Guoan Zhang

List of Publications by Year
in descending order

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60 papers	4,525 citations	71102 41 h-index	128289 60 g-index
60 all docs	60 docs citations	60 times ranked	3030 citing authors

#	Article	IF	Citations
1	On the fundamentals of electrochemical corrosion of X65 steel in CO2-containing formation water in the presence of acetic acid in petroleum production. Corrosion Science, 2009, 51, 87-94.	6.6	213
2	The corrosion behavior and mechanism of carbon steel induced by extracellular polymeric substances of iron-oxidizing bacteria. Corrosion Science, 2017, 114, 102-111.	6.6	169
3	Electrochemical corrosion behavior of carbon steel under dynamic high pressure H2S/CO2 environment. Corrosion Science, 2012, 65, 37-47.	6.6	153
4	Erosionâ€“corrosion at different locations of X65 carbon steel elbow. Corrosion Science, 2014, 85, 318-330.	6.6	153
5	Effect of guanidinium on mesoscopic perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 73-78.	10.3	146
6	A Novel Magnesium Metalâ€“Organic Framework as a Multiresponsive Luminescent Sensor for Fe(III) Ions, Pesticides, and Antibiotics with High Selectivity and Sensitivity. Inorganic Chemistry, 2018, 57, 13330-13340.	4.0	142
7	Micro-electrochemical characterization and Mottâ€“Schottky analysis of corrosion of welded X70 pipeline steel in carbonate/bicarbonate solution. Electrochimica Acta, 2009, 55, 316-324.	5.2	140
8	Corrosion inhibition of carbon steel in CO2-containing oilfield produced water in the presence of iron-oxidizing bacteria and inhibitors. Corrosion Science, 2016, 105, 149-160.	6.6	128
9	Evaluation of inhibition efficiency of an imidazoline derivative in CO2-containing aqueous solution. Materials Chemistry and Physics, 2007, 105, 331-340.	4.0	124
10	Localized corrosion of carbon steel in a CO2-saturated oilfield formation water. Electrochimica Acta, 2011, 56, 1676-1685.	5.2	122
11	Corrosion of X65 steel in CO2-saturated oilfield formation water in the absence and presence of acetic acid. Corrosion Science, 2009, 51, 1589-1595.	6.6	120
12	The effect of magneticfield on biomineralization and corrosion behavior of carbon steel induced by iron-oxidizing bacteria. Corrosion Science, 2016, 102, 93-102.	6.6	118
13	Mechanical properties of CO2 corrosion product scales and their relationship to corrosion rates. Corrosion Science, 2008, 50, 2796-2803.	6.6	115
14	The crevice corrosion behaviour of stainless steel in sodium chloride solution. Corrosion Science, 2011, 53, 4065-4072.	6.6	114
15	Inhibitive and adsorption behavior of thiadiazole derivatives on carbon steel corrosion in CO2-saturated oilfield produced water: Effect of substituent group on efficiency. Journal of Colloid and Interface Science, 2020, 572, 91-106.	9.4	114
16	From a ZIF-8 polyhedron to three-dimensional nitrogen doped hierarchical porous carbon: an efficient electrocatalyst for the oxygen reduction reaction. Journal of Materials Chemistry A, 2018, 6, 10731-10739.	10.3	111
17	Two novel chitosan derivatives as high efficient eco-friendly inhibitors for the corrosion of mild steel in acidic solution. Corrosion Science, 2020, 164, 108346.	6.6	108
18	Corrosion of X80 pipeline steel under sulfate-reducing bacterium biofilms in simulated CO2-saturated oilfield produced water with carbon source starvation. Corrosion Science, 2018, 136, 47-59.	6.6	104

