Srdjan Nesic

List of Publications by Year
in descending order

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85 papers	4,138 citations	126907 33 h-index	118850 62 g-index
86 all docs	86 docs citations	86 times ranked	2158 citing authors

#	Article	IF	Citations
1	Calculation of mass transfer coefficients for corrosion prediction in two-phase gas-liquid pipe flow. International Journal of Heat and Mass Transfer, 2021, 165, 120689.	4.8	10
2	An Electrochemical Study of the Effect of High Salt Concentration on Uniform Corrosion of Carbon Steel in Aqueous CO₂ Solutions. Journal of the Electrochemical Society, 2021, 168, 051501.	2.9	9
3	Pitting mechanism of mild steel in marginally sour environmentsâ€"Part I: A parametric study based on formation of protective layers. Corrosion Science, 2021, 183, 109305.	6.6	12
4	A revision of mechanistic modeling of mild steel corrosion in H2S environments. Electrochimica Acta, 2021, 382, 138231.	5.2	11
5	Machine learning modeling of time-dependent corrosion rates of carbon steel in presence of corrosion inhibitors. Corrosion Science, 2021, 193, 109904.	6.6	33
6	Identifying the dominant electrochemical reaction in electrochemical impedance spectroscopy. Electrochimica Acta, 2021, 400, 139460.	5.2	9
7	Determining Critical Micelle Concentration of Organic Corrosion Inhibitors and its Effectiveness in Corrosion Mitigation. Corrosion, 2021, 77, 266-275.	1.1	15
8	Improvement to Water Speciation and FeCO₃ Precipitation Kinetics in CO₂ Environments: Updates in NaCl Concentrated Solutions. Industrial & Engineering Chemistry Research, 2021, 60, 17026-17035.	3.7	5
9	Experiments and Molecular Simulations to Study the Role of Coadsorption of Oil in Corrosion Inhibitor Films in Improving Corrosion Mitigation. Corrosion, 2020, 76, .	1.1	3
10	On the mechanism of carbon dioxide corrosion of mild steel: Experimental investigation and mathematical modeling at elevated pressures and non-ideal solutions. Corrosion Science, 2020, 173, 108719.	6.6	30
11	The Unified Mechanism of Corrosion in Aqueous Weak Acids Solutions: A Review of the Recent Developments in Mechanistic Understandings of Mild Steel Corrosion in the Presence of Carboxylic Acids, Carbon Dioxide, and Hydrogen Sulfide. Corrosion, 2020, 76, 268-278.	1.1	20
12	CO₂ Corrosion of Mild Steel Exposed to CaCO₃-Saturated Aqueous Solutions. Corrosion, 2019, 75, 1281-1284.	1.1	5
13	Effect of Flow and Steel Microstructure on the Formation of Iron Carbonate. Corrosion, 2019, 75, 1183-1193.	1.1	13
14	Effect of FexCayCO3 and CaCO3 Scales on the CO2 Corrosion of Mild Steel. Corrosion, 2019, 75, 1434-1449.	1.1	23
15	Mechanistic Investigation of Hydrogen Evolution Reaction from Multiple Proton Donors: The Case of Mildly Acidic Solutions Containing Weak Acids. Journal of the Electrochemical Society, 2019, 166, H320-H330.	2.9	10
16	Localized Corrosion of Mild Steel in H₂S Containing Aqueous Environmentsâ€"Case Studies and Common Mechanisms. Corrosion, 2019, 75, 938-945.	1.1	10
17	A New Narrative for CO₂Corrosion of Mild Steel. Journal of the Electrochemical Society, 2019, 166, C3048-C3063.	2.9	40
18	Study of water wetting in oil-water flow in a small-scale annular flume. Experimental Thermal and Fluid Science, 2019, 102, 506-516.	2.7	2

