Ali Davoodi

List of Publications by Year
in descending order

85 papers	3,054 citations	136885 32 h-index	168321 53 g-index
86 all docs	86 docs citations	86 times ranked	2356 citing authors

#	Article	IF	Citations
1	Electrochemical and quantum chemical assessment of two organic compounds from pyridine derivatives as corrosion inhibitors for mild steel in HCl solution under stagnant condition and hydrodynamic flow. Corrosion Science, 2014, 78, 138-150.	3.0	250
2	Integrated AFM and SECM for in situ studies of localized corrosion of Al alloys. Electrochimica Acta, 2007, 52, 7697-7705.	2.6	124
3	The Role of Intermetallic Particles in Localized Corrosion of an Aluminum Alloy Studied by SKPFM and Integrated AFM/SECM. Journal of the Electrochemical Society, 2008, 155, C211.	1.3	110
4	A comparative H2S corrosion study of 304L and 316L stainless steels in acidic media. Corrosion Science, 2011, 53, 399-408.	3.0	103
5	In Situ Investigation of Localized Corrosion of Aluminum Alloys in Chloride Solution Using Integrated EC-AFM/SECM Techniques. Electrochemical and Solid-State Letters, 2005, 8, B21.	2.2	88
6	Correlation between critical pitting temperature and degree of sensitisation on alloy 2205 duplex stainless steel. Corrosion Science, 2011, 53, 637-644.	3.0	88
7	Improving corrosion resistance of steel rebars in concrete with marble and granite waste dust as partial cement replacement. Construction and Building Materials, 2018, 185, 110-119.	3.2	86
8	Theoretical and electrochemical assessment of inhibitive behavior of some thiophenol derivatives on mild steel in HCl. Corrosion Science, 2011, 53, 3058-3067.	3.0	82
9	Critical pitting temperature (CPT) assessment of 2205 duplex stainless steel in 0.1M NaCl at various molybdate concentrations. Corrosion Science, 2011, 53, 513-522.	3.0	81
10	Microstructure and corrosion characterization of the interfacial region in dissimilar friction stir welded AA5083 to AA7023. Corrosion Science, 2016, 107, 133-144.	3.0	81
11	Mechanical and durability behaviour of concrete with granite waste dust as partial cement replacement under adverse exposure conditions. Construction and Building Materials, 2019, 194, 143-152.	3.2	80
12	Water-base acrylic terpolymer as a corrosion inhibitor for SAE1018 in simulated sour petroleum solution in stagnant and hydrodynamic conditions. Corrosion Science, 2012, 64, 44-54.	3.0	78
13	The role of constituent phases on corrosion initiation of NiAl bronze in acidic media studied by SEMâ€“EDS, AFM and SKPFM. Corrosion Science, 2014, 80, 104-110.	3.0	78
14	Inhibitive effect of synthesized 2-(3-pyridyl)-3,4-dihydro-4-quinazolinone as a corrosion inhibitor for mild steel in hydrochloric acid. Materials Chemistry and Physics, 2011, 126, 873-879.	2.0	76
15	EIS assessment of critical pitting temperature of 2205 duplex stainless steel in acidified ferric chloride solution. Corrosion Science, 2014, 80, 197-204.	3.0	75
16	Critical pitting temperature dependence of 2205 duplex stainless steel on dichromate ion concentration in chloride medium. Corrosion Science, 2011, 53, 1278-1287.	3.0	73
17	Establishing a correlation between interfacial microstructures and corrosion initiation sites in Al/Cu joints by SEMâ€“EDS and AFMâ€“SKPFM. Corrosion Science, 2014, 79, 148-158.	3.0	70
18	Probing of local dissolution of Al-alloys in chloride solutions by AFM and SECM. Applied Surface Science, 2006, 252, 5499-5503.	3.1	66

