

# Mohammad Ramezanzadeh

## List of Publications by Year in descending order

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87  
papers

5,948  
citations

57758  
44  
h-index

76900  
74  
g-index

87  
all docs

87  
docs citations

87  
times ranked

2063  
citing authors

#	ARTICLE	IF	CITATIONS
1	Glycyrrhiza glabra leaves extract as a green corrosion inhibitor for mild steel in 1 M hydrochloric acid solution: Experimental, molecular dynamics, Monte Carlo and quantum mechanics study. Journal of Molecular Liquids, 2018, 255, 185-198.	4.9	346
2	Polyaniline-cerium oxide (PAni-CeO <sub>2</sub> ) coated graphene oxide for enhancement of epoxy coating corrosion protection performance on mild steel. Corrosion Science, 2018, 137, 111-126.	6.6	273
3	Development of metal-organic framework (MOF) decorated graphene oxide nanoplateforms for anti-corrosion epoxy coatings. Carbon, 2020, 161, 231-251.	10.3	260
4	Utilizing Lemon Balm extract as an effective green corrosion inhibitor for mild steel in 1M HCl solution: A detailed experimental, molecular dynamics, Monte Carlo and quantum mechanics study. Journal of the Taiwan Institute of Chemical Engineers, 2019, 95, 252-272.	5.3	242
5	Corrosion inhibition of mild steel in 1 M HCl solution by ethanolic extract of eco-friendly Mangifera indica (mango) leaves: Electrochemical, molecular dynamics, Monte Carlo and ab initio study. Applied Surface Science, 2019, 463, 1058-1077.	6.1	214
6	Use of Rosa canina fruit extract as a green corrosion inhibitor for mild steel in 1 M HCl solution: A complementary experimental, molecular dynamics and quantum mechanics investigation. Journal of Industrial and Engineering Chemistry, 2019, 69, 18-31.	5.8	209
7	Potential of Borage flower aqueous extract as an environmentally sustainable corrosion inhibitor for acid corrosion of mild steel: Electrochemical and theoretical studies. Journal of Molecular Liquids, 2019, 277, 895-911.	4.9	199
8	Novel cost-effective and high-performance green inhibitor based on aqueous Peganum harmala seed extract for mild steel corrosion in HCl solution: Detailed experimental and electronic/atomic level computational explorations. Journal of Molecular Liquids, 2019, 283, 174-195.	4.9	175
9	Highly effective inhibition of mild steel corrosion in 3.5% NaCl solution by green Nettle leaves extract and synergistic effect of eco-friendly cerium nitrate additive: Experimental, MD simulation and QM investigations. Journal of Molecular Liquids, 2018, 256, 67-83.	4.9	173
10	A combined experimental and theoretical study of green corrosion inhibition of mild steel in HCl solution by aqueous Citrullus lanatus fruit (CLF) extract. Journal of Molecular Liquids, 2019, 279, 603-624.	4.9	145
11	Highly effective mild steel corrosion inhibition in 1 M HCl solution by novel green aqueous Mustard seed extract: Experimental, electronic-scale DFT and atomic-scale MC/MD explorations. Journal of Molecular Liquids, 2019, 293, 111559.	4.9	124
12	Designing a dual-functional epoxy composite system with self-healing/barrier anti-corrosion performance using graphene oxide nano-scale platforms decorated with zinc doped-conductive polypyrrole nanoparticles with great environmental stability and non-toxicity. Chemical Engineering Journal, 2020, 382, 122819.	12.7	122
13	Potential role of a novel green eco-friendly inhibitor in corrosion inhibition of mild steel in HCl solution: Detailed macro/micro-scale experimental and computational explorations. Construction and Building Materials, 2020, 245, 118464.	7.2	121
14	Experimental and theoretical studies of the synergistic inhibition effects between the plant leaves extract (PLE) and zinc salt (ZS) in corrosion control of carbon steel in chloride solution. Journal of Molecular Liquids, 2017, 248, 854-870.	4.9	117
15	Synthesis of graphene oxide nanosheets decorated by nanoporous zeolite-imidazole (ZIF-67) based metal-organic framework with controlled-release corrosion inhibitor performance: Experimental and detailed DFT-D theoretical explorations. Journal of Hazardous Materials, 2021, 404, 124068.	12.4	114
16	Production of an environmentally stable anti-corrosion film based on Esfand seed extract molecules-metal cations: Integrated experimental and computer modeling approaches. Journal of Hazardous Materials, 2020, 382, 121029.	12.4	98
17	Application of nanoporous cobalt-based ZIF-67 metal-organic framework (MOF) for construction of an epoxy-composite coating with superior anti-corrosion properties. Corrosion Science, 2021, 178, 109099.	6.6	98
18	Study of the synergistic effect of Mangifera indica leaves extract and zinc ions on the mild steel corrosion inhibition in simulated seawater: Computational and electrochemical studies. Journal of Molecular Liquids, 2019, 292, 111387.	4.9	97

