

# 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	Comparison of the synergistic inhibition mechanism of two eco-friendly amino acids combined corrosion inhibitors for carbon steel pipelines in oil and gas production. <i>Applied Surface Science</i> , 2022, 583, 152559.	6.1	42
2	Interaction between crevice and galvanic corrosion of X65 carbon steel in the CO <sub>2</sub> -saturated NaCl solution under the coupling of crevice and galvanic effects. <i>Journal of Electroanalytical Chemistry</i> , 2022, 918, 116482.	3.8	6
3	Effective corrosion inhibition of mild steel by eco-friendly thiourea functionalized glucosamine derivatives in acidic solution. <i>Journal of Colloid and Interface Science</i> , 2021, 585, 355-367.	9.4	42
4	Purine derivatives as high efficient eco-friendly inhibitors for the corrosion of mild steel in acidic medium: Experimental and theoretical calculations. <i>Journal of Molecular Liquids</i> , 2021, 323, 114809.	4.9	10
5	In-depth insight into the inhibition mechanism of pyrimidine derivatives on the corrosion of carbon steel in CO <sub>2</sub> -containing environment based on experiments and theoretical calculations. <i>Corrosion Science</i> , 2021, 181, 109236.	6.6	40
6	A numerical model based on finite element method for predicting the corrosion of carbon steel under supercritical CO <sub>2</sub> conditions. <i>Chemical Engineering Research and Design</i> , 2021, 149, 866-884.	5.6	13
7	Two amino acid derivatives as high efficient green inhibitors for the corrosion of carbon steel in CO <sub>2</sub> -saturated formation water. <i>Corrosion Science</i> , 2021, 189, 109596.	6.6	94
8	Dextran derivatives as highly efficient green corrosion inhibitors for carbon steel in CO <sub>2</sub> -saturated oilfield produced water: Experimental and theoretical approaches. <i>Chemical Engineering Journal</i> , 2021, 424, 130519.	12.7	75
9	Corrosion behaviour of 13Cr stainless steel under stress and crevice in 3.5 wt.% NaCl solution. <i>Corrosion Science</i> , 2020, 163, 108290.	6.6	45
10	Two novel chitosan derivatives as high efficient eco-friendly inhibitors for the corrosion of mild steel in acidic solution. <i>Corrosion Science</i> , 2020, 164, 108346.	6.6	108
11	The corrosion promoting mechanism of <i>Aspergillus niger</i> on 5083 aluminum alloy and inhibition performance of miconazole nitrate. <i>Corrosion Science</i> , 2020, 176, 108930.	6.6	25
12	Inhibitive and adsorption behavior of thiadiazole derivatives on carbon steel corrosion in CO <sub>2</sub> -saturated oilfield produced water: Effect of substituent group on efficiency. <i>Journal of Colloid and Interface Science</i> , 2020, 572, 91-106.	9.4	114
13	A carbazole-functionalized metal-organic framework for efficient detection of antibiotics, pesticides and nitroaromatic compounds. <i>Dalton Transactions</i> , 2019, 48, 2683-2691.	3.3	99
14	Galvanic corrosion between N80 carbon steel and 13Cr stainless steel under supercritical CO <sub>2</sub> conditions. <i>Corrosion Science</i> , 2019, 147, 260-272.	6.6	46
15	Benzimidazole derivatives as novel inhibitors for the corrosion of mild steel in acidic solution: Experimental and theoretical studies. <i>Journal of Molecular Liquids</i> , 2019, 278, 413-427.	4.9	50
16	Inhibitive effects of inhibitors on the galvanic corrosion between N80 carbon steel and 13Cr stainless steel under dynamic supercritical CO <sub>2</sub> conditions. <i>Corrosion Science</i> , 2019, 146, 121-133.	6.6	41
17	Two novel thiadiazole derivatives as highly efficient inhibitors for the corrosion of mild steel in the CO <sub>2</sub> -saturated oilfield produced water. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 96, 588-598.	5.3	47
18	Effect of benzyl substitution at different sites on the inhibition performance of pyrimidine derivatives for mild steel in highly acidic solution. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 95, 541-554.	5.3	40