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19	Correlation of surface Volta potential with galvanic corrosion initiation sites in solid-state welded Ti-Cu bimetal using AFM-SKPFM. Corrosion Science, 2018, 140, 30-39.	3.0	66
20	Application of statistical analysis to evaluate the corrosion resistance of steel rebars embedded in concrete with marble and granite waste dust. Journal of Cleaner Production, 2019, 210, 837-846.	4.6	63
21	Corrosion evaluation of multi-pass welded nickelâ€“aluminum bronze alloy in 3.5% sodium chloride solution: A restorative application of gas tungsten arc welding process. Materials & Design, 2014, 58, 346-356.	5.1	61
22	Microstructural and mechanical properties of friction stir welded Cuâ€“30Zn brass alloy at various feed speeds: Influence of stir bands. Materials & Design, 2011, 32, 2749-2755.	5.1	57
23	Electrochemical and quantum chemical study of Thiazolo-pyrimidine derivatives as corrosion inhibitors on mild steel in 1M H2SO4. Journal of Industrial and Engineering Chemistry, 2015, 25, 112-121.	2.9	51
24	Microscale investigation of the correlation between microstructure and galvanic corrosion of low alloy steel A508 and its welded 309/308L stainless steel overlayer. Corrosion Science, 2019, 154, 49-60.	3.0	50
25	Inhibitive effect of Clopidogrel as a green corrosion inhibitor for mild steel; statistical modeling and quantum Monte Carlo simulation studies. Journal of Molecular Liquids, 2018, 269, 193-202.	2.3	49
26	Effect of thermomechanical parameters on dynamically recrystallized grain size of AZ91 magnesium alloy. Journal of Alloys and Compounds, 2011, 509, 2703-2708.	2.8	48
27	Tuning DOS measuring parameters based on double-loop EPR in H2SO4 containing KSCN by Taguchi method. Corrosion Science, 2010, 52, 2653-2660.	3.0	41
28	Experimental and computational chemistry studies of two imidazole-based compounds as corrosion inhibitors for mild steel in HCl solution. Journal of Molecular Liquids, 2019, 286, 110915.	2.3	40
29	Multianalytical and In Situ Studies of Localized Corrosion of EN AW-3003 Alloyâ€”Influence of Intermetallic Particles. Journal of the Electrochemical Society, 2008, 155, C138.	1.3	37
30	Theoretical and experimental investigations on corrosion control of 65Cuâ€“35Zn brass in nitric acid by two thiophenol derivatives. Applied Surface Science, 2015, 332, 384-392.	3.1	37
31	Facile synthesis and investigation of 1,8-dioxooctahydroxanthene derivatives as corrosion inhibitors for mild steel in hydrochloric acid solution. New Journal of Chemistry, 2016, 40, 1278-1286.	1.4	37
32	Evaluation of corrosion resistance of polypyrrole/functionalized multi-walled carbon nanotubes composite coatings on 60Cuâ€“40Zn brass alloy. Progress in Organic Coatings, 2015, 88, 106-115.	1.9	33
33	Morphology modification of electrodeposited superhydrophobic nickel coating for enhanced corrosion performance studied by AFM, SEM-EDS and electrochemical measurements. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 547, 81-94.	2.3	33
34	Correlation between the histogram and power spectral density analysis of AFM and SKPFM images in an AA7023/AA5083 FSW joint. Journal of Alloys and Compounds, 2018, 744, 174-181.	2.8	30
35	A new method to determine the synergistic effects of area ratio and microstructure on the galvanic corrosion of LAS A508/309 L/308 L SS dissimilar metals weld. Journal of Materials Science and Technology, 2021, 78, 38-50.	5.6	30
36	Characterization of screw dislocation-driven growth in nickel micro-nanostructure electrodeposition process by AFM. Materials Letters, 2018, 210, 341-344.	1.3	28

