Shao-Kang Guan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5216069/publications.pdf

Version: 2024-02-01

113 papers	4,455 citations	94433 37 h-index	114465 63 g-index
115 all docs	115 docs citations	115 times ranked	2822 citing authors

#	Article	IF	Citations
1	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.	11.9	21
2	Protein conformation and electric attraction adsorption mechanisms on anodized magnesium alloy by molecular dynamics simulations. Journal of Magnesium and Alloys, 2022, 10, 3143-3155.	11.9	12
3	Hydrogen-bonding regulated supramolecular chirality with controllable biostability. Nano Research, 2022, 15, 2226-2234.	10.4	11
4	The increased ratio of Mg2+/Ca2+ from degrading magnesium alloys directs macrophage fate for functionalized growth of endothelial cells. Smart Materials in Medicine, 2022, 3, 188-198.	6.7	29
5	Electrophoretic deposited boron nitride nanosheets-containing chitosan-based coating on Mg alloy for better corrosion resistance, biocompatibility and antibacterial properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 638, 128303.	4.7	22
6	Preparing a Bioactive (Chitosan/Sodium Hyaluronate)/SrHA Coating on Mgâ€“Znâ€“Ca Alloy for Orthopedic Implant Applications. Frontiers in Materials, 2022, 8, .	2.4	3
7	A biodegradable magnesium alloy vascular stent structure: Design, optimisation and evaluation. Acta Biomaterialia, 2022, 142, 402-412.	8.3	20
8	A robust calcium carbonate (CaCO3) coating on biomedical MgZnCa alloy for promising corrosion protection. Corrosion Science, 2022, 198, 110124.	6.6	29
9	Tailoring ZE21B Alloy with Nature-Inspired Extracellular Matrix Secreted by Micro-Patterned Smooth Muscle Cells and Endothelial Cells to Promote Surface Biocompatibility. International Journal of Molecular Sciences, 2022, 23, 3180.	4.1	14
10	Tailoring of Biodegradable Magnesium Alloy Surface with Schiff Base Coating via Electrostatic Spraying for Better Corrosion Resistance. Metals, 2022, 12, 471.	2.3	10
11	pH Stimuliâ€Responsive, Rapidly Selfâ€healable Coatings Enhanced the Corrosion Resistance and Osteogenic Differentiation of Mgâ€1Ca Osteoimplant. Small, 2022, 18, e2106056.	10.0	3
12	Cross-Scale Simulation Research on the Macro/Microstructure of TC4 Alloy Wire Laser Additive Manufacturing. Metals, 2022, 12, 934.	2.3	2
13	Optimizing structural design on biodegradable magnesium alloy vascular stent for reducing strut thickness and raising radial strength. Materials and Design, 2022, 220, 110843.	7.0	8
14	The deteriorated degradation resistance of Mg alloy microtubes for vascular stent under the coupling effect of radial compressive stress and dynamic medium. Journal of Magnesium and Alloys, 2022, , .	11.9	0
15	Preparation of functional coating on magnesium alloy with hydrophilic polymers and bioactive peptides for improved corrosion resistance and biocompatibility. Journal of Magnesium and Alloys, 2022, 10, 1957-1971.	11.9	19
16	Synthesis and degradation behaviour of Zn-modified coating on Mg alloy. Surface Engineering, 2021, 37, 963-971.	2.2	8
17	Clarifying effect of welding conditions on microstructure and mechanical properties of friction stir spot-welded DH590 automotive high-strength steel plates. Journal of Iron and Steel Research International, 2021, 28, 232-243.	2.8	4
18	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.	3.5	1

