



## Mohammad Mahdavian

Associate Professor

Faculty: Surface Coating and Novel Technologies  
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Corrosion



Accomplished Ph.D. in Polymer Engineering specializing in the development of polymeric protective coatings. As an associate professor at my current institute, I have amassed over a decade of experience spearheading cutting-edge research and executing successful technological projects. As a dedicated mentor, I have guided numerous MSc. and Ph.D. students, focusing on innovation in corrosion protection and coatings. My expertise is reflected in a prolific publication record, with over 180 scientific papers in esteemed international journals. I have been recognized as a top reviewer by WoS and ranked among the top 2% of scientists by Elsevier BV and the University of Stanford.

**Keywords:** Corrosion; Polymer; Coatings; Silane; Surface modification; Surface treatment; Graphene; Graphene oxide; Carbon; Metal-Organic Framework; MOF; Layered Double Hydroxide; LDH; Smart Coatings; Microcapsules; Mesoporous; Inhibitor; Hollow Carbon Sphere; CNT; Clay; Halloysite; Electrochemistry; Electrochemical Techniques; On-demand release; Self-cleaning; Self-repairing; Intumescent; Proposal; Patent; Know-How; UV resistant; UV shielding; Protective Coating Systems; Automotive; OEM; Refinishing; Road mark paints; Floor coatings; UV Curable Coatings; Waterborne Coatings; High solid coatings; Powder Coatings; Resin; Pigment; Python Programming; Machine Learning.

### Teaching Experience:

At Sahand University of Technology (SUT)

- Paint and Conversion Coating
- Organic Chemistry
- Advanced Chemical Reactor Design
- Advanced Corrosion Engineering
- Advanced Colorimetry

## Papers in Journals

1. E.Alibakhshi, S.A.Haddadi, A. Labbani Motlagh, M.Ghaderi, B.Ramezanzadeh, M.Mahdavian, M.Arjmand, M.Jalilif.Epoxy nanocomposite coating based on calcium zinc phosphate with dual active/barrier corrosion mitigation properties.Progress in Organic Coatings,۲۰۲۲/۲/۱.
2. M.Razizadeh, M.Mahdavian, B.Ramezanzadeh, E.Alibakhshi, S.Jamali,Synthesis of hybrid organic–inorganic inhibitive pigment based on basil extract and zinc cation for application in protective construction coatings,Construction and Building Materials,2021/6/14.
3. Seyyed Arash Haddadi, Ahmad Ramazani S.A., Mohammad Mahdavian, Mohammad Arjmand,Epoxy nanocomposite coatings with enhanced dual active/barrier behavior containing graphene-based carbon hollow spheres as corrosion inhibitor nanoreservoirs,Corrosion Science,2021/6/1.
4. Bahram Nematian,S.A. Ahmad Ramazani, Mohammad Mahdavian, Ghasem Bahlakeh, Seyyed Arash Haddadi,Adsorption of eco-friendly carthamus tinctorius on steel surface in saline solution: A combination of electrochemical and theoretical studies,Colloids and Surfaces A,2020/9/20.
5. Saman Nikpour, Mohammad Ramezanzadeh, Ghasem Bahlakeh, Bahram Ramezanzadeh, Mohammad Mahdavian,Eriobotrya japonica Lindl leaves extract application for effective corrosion mitigation of mild steel in HCl solution: Experimental and computational studies,Construction and Building Materials,pp. 161-176,2019/9/30.
6. S Amrollahi, B Ramezanzadeh, H Yari, M Ramezanzadeh, M Mahdavian,Synthesis of polyaniline-modified graphene oxide for obtaining a high performance epoxy nanocomposite film with excellent UV blocking/anti-oxidant/anti-corrosion capabilities,Composites Part B: Engineering,2019/9/15.
7. Seyyed Arash Haddadi, Taha Behrooz Kohlan, Sina Momeni, Ahmad Ramazani SA, Mohammad Mahdavian,Synthesis and application of mesoporous carbon nanospheres containing walnut extract for fabrication of active protective epoxy coatings,Progress in Organic Coatings,pp. 206-219,2019/8/1.
8. Sajjad Akbarzadeh, Reza Naderi, Mohammad Mahdavian,Fabrication of a highly protective silane composite coating with limited water uptake utilizing functionalized carbon nano-tubes,Composites Part B: Engineering,2019/7/5.
9. SA Haddadi, A Ramazani SA, M Mahdavian, P Taheri, JMC Mol, Y Gonzalez ,& Garcia,Self-healing epoxy nanocomposite coatings based on dual-encapsulation of nano-carbon hollow spheres with film-forming resin and curing agent,Composites Part B: Engineering,2019/7/2.
10. Najmeh Asadi, Reza Naderi, Mohammad Mahdavian,Synergistic effect of imidazole dicarboxylic acid and Zn<sup>2+</sup> simultaneously doped in halloysite nanotubes to improve protection of epoxy ester coating,Progress in Organic Coatings,pp. 29-40,2019/7/1.
11. Mahsa Mahmudzadeh, Hossein Yari, Bahram Ramezanzadeh, Mohammad Mahdavian,Highly potent radical scavenging-anti-oxidant activity of biologically reduced graphene oxide using Nettle extract as a green bio-genic amines-based reductants source instead of hazardous hydrazine hydrate,Journal of hazardous materials,pp. 609-624,2019/6/5.
12. Reza Samiee, Bahram Ramezanzade, Mohammad Mahdavian, Eiman Alibakhshi, Ghasem Bahlakeh,Graphene oxide nano-sheets loading with praseodymium cations: Adsorption-desorption study, quantum mechanics calculations and dual active-barrier effect for smart coatings fabrication,Journal of Industrial and Engineering Chemistry,2019/6/21.
13. M Mahmudzadeh, H Yari, B Ramezanzadeh, M Mahdavian,Urtica dioica extract as a facile green reductant of graphene oxide for UV resistant and corrosion protective polyurethane coating fabrication,Journal of Industrial and Engineering Chemistry,2019/6/21.
14. Seyyed Arash Haddadi, Eiman Alibakhshi, Ghasem Bahlakeh, Bahram Ramezanzadeh, Mohammad

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15. Niloufar Notghi Taheri, Bahram Ramezanzadeh, Mohammad Mahdavian, Application of layer-by-layer assembled graphene oxide nanosheets/polyaniline/zinc cations for construction of an effective epoxy coating anti-corrosion system, *Journal of Alloys and Compounds*, pp. 532-549, 2019/6/12.
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