



## Mohammad Mahdavian

Associate Professor

Faculty: Surface Coating and Novel Technologies  
Faculty

Department: Department of Surface Coating and  
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 Behroozi 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

- Mahdavian, A detailed atomic level computational and electrochemical exploration of the Juglans regia green fruit shell extract as a sustainable and highly efficient green corrosion inhibitor for mild steel in 3.5 wt% NaCl solution, *Journal of Molecular Liquids*, pp. 682-699, 2019/6/15.
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.
  16. Mojtaba Kasaeian, Ebrahim Ghasemi, Bahram Ramezanzadeh, Mohammad Mahdavian, Graphene oxide as a potential nanocarrier for Zn (II) to fabricate a dual-functional active/passive protection; sorption/desorption characteristics and electrochemical evaluation, *Journal of Industrial and Engineering Chemistry*, pp. 162-174, 2019/5/25.
  17. Reza Samiee, Bahram Ramezanzadeh, Mohammad Mahdavian, Eiman Alibakhshi, Assessment of the smart self-healing corrosion protection properties of a water-base hybrid organo-silane film combined with non-toxic organic/inorganic environmentally friendly corrosion inhibitors on mild steel, *Journal of Cleaner Production*, pp. 340-356, 2019/5/20.
  18. Najmeh Asadi, Reza Naderi, Mohammad Mahdavian, Doping of zinc cations in chemically modified halloysite nanotubes to improve protection function of an epoxy ester coating, *Corrosion Science*, pp. 69-80, 2019/5/1.
  19. S Amookht, S Gorji Kandi, M Mahdavian, Mathematical description of spectrophotometric properties of metallic coatings using spectral derivation and principal component analysis, *Progress in Organic Coatings*, pp. 338-348, 2019/4/1.
  20. M Yeganeh, N Asadi, M Omid, Mohammad Mahdavian, An investigation on the corrosion behavior of the epoxy coating embedded with mesoporous silica nanocontainer loaded by sulfamethazine inhibitor, *Progress in Organic Coatings*, pp. 75-81, 2019/3/1.
  21. SA Haddadi, A Ramazani SA, M Mahdavian, P Taheri, *JMC Mol*, Mechanical and corrosion protection properties of a smart composite epoxy coating with dual-encapsulated epoxy/polyamine in carbon nanospheres, *Industrial & Engineering Chemistry Research*, pp. 3033-3046, 2019/2/7.
  22. E Alibakhshi, M Ramezanzadeh, SA Haddadi, G Bahlakeh, B Ramezanzadeh, M Mahdavian, Persian Liquorice extract as a highly efficient sustainable corrosion inhibitor for mild steel in sodium chloride solution, *Journal of cleaner production*, pp. 660-672, 2019/2/10.
  23. Najmeh Asadi, Reza Naderi, Mohammad Mahdavian, Halloysite nanotubes loaded with imidazole dicarboxylic acid to enhance protection properties of a polymer coating, *Progress in Organic Coatings*, pp. 375-384, 2019/2/1.
  24. Saman Nikpour, Reza Naderi, Mohammad Mahdavian, Synergistic effect of Mentha longifolia and zinc cations in silane primer coating to improve protection properties of the subsequent epoxy coating, *Progress in Organic Coatings*, pp. 55-69, 2019/2/1.
  25. Eiman Alibakhshi, Alireza Naeimi, Mohammad Ramezanzadeh, Bahram Ramezanzadeh, Mohammad Mahdavian, 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 e, *Journal of Alloys and Compounds*, pp. 730-744, 2018/9/25.
  26. L Rassouli, R Naderi, M Mahdavian, AM Arabi, Synthesis and characterization of zeolites for anti-corrosion application: The effect of precursor and hydrothermal treatment, *Journal of Materials Engineering and Performance*, pp. 4625-4634, 2018/9/1.
  27. SM Orouji, R Naderi, M Mahdavian, Fabrication of protective silane coating on mild steel: The role of hydrogen peroxide in acid treatment solution, *Journal of Industrial and Engineering Chemistry*, pp. 245-255, 2018/8/25.
  28. Niloufar Notghi Taheri, Bahram Ramezanzadeh, Mohammad Mahdavian, Ghasem Bahlakeh, In-situ synthesis of Zn doped polyaniline on graphene oxide for inhibition of mild steel corrosion in 3.5 wt.% chloride solution, *Journal of industrial and engineering chemistry*, pp. 322-339, 2018/7/25.