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19	Corrosion of X80 pipeline steel under sulfate-reducing bacterium biofilms in simulated CO <sub>2</sub> -saturated oilfield produced water with carbon source starvation. <i>Corrosion Science</i> , 2018, 136, 47-59.	6.6	104
20	Metal-organic framework derived coralline-like non-precious metal catalyst for highly efficient oxygen reduction reaction. <i>Carbon</i> , 2018, 132, 172-180.	10.3	33
21	From a ZIF-8 polyhedron to three-dimensional nitrogen doped hierarchical porous carbon: an efficient electrocatalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10731-10739.	10.3	111
22	A Novel Magnesium Metal-Organic Framework as a Multiresponsive Luminescent Sensor for Fe(III) Ions, Pesticides, and Antibiotics with High Selectivity and Sensitivity. <i>Inorganic Chemistry</i> , 2018, 57, 13330-13340.	4.0	142
23	Semiconductivities of passive films formed on stainless steel bend under erosion-corrosion conditions. <i>Corrosion Science</i> , 2018, 144, 258-265.	6.6	65
24	Passivity of 13Cr Stainless Steel in 1% NaCl Solution under Dynamic Supercritical CO <sub>2</sub> Conditions. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 8718-8728.	3.7	12
25	Corrosion behaviour of X65 carbon steel in supercritical-CO <sub>2</sub> containing H <sub>2</sub> O and O <sub>2</sub> in carbon capture and storage (CCS) technology. <i>Corrosion Science</i> , 2017, 118, 118-128.	6.6	86
26	Corrosion inhibition and anti-bacterial efficacy of benzalkonium chloride in artificial CO <sub>2</sub> -saturated oilfield produced water. <i>Corrosion Science</i> , 2017, 117, 24-34.	6.6	102
27	Corrosion behaviour of N80 carbon steel in formation water under dynamic supercritical CO <sub>2</sub> condition. <i>Corrosion Science</i> , 2017, 120, 107-120.	6.6	89
28	Synergistic effect of stress and crevice on the corrosion of N80 carbon steel in the CO <sub>2</sub> -saturated NaCl solution containing acetic acid. <i>Corrosion Science</i> , 2017, 123, 228-242.	6.6	31
29	N, S co-doped carbon spheres with highly dispersed CoO as non-precious metal catalyst for oxygen reduction reaction. <i>Journal of Power Sources</i> , 2017, 360, 106-113.	7.8	36
30	The role of acetic acid or H <sup>+</sup> in initiating crevice corrosion of N80 carbon steel in CO <sub>2</sub> -saturated NaCl solution. <i>Corrosion Science</i> , 2017, 128, 9-22.	6.6	24
31	Inhibition of the erosion-corrosion of a 90° low alloy steel bend. <i>Journal of Alloys and Compounds</i> , 2017, 724, 827-840.	5.5	15
32	Inhibition effect of imidazoline inhibitor on the crevice corrosion of N80 carbon steel in the CO <sub>2</sub> -saturated NaCl solution containing acetic acid. <i>Corrosion Science</i> , 2017, 126, 127-141.	6.6	65
33	Effect of guanidinium on mesoscopic perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 73-78.	10.3	146
34	The corrosion behavior and mechanism of carbon steel induced by extracellular polymeric substances of iron-oxidizing bacteria. <i>Corrosion Science</i> , 2017, 114, 102-111.	6.6	169
35	Crevice corrosion of N80 carbon steel in CO <sub>2</sub> -saturated environment containing acetic acid. <i>Corrosion Science</i> , 2016, 112, 426-437.	6.6	35
36	The corrosion of X52 steel at an elbow of loop system based on array electrode technology. <i>Materials Chemistry and Physics</i> , 2016, 181, 312-320.	4.0	28

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37	Erosion-corrosion of stainless steel at different locations of a 90° elbow. <i>Corrosion Science</i> , 2016, 111, 72-83.	6.6	40
38	Corrosion inhibition of carbon steel in CO <sub>2</sub> -containing oilfield produced water in the presence of iron-oxidizing bacteria and inhibitors. <i>Corrosion Science</i> , 2016, 105, 149-160.	6.6	128