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37	Developing an AFM-Based SECM System; Instrumental Setup, SECM Simulation, Characterization, and Calibration. Journal of the Electrochemical Society, 2008, 155, C474.	1.3	26
38	Fabrication of microâ€“nano-roughened surface with superhydrophobic character on an aluminium alloy surface by a facile chemical etching process. Bulletin of Materials Science, 2020, 43, 1.	0.8	26
39	Post-weld heat treatment influence on galvanic corrosion of GTAW of 17-4PH stainless steel in 3Â·5%NaCl. Corrosion Engineering Science and Technology, 2011, 46, 415-424.	0.7	25
40	Compatibility of fabrication of superhydrophobic surfaces and addition of inhibitors in designing corrosion prevention strategies for electrodeposited nickel in saline solutions. Applied Surface Science, 2019, 493, 1243-1254.	3.1	25
41	Characterization of the passive layer on ferrite and austenite phases of super duplex stainless steel. Applied Surface Science, 2019, 496, 143634.	3.1	25
42	Effect of NH4Cl on the microstructure, wettability and corrosion behavior of electrodeposited Niâ€“Zn coatings with hierarchical nano/microstructure. Surface and Coatings Technology, 2020, 394, 125825.	2.2	25
43	Electrochemical and statistical analyses of the combined effect of air-entraining admixture and micro-silica on corrosion of reinforced concrete. Construction and Building Materials, 2020, 262, 120768.	3.2	22
44	Electrochemical corrosion behavior of Pbâ€“Caâ€“Snâ€“Sm grid alloy in H2SO4 solution. Journal of Alloys and Compounds, 2015, 652, 172-178.	2.8	21
45	Enhanced protective properties of epoxy/polyaniline-camphorsulfonate nanocomposite coating on an ultrafine-grained metallic surface. Applied Surface Science, 2016, 376, 121-132.	3.1	21
46	Synergistic effect of a crystal modifier and screw dislocation step defects on the formation mechanism of nickel micro-nanocone. Materials Letters, 2019, 245, 68-72.	1.3	21
47	An insight into the influence of morphological and compositional heterogeneity of an individual intermetallic particle on aluminium alloy corrosion initiation. Materials and Corrosion - Werkstoffe Und Korrosion, 2013, 64, 195-198.	0.8	20
48	Shape evolution of water and saline droplets during icing/melting cycles on superhydrophobic surface. Surface and Coatings Technology, 2018, 333, 201-209.	2.2	20
49	Insights into Galvanic Corrosion Behavior of Ti-Cu Dissimilar Joint: Effect of Microstructure and Volta Potential. Materials, 2018, 11, 1820.	1.3	17
50	TiO2/Cu2O coupled oxide films in Clâ¯ ion containing solution: Volta potential and electronic properties characterization by scanning probe microscopy. Materials Chemistry and Physics, 2018, 212, 403-407.	2.0	16
51	Improving the corrosion behaviour of powder metallurgical 316L alloy by prepassivation in 20% nitric acid. Corrosion Science, 2011, 53, 135-146.	3.0	15
52	Effect of Substrate Grain Size on Structural and Corrosion Properties of Electrodeposited Nickel Layer Protected with Self-Assembled Film of Stearic Acid. Materials, 2020, 13, 2052.	1.3	15
53	Tuning surface wettability of aluminum surface and its correlation with short and long term corrosion resistance in saline solutions. Surface and Coatings Technology, 2022, 429, 127950.	2.2	15
54	The effect of grid configurations on potential and current density distributions in positive plate of leadâ€“acid battery via numerical modeling. Electrochimica Acta, 2014, 115, 189-196.	2.6	14

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55	Electrochemical Characterization of Natural Chalcopyrite Dissolution in Sulfuric Acid Solution in Presence of Peroxydisulfate. Electrochimica Acta, 2016, 212, 921-928.	2.6	14
56	Corrosion behavior and optimization of airâ€entrained reinforced concrete, incorporating microsilica. Structural Concrete, 2018, 19, 1472-1480.	1.5	13
57	Effect of hydrogen peroxide on bovine serum albumin adsorption on Ti6Al4V alloy: A scanning Kelvin probe force microscopy study. Applied Surface Science, 2021, 563, 150364.	3.1	13
58	Analysis of internal cracks in Type 304 austenitic stainless steel cladding wall of regenerator column in amine treating unit. Engineering Failure Analysis, 2018, 90, 440-450.	1.8	12
59	Encapsulation of Cerium Nitrate within Poly(urea-formaldehyde) Microcapsules for the Development of Self-Healing Epoxy-Based Coating. ACS Omega, 2021, 6, 31147-31153.	1.6	12
60	Selective Acidic Leaching of Spent Zinc-Carbon Batteries Followed by Zinc Electrowinning. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 38-47.	1.0	10
61	Studies on corrosion-inhibiting performance of antithyroid drugs on mild steel in hydrochloric acid. Research on Chemical Intermediates, 2015, 41, 4255-4272.	1.3	9
62	Recycled Cobalt from Spent Li-ion Batteries as a Superhydrophobic Coating for Corrosion Protection of Plain Carbon Steel. Materials, 2019, 12, 90.	1.3	9
63	Corrosion Inhibitive Evaluation of an Environmentally Friendly Water-Base Acrylic Terpolymer on Mild Steel in Hydrochloric Acid Media. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5493-5504.	1.1	8
64	The Response Surface Method as an Experimental Design Technique to Explore and Model the Performance of Corrosion Inhibitors. Corrosion, 2015, 71, 819-827.	0.5	8
65	Galvanic corrosion behavior of plain carbon steel-B4C composite in 3.5% NaCl solution with electrochemical noise. Journal of Central South University, 2017, 24, 1-8.	1.2	8
66	Uniform nucleation of zincate layer through the optimized etching process to prevent failure in electroless plating on 2024 aluminum alloy. Engineering Failure Analysis, 2021, 124, 105326.	1.8	8
67	The effect of homogenization on microstructure and hot ductility behaviour of AZ91 magnesium alloy. Metallic Materials, 2010, 48, 277-Ã¾487.	0.2	8
68	Minuscule device for hydrogen generation/electrical energy collection system on aluminum alloy surface. International Journal of Hydrogen Energy, 2011, 36, 2855-2859.	3.8	7
69	New High-Resolution Solution for Measuring Degree of Sensitization of Duplex Stainless Steel 2205 Using Double-Loop Electrochemical Potentiodynamic Reactivation Technique. Corrosion, 2013, 69, 230-242.	0.5	7
70	3D modeling and control of fuel sloshing in a spacecraft. , 2017, , .		7
71	Galvanic corrosion of gas tungsten arc repair welds in 17-4PH stainless steel in 3Â·5% NaCl solution. Corrosion Engineering Science and Technology, 2011, 46, 406-414.	0.7	6
72	Microstructure and corrosion behaviour of plain carbon steelâ€“B‹sub›4‹/sub›C composite produced by GTAW method in 3Â·5 wt-%NaCl solution. Corrosion Engineering Science and Technology, 2014, 49, 55-65.	0.7	6

