Tao Zhang

List of Publications by Year
in descending order

56 papers	2,786 citations	172457 29 h-index	175258 52 g-index
56 all docs	56 docs citations	56 times ranked	1747 citing authors

#	Article	IF	Citations
1	Corrosion of hot extrusion AZ91 magnesium alloy: I-relation between the microstructure and corrosion behavior. Corrosion Science, 2011, 53, 1960-1968.	6.6	226
2	The role of a zinc phosphate pigment in the corrosion of scratched epoxy-coated steel. Corrosion Science, 2009, 51, 371-379.	6.6	175
3	Corrosion of hot extrusion AZ91 magnesium alloy. Part II: Effect of rare earth element neodymium (Nd) on the corrosion behavior of extruded alloy. Corrosion Science, 2011, 53, 2934-2942.	6.6	170
4	Roles of Î² phase in the corrosion process of AZ91D magnesium alloy. Corrosion Science, 2006, 48, 1249-1264.	6.6	132
5	Influence of nitrogen on corrosion behaviour of high nitrogen martensitic stainless steels manufactured by pressurized metallurgy. Corrosion Science, 2018, 144, 288-300.	6.6	112
6	Effect of hydrostatic pressure on the corrosion behaviour of Niâ€"Crâ€"Moâ€"V high strength steel. Corrosion Science, 2010, 52, 2697-2706.	6.6	110
7	Electrochemical noise analysis of the corrosion of AZ91D magnesium alloy in alkaline chloride solution. Electrochimica Acta, 2007, 53, 561-568.	5.2	108
8	Effect of nitrogen on corrosion behaviour of a novel high nitrogen medium-entropy alloy CrCoNiN manufactured by pressurized metallurgy. Journal of Materials Science and Technology, 2018, 34, 1781-1790.	10.7	102
9	Effect of pitting nucleation on critical pitting temperature of 316L stainless steel by nitric acid passivation. Corrosion Science, 2015, 91, 232-244.	6.6	93
10	Corrosion of pure magnesium under thin electrolyte layers. Electrochimica Acta, 2008, 53, 7921-7931.	5.2	92
11	New understanding of the effect of hydrostatic pressure on the corrosion of Niâ€"Crâ€"Moâ€"V high strength steel. Corrosion Science, 2013, 73, 250-261.	6.6	92
12	A stochastic analysis of the effect of hydrostatic pressure on the pit corrosion of Feâ€"20Cr alloy. Electrochimica Acta, 2009, 54, 3915-3922.	5.2	88
13	Effect of Clâ^'Âon the Properties of the Passive Films Formed on 316L Stainless Steel in Acidic Solution. Journal of Materials Science and Technology, 2014, 30, 253-258.	10.7	83
14	Unveiling the inhibition mechanism of an effective inhibitor for AZ91 Mg alloy. Corrosion Science, 2019, 148, 264-271.	6.6	76
15	Electrochemical noise analysis on the pit corrosion susceptibility of Mgâ€"10Gdâ€"2Yâ€"0.5Zr, AZ91D alloy and pure magnesium using stochastic model. Corrosion Science, 2008, 50, 3500-3507.	6.6	74
16	Effect of microcrystallization on pitting corrosion of pure aluminium. Corrosion Science, 2009, 51, 2151-2157.	6.6	74
17	Why CoCrFeMnNi HEA could not passivate in chloride solution? â€" A novel strategy to significantly improve corrosion resistance of CoCrFeMnNi HEA by N-alloying. Corrosion Science, 2022, 204, 110396.	6.6	62
18	Designing for high corrosion-resistant high nitrogen martensitic stainless steel based on DFT calculation and pressurized metallurgy method. Corrosion Science, 2019, 158, 108081.	6.6	61

#	Article	IF	Citations
19	Laboratory investigation of microbiologically influenced corrosion of 2205 duplex stainless steel by marine Pseudomonas aeruginosa biofilm using electrochemical noise. Corrosion Science, 2018, 143, 281-291.	6.6	55
20	In-situ study of the formation process of stannate conversion coatings on AZ91D magnesium alloy using electrochemical noise. Corrosion Science, 2010, 52, 892-900.	6.6	51
21	Significantly improved corrosion resistance of Mg-15Gd-2Zn-0.39Zr alloys: Effect of heat-treatment. Journal of Materials Science and Technology, 2019, 35, 1644-1654.	10.7	51
22	Nitrogen significantly enhances corrosion resistance of 316L stainless steel in thiosulfate-chloride solution. Corrosion Science, 2020, 174, 108792.	6.6	49
23	Effect of alternating voltage treatment on the corrosion resistance of pure magnesium. Corrosion Science, 2009, 51, 1772-1779.	6.6	48
24	Failure behavior of nano-SiO2 fillers epoxy coating under hydrostatic pressure. Electrochimica Acta, 2012, 62, 42-50.	5.2	44
25	Modeling the corrosion behavior of Ni-Cr-Mo-V high strength steel in the simulated deep sea environments using design of experiment and artificial neural network. Journal of Materials Science and Technology, 2019, 35, 168-175.	10.7	44
26	Influence of second phase on corrosion performance and formation mechanism of PEO coating on AZ91 Mg alloy. Journal of Alloys and Compounds, 2017, 718, 92-103.	5.5	42
27	Relationship between Microstructure and Corrosion Behavior of Martensitic High Nitrogen Stainless Steel 30Cr15Mo1N at Different Austenitizing Temperatures. Materials, 2017, 10, 861.	2.9	34
28	In situ study of dew point corrosion by electrochemical measurement. Corrosion Science, 2013, 71, 62-71.	6.6	33
29	A new criterion to determine the critical pitting temperature (CPT) based on electrochemical noise measurement. Corrosion Science, 2012, 58, 202-210.	6.6	32
30	Study on the effect of mischmetal (La,Ce) on the micro-galvanic corrosion of AZ91 alloy using multiscale methods. Journal of Alloys and Compounds, 2019, 778, 427-438.	5.5	32
31	Effects of hydrogen on the corrosion of pure magnesium. Electrochimica Acta, 2006, 52, 1323-1328.	5.2	28
32	Effect of SiC Particulates on the Corrosion Behavior of Extruded AZ91/SiCp Composites during the Early Stage of Exposure. Journal of the Electrochemical Society, 2015, 162, C754-C766.	2.9	28
33	Effect of alternating voltage passivation on the corrosion resistance of duplex stainless steel. Journal of Applied Electrochemistry, 2009, 39, 737-745.	2.9	24
34	Effect of alternating voltage treatment on the microstructure and corrosion resistance of stannate conversion coating on AZ91D alloy. Corrosion Science, 2009, 51, 2685-2693.	6.6	23
35	The effect of hot extrusion on the microstructure and anti-corrosion performance of LDHs conversion coating on AZ91D magnesium alloy. Journal of Alloys and Compounds, 2019, 788, 756-767.	5.5	23
36	Interaction effect between different constituents in silicate-containing electrolyte on PEO coatings on Mg alloy. Surface and Coatings Technology, 2016, 307, 825-836.	4.8	22