#	Article	IF	Citations
19	The effect of Zn coating layer on the microstructure and mechanical properties of friction stir spot welded galvanized DP590 high-strength steel plates. International Journal of Advanced Manufacturing Technology, 2021, 113, 1787-1798.	3.0	5
20	Facile route to bulk ultrafine-grain steels for high strength and ductility. Nature, 2021, 590, 262-267.	27.8	98
21	Zn content mediated fibrinogen adsorption on biodegradable Mg-Zn alloys surfaces. Journal of Magnesium and Alloys, 2021, 9, 2145-2154.	11.9	8
22	Investigation of Mgâ€“xLiâ€“Zn alloys for potential application of biodegradable bone implant materials. Journal of Materials Science: Materials in Medicine, 2021, 32, 43.	3.6	15
23	Microstructure, mechanical properties and corrosion fatigue behaviour of biodegradable Mgâ€“Znâ€“Yâ€“Nd alloy prepared by double extrusion. Corrosion Engineering Science and Technology, 2021, 56, 584-593.	1.4	5
24	Microstructural Evolution and Mechanical Properties of Graphene Oxide-Reinforced Ti6Al4V Matrix Composite Fabricated Using Spark Plasma Sintering. Nanomaterials, 2021, 11, 1440.	4.1	9
25	Fabrication of Citric Acid/RGD Multilayers on Mgâ€Znâ€Yâ€Nd Alloy via Layerâ€byâ€Layer Selfâ€Assembly for Promoting Surface Biocompatibility. Advanced Materials Interfaces, 2021, 8, 2002241.	3.7	12
26	Simulation of dynamic recrystallization behavior of hot extruded Mg-Zn-Y-Nd alloy tubes by the finite element method. Materials Today Communications, 2021, 27, 102384.	1.9	2
27	Hemocompatibility of Mgâ€Znâ€Yâ€Nd: Fabrication of Citric Acid/RGD Multilayers on Mgâ€Znâ€Yâ€Nd Alloy via Layerâ€byâ€Layer Selfâ€Assembly for Promoting Surface Biocompatibility (Adv. Mater. Interfaces 13/2021). Advanced Materials Interfaces, 2021, 8, 2170074.	3.7	1
28	Influence of the second phase on protein adsorption on biodegradable Mg alloysâ€™ surfaces: Comparative experimental and molecular dynamics simulation studies. Acta Biomaterialia, 2021, 129, 323-332.	8.3	16
29	Quantifying the effects of Sn on Î¸â€²-Al₂Cu precipitation kinetics in Alâ€“Cu alloys. Materials Science and Technology, 2021, 37, 979-992.	1.6	6
30	Directâ€Chill Casting of Largeâ€Scale Alâ€“Cu Alloy Ingot Under Ultrasound: Distribution of Physical Fields and Analysis of Microstructure. Advanced Engineering Materials, 2021, 23, 2100432.	3.5	4
31	Sol-gel coating loaded with inhibitor on ZE21B Mg alloy for improving corrosion resistance and endothelialization aiming at potential cardiovascular application. Colloids and Surfaces B: Biointerfaces, 2021, 207, 111993.	5.0	23
32	Improved corrosion resistance and cytocompatibility of Mgâ€“Znâ€“Yâ€“Nd alloy by the electrografted polycaprolactone coating. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 629, 127471.	4.7	12
33	Advances in coatings on magnesium alloys for cardiovascular stents â€“ A review. Bioactive Materials, 2021, 6, 4729-4757.	15.6	93
34	Polyâ€Cytosine Deoxyribonucleic Acid Strongly Anchoring on Graphene Oxide Due to Flexible Backbone Phosphate Interactions. Advanced Materials Interfaces, 2021, 8, 2001798.	3.7	10
35	Application of 3D Printing Technology in Bone Tissue Engineering: A Review. Current Drug Delivery, 2021, 18, 847-861.	1.6	29
36	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.	2.8	9

#	Article	IF	Citations
37	Comparative in vitro study on binary Mg-RE (Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu) alloy systems. Acta Biomaterialia, 2020, 102, 508-528.	8.3	135