  29. S Nikpour, R Naderi, M Mahdavian, Fabrication of silane coating with improved protection

performance using *Mentha longifolia* extract, *Journal of the Taiwan Institute of Chemical Engineers*, pp. 261-276, 2018/7/1.

30. Ali Bahrani, Reza Naderi, Mohammad Mahdavian, Chemical modification of talc with corrosion inhibitors to enhance the corrosion protective properties of epoxy-ester coating, *Progress in Organic Coatings*, pp. 110-122, 2018/7/1.
31. Mohammad Mahdavian, Ali Reza Tehrani, & Bagha, Eiman Alibakhshi, Shabnam Ashhari, Mohammad Javad Palimi, Sajad Farashi, Soheila Javadian, Fatemeh Ektefa, Corrosion of mild steel in hydrochloric acid solution in the presence of two cationic gemini surfactants with and without hydroxyl substituted spacers, *Corrosion Science*, pp. 62-75, 2018/6/1.
32. Eiman Alibakhshi, Mohammad Ramezanzadeh, Ghasem Bahlakeh, Bahram Ramezanzadeh, Mohammad Mahdavian, Milad Motamedi, 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*, pp. 185-198, 2018/4/1.
33. Y Hayatgheib, B Ramezanzadeh, P Kardar, M Mahdavian, A comparative study on fabrication of a highly effective corrosion protective system based on graphene oxide-polyaniline nanofibers/epoxy composite, *Corrosion Science*, pp. 358-373, 2018/4/1.
34. Lili Rassouli, Reza Naderi, Mohammad Mahdavian, Study of the active corrosion protection properties of epoxy ester coating with zeolite nanoparticles doped with organic and inorganic inhibitors, *Journal of the Taiwan Institute of Chemical Engineers*, pp. 207-220, 2018/4/1.
35. M Hasani, M Mahdavian, H Yari, B Ramezanzadeh, Versatile protection of exterior coatings by the aid of graphene oxide nano-sheets; comparison with conventional UV absorbers, *Progress in Organic Coatings*, pp. 90-101, 2018/3/1.
36. Samira Moqadam, Mehdi Salami Kalajahi, Mohammad Mahdavian, Synthesis and characterization of sunflower oil-based polysulfide polymer/cloisite 30B nanocomposites, *Iranian Journal of Chemistry and Chemical Engineering (IJCCE)*, pp. 185-192, 2018/2/1.
37. Mojtaba Kasaeian, Ebrahim Ghasemi, Bahram Ramezanzadeh, Mohammad Mahdavian, Ghasem Bahlakeh, A combined experimental and electronic-structure quantum mechanics approach for studying the kinetics and adsorption characteristics of zinc nitrate hexahydrate corrosion inhibitor on the graphene oxide nanosheets, *Applied Surface Science*, pp. 963-979, 2018/12/31.
38. Mojtaba Kasaeian, Ebrahim Ghasemi, Bahram Ramezanzadeh, Mohammad Mahdavian, Ghasem Bahlakeh, Construction of a highly effective self-repair corrosion-resistant epoxy composite through impregnation of 1H-Benzimidazole corrosion inhibitor modified graphene oxide nanosheets (GO-BIM), *Corrosion Science*, pp. 119-134, 2018/12/1.
39. SA Haddadi, SAA Ramazani, M Mahdavian, P Taheri, *JMC Mol*, Fabrication and characterization of graphene-based carbon hollow spheres for encapsulation of organic corrosion inhibitors, *Chemical Engineering Journal*, pp. 909-922, 2018/11/15.
40. Lili Rassouli, Reza Naderi, Mohammad Mahdavian, Study of the impact of sequence of corrosion inhibitor doping in zeolite on the self-healing properties of silane sol-gel film, *Journal of Industrial and Engineering Chemistry*, pp. 221-230, 2018/10/25.
41. M Motamedi, B Ramezanzadeh, M Mahdavian, Corrosion inhibition properties of a green hybrid pigment based on *Pr-Urtica Dioica* plant extract, *Journal of Industrial and Engineering Chemistry*, 2018/10/25.
42. Sara Khamseh, Eiman Alibakhshi, Mohammad Mahdavian, Mohammad Reza Saeb, Henri Vahabi, Ninel Kokanyan, Pascal Laheurte, Magnetron-sputtered copper/diamond-like carbon composite thin films with super anti-corrosion properties, *Surface and Coatings Technology*, pp. 148-157, 2018/1/15.
