

Ali Dehghani

List of Publications by Year in descending order

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42
papers

2,047
citations

236612

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h-index

315357

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42
all docs

42
docs citations

42
times ranked

805
citing authors

#	ARTICLE	IF	CITATIONS
1	Potential of Borage flower aqueous extract as an environmentally sustainable corrosion inhibitor for acid corrosion of mild steel: Electrochemical and theoretical studies. <i>Journal of Molecular Liquids</i> , 2019, 277, 895-911.	2.3	199
2	A detailed electrochemical/theoretical exploration of the aqueous Chinese gooseberry fruit shell extract as a green and cheap corrosion inhibitor for mild steel in acidic solution. <i>Journal of Molecular Liquids</i> , 2019, 282, 366-384.	2.3	176
3	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. <i>Journal of Molecular Liquids</i> , 2019, 283, 174-195.	2.3	175
4	A combined experimental and theoretical study of green corrosion inhibition of mild steel in HCl solution by aqueous Citrullus lanatus fruit (CLF) extract. <i>Journal of Molecular Liquids</i> , 2019, 279, 603-624.	2.3	145
5	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. <i>Journal of Molecular Liquids</i> , 2019, 293, 111559.	2.3	124
6	Green Eucalyptus leaf extract: A potent source of bio-active corrosion inhibitors for mild steel. <i>Bioelectrochemistry</i> , 2019, 130, 107339.	2.4	124
7	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. <i>Construction and Building Materials</i> , 2020, 245, 118464.	3.2	121
8	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 1 M). <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 102, 349-377.	2.7	93
9	Detailed macro-/micro-scale exploration of the excellent active corrosion inhibition of a novel environmentally friendly green inhibitor for carbon steel in acidic environments. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 100, 239-261.	2.7	87
10	Designing a novel targeted-release nano-container based on the silanized graphene oxide decorated with cerium acetylacetonate loaded beta-cyclodextrin (β -CD-CeA-MGO) for epoxy anti-corrosion coating. <i>Chemical Engineering Journal</i> , 2020, 400, 125860.	6.6	63
11	A detailed study on the synergistic corrosion inhibition impact of the Quercetin molecules and trivalent europium salt on mild steel; electrochemical/surface studies, DFT modeling, and MC/MD computer simulation. <i>Journal of Molecular Liquids</i> , 2020, 316, 113914.	2.3	62
12	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.	2.3	59
13	Experimental complemented with microscopic (electronic/atomic)-level modeling explorations of Laurus nobilis extract as green inhibitor for carbon steel in acidic solution. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 84, 52-71.	2.9	59
14	Fabrication of metal-organic based complex film based on three-valent samarium ions-[bis (phosphonomethyl) amino] methylphosphonic acid (ATMP) for effective corrosion inhibition of mild steel in simulated seawater. <i>Construction and Building Materials</i> , 2020, 239, 117812.	3.2	44
15	Combined molecular simulation, DFT computation and electrochemical studies of the mild steel corrosion protection against NaCl solution using aqueous Eucalyptus leaves extract molecules linked with zinc ions. <i>Journal of Molecular Liquids</i> , 2019, 294, 111550.	2.3	43
16	Synthesis of a non-hazardous/smart anti-corrosion nano-carrier based on beta-cyclodextrin-zinc acetylacetonate inclusion complex decorated graphene oxide (β -CD-ZnA-MGO). <i>Journal of Hazardous Materials</i> , 2020, 398, 122962.	6.5	36
17	A comprehensive electronic-scale DFT modeling, atomic-level MC/MD simulation, and electrochemical/surface exploration of active nature-inspired phytochemicals based on Heracleum persicum seeds phytoextract for effective retardation of the acidic-induced corrosion of mild steel. <i>Journal of Molecular Liquids</i> , 2021, 331, 115764.	2.3	34
18	Beta-cyclodextrin-zinc acetylacetonate (β -CD@ZnA) inclusion complex formation as a sustainable/smart nanocarrier of corrosion inhibitors for a water-based siliconized composite film: Integrated experimental analysis and fundamental computational electronic/atomic-scale simulation. <i>Composites Part B: Engineering</i> , 2020, 197, 108152.	5.9	34