38	Preparation of Biodegradable Mg/Î²-TCP Biofunctional Gradient Materials by Friction Stir Processing and Pulse Reverse Current Electrodeposition. Acta Metallurgica Sinica (English Letters), 2020, 33, 103-114.	2.9	6
39	Investigation of Mgâ€“Znâ€“Yâ€“Nd alloy for potential application of biodegradable esophageal stent material. Bioactive Materials, 2020, 5, 1-8.	15.6	49
40	Enhancing biocompatibility and corrosion resistance of biodegradable Mg-Zn-Y-Nd alloy by preparing PDA/HA coating for potential application of cardiovascular biomaterials. Materials Science and Engineering C, 2020, 109, 110607.	7.3	83
41	Microstructural evolution and mechanical properties of nanostructured Cu/Ni multilayer fabricated by accumulative roll bonding. Journal of Alloys and Compounds, 2020, 819, 152956.	5.5	22
42	Sulfur Contents in Sulfonated Hyaluronic Acid Direct the Cardiovascular Cells Fate. ACS Applied Materials & Interfaces, 2020, 12, 46827-46836.	8.0	26
43	Microstructure and texture evolution of fine-grained Mg-Zn-Y-Nd alloy micro-tubes for biodegradable vascular stents processed by hot extrusion and rapid cooling. Journal of Magnesium and Alloys, 2020, 8, 873-882.	11.9	27
44	Micro-patterned hydroxyapatite/silk fibroin coatings on Mg-Zn-Y-Nd-Zr alloys for better corrosion resistance and cell behavior guidance. Frontiers of Materials Science, 2020, 14, 413-425.	2.2	7
45	Microstructure, mechanical and corrosion properties of Mgâ€“Znâ€“Srâ€“Ca alloys for use as potential biodegradable implant materials. Corrosion Engineering Science and Technology, 2020, 55, 739-746.	1.4	9
46	Surface solid-state amorphization of accumulative roll bonded Cu-Zr laminates by friction stir processing. Materials Letters, 2020, 279, 128518.	2.6	4
47	Atomic structure of <scp>Co_{92â^'x}B_xTa₈</scp> glassy alloys studied by ab initio molecular dynamics simulations. International Journal of Quantum Chemistry, 2020, 120, e26406.	2.0	1
48	Stronger Adsorption of Phosphorothioate DNA Oligonucleotides on Graphene Oxide by van der Waals Forces. Langmuir, 2020, 36, 13708-13715.	3.5	10
49	Advances in coatings on biodegradable magnesium alloys. Journal of Magnesium and Alloys, 2020, 8, 42-65.	11.9	274
50	Effects of alloy elements on adsorption of fibrinogen on biodegradable magnesium alloys surfaces: The MD simulations and experimental studies. Applied Surface Science, 2020, 512, 145725.	6.1	6
51	Corrosion fatigue of the extruded Mgâ€“Znâ€“Yâ€“Nd alloy in simulated body fluid. Journal of Magnesium and Alloys, 2020, 8, 231-240.	11.9	42
52	Tailoring of cardiovascular stent material surface by immobilizing exosomes for better pro-endothelialization function. Colloids and Surfaces B: Biointerfaces, 2020, 189, 110831.	5.0	37
53	Influences of laser surface melting on microstructure, mechanical properties and corrosion resistance of dual-phase Crâ€“Feâ€“Coâ€“Niâ€“Al high entropy alloys. Journal of Alloys and Compounds, 2020, 826, 154100.	5.5	20
54	Microstructure and properties of biodegradable Mgâ€“Znâ€“Y-Nd alloy micro-tubes prepared by an improved method. Journal of Alloys and Compounds, 2020, 835, 155369.	5.5	8

#	Article	IF	Citations
55	Correlation between jerky flow and jerky dynamics in a nanoscratch on a metallic glass film. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	5.1	6
56	Effect of Trace Elements on the Crystallization Temperature Interval and Properties of 5xxx Series Aluminum Alloys. Metals, 2020, 10, 483.	2.3	4