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19	Implementation of a Comprehensive Mechanistic Prediction Model of Mild Steel Corrosion in Multiphase Oil and Gas Pipelines. Corrosion, 2019, 75, 274-291.	1.1	25
20	H2S corrosion of mild steel: A quantitative analysis of the mechanism of the cathodic reaction. Electrochimica Acta, 2019, 297, 676-684.	5.2	42
21	Adsorption Behavior of Organic Corrosion Inhibitors on Metal Surfacesâ€”Some New Insights from Molecular Simulations. Corrosion, 2019, 75, 90-105.	1.1	29
22	Formation Mechanisms of Iron Oxide and Iron Sulfide at High Temperature in Aqueous H₂S Corrosion Environment. Journal of the Electrochemical Society, 2018, 165, C171-C179.	2.9	13
23	Investigation of precipitation kinetics of FeCO3 by EQCM. Corrosion Science, 2018, 141, 195-202.	6.6	31
24	Investigation of the Role of Droplet Transport in Mitigating Top of the Line Corrosion. Corrosion, 2018, 74, 873-885.	1.1	5
25	Effect of Alloying Elements on the Corrosion Behavior of Carbon Steel in CO2 Environments. Corrosion, 2018, 74, 566-576.	1.1	10
26	<i>Technical Note:</i> Electrochemistry of CO2 Corrosion of Mild Steel: Effect of CO2 on Cathodic Currents. Corrosion, 2018, 74, 851-859.	1.1	31
27	Influence of Pyrrhotite on the Corrosion of Mild Steel. Corrosion, 2018, 74, 37-49.	1.1	11
28	Comparison of Model Predictions and Field Data: The Case of Top of the Line Corrosion. Corrosion, 2017, 73, 1007-1016.	1.1	8
29	Mechanism of the Hydrogen Evolution Reaction in Mildly Acidic Environments on Gold. Journal of the Electrochemical Society, 2017, 164, H365-H374.	2.9	75
30	Mechanism of magnetite formation in high temperature naphthenic acid corrosion by crude oil fractions. Corrosion Science, 2017, 115, 93-105.	6.6	23
31	Localized Corrosion of Mild Steel in Marginally Sour Environments. Corrosion, 2017, 73, 1098-1106.	1.1	15
32	Corrosion Behavior of Mild Steel in Sour Environments at Elevated Temperatures. Corrosion, 2017, 73, 915-926.	1.1	24
33	Electrochemistry of CO2 corrosion of mild steel: Effect of CO2 on iron dissolution reaction. Corrosion Science, 2017, 129, 146-151.	6.6	65
34	Reduction Reactions on Iron Sulfides in Aqueous Acidic Solutions. Journal of the Electrochemical Society, 2017, 164, C664-C670.	2.9	10
35	Effect of High Temperature on the Aqueous H₂S Corrosion of Mild Steel. Corrosion, 2017, 73, 1188-1191.	1.1	22
36	Acidic corrosion of mild steel in the presence of acetic acid: Mechanism and prediction. Electrochimica Acta, 2017, 258, 639-652.	5.2	78

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37	Inhibition of CO 2 corrosion of mild steel âˆ’ Study of mechanical effects of highly turbulent disturbed flow. Corrosion Science, 2017, 126, 208-226.	6.6	54
38	Characterization of Magnetite Scale Formed in Naphthenic Acid Corrosion. Jom, 2017, 69, 217-224.	1.9	7
39	CO 2 corrosion of mild steel. , 2017, , 149-190.		28
40	Mathematical modeling of uniform CO 2 corrosion. , 2017, , 805-849.		8
41	Effect of Incorporation of Calcium into Iron Carbonate Protective Layers in CO₂ Corrosion of Mild Steel. Corrosion, 2017, 73, 238-246.	1.1	40
42	The Role of Iron Sulfide Polymorphism in Localized H2S Corrosion of Mild Steel. Corrosion, 2017, 73, 155-168.	1.1	29
43	Verification of an Electrochemical Model for Aqueous Corrosion of Mild Steel for H₂S Partial Pressures up to 0.1ÂMPa. Corrosion, 2017, 73, 144-154.	1.1	16
44	A direct measurement of wall shear stress in multiphase flowâ€”Is it an important parameter in CO 2 corrosion of carbon steel pipelines?. Corrosion Science, 2016, 110, 35-45.	6.6	79
45	Investigation of Cathodic Reaction Mechanisms of H2S Corrosion Using a Passive SS304 Rotating Cylinder Electrode. Corrosion, 2016, 72, 1519-1525.	1.1	5
46	Mechanism of Cathodic Reactions in Acetic Acid Corrosion of Iron and Mild Steel. Corrosion, 2016, 72, 1539-1546.	1.1	28
47	Electrochemical Model of Sour Corrosion of Mild Steel: Validation at High H2S Partial Pressures. Corrosion, 2016, 72, 1220-1222.	1.1	2
48	Analysis of Oxide Scales Formed in the Naphthenic Acid Corrosion of Carbon Steel. Energy & Fuels, 2016, 30, 6853-6862.	5.1	17
49	Advancement in Predictive Modeling of Mild Steel Corrosion in CO₂- and H₂S-Containing Environments. Corrosion, 2016, 72, 679-691.	1.1	36
50	Modeling of uniform CO2 corrosion of mild steel in gas transportation systems: A review. Journal of Natural Gas Science and Engineering, 2016, 29, 530-549.	4.4	128
51	Characterization of Iron Oxide Scale Formed in Naphthenic Acid Corrosion. , 2016, , 117-125.		3
52	Analysis of corrosion scales formed on steel at high temperatures in hydrocarbons containing model naphthenic acids and sulfur compounds. Surface and Interface Analysis, 2015, 47, 454-465.	1.8	35
53	Experimental Study of Oil-Water Flow Patterns in a Large Diameter Flow Loop - The Effects on Water Wetting and Corrosion. Corrosion, 2015, , .	1.1	6
54	Corrosion of Carbon Steel in MDEA-Based CO₂Capture Plants Under Regenerator Conditions: Effects of O₂and Heat-Stable Salts. Corrosion, 2015, 71, 30-37.	1.1	32