39	Effect of O <sub>2</sub> and H <sub>2</sub> S impurities on the corrosion behavior of X65 steel in water-saturated supercritical CO <sub>2</sub> system. <i>Corrosion Science</i> , 2016, 107, 31-40.	6.6	89
40	Effect of Hydrodynamics on the Inhibition Effect of Thioureido Imidazoline Inhibitor for the Flow Accelerated Corrosion of X65 Pipeline Steel. <i>Corrosion</i> , 2016, 72, 598-614.	1.1	10
41	The effect of magneticfield on biomineralization and corrosion behavior of carbon steel induced by iron-oxidizing bacteria. <i>Corrosion Science</i> , 2016, 102, 93-102.	6.6	118
42	Conductive porous sponge-like ionic liquid-graphene assembly decorated with nanosized polyaniline as active electrode material for supercapacitor. <i>Journal of Power Sources</i> , 2016, 302, 92-97.	7.8	63
43	Study of Flow-Assisted Corrosion of AZ91D Magnesium Alloy in Loop System Based on Array Electrode Technology. <i>Journal of Chemistry</i> , 2015, 2015, 1-8.	1.9	2
44	Study of corrosion behavior and mechanism of carbon steel in the presence of <i>Chlorella vulgaris</i> . <i>Corrosion Science</i> , 2015, 101, 84-93.	6.6	93
45	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. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 8129-8136.	3.7	32
46	Real-time tracking of hydrogen peroxide secreted by live cells using MnO <sub>2</sub> nanoparticles intercalated layered doubled hydroxide nanohybrids. <i>Analytica Chimica Acta</i> , 2015, 898, 34-41.	5.4	50
47	Inhibition effect of thioureidoimidazoline inhibitor for the flow accelerated corrosion of an elbow. <i>Corrosion Science</i> , 2015, 90, 202-215.	6.6	81
48	Erosion-corrosion at different locations of X65 carbon steel elbow. <i>Corrosion Science</i> , 2014, 85, 318-330.	6.6	153
49	Galvanic corrosion behavior of deposit-covered and uncovered carbon steel. <i>Corrosion Science</i> , 2014, 86, 202-212.	6.6	88
50	A study of flow accelerated corrosion at elbow of carbon steel pipeline by array electrode and computational fluid dynamics simulation. <i>Corrosion Science</i> , 2013, 77, 334-341.	6.6	89
51	Electrochemical corrosion behavior of carbon steel under dynamic high pressure H <sub>2</sub> S/CO <sub>2</sub> environment. <i>Corrosion Science</i> , 2012, 65, 37-47.	6.6	153
52	The crevice corrosion behaviour of stainless steel in sodium chloride solution. <i>Corrosion Science</i> , 2011, 53, 4065-4072.	6.6	114
53	Localized corrosion of carbon steel in a CO <sub>2</sub> -saturated oilfield formation water. <i>Electrochimica Acta</i> , 2011, 56, 1676-1685.	5.2	122
54	Electrochemical characterization and computational fluid dynamics simulation of flow-accelerated corrosion of X65 steel in a CO <sub>2</sub> -saturated oilfield formation water. <i>Corrosion Science</i> , 2010, 52, 2716-2724.	6.6	80

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55	Micro-electrochemical characterization and Mott-Schottky analysis of corrosion of welded X70 pipeline steel in carbonate/bicarbonate solution. <i>Electrochimica Acta</i> , 2009, 55, 316-324.	5.2	140
56	On the fundamentals of electrochemical corrosion of X65 steel in CO <sub>2</sub> -containing formation water in the presence of acetic acid in petroleum production. <i>Corrosion Science</i> , 2009, 51, 87-94.	6.6	213
57	Investigation of erosion-corrosion of 3003 aluminum alloy in ethylene glycol-water solution by impingement jet system. <i>Corrosion Science</i> , 2009, 51, 283-290.	6.6	78
58	Corrosion of X65 steel in CO <sub>2</sub> -saturated oilfield formation water in the absence and presence of acetic acid. <i>Corrosion Science</i> , 2009, 51, 1589-1595.	6.6	120
59	Mechanical properties of CO <sub>2</sub> corrosion product scales and their relationship to corrosion rates. <i>Corrosion Science</i> , 2008, 50, 2796-2803.	6.6	115
60	Evaluation of inhibition efficiency of an imidazoline derivative in CO <sub>2</sub> -containing aqueous solution. <i>Materials Chemistry and Physics</i> , 2007, 105, 331-340.	4.0	124