57	Advance in Antibacterial Magnesium Alloys and Surface Coatings on Magnesium Alloys: A Review. Acta Metallurgica Sinica (English Letters), 2020, 33, 615-629.	2.9	80
58	Conjugating heparin, Argâ€“Gluâ€“Aspâ€“Val peptide, and anti-CD34 to the silanic Mgâ€“Znâ€“Yâ€“Nd alloy for better endothelialization. Journal of Biomaterials Applications, 2020, 35, 158-168.	2.4	22
59	In vitro corrosion of pure Mg in phosphate buffer solutionâ€”Influences of isoelectric point and molecular structure of amino acids. Materials Science and Engineering C, 2019, 105, 110042.	7.3	33
60	Corrosion and Wear Resistance of Microâ€Arc Oxidation Composite Coatings on Magnesium Alloy AZ31â€”The Influence of Inclusions of Carbon Spheres. Advanced Engineering Materials, 2019, 21, 1900446.	3.5	38
61	Corrosion resistance and antibacterial activity of zinc-loaded montmorillonite coatings on biodegradable magnesium alloy AZ31. Acta Biomaterialia, 2019, 98, 196-214.	8.3	114
62	Optimizing strength and ductility of Alâ€“7Siâ€“0.4â€¯Mg foundry alloy: Role of Cu and Sc addition. Journal of Alloys and Compounds, 2019, 810, 151944.	5.5	16
63	In vitro and in vivo assessment of the biocompatibility of an paclitaxel-eluting poly-l-lactide-coated Mg-Zn-Y-Nd alloy stent in the intestine. Materials Science and Engineering C, 2019, 105, 110087.	7.3	16
64	Corrosion resistance of in-situ growth of nano-sized Mg(OH)2 on micro-arc oxidized magnesium alloy AZ31â€”Influence of EDTA. Journal of Materials Science and Technology, 2019, 35, 1088-1098.	10.7	86
65	Microstructure, mechanical properties and deformation mechanisms of an as-cast Mgâ€“Znâ€“Yâ€“Ndâ€“Zr alloy for stent applications. Journal of Materials Science and Technology, 2019, 35, 1211-1217.	10.7	34
66	Electrochemical polymerization of dopamine with/without subsequent PLLA coating on Mg-Zn-Y-Nd alloy. Materials Letters, 2019, 252, 202-206.	2.6	19
67	Corrosion resistance of Mg(OH)2/Mgâ€“Al-layered double hydroxide coatings on magnesium alloy AZ31: influence of hydrolysis degree of silane. Rare Metals, 2019, 38, 629-641.	7.1	52
68	Corrosion resistance and drug release profile of gentamicin-loaded polyelectrolyte multilayers on magnesium alloys: Effects of heat treatment. Journal of Colloid and Interface Science, 2019, 547, 309-317.	9.4	43
69	Fundamental Theory of Biodegradable Metalsâ€”Definition, Criteria, and Design. Advanced Functional Materials, 2019, 29, 1805402.	14.9	226
70	Corrosion resistance of nanostructured magnesium hydroxide coating on magnesium alloy AZ31: influence of EDTA. Rare Metals, 2019, 38, 520-531.	7.1	45
71	Influence of surface charge density on ligand-metal bonding: A DFT study of NH3 and HCOOH on Mg (0â€¯0â€¯0â€¯1) surface. Applied Surface Science, 2019, 470, 893-898.	6.1	23
72	Effects of degradation products of biomedical magnesium alloys on nitric oxide release from vascular endothelial cells. Medical Gas Research, 2019, 9, 153.	2.3	22

#	Article	IF	Citations
73	Investigation on the in vitro cytocompatibility of Mg-Zn-Y-Nd-Zr alloys as degradable orthopaedic implant materials. Journal of Materials Science: Materials in Medicine, 2018, 29, 44.	3.6	20
74	Mg-Zn-Y-Nd coated with citric acid and dopamine by layer-by-layer self-assembly to improve surface biocompatibility. Science China Technological Sciences, 2018, 61, 1228-1237.	4.0	42
75	Processing and properties of magnesium alloy micro-tubes for biodegradable vascular stents. Materials Science and Engineering C, 2018, 90, 504-513.	7.3	49