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37	Incorporation of LDH nanocontainers into plasma electrolytic oxidation coatings on Mg alloy. Journal of Magnesium and Alloys, 2023, 11, 1236-1246.	11.9	19
38	Investigation of the failure mechanism of the TG-201 inhibitor: Promoting the synergistic effect of HP-13Cr stainless steel during the well completion. Corrosion Science, 2020, 166, 108448.	6.6	17
39	Chemically depleting the noble impurities from AZ91-T4 magnesium alloy: A new and efficient pretreatment method to improve the corrosion resistance of phosphate conversion coatings. Corrosion Science, 2021, 191, 109725.	6.6	16
40	Experimental and numerical studies on corrosion failure of a three-limb pipe in natural gas field. Engineering Failure Analysis, 2016, 62, 21-38.	4.0	13
41	Influence of Rare Earth Element (Y) on Microstructure and Corrosion Behavior of Hot Extrusion AZ91 Magnesium Alloy. Materials, 2020, 13, 3651.	2.9	13
42	Electrochemically assisted silanization treatment of an aluminum alloy under oxygen pressure for corrosion protection. New Journal of Chemistry, 2018, 42, 9771-9782.	2.8	12
43	Modeling of Pitting Corrosion Damage Based on Electrochemical and Statistical Methods. Journal of the Electrochemical Society, 2019, 166, C539-C549.	2.9	12
44	High Pitting Corrosion Resistance of Pure Aluminum with Nanoscale Twins. Journal of the Electrochemical Society, 2009, 156, C240.	2.9	11
45	Electrochemical noise analysis on the crevice corrosion behavior of Niâ€“Crâ€“Moâ€“V high strength steel using recurrence plots. Journal of Applied Electrochemistry, 2011, 41, 289-298.	2.9	11
46	Effect of alternating voltage treatment on corrosion resistance of AZ91D magnesium alloy. Materials and Corrosion - Werkstoffe Und Korrosion, 2012, 63, 505-516.	1.5	10
47	A novel design of electrochemical noise configuration based on embedded-electrodes for in-situ evaluation of epoxy coating under marine alternating hydrostatic pressure. Progress in Organic Coatings, 2019, 131, 346-356.	3.9	10
48	The development of a mechanistic-chemometrics model with multi-degree of freedom for pitting corrosion of HP-13Cr stainless steel under extremely oilfield environments. Corrosion Science, 2021, 181, 109237.	6.6	9
49	Modeling of the Critical Pitting Temperature between the Laboratory-Scale Specimen and the Large-Scale Specimen. Journal of the Electrochemical Society, 2018, 165, C328-C333.	2.9	8
50	Effect of hydrostatic pressure on the nature of passive film of pure nickel. Materials and Corrosion - Werkstoffe Und Korrosion, 2011, 62, 269-274.	1.5	7
51	A stochastic analysis of the effect of magnetic field on the pitting corrosion susceptibility of pure magnesium. Materials and Corrosion - Werkstoffe Und Korrosion, 2010, 61, 306-312.	1.5	6
52	Corrosion behavior of Mgâ€‑10Gdâ€‑2Yâ€‑0.4Zr alloy under thin electrolyte layers. Materials and Corrosion - Werkstoffe Und Korrosion, 2010, 61, 388-397.	1.5	5
53	Quantitative Modeling for Corrosion Behavior in Complex Coupled Environment by Response Surface Methodology. Acta Metallurgica Sinica (English Letters), 2015, 28, 994-1001.	2.9	5
54	Effects of Gd and Nd on microstructure, corrosion behavior, and electrochemical performance of Mg-Y-based anodes for magnesium air batteries. Journal of Applied Electrochemistry, 2022, 52, 1433-1447.	2.9	5

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55	Effect of the calcareous deposits on the cathodic protection potential of 10Ni5CrMoV highâ€strength steel in a deepâ€sea environment by using the response surface methodology. Materials and Corrosion - Werkstoffe Und Korrosion, 2021, 72, 720-731.	1.5	3
56	Reply to comment on â€œNew understanding of the effect of hydrostatic pressure on the corrosion of Ni-Cr-Mo-V high strength steelâ€• Corrosion Science, 2015, 100, 674-676.	6.6	1