43. Reza Samiee, Bahram Ramezanzadeh, Mohammad Mahdavian, Eiman Alibakhshi, Corrosion inhibition performance and healing ability of a hybrid silane coating in the presence of praseodymium (III) cations, *Journal of The Electrochemical Society*, pp. C777-C786, 2018/1/1.
44. MJ Palimi, E Alibakhshi, B Ramezanzadeh, G Bahlakeh, M Mahdavian, Screening the anti-corrosion effect of a hybrid pigment based on zinc acetyl acetate on the corrosion protection performance of

an epoxy-ester polymeric coating, *Journal of the Taiwan Institute of Chemical Engineers*, pp. 261-272, 2018/1/1.

45. B Ramezanzadeh, P Kardar, G Bahlakeh, Y Hayatgheib, M Mahdavian, Fabrication of a Highly Tunable Graphene Oxide Composite through Layer-by-Layer Assembly of Highly Crystalline Polyaniline Nanofibers and Green Corrosion Inhibitors: Complementary Experimental and First-Principles Quantum-Mechanics Modeling Approaches, *The Journal of Physical Chemistry C*, pp. 20433-20450, 2017/9/8.
46. R Miraftab, B Ramezanzadeh, G Bahlakeh, M Mahdavian, An advanced approach for fabricating a reduced graphene oxide-AZO dye/polyurethane composite with enhanced ultraviolet (UV) shielding properties: Experimental and first-principles QM modeling, *Chemical Engineering Journal*, pp. 159-174, 2017/8/1.
47. B Ramezanzadeh, MH Mohamadzadeh Moghadam, N Shohani, M Mahdavian, Effects of highly crystalline and conductive polyaniline/graphene oxide composites on the corrosion protection performance of a zinc-rich epoxy coating, *Chemical Engineering Journal*, pp. 363-375, 2017/7/15.
48. E Alibakhshi, E Ghasemi, M Mahdavian, B Ramezanzadeh, S Farashi, Active corrosion protection of Mg-Al-PO<sub>4</sub>- LDH nanoparticle in silane primer coated with epoxy on mild steel, *Journal of the Taiwan Institute of Chemical Engineers*, pp. 248-262, 2017/6/1.
49. Seyyed Arash Haddadi, Pooneh Kardar, Farhang Abbasi, Mohammad Mahdavian, Effects of nano-silica and boron carbide on the curing kinetics of resole resin, *Journal of Thermal Analysis and Calorimetry*, pp. 1217-1226, 2017/5/1.
50. Shima Alinejad, Reza Naderi, Mohammad Mahdavian, Effect of inhibition synergism of zinc chloride and 2-mercaptobenzoxazole on protective performance of an ecofriendly silane coating on mild steel, *Journal of industrial and engineering chemistry*, pp. 88-98, 2017/4/25.
51. E Alibakhshi, E Ghasemi, M Mahdavian, B Ramezanzadeh, A comparative study on corrosion inhibitive effect of nitrate and phosphate intercalated Zn-Al- layered double hydroxides (LDHs) nanocontainers incorporated into a hybrid silane layer and their effect on cathodic delamination of epoxy topcoat, *Corrosion Science*, 2017/2/1.
52. Seyed Siamak Rouzmeh, Reza Naderi, Mohammad Mahdavian, A sulfuric acid surface treatment of mild steel for enhancing the protective properties of an organosilane coating, *Progress in Organic Coatings*, pp. 156-164, 2017/2/1.
53. Sadegh Mahvidi, Mehrnaz Gharagozlou, Mohammad Mahdavian, Sanaz Naghibi, Potency of ZnFe<sub>2</sub>O<sub>4</sub> nanoparticles as corrosion inhibitor for stainless steel; the pigment extract study, *Materials Research*, pp. 1492-1502, 2017/12.
54. M Mahdavian, B Ramezanzadeh, M Akbarian, M Ramezanzadeh, P Kardar, E Alibakhshi, S Farashi, Enhancement of silane coating protective performance by using a polydimethylsiloxane additive, *Journal of Industrial and Engineering Chemistry*, pp. 244-252, 2017/11/25.
