Zhang-Zhi Shi

List of Publications by Year
in descending order

57 papers	1,649 citations	304368 22 h-index	301761 39 g-index
57 all docs	57 docs citations	57 times ranked	894 citing authors

#	Article	IF	Citations
1	Second phase refining induced optimization of Fe alloying in Zn: Significantly enhanced strengthening effect and corrosion uniformity. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 796-806.	2.4	11
2	Development of a high-strength Zn-Mn-Mg alloy for ligament reconstruction fixation. Acta Biomaterialia, 2021, 119, 485-498.	4.1	40
3	Crystallography of precipitates in Mg alloys. Journal of Magnesium and Alloys, 2021, 9, 416-431.	5.5	38
4	Hierarchical microstructure and two-stage corrosion behavior of a high-performance near-eutectic Zn-Li alloy. Journal of Materials Science and Technology, 2021, 80, 50-65.	5.6	32
5	Suppression mechanism of initial pitting corrosion of pure Zn by Li alloying. Corrosion Science, 2021, 189, 109564.	3.0	16
6	Nano-scale ZnO corrosion product on a biodegradable Zn alloy matrix. Materials Characterization, 2021, 179, 111376.	1.9	1
7	Stress-induced alternating microstructures of titanium/steel bonding interface. Materials Letters, 2021, 298, 130019.	1.3	9
8	Microstructure and mechanical properties of extruded and caliber rolled biodegradable Zn-0.8Mn-0.4Ag alloy with high ductility. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 770, 138543.	2.6	29
9	Significant enhancement of high temperature oxidation resistance of pure titanium via minor addition of Nb and Si. Corrosion Science, 2020, 166, 108430.	3.0	19
10	Research on elastic recoil and restoration of vessel pulsatility of Zn-Cu biodegradable coronary stents. Biomedizinische Technik, 2020, 65, 219-227.	0.9	8
11	Microstructure evolution of a high-strength low-alloy Znâ€“Mnâ€“Ca alloy through casting, hot extrusion and warm caliber rolling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 771, 138626.	2.6	26
12	Quantitative prediction of grain boundary misorientation effect on twin transmission in hexagonal metals. Materials and Design, 2020, 192, 108745.	3.3	14
13	A new orientation relationship OR13 and irrational interfaces between Mg2Sn phase and magnesium matrix in an aged Mg alloy. Materials Letters, 2020, 281, 128648.	1.3	5
14	Insight into role and mechanism of Li on the key aspects of biodegradable Zn Li alloys: Microstructure evolution, mechanical properties, corrosion behavior and cytotoxicity. Materials Science and Engineering C, 2020, 114, 111049.	3.8	40
15	FeZn13 intermetallic compound in biodegradable Zn Fe alloy: Twinning and its shape effect. Materials Characterization, 2020, 164, 110352.	1.9	7
16	Enhancement in mechanical and corrosion resistance properties of a biodegradable Zn-Fe alloy through second phase refinement. Materials Science and Engineering C, 2020, 116, 111197.	3.8	38
17	Design biodegradable Zn alloys: Second phases and their significant influences on alloy properties. Bioactive Materials, 2020, 5, 210-218.	8.6	85
18	Opportunities and challenges of biodegradable Zn-based alloys. Journal of Materials Science and Technology, 2020, 46, 136-138.	5.6	60

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19	Adjusting comprehensive properties of biodegradable Zn-Mn alloy through solution heat-treatment. Materials Today Communications, 2020, 23, 101150.	0.9	6
20	Long-term in vivo study of biodegradable Zn-Cu stent: A 2-year implantation evaluation in porcine coronary artery. Acta Biomaterialia, 2019, 97, 657-670.	4.1	82
21	Significant refinement of coarse (Fe, Mn)Zn13 phase in biodegradable Znâ€“1Mn-0.1Fe alloy with minor addition of rare earth elements. Materials Characterization, 2019, 158, 109993.	1.9	19
22	High-performance hot-warm rolled Zn-0.8Li alloy with nano-sized metastable precipitates and sub-micron grains for biodegradable stents. Journal of Materials Science and Technology, 2019, 35, 2618-2624.	5.6	59
23	Hemocompatibility of biodegradable Zn-0.8â€¯wt% (Cu, Mn, Li) alloys. Materials Science and Engineering C, 2019, 104, 109896.	3.8	46
24	Effects of Ag, Cu or Ca addition on microstructure and comprehensive properties of biodegradable Zn-0.8Mn alloy. Materials Science and Engineering C, 2019, 99, 969-978.	3.8	86
25	Influence of solution heat treatment on microstructure and hardness of as-cast biodegradable Znâ€“Mn alloys. Journal of Materials Science, 2019, 54, 1728-1740.	1.7	18
26	(Fe, Mn)Zn13 phase and its core-shell structure in novel biodegradable Zn-Mn-Fe alloys. Materials and Design, 2019, 162, 235-245.	3.3	29
27	Serrated and stepped-like twin boundary of nano-sized extension twin in a deformed magnesium alloy. Materials Letters, 2019, 236, 604-606.	1.3	2
28	Microstructure quantification of Cuâ€“4.7Sn alloys prepared by two-phase zone continuous casting and a BP artificial neural network model for microstructure prediction. Rare Metals, 2019, 38, 1124-1130.	3.6	8
29	Microalloyed Zn-Mn alloys: From extremely brittle to extraordinarily ductile at room temperature. Materials and Design, 2018, 144, 343-352.	3.3	81
30	Twinning in MnZn13 intermetallic compound with base-centered monoclinic structure in Zn-0.75Mn alloy. Materials Characterization, 2018, 137, 9-13.	1.9	22
31	Blockage mechanism of metal wire in semi-dieless drawing and stable forming method. Metallurgical Research and Technology, 2018, 115, 112.	0.4	2
32	Intragranular cross-level twin pairs in AZ31 Mg alloy after sequential biaxial compressions. Journal of Alloys and Compounds, 2018, 749, 52-59.	2.8	19
33	Structure and orientation relationship of new precipitates in a Cuâ€“Crâ€“Zr alloy. Materials Science and Technology, 2018, 34, 282-288.	0.8	14
34	Microstructure and mechanical properties of as-cast and as-hot-rolled novel Mg-xSn-2.5Zn-2Al alloys (x = 2, 4 wt%). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 65-72.	2.6	23
35	Fabrication and characterization of novel biodegradable Zn-Mn-Cu alloys. Journal of Materials Science and Technology, 2018, 34, 1008-1015.	5.6	77
36	Significant influence of sharp grain boundary corner on tensile elongation of copper bars with columnar grains and its mechanism. Transactions of Nonferrous Metals Society of China, 2018, 28, 1329-1333.	1.7	3

