and corrosion resistance of high aluminum containing magnesium alloy by engineering hierarchical precipitates. <i>Journal of Alloys and Compounds</i> , 2021 , 857, 158277	5.7	1
4	Shrinking tension-compression asymmetry of Au nanowires by designed nanotwin boundaries. <i>Materials Chemistry and Physics</i> , 2020 , 252, 123267	4.4	0
3	Improved corrosion and wear resistance of micro-arc oxidation coatings on the 2024 aluminum alloy by incorporation of quasi-two-dimensional sericite microplates. <i>Applied Surface Science</i> , 2022 , 585, 152693	6.7	0
2	Influence of gradient interlayer thickness on corrosion and tribological behavior of Ti-containing multilayer graphite-like carbon films. <i>Wear</i> , 2021 , 488-489, 204177	3.5	0
1	Corrosion behavior of Mg-5.7Gd-1.9Ag Mg alloy sheet. <i>Journal of Alloys and Compounds</i> , 2022 , 165241	5.7	0