55. Sara Khamseh, Eiman Alibakhshi, Mohammad Mahdavian, Mohammad Reza Saeb, Henri Vahabi, Jean , & Sebastien Lecomte, Pascal Laheurte, High-performance hybrid coatings based on diamond-like carbon and copper for carbon steel protection, *Diamond and Related Materials*, pp. 84-92, 2017/11/1.
56. E Alibakhshi, E Ghasemi, M Mahdavian, B Ramezanzadeh, Fabrication and characterization of layered double hydroxide/silane nanocomposite coatings for protection of mild steel, *Journal of the Taiwan Institute of Chemical Engineers*, pp. 924-934, 2017/11/1.
57. Seyed Siamak Rouzmeh, Reza Naderi, Mohammad Mahdavian, Steel surface treatment with three different acid solutions and its effect on the protective properties of the subsequent silane coating, *Progress in Organic Coatings*, pp. 133-140, 2017/11/1.
58. Bahar Nikpour, Bahram Ramezanzadeh, Ghasem Bahlakeh, Mohammad Mahdavian, Synthesis of graphene oxide nanosheets functionalized by green corrosion inhibitive compounds to fabricate a protective system, *Corrosion Science*, pp. 240-259, 2017/10/1.
59. MJ Palimi, E Alibakhshi, G Bahlakeh, B Ramezanzadeh, M Mahdavian, Electrochemical investigations of the corrosion protection properties of an epoxy-ester coating filled with cerium acetyl acetate anticorrosive pigment, *Journal of The Electrochemical Society*, pp. C709-C716, 2017/1/1.

60. B Ramezanzadeh, M Akbarian, M Ramezanzadeh, M Mahdavian, E Alibakhshi, P Kardar, Corrosion protection of steel with zinc phosphate conversion coating and post-treatment by hybrid organic-inorganic sol-gel based silane film, *Journal of The Electrochemical Society*, pp. C224-C230, 2017/1/1.
61. Marzieh Taheri, Reza Naderi, Mohsen Saremi, Mohammad Mahdavian, Development of an ecofriendly silane sol-gel coating with zinc acetylacetonate corrosion inhibitor for active protection of mild steel in sodium chloride solution, *Journal of Sol-Gel Science and Technology*, pp. 154-166, 2017/1/1.
62. Leili Rassouli, Reza Naderi, Mohammad Mahdavian, The role of micro/nano zeolites doped with zinc cations in the active protection of epoxy ester coating, *Applied Surface Science*, pp. 571-583, 2017.
63. B Ramezanzadeh, A Ahmadi, M Mahdavian, Enhancement of the corrosion protection performance and cathodic delamination resistance of epoxy coating through treatment of steel substrate by a novel nanometric sol-gel based silane composite film filled with functionalized graphene oxide nanosheets, *Corrosion Science*, pp. 182-205, 2016/8/1.
64. Fatemeh Askari, Ebrahim Ghasemi, Bahram Ramezanzadeh, Mohammad Mahdavian, Potassium zinc phosphate pigment coupled with benzotriazole for enhanced protection of carbon steel, *Corrosion*, pp. 1526-1538, 2016/7/25.
65. B Ramezanzadeh, S Niroumandrad, A Ahmadi, M Mahdavian, MH Mohamadzadeh Moghadam, Enhancement of barrier and corrosion protection performance of an epoxy coating through wet transfer of amino functionalized graphene oxide, *Corrosion Science*, 2016/2/1.
66. S Alinejad, R Naderi, M Mahdavian, The effect of zinc cation on the anticorrosion behavior of an eco-friendly silane sol-gel coating applied on mild steel, *Progress in Organic Coatings*, pp. 142-148, 2016/12/1.
67. A Bahrani, R Naderi, M Mahdavian, Effect of talc as reservoir of benzothiazole on the mild steel corrosion in a sodium chloride solution, *SCIENCE AND ENGINEERING CORROSION*, pp. 67-76, 2016/1/1.
68. E Alibakhshi, E Ghasemi, M Mahdavian, B Ramezanzadeh, S Farashi, Fabrication and characterization of PO<sub>4</sub><sup>3-</sup>-intercalated Zn-Al-layered double hydroxide nanocontainer, *Journal of The Electrochemical Society*, pp. C495-C505, 2016/1/1.
69. F Askari, E Ghasemi, B Ramezanzadeh, M Mahdavian, Synthesis and characterization of the fourth generation of zinc phosphate pigment in the presence of benzotriazole, *Dyes and Pigments*, pp. 18-26, 2016/1/1.