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19	Electronic/atomic level fundamental theoretical evaluations combined with electrochemical/surface examinations of Tamarindus indica aqueous extract as a new green inhibitor for mild steel in acidic solution (HCl 1M). Journal of the Taiwan Institute of Chemical Engineers, 2019, 102, 349-377.	5.3	93
20	Development of an active/barrier bi-functional anti-corrosion system based on the epoxy nanocomposite loaded with highly-coordinated functionalized zirconium-based nanoporous metal-organic framework (Zr-MOF). Chemical Engineering Journal, 2021, 408, 127361.	12.7	89
21	Detailed macro-/micro-scale exploration of the excellent active corrosion inhibition of a novel environmentally friendly green inhibitor for carbon steel in acidic environments. Journal of the Taiwan Institute of Chemical Engineers, 2019, 100, 239-261.	5.3	87
22	Superior inhibition action of the Mish Gush (MG) leaves extract toward mild steel corrosion in HCl solution: Theoretical and electrochemical studies. Journal of Molecular Liquids, 2021, 332, 115876.	4.9	86
23	Fabrication of an efficient system for Zn ions removal from industrial wastewater based on graphene oxide nanosheets decorated with highly crystalline polyaniline nanofibers (GO-PANI): Experimental and ab initio quantum mechanics approaches. Chemical Engineering Journal, 2018, 337, 385-397.	12.7	84
24	A green assisted route for the fabrication of a high-efficiency self-healing anti-corrosion coating through graphene oxide nanoplateform reduction by Tamarindus indica extract. Journal of Hazardous Materials, 2020, 390, 122147.	12.4	83
25	Adsorption mechanism and synergistic corrosion-inhibiting effect between the green Nettle leaves extract and Zn <sup>2+</sup> cations on carbon steel. Journal of Industrial and Engineering Chemistry, 2019, 77, 323-343.	5.8	81
26	Synthesis and application of Zn-doped polyaniline modified multi-walled carbon nanotubes as stimuli-responsive nanocarrier in the epoxy matrix for achieving excellent barrier-self-healing corrosion protection potency. Chemical Engineering Journal, 2021, 412, 128637.	12.7	81
27	Application of green molecules from Chicory aqueous extract for steel corrosion mitigation against chloride ions attack; the experimental examinations and electronic/atomic level computational studies. Journal of Molecular Liquids, 2019, 290, 111176.	4.9	79
28	Cerium oxide nanoparticles influences on the binding and corrosion protection characteristics of a melamine-cured polyester resin on mild steel: An experimental, density functional theory and molecular dynamics simulation study. Corrosion Science, 2017, 118, 69-83.	6.6	77
29	Studying the Urtica dioica leaves extract inhibition effect on the mild steel corrosion in 1 M HCl solution: Complementary experimental, ab initio quantum mechanics, Monte Carlo and molecular dynamics studies. Journal of Molecular Liquids, 2018, 272, 120-136.	4.9	74
30	Green method of carbon steel effective corrosion mitigation in 1M HCl medium protected by Primula vulgaris flower aqueous extract via experimental, atomic-level MC/MD simulation and electronic-level DFT theoretical elucidation. Journal of Molecular Liquids, 2019, 284, 658-674.	4.9	74
31	Designing an eco-friendly lanthanide-based metal organic framework (MOF) assembled graphene-oxide with superior active anti-corrosion performance in epoxy composite. Journal of Cleaner Production, 2021, 319, 128732.	9.3	74
32	Combined atomic-scale/DFT-theoretical simulations & electrochemical assessments of the chamomile flower extract as a green corrosion inhibitor for mild steel in HCl solution. Journal of Molecular Liquids, 2021, 342, 117570.	4.9	73
33	Elucidating detailed experimental and fundamental understandings concerning the green organic-inorganic corrosion inhibiting molecules onto steel in chloride solution. Journal of Molecular Liquids, 2019, 290, 111212.	4.9	66
34	Eriobotrya japonica Lindl leaves extract application for effective corrosion mitigation of mild steel in HCl solution: Experimental and computational studies. Construction and Building Materials, 2019, 220, 161-176.	7.2	64
35	Detailed-level computer modeling explorations complemented with comprehensive experimental studies of Quercetin as a highly effective inhibitor for acid-induced steel corrosion. Journal of Molecular Liquids, 2020, 309, 113035.	4.9	64
36	Probing molecular adsorption/interactions and anti-corrosion performance of poppy extract in acidic environments. Journal of Molecular Liquids, 2020, 304, 112750.	4.9	63