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37	Effect and Mechanism of Cold-Hot Roll Bonding Process on Interfacial Bonding Properties of Aluminum/Steel Laminated Composite Plate. Lecture Notes in Mechanical Engineering, 2018, , 287-305.	0.3	0
38	Asymmetrical Precipitation on the {10-12} Twin Boundary in the Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4446-4451.	1.1	5
39	Row-matching in pyramidal Mg2Sn precipitates in Mgâ€“Snâ€“Zn alloys. Journal of Materials Science, 2017, 52, 7110-7117.	1.7	11
40	Compound cross-grain boundary extension twin structure and its related twin variant selection in a deformed Mg alloy. Journal of Alloys and Compounds, 2017, 716, 128-136.	2.8	25
41	Characteristics of cross grain boundary contraction twin pairs and bands in a deformed Mg alloy. Journal of Alloys and Compounds, 2017, 692, 274-279.	2.8	29
42	Secondary twin variant selection in Mg alloy after a strain-path change. Journal of Alloys and Compounds, 2017, 696, 510-515.	2.8	13
43	Mechanisms and influences of electro-brush plating micro-force on coatings performances. Journal of Materials Research, 2016, 31, 2337-2346.	1.2	5
44	Review of research status and development direction of dieless drawing. Metallurgical Research and Technology, 2016, 113, 610.	0.4	4
45	Caution regarding ambiguities in similar expressions of orientation relationships. Journal of Applied Crystallography, 2016, 49, 40-46.	1.9	9
46	Characterization and interpretation of twin related row-matching orientation relationships between Mg₂Sn precipitates and the Mg matrix. Journal of Applied Crystallography, 2015, 48, 1745-1752.	1.9	19
47	Sequential double extension twinning in a magnesium alloy: Combined statistical and micromechanical analyses. Acta Materialia, 2015, 96, 333-343.	3.8	51
48	On the selection of extension twin variants with low Schmid factors in a deformed Mg alloy. Acta Materialia, 2015, 83, 17-28.	3.8	145
49	Transmission electron microscopy investigation and interpretation of the morphology and interfacial structure of the â^Šâ€²-Mg54Ag17precipitates in an Mgâ€“Snâ€“Mnâ€“Agâ€“Zn alloy. Journal of Applied Crystallography, 2014, 47, 1676-1687.	1.9	13
50	Prediction of the morphology of Mg32(Al, Zn)49 precipitates in a Mgâ€“Znâ€“Al alloy. Intermetallics, 2013, 39, 34-37.	1.8	22
51	The crystallography of lath-shaped Mg2Sn precipitates in a Mgâ€“Snâ€“Znâ€“Mn alloy. Journal of Alloys and Compounds, 2013, 559, 158-161.	2.8	16
52	Enhanced age-hardening response and microstructure study of an Ag-modified Mgâ€“Snâ€“Zn based alloy. Philosophical Magazine Letters, 2013, 93, 473-480.	0.5	11
53	Investigation on the microstructure of a Ï„-Mg32(Al, Zn)49strengthened Mgâ€“Znâ€“Al alloy with relatively low Zn content. Phase Transitions, 2012, 85, 41-51.	0.6	9
54	Crystallography of Mg₂Sn precipitates with two newly observed orientation relationships in an Mgâ€“Snâ€“Mn alloy. Materials Science and Technology, 2012, 28, 411-414.	0.8	16

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55	Effects of phase composition on the mechanical properties and damping capacities of as-extruded Mgâ€“Znâ€“Yâ€“Zr alloys. Journal of Alloys and Compounds, 2011, 509, 8567-8572.	2.8	104
56	Effects of Zn on the microstructure, mechanical properties, and damping capacity of Mgâ€“Znâ€“Yâ€“Zr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5914-5920.	2.6	61
57	Interpretation of Crystallographic Morphologies of Precipitates in Mg Alloys with a Secondary CCSL Model. Materials Science Forum, 0, 686, 192-196.	0.3	7