70. E Alibakhshi, E Ghasemi, M Mahdavian, B Ramezanzadeh, Corrosion inhibitor release from Zn-Al-[PO<sub>4</sub><sup>3-</sup>]-[CO<sub>3</sub><sup>2-</sup>] layered double hydroxides nanoparticles, *J. Prog. Color Color. Coat.*, pp. 231-246, 2016.
71. Naghmeh Amirshaqai, Mehdi Salami, & Kalajahi, Mohammad Mahdavian, Applicability of EIS for evaluation of corrosion resistance of aluminum flakes, *Anti-Corrosion Methods and Materials*, pp. 355-359, 2016.
72. Anahita Ahmadi, Bahram Ramezanzadeh, Mohammad Mahdavian, Hybrid silane coating reinforced with silanized graphene oxide nanosheets with improved corrosion protective performance, *Rsc Advances*, pp. 54102-54112, 2016.
73. Pooneh Kardar, Hossein Yari, Mohammad Mahdavian, Bahram Ramezanzadeh, *Smart Self-Healing Polymer Coatings: Mechanical Damage Repair and Corrosion Prevention*, Springer, Cham, pp. 511-535, 2016.
74. Alireza Ghazizadeh, Seyyed Arash Haddadi, Mohammad Mahdavian, The effect of sol-gel surface modified silver nanoparticles on the protective properties of the epoxy coating, *RSC Advances*, pp. 18996-19006, 2016.
75. F Askari, E Ghasemi, B Ramezanzadeh, M Mahdavian, The corrosion inhibitive properties of various kinds of potassium zinc phosphate pigments: solution phase and coating phase studies, *Progress in Organic Coatings*, pp. 109-122, 2015/8/1.
76. SM Amoozadeh, M Mahdavian, Synergistic inhibition effect of zinc acetylacetonate and benzothiazole in epoxy coating on the corrosion of mild steel, *Journal of Materials Engineering and Performance*, pp. 2464-2472, 2015/6/1.

77. F Askari, E Ghasemi, B Ramezanzadeh, M Mahdavian, Effects of KOH: ZnCl<sub>2</sub> mole ratio on the phase formation, morphological and inhibitive properties of potassium zinc phosphate (PZP) pigments, *Journal of Alloys and Compounds*, pp. 138-145, 2015/5/15.
78. MJ Palimi, M Rostami, M Mahdavian, B Ramezanzadeh, The Corrosion Protection Performance of the Polyurethane Coatings Containing Surface Modified Fe<sub>2</sub>O<sub>3</sub> Nanoparticles, *Corrosion*, pp. 1012-1026, 2015/5/11.
79. A Ghazi, E Ghasemi, M Mahdavian, B Ramezanzadeh, M Rostami, The application of benzimidazole and zinc cations intercalated sodium montmorillonite as smart ion exchange inhibiting pigments in the epoxy ester coating, *Corrosion Science*, pp. 207-217, 2015/5/1.
80. MJ Palimi, M Rostami, M Mahdavian, B Ramezanzadeh, A study on the corrosion inhibition properties of silane-modified Fe<sub>2</sub>O<sub>3</sub> nanoparticle on mild steel and its effect on the anticorrosion properties of the polyurethane coating, *Journal of Coatings Technology and Research*, pp. 277-292, 2015/3/1.
81. B Ramezanzadeh, E Raeisi, M Mahdavian, Studying various mixtures of 3-aminopropyltriethoxysilane (APS) and tetraethylorthosilicate (TEOS) silanes on the corrosion resistance of mild steel and adhesion properties of epoxy coating, *International Journal of Adhesion and Adhesives*, pp. 166-176, 2015/12/1.
82. B Ramezanzadeh, E Ghasemi, M Mahdavian, E Changizi, MH Mohamadzadeh Moghadam, Characterization of covalently-grafted polyisocyanate chains onto graphene oxide for polyurethane composites with improved mechanical properties, *Chemical Engineering Journal*, pp. 869-883, 2015/12/1.
83. B Ramezanzadeh, E Ghasemi, F Askari, M Mahdavian, Synthesis and characterization of a new generation of inhibitive pigment based on zinc acetate/benzotriazole: solution phase and coating phase studies, *Dyes and Pigments*, pp. 331-345, 2015/11/1.
