Zhiming Shi

List of Publications by Year
in descending order

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43 papers	4,291 citations	304743 22 h-index	265206 42 g-index
44 all docs	44 docs citations	44 times ranked	2423 citing authors

#	Article	IF	Citations
1	Measurement of the corrosion rate of magnesium alloys using Tafel extrapolation. Corrosion Science, 2010, 52, 579-588.	6.6	774
2	Review of Recent Developments in the Field of Magnesium Corrosion. Advanced Engineering Materials, 2015, 17, 400-453.	3.5	595
3	Advances in Mg corrosion and research suggestions. Journal of Magnesium and Alloys, 2013, 1, 177-200.	11.9	397
4	An innovative specimen configuration for the study of Mg corrosion. Corrosion Science, 2011, 53, 226-246.	6.6	368
5	Corrosion of ultra-high-purity Mg in 3.5% NaCl solution saturated with Mg(OH)2. Corrosion Science, 2013, 75, 78-99.	6.6	271
6	Corrosion behaviour in salt spray and in 3.5% NaCl solution saturated with Mg(OH)2 of as-cast and solution heat-treated binary Mgâ€“X alloys: X=Mn, Sn, Ca, Zn, Al, Zr, Si, Sr. Corrosion Science, 2013, 76, 60-97.	6.6	212
7	Review of Mg alloy corrosion rates. Journal of Magnesium and Alloys, 2020, 8, 989-998.	11.9	212
8	Corrosion mechanism and evaluation of anodized magnesium alloys. Corrosion Science, 2014, 85, 126-140.	6.6	206
9	Corrosion behaviour of a nominally high purity Mg ingot produced by permanent mould direct chill casting. Corrosion Science, 2012, 61, 185-207.	6.6	158
10	Viewpoint - Understanding Mg corrosion in the body for biodegradable medical implants. Scripta Materialia, 2018, 154, 92-100.	5.2	156
11	Corrosion behaviour in salt spray and in 3.5% NaCl solution saturated with Mg(OH)2 of as-cast and solution heat-treated binary Mgâ€“RE alloys: RE=Ce, La, Nd, Y, Gd. Corrosion Science, 2013, 76, 98-118.	6.6	143
12	The influence of pH on the corrosion rate of high-purity Mg, AZ91 and ZE41 in bicarbonate buffered Hanks' solution. Corrosion Science, 2015, 101, 182-192.	6.6	114
13	The corrosion performance of anodised magnesium alloys. Corrosion Science, 2006, 48, 3531-3546.	6.6	111
14	Low apparent valence of Mg during corrosion. Corrosion Science, 2014, 88, 434-443.	6.6	62
15	Corrosion performance and mechanical properties of sputter-deposited MgY and MgGd alloys. Corrosion Science, 2014, 78, 43-54.	6.6	55
16	Influence of surface condition on the corrosion of ultra-high-purity Mg alloy wire. Corrosion Science, 2016, 108, 66-75.	6.6	36
17	Investigating Mg Biocorrosion In Vitro: Lessons Learned and Recommendations. Jom, 2019, 71, 1406-1413.	1.9	34
18	Understanding the corrosion behaviour of the magnesium alloys EV31A, WE43B, and ZE41A. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1527-1552.	1.5	33

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19	Anodic hydrogen evolution on Mg. Journal of Magnesium and Alloys, 2021, 9, 2049-2062.	11.9	30
20	Microstructure modification and corrosion resistance enhancement of die-cast Mg-Al-Re alloy by Sr alloying. Journal of Magnesium and Alloys, 2020, 9, 950-950.	11.9	28
21	A cost-effective Fe-rich compositionally complicated alloy with superior high-temperature oxidation resistance. Corrosion Science, 2021, 180, 109190.	6.6	28
22	Understanding the discharge behavior of an ultra-high-purity Mg anode for Mgâ€“air primary batteries. Journal of Materials Chemistry A, 2021, 9, 21387-21401.	10.3	27
23	Effect of vanadium and rare earth microalloying on the hydrogen embrittlement susceptibility of a Fe-18Mn-0.6C TWIP steel studied using the linearly increasing stress test. Corrosion Science, 2021, 185, 109440.	6.6	27
24	Effect of corrosion inhibiting compounds on the corrosion behaviour of pure magnesium and the magnesium alloys EV31A, WE43B and ZE41A. Journal of Magnesium and Alloys, 2021, 9, 432-455.	11.9	21
25	Hydrogen-induced fast fracture in notched 1500 and 1700 MPa class automotive martensitic advanced high-strength steel. Corrosion Science, 2021, 188, 109550.	6.6	21
26	Effect of plastic strain damage on the hydrogen embrittlement of a dual-phase (DP) and a quenching and partitioning (Q&P) advanced high-strength steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 785, 139343.	5.6	20
27	Synergistic inhibitory effects of free nitrous acid and imidazoline derivative on metal corrosion in a simulated water injection system. Water Research, 2020, 184, 116122.	11.3	18
28	Corrosion of Mg alloys EV31A, WE43B, and ZE41A in chlorideâ€•and sulfateâ€containing solutions saturated with magnesium hydroxide. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 956-979.	1.5	17
29	Decreasing microbially influenced metal corrosion using free nitrous acid in a simulated water injection system. Water Research, 2020, 172, 115470.	11.3	17
30	The influence of two common sterilization techniques on the corrosion of Mg and its alloys for biomedical applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 1907-1917.	3.4	16
31	Porous Titanium Scaffolds Fabricated by Metal Injection Moulding for Biomedical Applications. Materials, 2018, 11, 1573.	2.9	16
32	The influence of the protein bovine serum albumin (BSA) on the corrosion of Mg, Zn, and Fe in Zahrinaâ€™s simulated interstitial fluid. Corrosion Science, 2022, 199, 110160.	6.6	10
33	The Corrosion Behavior of Mg5Y in Nominally Distilled Water. Advanced Engineering Materials, 2018, 20, 1700986.	3.5	9
34	Development of microbially influenced corrosion on carbon steel in a simulated water injection system. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1826-1836.	1.5	7
35	Influence of commercial corrosionâ€inhibiting compounds on the atmospheric corrosion of the magnesium alloys EV31A, WE43B, ZE41A and pure magnesium. Materials and Corrosion - Werkstoffe Und Korrosion, 2021, 72, 672-693.	1.5	7
36	Corrosion of porous Ti35Zr28Nb in Hanksâ€™ solution and 3.5â€‰wt% NaCl. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 529-536.	1.5	6

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37	Design, mechanical and degradation requirements of biodegradable metal mesh for pelvic floor reconstruction. Biomaterials Science, 2022, 10, 3371-3392.	5.4	6
38	Effect of cold deformation on the hydrogen permeation in a dual-phase advanced high-strength steel. Electrochimica Acta, 2022, 424, 140619.	5.2	5
39	The influence of phosphorus on the temper embrittlement and hydrogen embrittlement of some dual-phase steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 854, 143379.	5.6	5
40	Influence of hydrogen on the Sâ€“N fatigue of DP1180 advanced high-strength steel. Corrosion Science, 2022, 205, 110465.	6.6	4
41	Hydrogen-induced delayed fracture of a 1180â€¯MPa martensitic advanced high-strength steel under U-bend loading. Materials Today Communications, 2021, 26, 101887.	1.9	3
42	The feasibility and limitation of urine as the electrolyte for primary Mg-air batteries. Ionics, 2021, 27, 2733-2737.	2.4	3
43	Corrosion of Mg Alloys. , 2022, , 46-74.		3