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73	Rapid diagnosis of mycobacterium tuberculosis with electrical impedance spectroscopy in suspensions using interdigitated microelectrode. Journal of Analytical Chemistry, 2016, 71, 676-684.	0.4	6
74	Characterization of the Native Passive Film on Ferrite and Austenite Phases of Sensitized 2205 Duplex Stainless Steel. Journal of the Electrochemical Society, 2019, 166, C609-C616.	1.3	6
75	Is cotoneaster manna improving the treatment of neonatal jaundice?. Bangladesh Journal of Pharmacology, 2018, 13, 168-178.	0.1	5
76	Effect of Fluid Flow on the Corrosion Performance of as-Cast and Heat-Treated Nickel Aluminum Bronze Alloy (UNS C95800) in Saline Solution. Corrosion and Materials Degradation, 2021, 2, 61-77.	1.0	4
77	Exploring mechano-bactericidal nature of Psalmocharias cicadas wings: an analytical nanotopology investigation based on atomic force microscopy characterization. Surfaces and Interfaces, 2021, 26, 101407.	1.5	4
78	Imitating seasonal temperature fluctuations for the H2S corrosion of 304L and 316L austenitic stainless steels. Metals and Materials International, 2013, 19, 731-740.	1.8	3
79	Water-based acrylic copolymer as an environment-friendly corrosion inhibitor onto carbon steel in 1ÂM H2SO4 in static and dynamic conditions. International Journal of Mechanical and Materials Engineering, 2014, 9, .	1.1	3
80	Microstructure characterization and electrochemical corrosion behavior of Zn and Zn/Mg alloys in H2SO4 solution. Journal of Central South University, 2015, 22, 2007-2013.	1.2	3
81	Corrosion Performance of Steel Rebars in the Roof of a 65-Year-Old Underground Reinforced Concrete Water-Storage Tank. Journal of Performance of Constructed Facilities, 2020, 34, .	1.0	3
82	The influence of cold plastic deformation on passivity of Ti-6Al-4V alloy studied by electrochemical and local probing techniques. Corrosion, 2015, , .	0.5	1
83	Fabrication and electrochemical behavior of plain carbon Steel-B4C-W Composite in 3.5 wt % NaCl solution. Russian Journal of Non-Ferrous Metals, 2015, 56, 461-468.	0.2	1
84	On the material characteristics of a high carbon cast austenitic stainless steel after solution annealing followed by quenching in a CNT nanofluid. International Journal of Materials Research, 2019, 110, 570-576.	0.1	1
85	Electrochemical Study of Corrosion Inhibition Behavior of Dehydroabietylamine Against Mild Steel in 1 M HCl. Protection of Metals and Physical Chemistry of Surfaces, 0, , 1.	0.3	0