84. B Ramezanzadeh, E Ghasemi, M Mahdavian, E Changizi, MH Mohamadzadeh Moghadam, Covalently-grafted graphene oxide nanosheets to improve barrier and corrosion protection properties of polyurethane coatings, *Carbon*, pp. 555-573, 2015/11/1.
85. M Mahdavian, R Naderi, M Peighambari, M Hamdipour, SA Haddadi, Evaluation of cathodic disbondment of epoxy coating containing azole compounds, *Journal of Industrial and Engineering Chemistry*, pp. 1167-1173, 2015/1/25.
86. M Mahdavian, MM Attar, Electrochemical assessment of imidazole derivatives as corrosion inhibitors for mild steel in 3.5% NaCl solution, *PROGRESS IN COLOR, COLORANTS AND COATINGS*, 2015/1/1.
87. MJ Palimi, M Rostami, M Mahdavian, B Ramezanzadeh, Studying the effects of surface modification of Cr<sub>2</sub>O<sub>3</sub> nanoparticles by 3-aminopropyltrimethoxysilane (APTMS) on its corrosion inhibitive performance, *Journal of Sol-Gel Science and Technology*, pp. 141-153, 2015/1/1.
88. M Mahdavian, MM Attar, F Shiran, Quantum chemical studies on adsorption of imidazole derivatives as corrosion inhibitors for mild steel in 3.5% NaCl solution, *Prog Color Colorants Coat*, pp. 283-294, 2015.
89. SA Haddadi, M Mahdavian, E Karimi, Evaluation of the corrosion protection properties of an epoxy coating containing sol-gel surface modified nano-zirconia on mild steel, *RSC Advances*, pp. 28769-28777, 2015.
90. Naghmeh Amirshaqaji, Mehdi Salami, & Kalajahi, Mohammad Mahdavian, Corrosion behavior of aluminum/silica/polystyrene nanostructured hybrid flakes, *Iranian Polymer Journal*, pp. 699-706, 2014/9/1.
91. BP Markhali, R Naderi, M Sayebani, M Mahdavian, Corrosion inhibition of some azole derivatives on carbon steel in hydrochloric acid solution, *Anti-Corrosion Methods and Materials*, pp. 300-306, 2014/8/26.
92. M Akbarian, ME Olya, M Mahdavian, M Ataefard, Effects of nanoparticulate silver on the corrosion protection performance of polyurethane coatings on mild steel in sodium chloride solution, *Progress in Organic Coatings*, pp. 1233-1240, 2014/8/1.
93. Seyyed Arash Haddadi, Mohammad Mahdavian, & Ahadi, Farhang Abbasi, Effect of nanosilica and

- boron carbide on adhesion strength of high temperature adhesive based on phenolic resin for graphite bonding, *Industrial & Engineering Chemistry Research*, pp. 11747-11754, 2014/7/10.
94. Eiman Alibakhshi, Ebrahim Ghasemi, Mohammad Mahdavian, Sodium zinc phosphate as a corrosion inhibitive pigment, *Progress in Organic Coatings*, pp. 1155-1162, 2014/7/1.
95. S Amookht, S Gorji Kandi, M Mahdavian, Effect of surface texture on color appearance of metallic coatings, *Progress in Organic Coatings*, pp. 1221-1225, 2014/7/1.
96. M Motamedi, AR Tehrani, & Bagha, M Mahdavian, The effect of cationic surfactants in acid cleaning solutions on protective performance and adhesion strength of the subsequent polyurethane coating, *Progress in Organic Coatings*, pp. 712-718, 2014/3/1.
97. Naghmeh Amirshaqaji, Mehdi Salami, & Kalajahi, Mohammad Mahdavian, Encapsulation of aluminum flakes with hybrid silica/poly (acrylic acid) nanolayers by combination of sol-gel and in situ polymerization methods: a corrosion behavior study, *Journal of sol-gel science and technology*, pp. 513-519, 2014/3/1.
98. BP Markhali, R Naderi, M Mahdavian, Characterization of corrosion inhibition performance ofazole compounds through power spectral density of electrochemical noise, *Journal of Electroanalytical Chemistry*, pp. 56-62, 2014/2/1.
