Srdjan Nesic

List of Publications by Year
in descending order

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	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
2	Effect of Impurities on the Corrosion Behavior of CO₂ Transmission Pipeline Steel in Supercritical CO₂â€"Water Environments. Environmental Science & Technology, 2010, 44, 9233-9238.	10.0	193
3	Effect of H2S on the CO2 corrosion of carbon steel in acidic solutions. Electrochimica Acta, 2011, 56, 1752-1760.	5.2	181
4	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
5	The effect of temperature and ionic strength on iron carbonate (FeCO3) solubility limit. Corrosion Science, 2009, 51, 1273-1276.	6.6	152
6	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
7	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
8	Electrochemical Study and Modeling of H₂S Corrosion of Mild Steel. Corrosion, 2014, 70, 351-365.	1.1	89
9	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
10	Acidic corrosion of mild steel in the presence of acetic acid: Mechanism and prediction. Electrochimica Acta, 2017, 258, 639-652.	5.2	78
11	Equilibrium Expressions Related to the Solubility of the Sour Corrosion Product Mackinawite. Industrial & Engineering Chemistry Research, 2008, 47, 1738-1742.	3.7	77
12	Mechanism of the Hydrogen Evolution Reaction in Mildly Acidic Environments on Gold. Journal of the Electrochemical Society, 2017, 164, H365-H374.	2.9	75
13	Spontaneous passivation observations during scale formation on mild steel in CO2 brines. Electrochimica Acta, 2011, 56, 5396-5404.	5.2	73
14	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
15	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
16	Thermodynamic Study of Hydrogen Sulfide Corrosion of Mild Steel. Corrosion, 2014, 70, 375-389.	1.1	66
17	Effect of Calcium on the Formation and Protectiveness of Iron Carbonate Layer in CO2 Corrosion. Corrosion, 2013, 69, 912-920.	1.1	65
18	Investigation of Pseudo-Passivation of Mild Steel in CO2 Corrosion. Corrosion, 2014, 70, 294-302.	1.1	65

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19	Electrochemistry of CO2 corrosion of mild steel: Effect of CO2 on iron dissolution reaction. Corrosion Science, 2017, 129, 146-151.	6.6	65
20	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
21	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
22	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
23	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
24	Erosionâ€“corrosion of mild steel in hot caustic. Part I: NaOH solution. Corrosion Science, 2006, 48, 2633-2659.	6.6	48
25	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
26	Investigation of the Electrochemical Mechanisms for Acetic Acid Corrosion of Mild Steel. Corrosion, 2014, 70, 223-229.	1.1	44
27	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
28	H2S corrosion of mild steel: A quantitative analysis of the mechanism of the cathodic reaction. Electrochimica Acta, 2019, 297, 676-684.	5.2	42
29	Effect of Incorporation of Calcium into Iron Carbonate Protective Layers in CO₂ Corrosion of Mild Steel. Corrosion, 2017, 73, 238-246.	1.1	40
30	A New Narrative for CO₂Corrosion of Mild Steel. Journal of the Electrochemical Society, 2019, 166, C3048-C3063.	2.9	40
31	Advancement in Predictive Modeling of Mild Steel Corrosion in CO₂- and H₂S-Containing Environments. Corrosion, 2016, 72, 679-691.	1.1	36
32	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
33	Probabilistic modelling of CO2 corrosion laboratory data using neural networks. Corrosion Science, 2001, 43, 1373-1392.	6.6	34
34	Atomic Force Microscopy Study of the Adsorption of Surfactant Corrosion Inhibitor Films. Corrosion, 2014, 70, 247-260.	1.1	34
35	CO2 CORROSION OF CARBON STEEL - FROM MECHANISTIC TO EMPIRICAL MODELLING. Corrosion Reviews, 1997, 15, 211-240.	2.0	33
36	Machine learning modeling of time-dependent corrosion rates of carbon steel in presence of corrosion inhibitors. Corrosion Science, 2021, 193, 109904.	6.6	33