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19	Corrosion inhibition and anti-bacterial efficacy of benzalkonium chloride in artificial CO2-saturated oilfield produced water. Corrosion Science, 2017, 117, 24-34.	6.6	102
20	A carbazole-functionalized metalâ€“organic framework for efficient detection of antibiotics, pesticides and nitroaromatic compounds. Dalton Transactions, 2019, 48, 2683-2691.	3.3	99
21	Two amino acid derivatives as high efficient green inhibitors for the corrosion of carbon steel in CO2-saturated formation water. Corrosion Science, 2021, 189, 109596.	6.6	94
22	Study of corrosion behavior and mechanism of carbon steel in the presence of Chlorella vulgaris. Corrosion Science, 2015, 101, 84-93.	6.6	93
23	A study of flow accelerated corrosion at elbow of carbon steel pipeline by array electrode and computational fluid dynamics simulation. Corrosion Science, 2013, 77, 334-341.	6.6	89
24	Effect of O2 and H2S impurities on the corrosion behavior of X65 steel in water-saturated supercritical CO2 system. Corrosion Science, 2016, 107, 31-40.	6.6	89
25	Corrosion behaviour of N80 carbon steel in formation water under dynamic supercritical CO 2 condition. Corrosion Science, 2017, 120, 107-120.	6.6	89
26	Galvanic corrosion behavior of deposit-covered and uncovered carbon steel. Corrosion Science, 2014, 86, 202-212.	6.6	88
27	Corrosion behaviour of X65 carbon steel in supercritical-CO 2 containing H 2 O and O 2 in carbon capture and storage (CCS) technology. Corrosion Science, 2017, 118, 118-128.	6.6	86
28	Inhibition effect of thioureidoimidazoline inhibitor for the flow accelerated corrosion of an elbow. Corrosion Science, 2015, 90, 202-215.	6.6	81
29	Electrochemical characterization and computational fluid dynamics simulation of flow-accelerated corrosion of X65 steel in a CO2-saturated oilfield formation water. Corrosion Science, 2010, 52, 2716-2724.	6.6	80
30	Investigation of erosionâ€“corrosion of 3003 aluminum alloy in ethylene glycolâ€“water solution by impingement jet system. Corrosion Science, 2009, 51, 283-290.	6.6	78
31	Dextran derivatives as highly efficient green corrosion inhibitors for carbon steel in CO2-saturated oilfield produced water: Experimental and theoretical approaches. Chemical Engineering Journal, 2021, 424, 130519.	12.7	75
32	Inhibition effect of imidazoline inhibitor on the crevice corrosion of N80 carbon steel in the CO 2 -saturated NaCl solution containing acetic acid. Corrosion Science, 2017, 126, 127-141.	6.6	65
33	Semiconductivities of passive films formed on stainless steel bend under erosion-corrosion conditions. Corrosion Science, 2018, 144, 258-265.	6.6	65
34	Conductive porous sponge-like ionic liquid-graphene assembly decorated with nanosized polyaniline as active electrode material for supercapacitor. Journal of Power Sources, 2016, 302, 92-97.	7.8	63
35	Real-time tracking of hydrogen peroxide secreted by live cells using MnO2 nanoparticles intercalated layered doubled hydroxide nanohybrids. Analytica Chimica Acta, 2015, 898, 34-41.	5.4	50
36	Benzimidazole derivatives as novel inhibitors for the corrosion of mild steel in acidic solution: Experimental and theoretical studies. Journal of Molecular Liquids, 2019, 278, 413-427.	4.9	50