99. MJ Palimi, M Rostami, M Mahdavian, B Ramezanzadeh, Surface modification of Fe<sub>2</sub>O<sub>3</sub> nanoparticles with 3-aminopropyltrimethoxysilane (APTMS): An attempt to investigate surface treatment on surface chemistry and mechanical properties of polyurethane/Fe<sub>2</sub>O<sub>3</sub> nanocomposites, *Applied Surface Science*, pp. 60-72, 2014/11/30.
100. MJ Palimi, M Rostami, M Mahdavian, B Ramezanzadeh, Application of EIS and salt spray tests for investigation of the anticorrosion properties of polyurethane-based nanocomposites containing Cr<sub>2</sub>O<sub>3</sub> nanoparticles modified with 3-amino propyl trimethoxy silane, *Progress in Organic Coatings*, pp. 1935-1945, 2014/11/1.
101. MJ Palimi, M Rostami, M Mahdavian, B Ramezanzadeh, Surface modification of Cr<sub>2</sub>O<sub>3</sub> nanoparticles with 3-amino propyl trimethoxy silane (APTMS). Part 1: Studying the mechanical properties of polyurethane/Cr<sub>2</sub>O<sub>3</sub> nanocomposites, *Progress in Organic Coatings*, pp. 1663-1673, 2014/11/1.
102. E Alibakhshi, E Ghasemi, M Mahdavian, The influence of surface modification of lithium zinc phosphate pigment on corrosion inhibition of mild steel and adhesion strength of epoxy coating, *Journal of sol-gel science and technology*, pp. 359-368, 2014/11/1.
103. M Mahdavian, H Yari, B Ramezanzadeh, G Bahlakeh, M Hasani, Immobilization of ultraviolet absorbers on graphene oxide nanosheets to be utilized as a multifunctional hybrid UV-blocker: A combined density functional theory and practical application, *Applied Surface Science*, pp. 135-151, 2014/10/1.
104. Naghmeh Amirshaqaji, Mehdi Salami, & Kalajahi, Mohammad Mahdavian, Investigation of corrosion behavior of aluminum flakes coated by polymeric nanolayer: Effect of polymer type, *Corrosion Science*, pp. 392-396, 2014/10/1.
105. F Askari, E Ghasemi, B Ramezanzadeh, M Mahdavian, Mechanistic approach for evaluation of the corrosion inhibition of potassium zinc phosphate pigment on the steel surface: Application of surface analysis and electrochemical techniques, *Dyes and Pigments*, pp. 189-199, 2014/10/1.
106. M Motamedi, Ali Reza Tehrani, & Bagha, M Mahdavian, Effect of aging time on corrosion inhibition of cationic surfactant on mild steel in sulfamic acid cleaning solution, *Corrosion Science*, pp. 46-54, 2013/5/1.
107. E Alibakhshi, E Ghasemi, M Mahdavian, Corrosion inhibition by lithium zinc phosphate pigment, *Corrosion Science*, pp. 222-229, 2013/12/1.
108. BP Markhali, R Naderi, M Mahdavian, M Sayebani, SY Arman, Electrochemical impedance spectroscopy and electrochemical noise measurements as tools to evaluate corrosion inhibition ofazole compounds on stainless steel in acidic media, *Corrosion Science*, pp. 269-279, 2013/10/1.
109. S Amookht, S Gorji Kandi, M Mahdavian, S Moradian, The effect of clear coat and basecoat

- interdiffusion on the appearance of automotive coating system, *Progress in Organic Coatings*, pp. 1325-1328, 2013/10/1.
110. E Alibakhshi, E Ghasemi, M Mahdavian, Optimization of potassium zinc phosphate anticorrosion pigment by Taguchi experimental design, *Progress in Organic Coatings*, pp. 224-230, 2013/1/1.
111. R Naderi, M Mahdavian, A Darvish, Electrochemical examining behavior of epoxy coating incorporating zinc-free phosphate-based anticorrosion pigment, *Progress in Organic Coatings*, 2013/1/1.
112. M Akbarian, ME Olya, M Ataefard, M Mahdavian, The influence of nanosilver on thermal and antibacterial properties of a 2 K waterborne polyurethane coating, *Progress in Organic Coatings*, pp. 344-348, 2012/12/1.
113. SM Kasaeian, MM Attar, M Mahdavian Ahadi, Optimization of chemical pretreatment of rusted steel surfaces by solutions based on tannin and phosphoric acid mixture, 2012/1/1 *Journal J. Color Sci. Technol*, pp. 67-76, 2012/1/1.