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37	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
38	Investigation of precipitation kinetics of FeCO3 by EQCM. Corrosion Science, 2018, 141, 195-202.	6.6	31
39	<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
40	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
41	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
42	The Role of Iron Sulfide Polymorphism in Localized H2S Corrosion of Mild Steel. Corrosion, 2017, 73, 155-168.	1.1	29
43	Adsorption Behavior of Organic Corrosion Inhibitors on Metal Surfacesâ€"Some New Insights from Molecular Simulations. Corrosion, 2019, 75, 90-105.	1.1	29
44	Mechanism of Cathodic Reactions in Acetic Acid Corrosion of Iron and Mild Steel. Corrosion, 2016, 72, 1539-1546.	1.1	28
45	CO 2 corrosion of mild steel. , 2017, , 149-190.		28
46	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
47	Corrosion Behavior of Mild Steel in Sour Environments at Elevated Temperatures. Corrosion, 2017, 73, 915-926.	1.1	24
48	Mechanism of magnetite formation in high temperature naphthenic acid corrosion by crude oil fractions. Corrosion Science, 2017, 115, 93-105.	6.6	23
49	Effect of FexCayCO3 and CaCO3 Scales on the CO2 Corrosion of Mild Steel. Corrosion, 2019, 75, 1434-1449.	1.1	23
50	Mechanistic Modeling of Carbon Steel Corrosion in a Methyldiethanolamine (MDEA)-Based Carbon Dioxide Capture Process. Corrosion, 2013, 69, 551-559.	1.1	22
51	Effect of High Temperature on the Aqueous H₂S Corrosion of Mild Steel. Corrosion, 2017, 73, 1188-1191.	1.1	22
52	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
53	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
54	Integrated CO2 Corrosion - Multiphase Flow Model. , 2004, , .		19

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55	Analysis of Oxide Scales Formed in the Naphthenic Acid Corrosion of Carbon Steel. Energy & Fuels, 2016, 30, 6853-6862.	5.1	17
56	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
57	Localized Corrosion of Mild Steel in Marginally Sour Environments. Corrosion, 2017, 73, 1098-1106.	1.1	15
58	Determining Critical Micelle Concentration of Organic Corrosion Inhibitors and its Effectiveness in Corrosion Mitigation. Corrosion, 2021, 77, 266-275.	1.1	15
59	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
60	Effect of Flow and Steel Microstructure on the Formation of Iron Carbonate. Corrosion, 2019, 75, 1183-1193.	1.1	13
61	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
62	Influence of Pyrrhotite on the Corrosion of Mild Steel. Corrosion, 2018, 74, 37-49.	1.1	11
63	A revision of mechanistic modeling of mild steel corrosion in H2S environments. Electrochimica Acta, 2021, 382, 138231.	5.2	11
64	Reduction Reactions on Iron Sulfides in Aqueous Acidic Solutions. Journal of the Electrochemical Society, 2017, 164, C664-C670.	2.9	10
65	Effect of Alloying Elements on the Corrosion Behavior of Carbon Steel in CO2 Environments. Corrosion, 2018, 74, 566-576.	1.1	10
66	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
67	Localized Corrosion of Mild Steel in H₂S Containing Aqueous Environmentsâ€"Case Studies and Common Mechanisms. Corrosion, 2019, 75, 938-945.	1.1	10
68	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
69	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
70	Identifying the dominant electrochemical reaction in electrochemical impedance spectroscopy. Electrochimica Acta, 2021, 400, 139460.	5.2	9
71	Comparison of Model Predictions and Field Data: The Case of Top of the Line Corrosion. Corrosion, 2017, 73, 1007-1016.	1.1	8
72	Mathematical modeling of uniform CO 2 corrosion. , 2017, , 805-849.		8

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73	Characterization of Magnetite Scale Formed in Naphthenic Acid Corrosion. Jom, 2017, 69, 217-224.	1.9	7
74	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
75	Investigation of Cathodic Reaction Mechanisms of H2S Corrosion Using a Passive SS304 Rotating Cylinder Electrode. Corrosion, 2016, 72, 1519-1525.	1.1	5
76	Investigation of the Role of Droplet Transport in Mitigating Top of the Line Corrosion. Corrosion, 2018, 74, 873-885.	1.1	5
77	CO₂ Corrosion of Mild Steel Exposed to CaCO₃-Saturated Aqueous Solutions. Corrosion, 2019, 75, 1281-1284.	1.1	5
78	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
79	Erosionâ€“corrosion of mild steel in hot caustic. Part II: The effect of acid cleaning. Corrosion Science, 2006, 48, 2660-2675.	6.6	4
80	A Corrosion Model for Oil and Gas Mild Steel Production Tubing. Corrosion, 2014, 70, 1175-1176.	1.1	4
81	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
82	Characterization of Iron Oxide Scale Formed in Naphthenic Acid Corrosion. , 2016, , 117-125.		3
83	Electrochemical Model of Sour Corrosion of Mild Steel: Validation at High H2S Partial Pressures. Corrosion, 2016, 72, 1220-1222.	1.1	2
84	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
85	Influence of Co-condensations of Water and Hydrocarbon on Top of the Line Corrosion. Corrosion, 0, , .	1.1	1