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37	Two novel thiadiazole derivatives as highly efficient inhibitors for the corrosion of mild steel in the CO2-saturated oilfield produced water. Journal of the Taiwan Institute of Chemical Engineers, 2019, 96, 588-598.	5.3	47
38	Galvanic corrosion between N80 carbon steel and 13Cr stainless steel under supercritical CO2 conditions. Corrosion Science, 2019, 147, 260-272.	6.6	46
39	Corrosion behaviour of 13Cr stainless steel under stress and crevice in 3.5 wt.% NaCl solution. Corrosion Science, 2020, 163, 108290.	6.6	45
40	Effective corrosion inhibition of mild steel by eco-friendly thiourea functionalized glucosamine derivatives in acidic solution. Journal of Colloid and Interface Science, 2021, 585, 355-367.	9.4	42
41	Comparison of the synergistic inhibition mechanism of two eco-friendly amino acids combined corrosion inhibitors for carbon steel pipelines in oil and gas production. Applied Surface Science, 2022, 583, 152559.	6.1	42
42	Inhibitive effects of inhibitors on the galvanic corrosion between N80 carbon steel and 13Cr stainless steel under dynamic supercritical CO2 conditions. Corrosion Science, 2019, 146, 121-133.	6.6	41
43	Erosion-corrosion of stainless steel at different locations of a 90Â° elbow. Corrosion Science, 2016, 111, 72-83.	6.6	40
44	Effect of benzyl substitution at different sites on the inhibition performance of pyrimidine derivatives for mild steel in highly acidic solution. Journal of the Taiwan Institute of Chemical Engineers, 2019, 95, 541-554.	5.3	40
45	In-depth insight into the inhibition mechanism of pyrimidine derivatives on the corrosion of carbon steel in CO2-containing environment based on experiments and theoretical calculations. Corrosion Science, 2021, 181, 109236.	6.6	40
46	N, S co-doped carbon spheres with highly dispersed CoO as non-precious metal catalyst for oxygen reduction reaction. Journal of Power Sources, 2017, 360, 106-113.	7.8	36
47	Crevice corrosion of N80 carbon steel in CO 2 -saturated environment containing acetic acid. Corrosion Science, 2016, 112, 426-437.	6.6	35
48	Metal-organic framework derived coralline-like non-precious metal catalyst for highly efficient oxygen reduction reaction. Carbon, 2018, 132, 172-180.	10.3	33
49	Hierarchical nanostructured noble metal/metal oxide/graphene-coated carbon fiber: in situ electrochemical synthesis and use as microelectrode for real-time molecular detection of cancer cells. Analytical and Bioanalytical Chemistry, 2015, 407, 8129-8136.	3.7	32
50	Synergistic effect of stress and crevice on the corrosion of N80 carbon steel in the CO 2 -saturated NaCl solution containing acetic acid. Corrosion Science, 2017, 123, 228-242.	6.6	31
51	The corrosion of X52 steel at an elbow of loop system based on array electrode technology. Materials Chemistry and Physics, 2016, 181, 312-320.	4.0	28
52	The corrosion promoting mechanism of Aspergillus niger on 5083 aluminum alloy and inhibition performance of miconazole nitrate. Corrosion Science, 2020, 176, 108930.	6.6	25
53	The role of acetic acid or H+ in initiating crevice corrosion of N80 carbon steel in CO2-saturated NaCl solution. Corrosion Science, 2017, 128, 9-22.	6.6	24
54	Inhibition of the erosion-corrosion of a 90Â° low alloy steel bend. Journal of Alloys and Compounds, 2017, 724, 827-840.	5.5	15

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55	A numerical model based on finite element method for predicting the corrosion of carbon steel under supercritical CO2 conditions. Chemical Engineering Research and Design, 2021, 149, 866-884.	5.6	13
56	Passivity of 13Cr Stainless Steel in 1% NaCl Solution under Dynamic Supercritical CO₂ Conditions. Industrial & Engineering Chemistry Research, 2018, 57, 8718-8728.	3.7	12
57	Effect of Hydrodynamics on the Inhibition Effect of Thioureido Imidazoline Inhibitor for the Flow Accelerated Corrosion of X65 Pipeline Steel. Corrosion, 2016, 72, 598-614.	1.1	10
58	Purine derivatives as high efficient eco-friendly inhibitors for the corrosion of mild steel in acidic medium: Experimental and theoretical calculations. Journal of Molecular Liquids, 2021, 323, 114809.	4.9	10
59	Interaction between crevice and galvanic corrosion of X65 carbon steel in the CO2-saturated NaCl solution under the coupling of crevice and galvanic effects. Journal of Electroanalytical Chemistry, 2022, 918, 116482.	3.8	6
60	Study of Flow-Assisted Corrosion of AZ91D Magnesium Alloy in Loop System Based on Array Electrode Technology. Journal of Chemistry, 2015, 2015, 1-8.	1.9	2