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37	Construction of an epoxy composite coating with exceptional thermo-mechanical properties using Zr-based NH <sub>2</sub> -UiO-66 metal-organic framework (MOF): Experimental and DFT-D theoretical explorations. <i>Chemical Engineering Journal</i> , 2021, 408, 127366.	12.7	62
38	Integrated modeling and electrochemical study of Myrobalan extract for mild steel corrosion retardation in acidizing media. <i>Journal of Molecular Liquids</i> , 2020, 298, 112046.	4.9	59
39	Experimental complemented with microscopic (electronic/atomic)-level modeling explorations of <i>Laurus nobilis</i> extract as green inhibitor for carbon steel in acidic solution. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 84, 52-71.	5.8	59
40	A facile synthesis method of an effective anti-corrosion nanopigment based on zinc polyphosphate through microwaves assisted combustion method; comparing the influence of nanopigment and conventional zinc phosphate on the anti-corrosion properties of an epoxy coating. <i>Journal of Alloys and Compounds</i> , 2018, 762, 730-744.	5.5	57
41	Corrosion resistance of epoxy coating on mild steel through polyamidoamine dendrimer-covalently functionalized graphene oxide nanosheets. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 82, 290-302.	5.8	57
42	Graphene oxide nanoplateforms reduction by green plant-sourced organic compounds for construction of an active anti-corrosion coating; experimental/electronic-scale DFT-D modeling studies. <i>Chemical Engineering Journal</i> , 2020, 397, 125433.	12.7	57
43	Molecular/electronic/atomic-level simulation and experimental exploration of the corrosion inhibiting molecules attraction at the steel/chloride-containing solution interface. <i>Journal of Molecular Liquids</i> , 2019, 296, 111809.	4.9	48
44	Theoretical and experimental assessment of a green corrosion inhibitor extracted from <i>Malva sylvestris</i> . <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105256.	6.7	47
45	Combined molecular simulation, DFT computation and electrochemical studies of the mild steel corrosion protection against NaCl solution using aqueous <i>Eucalyptus</i> leaves extract molecules linked with zinc ions. <i>Journal of Molecular Liquids</i> , 2019, 294, 111550.	4.9	43
46	<i>Aloysia citrodora</i> leaves extract corrosion retardation effect on mild-steel in acidic solution: Molecular/atomic scales and electrochemical explorations. <i>Journal of Molecular Liquids</i> , 2020, 310, 113221.	4.9	39
47	Fabrication of Highly Effective Polyaniline Grafted Carbon Nanotubes To Induce Active Protective Functioning in a Silane Coating. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 20309-20322.	3.7	37
48	Synthesis of a multi-functional zinc-centered nitrogen-rich graphene-like thin film from natural sources on the steel surface for achieving superior anti-corrosion properties. <i>Corrosion Science</i> , 2021, 178, 109077.	6.6	35
49	A comprehensive electronic-scale DFT modeling, atomic-level MC/MD simulation, and electrochemical/surface exploration of active nature-inspired phytochemicals based on <i>Heracleum persicum</i> seeds phytoextract for effective retardation of the acidic-induced corrosion of mild steel. <i>Journal of Molecular Liquids</i> , 2021, 331, 115764.	4.9	34
50	New detailed insights on the role of a novel praseodymium nanofilm on the polymer/steel interfacial adhesion bonds in dry and wet conditions: An integrated molecular dynamics simulation and experimental study. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2018, 85, 221-236.	5.3	33
51	A detailed investigation of the chloride-induced corrosion of mild steel in the presence of combined green organic molecules of Primrose flower and zinc cations. <i>Journal of Molecular Liquids</i> , 2020, 297, 111862.	4.9	33
52	Ultrastable Porous Covalent Organic Framework Assembled Carbon Nanotube as a Novel Nanocontainer for Anti-Corrosion Coatings: Experimental and Computational Studies. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 19958-19974.	8.0	32
53	A green complex film based on the extract of Persian <i>Echium amoenum</i> and zinc nitrate for mild steel protection in saline solution; Electrochemical and surface explorations besides dynamic simulation. <i>Journal of Molecular Liquids</i> , 2019, 291, 111281.	4.9	31
54	Steel corrosion lowering in front of the saline solution by a nitrogen-rich source of green inhibitors: Detailed surface, electrochemical and computational studies. <i>Construction and Building Materials</i> , 2020, 254, 119266.	7.2	31