76	Fabrication and characterization of biodegradable Mg-Zn-Y-Nd-Ag alloy: Microstructure, mechanical properties, corrosion behavior and antibacterial activities. Bioactive Materials, 2018, 3, 225-235.	15.6	38
77	Self-degradation of micro-arc oxidation/chitosan composite coating on Mg-4Li-1Ca alloy. Surface and Coatings Technology, 2018, 344, 1-11.	4.8	104
78	Complex Dynamical Behavior in the Shear-Displacement Model for Bulk Metallic Glasses during Plastic Deformation. Complexity, 2018, 2018, 1-13.	1.6	3
79	Surface modification of the biodegradable cardiovascular stent material Mgâ€“Znâ€“Yâ€“Nd alloy via conjugating REDV peptide for better endothelialization. Journal of Materials Research, 2018, 33, 4123-4133.	2.6	38
80	In Vitro Corrosion and Antibacterial Performance of Micro-Arc Oxidation Coating on AZ31 Magnesium Alloy: Effects of Tannic Acid. Journal of the Electrochemical Society, 2018, 165, C821-C829.	2.9	38
81	Exfoliation corrosion of extruded Mg-Li-Ca alloy. Journal of Materials Science and Technology, 2018, 34, 1550-1557.	10.7	84
82	In vitro corrosion resistance of a layer-by-layer assembled DNA coating on magnesium alloy. Applied Surface Science, 2018, 457, 49-58.	6.1	57
83	In vitro corrosion of magnesium alloy AZ31 â€” a synergetic influence of glucose and Tris. Frontiers of Materials Science, 2018, 12, 184-197.	2.2	32
84	InÂvitro corrosion of micro-arc oxidation coating on Mg-1Li-1Ca alloy â€” The influence of intermetallic compound Mg2Ca. Journal of Alloys and Compounds, 2018, 764, 250-260.	5.5	95
85	Characterization and corrosion property of nano-rod-like HA on fluoride coating supported on Mg-Zn-Ca alloy. Bioactive Materials, 2017, 2, 63-70.	15.6	39
86	Adsorption of arginine, glycine and aspartic acid on Mg and Mg-based alloy surfaces: A first-principles study. Applied Surface Science, 2017, 409, 149-155.	6.1	22
87	The microstructure and corrosion resistance of biological Mgâ€“Znâ€“Ca alloy processed by high-pressure torsion and subsequently annealing. Journal of Materials Research, 2017, 32, 1061-1072.	2.6	27
88	Characterization and cytocompatibility of polydopamine on MAOâ€HA coating supported on Mgâ€Znâ€Ca alloy. Surface and Interface Analysis, 2017, 49, 1115-1123.	1.8	42
89	Degradation mechanism of micro-arc oxidation coatings on biodegradable Mg-Ca alloys: The influence of porosity. Journal of Alloys and Compounds, 2017, 695, 2464-2476.	5.5	158
90	Effect of Solution Pretreatment on Homogeneity and Corrosion Resistance of Biomedical Mgâ€“Znâ€“Ca Alloy Processed by High Pressure Torsion. Advanced Engineering Materials, 2017, 19, 1600326.	3.5	9

#	Article	IF	Citations
91	Microstructure and mechanical properties of a newly developed low Young's modulus Tiâ€“15Zrâ€“5Crâ€“2Al biomedical alloy. Materials Science and Engineering C, 2017, 72, 536-542.	7.3	26
92	Enhanced in Vitro and in Vivo Performance of Mgâ€“Znâ€“Yâ€“Nd Alloy Achieved with APTES Pretreatment for Drug-Eluting Vascular Stent Application. ACS Applied Materials & Interfaces, 2016, 8, 17842-17858.	8.0	85
93	Microstructure and mechanical properties of Tiâ€“Zrâ€“Cr biomedical alloys. Materials Science and Engineering C, 2015, 51, 148-152.	7.3	41
94	Multifunctional MgF2/Polydopamine Coating on Mg Alloy for Vascular Stent Application. Journal of Materials Science and Technology, 2015, 31, 733-743.	10.7	80