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55	A Thermodynamic Model for the Prediction of Mild Steel Corrosion Products in an Aqueous Hydrogen Sulfide Environment. Corrosion, 2015, 71, 945-960.	1.1	42
56	Electrochemical Model of Mild Steel Corrosion in a Mixed H₂S/CO₂Aqueous Environment in the Absence of Protective Corrosion Product Layers. Corrosion, 2015, 71, 316-325.	1.1	63
57	Investigation of the Electrochemical Mechanisms for Acetic Acid Corrosion of Mild Steel. Corrosion, 2014, 70, 223-229.	1.1	44
58	Corrosion Behavior of Deep Water Oil Production Tubing Material Under Supercritical CO₂Environment: Part 1â€"Effect of Pressure and Temperature. Corrosion, 2014, 70, 38-47.	1.1	30
59	Electrochemical Study and Modeling of H₂S Corrosion of Mild Steel. Corrosion, 2014, 70, 351-365.	1.1	89
60	Atomic Force Microscopy Study of the Adsorption of Surfactant Corrosion Inhibitor Films. Corrosion, 2014, 70, 247-260.	1.1	34
61	Wellbore integrity and corrosion of low alloy and stainless steels in high pressure CO2 geologic storage environments: An experimental study. International Journal of Greenhouse Gas Control, 2014, 23, 30-43.	4.6	49
62	Thermodynamic Study of Hydrogen Sulfide Corrosion of Mild Steel. Corrosion, 2014, 70, 375-389.	1.1	66
63	Time-dependent electrochemical behavior of carbon steel in MEA-based CO 2 capture process. International Journal of Greenhouse Gas Control, 2014, 30, 125-132.	4.6	53
64	A Corrosion Model for Oil and Gas Mild Steel Production Tubing. Corrosion, 2014, 70, 1175-1176.	1.1	4
65	Investigation of Pseudo-Passivation of Mild Steel in CO2 Corrosion. Corrosion, 2014, 70, 294-302.	1.1	65
66	Mechanistic Modeling of Carbon Steel Corrosion in a Methyldiethanolamine (MDEA)-Based Carbon Dioxide Capture Process. Corrosion, 2013, 69, 551-559.	1.1	22
67	Wellbore integrity and corrosion of carbon steel in CO2 geologic storage environments: A literature review. International Journal of Greenhouse Gas Control, 2013, 16, S70-S77.	4.6	89
68	Effect of Calcium on the Formation and Protectiveness of Iron Carbonate Layer in CO2 Corrosion. Corrosion, 2013, 69, 912-920.	1.1	65
69	Experimental study of water wetting in oilâ€"water two phase flowâ€"Horizontal flow of model oil. Chemical Engineering Science, 2012, 73, 334-344.	3.8	71
70	Determining the corrosive potential of CO2 transport pipeline in high pCO2â€"water environments. International Journal of Greenhouse Gas Control, 2011, 5, 788-797.	4.6	172
71	Effect of H2S on the CO2 corrosion of carbon steel in acidic solutions. Electrochimica Acta, 2011, 56, 1752-1760.	5.2	181
72	Spontaneous passivation observations during scale formation on mild steel in CO2 brines. Electrochimica Acta, 2011, 56, 5396-5404.	5.2	73

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73	Mesh-capped probe design for direct pH measurements at an actively corroding metal surface. Journal of Applied Electrochemistry, 2010, 40, 683-690.	2.9	45
74	Effect of Impurities on the Corrosion Behavior of CO₂ Transmission Pipeline Steel in Supercritical CO₂âˆ’Water Environments. Environmental Science & Technology, 2010, 44, 9233-9238.	10.0	193
75	CO2 corrosion of carbon steel in the presence of acetic acid at higher temperatures. Journal of Applied Electrochemistry, 2009, 39, 873-877.	2.9	20
76	Chemistry and Structure of the Passive Film on Mild Steel in CO₂ Corrosion Environments. Industrial & Engineering Chemistry Research, 2009, 48, 6296-6302.	3.7	70
77	The effect of temperature and ionic strength on iron carbonate (FeCO3) solubility limit. Corrosion Science, 2009, 51, 1273-1276.	6.6	152
78	Equilibrium Expressions Related to the Solubility of the Sour Corrosion Product Mackinawite. Industrial & Engineering Chemistry Research, 2008, 47, 1738-1742.	3.7	77
79	Key issues related to modelling of internal corrosion of oil and gas pipelines â€“ A review. Corrosion Science, 2007, 49, 4308-4338.	6.6	899
80	Erosionâ€“corrosion of mild steel in hot caustic. Part I: NaOH solution. Corrosion Science, 2006, 48, 2633-2659.	6.6	48
81	Erosionâ€“corrosion of mild steel in hot caustic. Part II: The effect of acid cleaning. Corrosion Science, 2006, 48, 2660-2675.	6.6	4
82	Integrated CO2 Corrosion - Multiphase Flow Model. , 2004, , .		19
83	Probabilistic modelling of CO2 corrosion laboratory data using neural networks. Corrosion Science, 2001, 43, 1373-1392.	6.6	34
84	CO2 CORROSION OF CARBON STEEL - FROM MECHANISTIC TO EMPIRICAL MODELLING. Corrosion Reviews, 1997, 15, 211-240.	2.0	33
85	Influence of Co-condensations of Water and Hydrocarbon on Top of the Line Corrosion. Corrosion, 0, , .	1.1	1