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19	Benzimidazole loaded β -cyclodextrin as a novel anti-corrosion system; coupled experimental/computational assessments. <i>Journal of Colloid and Interface Science</i> , 2021, 603, 716-727.	5.0	32
20	A green complex film based on the extract of Persian Echiium amoenum 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.	2.3	31
21	Construction of a sustainable/controlled-release nano-container of non-toxic corrosion inhibitors for the water-based siliconized film: Estimating the host-guest interactions/desorption of inclusion complexes of cerium acetylacetonate (CeA) with beta-cyclodextrin (β -CD) via detailed electronic/atomic-scale computer modeling and experimental methods. <i>Journal of Hazardous Materials</i> , 2020, 399, 123046.	6.5	31
22	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.	3.2	29
23	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.	7.0	29
24	Molecular-dynamic/DFT-electronic theoretical studies coupled with electrochemical investigations of the carrot pomace extract molecules inhibiting potency toward mild steel corrosion in 1M HCl solution. <i>Journal of Molecular Liquids</i> , 2022, 346, 118344.	2.3	27
25	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.	2.3	25
26	Construction of a high-potency anti-corrosive metal-organic film based on europium (III)-benzimidazole: Theoretical and electrochemical investigations. <i>Construction and Building Materials</i> , 2021, 269, 121271.	3.2	20
27	Construction of a zinc-centered metal-organic film with high anti-corrosion potency through covalent-bonding between the natural flavonoid-based molecules (Quercetin)/divalent-zinc: Computer modeling (integrated-DFT&MC/MD)/electrochemical-surface assessments. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 88, 382-395.	2.9	20
28	Construction of a highly-effective/sustainable corrosion protective composite nanofilm based on Aminotris(methylphosphonic acid) and trivalent cerium ions on mild steel against chloride solution. <i>Construction and Building Materials</i> , 2020, 261, 119838.	3.2	19
29	2D reduced-graphene oxide (rGO) nanosheets decorated with l-histidine loaded- β -cyclodextrin for efficient epoxy nano-composite anti-corrosion properties; DFT-D modeling/experimental assessments. <i>FlatChem</i> , 2021, 30, 100309.	2.8	18
30	Cyclodextrin-based nano-carrier for intelligent delivery of dopamine in a self-healable anti-corrosion coating. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105457.	3.3	16
31	Plant extracts: Probable alternatives for traditional inhibitors for controlling alloys corrosion against acidic media—A review. <i>Biomass Conversion and Biorefinery</i> , 0, , .	2.9	11
32	Investigating the effectiveness of Watermelon extract-zinc ions for steel alloy corrosion mitigation in sodium chloride solution. <i>Journal of Molecular Liquids</i> , 2022, 346, 117086.	2.3	10
33	Improvement of the anti-corrosion ability of a silane film with β -cyclodextrin-based nanocontainer loaded with L-histidine: Coupled experimental and simulations studies. <i>Progress in Organic Coatings</i> , 2021, 157, 106288.	1.9	10
34	Electronic DFT-D modeling of L-citrulline molecules interactions with Beta-CD aligned rGO-APTES multi-functional nano-capsule for anti-corrosion application. <i>Journal of Molecular Liquids</i> , 2022, 354, 118814.	2.3	9
35	<i>Sinapis arvensis</i> (Mustard) extract derived bio-molecules linked Zinc-II ions; Integrated electrochemical & surface investigations. <i>Journal of Molecular Liquids</i> , 2022, 346, 117085.	2.3	8
36	Steel-alloy surface protection against saline attacks via the development of Zn(II)-metal-organic networks using Lemon verbena leaves extract (LVLE); Integrated surface/electrochemical explorations. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 630, 127561.	2.3	6

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37	Application of L-citrulline loaded beta-cyclodextrin nano-carrier for fabrication of a corrosion protective silane film on mild-steel. Progress in Organic Coatings, 2021, 161, 106484.	1.9	5
38	Metal-doped 2D rGO nano-sheets fabrication utilizing plant source bio-molecules and application in the epoxy anti-corrosive coating: Combined experimental and DFT-D modeling investigations. Progress in Organic Coatings, 2022, 170, 106938.	1.9	5
39	Combined clove extract bio-molecules and zinc(II) ion synergistic effects in steel corrosion mitigation in saline solution: electronic (DFT) modeling, atomic/molecular (MC/MD) simulations, and corrosion measurement. Biomass Conversion and Biorefinery, 0, , .	2.9	5
40	Chitosan biomolecules-modified graphene oxide nano-layers decorated by mesoporous ZIF-9 nanocrystals for the construction of a smart/pH-triggered anti-corrosion coating system. Journal of Industrial and Engineering Chemistry, 2023, 121, 45-62.	2.9	3
41	Introduction to graphene-based materials and their composites. , 2022, , 1-47.		0
42	Graphene-based polymer composites in corrosion protection applications. , 2022, , 559-581.		0