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55	The role of ethanolic extract of <i>Stachys byzantina</i> 's leaves for effective decreasing the mild-steel (MS) degradation in the acidic solution; coupled theoretical/experimental assessments. <i>Journal of Molecular Liquids</i> , 2021, 329, 115571.	4.9	30
56	Estimating the synergistic corrosion inhibition potency of (2-(3,4)-3,5,7-trihydroxy-4H-chromen-4-one) and trivalent-cerium ions on mild steel in NaCl solution. <i>Construction and Building Materials</i> , 2020, 261, 119923.	7.2	29
57	Rising of MXenes: Novel 2D-functionalized nanomaterials as a new milestone in corrosion science - a critical review. <i>Advances in Colloid and Interface Science</i> , 2022, 307, 102730.	14.7	29
58	Mild steel surface eco-friendly treatment by Neodymium-based nanofilm for fusion bonded epoxy coating anti-corrosion/adhesion properties enhancement in simulated seawater. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 72, 474-490.	5.8	27
59	Unique 2-methylimidazole based Inorganic Building Brick nano-particles (NPs) functionalized with 3-aminopropyltriethoxysilane with excellent controlled corrosion inhibitors delivery performance; Experimental coupled with molecular/DFT-D simulations. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2020, 117, 209-222.	5.3	27
60	Recent progress on the metal-organic frameworks decorated graphene oxide (MOFs-GO) nano-building application for epoxy coating mechanical-thermal/flame-retardant and anti-corrosion features improvement. <i>Progress in Organic Coatings</i> , 2022, 163, 106645.	3.9	27
61	Development of a nanostructured Ce(III)-Pr(III) film for excellently corrosion resistance improvement of epoxy/polyamide coating on carbon steel. <i>Journal of Alloys and Compounds</i> , 2019, 792, 375-388.	5.5	26
62	The role of chrome and zinc free-based neodymium oxide nanofilm on adhesion and corrosion protection properties of polyester/melamine coating on mild steel: Experimental and molecular dynamics simulation study. <i>Journal of Cleaner Production</i> , 2019, 210, 872-886.	9.3	26
63	Applying detailed molecular/atomic level simulation studies and electrochemical explorations of the green inhibiting molecules adsorption at the interface of the acid solution-steel substrate. <i>Journal of Molecular Liquids</i> , 2020, 299, 112220.	4.9	25
64	Highly improving the mechanical-responses/thermal-stability of the epoxy nano-composite using novel highly-oxidized multi-walled carbon nanotubes (OMWCNT) functionalized by Zinc-doped Polyaniline (PANI) nanofibers. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2021, 119, 245-258.	5.3	24
65	Highly-effective/durable method of mild-steel corrosion mitigation in the chloride-based solution via fabrication of hybrid metal-organic film (MOF) generated between the active <i>Trachyspermum Ammi</i> bio-molecules-divalent zinc cations. <i>Corrosion Science</i> , 2021, 184, 109383.	6.6	24
66	Theoretical MD/DFT computer explorations and surface-electrochemical investigations of the zinc/iron metal cations interactions with highly active molecules from Lemon balm extract toward the steel corrosion retardation in saline solution. <i>Journal of Molecular Liquids</i> , 2020, 310, 113220.	4.9	21
67	Construction of a smart active/barrier anti-corrosion system based on epoxy-ester/zinc intercalated kaolin nanocontainer for steel substrate. <i>Construction and Building Materials</i> , 2020, 247, 118555.	7.2	21
68	Golpar leaves extract application for construction of an effective anti-corrosion film for superior mild-steel acidic-induced corrosion mitigation at different temperatures. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 629, 127488.	4.7	21
69	Recent innovations in synthesis/characterization of advanced nano-porous metal-organic frameworks (MOFs); current/future trends with a focus on the smart anti-corrosion features. <i>Materials Chemistry and Physics</i> , 2022, 276, 125420.	4.0	21
70	Corrosion protective and adhesion properties of a melamine-cured polyester coating applied on steel substrate treated by a nanostructure cerium-lanthanum film. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2017, 81, 419-434.	5.3	20
71	The influence of steel surface treatment by a novel eco-friendly praseodymium oxide nanofilm on the adhesion and corrosion protection properties of a fusion-bonded epoxy powder coating. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 62, 427-435.	5.8	19
72	Eco-friendly protocol for zinc-doped amorphous carbon-based film construction over steel surface using nature-inspired phytochemicals: Coupled experimental and classical atomic/molecular and electronic-level theoretical explorations. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105487.	6.7	19