114. E Alibakhshi, E Ghasemi, M Mahdavian, A comparison study on corrosion behavior of zinc phosphate and potassium zinc phosphate anticorrosive pigments, *PROGRESS IN COLOR, COLORANTS AND COATINGS*, pp. 91-99, 2012/1/1.
115. M Mahdavian, R Naderi, Corrosion inhibition of mild steel in sodium chloride solution by some zinc complexes, *Corrosion Science*, pp. 1194-1200, 2011/4/1.
116. M Motamedi, Ali Reza Tehrani, & Bagha, M Mahdavian, A comparative study on the electrochemical behavior of mild steel in sulfamic acid solution in the presence of monomeric and gemini surfactants, *Electrochimica Acta*, pp. 488-496, 2011/12/30.
117. Mohammad Mahdavian, Ali Reza Tehrani-Bagha, Krister Holmberg, Comparison of a cationic gemini surfactant and the corresponding monomeric surfactant for corrosion protection of mild steel in hydrochloric acid, *Journal of Surfactants and Detergents*, pp. 605-613, 2011/10.
118. M Mahdavian, S Ashhari, Mercapto functionalazole compounds as organic corrosion inhibitors in a polyester-melamine coating, *Progress in Organic Coatings*, pp. 259-264, 2010/8/1.
119. M Mahdavian, S Ashhari, Corrosion inhibition performance of 2-mercaptobenzimidazole and 2-mercaptobenzoxazole compounds for protection of mild steel in hydrochloric acid solution, *Electrochimica Acta*, pp. 1720-1724, 2010/2/1.
120. A Ghanbari, MM Attar, M Mahdavian, Corrosion inhibition performance of three imidazole derivatives on mild steel in 1 M phosphoric acid, *Materials Chemistry and Physics*, pp. 1205-1209, 2010/12/1.
121. B Naderi Zand, M Mahdavian, Corrosion and adhesion study of polyurethane coating on silane pretreated aluminum, *Surface and Coatings Technology*, pp. 1677-1681, 2009/3/15.
122. M Mahdavian, MM Attar, Electrochemical behaviour of some transition metal acetylacetonate complexes as corrosion inhibitors for mild steel, *Corrosion Science*, pp. 409-414, 2009/2/1.
123. R Naderi, M Mahdavian, MM Attar, Electrochemical behavior of organic and inorganic complexes of Zn (II) as corrosion inhibitors for mild steel: Solution phase study, *Electrochimica Acta*, pp. 6892-6895, 2009/11/30.
124. M Mahdavian, MM Attar, The effect of benzimidazole and zinc acetylacetonate mixture on cathodic disbonding of epoxy coated mild steel, *Progress in Organic Coatings*, pp. 137-140, 2009/10/1.
125. A Ghanbari, MM Attar, M Mahdavian, Acetylacetonate complexes as new corrosion inhibitors in phosphoric acid media: inhibition and synergism study, *PROGRESS IN COLOR, COLORANTS AND COATINGS*, pp. 115-122, 2009/1/1.
126. B Naderi Zand, M Mahdavian, Evaluation of the effect of vinyltrimethoxysilane on corrosion resistance and adhesion strength of epoxy coated AA1050, *Electrochimica acta*, pp. 6438-6442, 2007/7/10.
127. AHADI M MAHDAVIAN, ATTAR M MOHAMMADZADEH, OCP measurement: A method to determine CPVC, *SCIENTIA IRANICA*, pp. 369-372, 2007/1/1.
128. MMAM Mahdavian, MM Attar, Another approach in analysis of paint coatings with EIS measurement: phase angle at high frequencies, *Corrosion Science*, pp. 4152-4157, 2006/12/1.

129. MM Attar, M Mahdavian, Investigation on zinc phosphate effectiveness at different pigment volume concentrations via electrochemical impedance spectroscopy, *Electrochimica Acta*, pp. 4645-4648, 2005/8/30.
130. M Mahdavian, MM Attar, Evaluation of zinc phosphate and zinc chromate effectiveness via AC and DC methods, *Progress in organic coatings*, pp. 191-194, 2005/7/1.
131. E Alibakhshi, M Akbarian, M Ramezanzadeh, B Ramezanzadeh, M Mahdavian, Evaluation of the corrosion protection performance of mild steel coated with hybrid sol-gel silane coating in 3.5 wt.% NaCl solution, *Progress in Organic Coatings*, 190-200.