95	Effect of different processings on mechanical property and corrosion behavior in simulated body fluid of Mg-Zn-Y-Nd alloy for cardiovascular stent application. Frontiers of Materials Science, 2014, 8, 256-263.	2.2	27
96	Formation mechanism of Ca-deficient hydroxyapatite coating on Mgâ€“Znâ€“Ca alloy for orthopaedic implant. Applied Surface Science, 2014, 307, 92-100.	6.1	84
97	Corrosion of magnesium alloy AZ31: The influence of bicarbonate, sulphate, hydrogen phosphate and dihydrogen phosphate ions in saline solution. Corrosion Science, 2014, 86, 171-182.	6.6	126
98	Microstructure and properties of Al0.3CrFe1.5MnNi0.5Ti x and Al0.3CrFe1.5MnNi0.5Si x high-entropy alloys. Rare Metals, 2014, 33, 149-154.	7.1	37
99	Synthesis and properties of a bio-composite coating formed on magnesium alloy by one-step method of micro-arc oxidation. Journal of Alloys and Compounds, 2014, 590, 247-253.	5.5	73
100	Corrosion protection of Mgâ€Znâ€Yâ€Nd alloy by flowerâ€like nanostructured <scp>TiO₂</scp> film for vascular stent application. Journal of Chemical Technology and Biotechnology, 2013, 88, 2062-2066.	3.2	6
101	Effects of Al on Microstructure and High-Temperature Wear Properties of Austenitic Heat-Resistant Steel. Journal of Iron and Steel Research International, 2012, 19, 62-66.	2.8	11
102	Biocorrosion of coated Mgâ€“Znâ€“Ca alloy under constant compressive stress close to that of human tibia. Materials Letters, 2012, 70, 174-176.	2.6	17
103	Fabrication of chitosan/magnesium phosphate composite coating and the in vitro degradation properties of coated magnesium alloy. Materials Letters, 2012, 73, 59-61.	2.6	82
104	The microstructure and properties of cyclic extrusion compression treated Mgâ€“Znâ€“Yâ€“Nd alloy for vascular stent application. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 8, 1-7.	3.1	107
105	Effects of Nd on microstructures and properties of extruded Mgâ€“2Znâ€“0.46Yâ€“xNd alloys for stent application. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 1673-1678.	3.5	53
106	In vivo degradation behavior of Ca-deficient hydroxyapatite coated Mgâ€“Znâ€“Ca alloy for bone implant application. Colloids and Surfaces B: Biointerfaces, 2011, 88, 254-259.	5.0	107
107	Characterization and corrosion properties of Tiâ€O/HA composite coatings on Mgâ€Zn alloy. Surface and Interface Analysis, 2011, 43, 1575-1580.	1.8	9
108	Microstructure and corrosion properties of as sub-rapid solidification Mgâ€“Znâ€“Yâ€“Nd alloy in dynamic simulated body fluid for vascular stent application. Journal of Materials Science: Materials in Medicine, 2010, 21, 2001-2008.	3.6	62

#	Article	IF	Citations
109	Characterization and degradation behavior of AZ31 alloy surface modified by bone-like hydroxyapatite for implant applications. Applied Surface Science, 2009, 255, 6433-6438.	6.1	283
110	Influence of Mg3N2 powder on microstructures and mechanical properties of AZ31 Mg alloy. Central South University, 2008, 15, 459-462.	0.5	9
111	High Specific Strength and Improved Ductility of Bulk (Mg_{0.65}Cu_{0.25}Gd_{0.1})<SUB>100−<I> Metallic Glass Composites. Materials Transactions, 2007, 48, 3193-3196.	1.2	9
112	Microstructure and Mechanical Properties of Friction Stir Welded 1.5 GPa Martensitic High-Strength Steel Plates. Acta Metallurgica Sinica (English Letters), 0, , 1.	2.9	3
113	Friction Stir Processed High Purity Mg Coating on MgZnYNd Alloy with Improved Corrosion Resistance. Journal of Materials Engineering and Performance, 0, , 1.	2.5	0