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73	Ce-TA MOF assembled GO nanosheets reinforced epoxy composite for superior thermo-mechanical properties. Journal of the Taiwan Institute of Chemical Engineers, 2021, 126, 313-323.	5.3	19
74	Nano-scale P, Zn-codoped reduced-graphene oxide incorporated epoxy composite; synthesis, electronic-level DFT-D modeling, and anti-corrosion properties. Progress in Organic Coatings, 2021, 159, 106416.	3.9	17
75	Stachys byzantina extract: A green biocompatible molecules source for graphene skeletons generation on the carbon steel for superior corrosion mitigation. Bioelectrochemistry, 2022, 143, 107970.	4.6	17
76	Green synthesis of reduced graphene oxide nanosheets decorated with zinc-centered metal-organic film for epoxy-ester composite coating reinforcement: DFT-D modeling and experimental explorations. Journal of the Taiwan Institute of Chemical Engineers, 2020, 114, 311-330.	5.3	16
77	Detailed atomic/molecular-level/electronic-scale computer modeling and electrochemical explorations of the adsorption and anti-corrosion effectiveness of the green nitrogen-based phytochemicals on the mild steel surface in the saline solution. Journal of Molecular Liquids, 2020, 319, 114312.	4.9	16
78	S, P-codoped rGO-phytic acid-polythiophene core-shell; synthesis, modeling, and dual active-passive anti-corrosion performance of epoxy nanocomposite. Journal of Industrial and Engineering Chemistry, 2021, 103, 102-117.	5.8	15
79	Inspection the corrosion prevention performance and dry/wet interfacial adhesion qualities of the melamine-cured polyester coating applied on the treated mild steel surface with a nanostructured composite cerium-neodymium film. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 590, 124472.	4.7	13
80	Detailed experimental investigation of the highly active corrosion inhibitive green molecules based on zinc cations/Nepeta Pogonosperma extract and toward the corrosion mitigation of mild steel in the saline solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 642, 128613.	4.7	13
81	Interfacial adhesion and corrosion protection properties improvement of a polyester-melamine coating by deposition of a novel green praseodymium oxide nanofilm: A comprehensive experimental and computational study. Journal of Industrial and Engineering Chemistry, 2019, 74, 26-40.	5.8	12
82	Construction of an epoxy composite with excellent thermal/mechanical properties using graphene oxide nanosheets reduced/functionalized by Tamarindus indiaca extract/zinc ions; detailed experimental and DFT-D computer modeling explorations. Results in Physics, 2020, 19, 103400.	4.1	12
83	A highly-effective/durable metal-organic anti-corrosion film deposition on mild steel utilizing Malva sylvestris (M.S) phytoextract-divalent zinc cations. Journal of Industrial and Engineering Chemistry, 2021, 95, 292-304.	5.8	12
84	MD simulation/Quantum chemical calculations and experimental studies of Ranunculus bulbosus biomolecules impact on the mild steel dissolution reduction in a destructive acidic liquid. Journal of Molecular Liquids, 2022, 355, 118950.	4.9	12
85	Effective steel alloy surface protection from HCl attacks using Nepeta Pogonosperma plant stems extract. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 634, 127990.	4.7	10
86	Investigating the thermo-mechanical and UV-shielding properties of a nano-porous Zr(IV)-type metal-organic framework (MOF) incorporated epoxy composite coating. Progress in Organic Coatings, 2022, 164, 106693.	3.9	9
87	Thermomechanical and anticorrosion characteristics of metal-organic frameworks. , 2021, , 295-330.		6