

# MANSOOR BOZORG

## PERSONAL INFORMATION

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Place and date of birth: Shahrood, Iran; 18 August 1985

Marital Status: Married

Nationality: Iranian

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## EDUCATION

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| <b>PhD</b> | Tarbiat Modares University, Material Science & Engineering<br>Dissertation: "Inhibitive Assessment of Hetrocyclic Aromatic Compounds in Acidic Solution on Steel Corrosion"<br>Supervisor: Dr. Taaghi Shahrabi Farahani          | 2010-2015 |
| <b>MS</b>  | Tarbiat Modares University, Corrosion Engineering<br>Thesis: "Effect of Environmental Condition on Inhibition Efficiency of Hexamine for Corrosion Control of Steel in HCl Solution"<br>Supervisor: Dr. Taaghi Shahrabi Farahani | 2007-2009 |
| <b>BS</b>  | University of Tehran, Material Science & Engineering<br>Thesis: "Investigation of Lead Cylinders Deformation"<br>Supervisor: Dr. Mohammad Hibibi Parsa   | 2003-2007 |

## PROFESSIONAL EXPERIENCES

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- **Rooyin Garan Sanat**, Tehran, Iran
  - Head of Laboratory 2011 to 2015
- **Buein Zahra Technical University**, Ghazvin
  - Assistant Professor 2014 to 2017
- **Shahrood University of Technology**, Shahrood, Iran
  - Assistant Professor 2017- 2023
  - Dean of the Department of Chemical and Materials Engineering 2022- present
  - Associate Professor 2023- present

## TECHNICAL PROJECTS AND ACTIVITIES

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- **Development of knowledge for nanostructured coatings to prevent corrosion of boiler tubes** 2020
- **Evaluation of capability of various mixed metal oxide anodes for cathodic protection** 2019
- **Improving the technology of producing high silicon cast iron impressed current anodes to modify its corrosion resistance, corrosion surface, mechanical properties, joint failures and current density** 2018
- **Improvement of Cathodic Protection System of Shahrood Cement Company** 2016
- **An Investigation on Corrosion of Vario Shuttle Arms and Proposing Applicable Methods for Preventing their Corrosion Via a Suitable Coating System** 2009

## PUBLICATIONS

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### *Translated Books*

- *Guidance for Corrosion management in oil and gas production and processing*, Research Institute of Petroleum Industry, 2015.
- *Manual of casting defects*, Shahrood University of Technology, 2019.

### *Journal Publications*

36. Tailoring the glass forming ability, mechanical properties and corrosion resistance of Cu–Zr–Al bulk metallic glasses by yttrium addition, *Intermetallics*, 158, 2023.
35. Corrosion inhibition of Carbon Steel using a new morpholine-based ligand during acid pickling: Experimental and theoretical studies, *Inorganic Chemistry Communications*, 148, 2023.
34. Physicochemical and Mechanical Studies of Al<sub>2</sub>O<sub>3</sub>–Cu Metal-Ceramic Composites Obtained by Spark Plasma Sintering, *Russian Journal of Inorganic Chemistry*, 1-11.
33. Anti-corrosion behavior of 2-(((4-((2-morpholinoethyl)(pyridin-2-ylmethyl) amino) butyl) imino) methyl) naphthalen-1-ol on Mild Steel in Hydrochloric Acid solution, *Thin Solid Films*, 139558.
32. Optimization of biocorrosion resistance and mechanical properties of PM Ti–XAl–2Fe–3Cu alloys by response surface methodology, *Journal of Materials Science* 57 (39), 18669-18686.
31. Wear behavior of laminated nanostructured CP-Ti sheets fabricated by severe plastic deformation, *Materials Chemistry and Physics*, 126634.

30. Improvement of anti-corrosion performance of an epoxy coating using hybrid UiO-66-NH<sub>2</sub>/carbon nanotubes nanocomposite, *Scientific reports* 12 (1), 1-14.
29. Characterization and Comparison of TiN Coatings Deposited on Coarse-and Nano-grained Substrates, *Metals and Materials International*, 1-12.
28. Microstructure and Mechanical Properties of a High-Strength Ti-4Al-2Fe-3Cu Alloy Fabricated by Sintering and Hot Extrusion, *Metallurgical and Materials Transactions A* 53 (6), 1955-1968.
27. Fabrication of Ti–Al<sub>2</sub>O<sub>3</sub>–HA composites by spark plasma sintering and its properties for medical applications, *Journal of Materials Research*, 1-10.
26. Growth Mechanism and Kinetics of Siliconizing of AISI D2 Tool Steel, *Silicon*, 1-9.
25. On the manufacture of a porous alumina-titanium biocomposite by spark plasma sintering, *Materials Chemistry and Physics* 280, 12583.
24. Microstructures and mechanical properties of high strength Ti-XAl-2Fe-3Cu alloys fabricated by powder compact extrusion, *Journal of Alloys and Compounds* 884, 161136.
23. Compressive and biocorrosion properties of Ti-XAl-2Fe-3Cu alloys fabricated by powder metallurgy, *Journal of Alloys and Compounds* 884, 161079.
22. Corrosion and wear analysis of high-velocity oxy-fuel sprayed WC-10Co-4Cr and colmonoy-6 coatings on nickel-aluminum bronze alloy substrate, *Journal of Materials Engineering and Performance* 30 (10), 7564-7576.
21. Investigation of physical and electrical properties of TiN-coated SS316L as bipolar plate of proton exchange membrane fuel cells, *Surface Engineering* 37 (6), 822-830.
20. Investigation of microstructure and corrosion behavior of IN718 superalloy fabricated by selective laser melting, *Materials Chemistry and Physics* 263, 124368.
19. Correlation between Microstructural Characteristics and Corrosion Properties of Mg-RE Alloys in Ringer's Solution, *Journal of The Electrochemical Society*, 2021, 167, 161511.
18. Investigation of microstructure and corrosion behavior of IN718 superalloy fabricated by selective laser melting, *Materials Chemistry and Physics*, 2021, 263.
17. Electrochemical corrosion of Ti-Al<sub>2</sub>O<sub>3</sub> biocomposites in Ringer's solution, *Journal of Alloys and Compounds*, 2019, 777, 34-43.
16. Corrosion of Al<sub>2</sub>O<sub>3</sub>-Ti composites under inflammatory condition in simulated physiological solution" *Materials Science & Engineering C* .2019.
15. Investigation of Physical and Electrical Properties of TiN-Coated SS316L as Bipolar Plate of Proton Exchange Membrane Fuel Cells, *Surface Engineering*, 2020.

14. In Situ Formation of Extremely High Corrosion Resistant Ni-Ni<sub>3</sub>Si Nanocomposite Coating Using Spark Plasma Sintering and Subsequent Heat Treatment, *Metals and Materials International*, 2020.
13. Role of Sr on microstructure , mechanical properties , wear and corrosion behaviour of an Al–Mg<sub>2</sub>Si–Cu in-situ composite" *Materials Chemistry and Physics* .2020.
12. Investigation on physical and electrochemical properties of TiN-coated Monel alloy used for bipolar plates of proton exchange membrane fuel cell" *Materials Chemistry and Physics* .2019.
11. Fabrication and properties of Cu-Al<sub>2</sub>O<sub>3</sub> functionally graded nanocomposites prepared by spark plasma sintering: The effect of copper particle size and reinforcement content" . *Materials Research Express* .2019.
10. Myrtus Communis as Green Inhibitor of Copper Corrosion in Sulfuric Acid, *Ind. Eng. Chem. Res.* 2014, 53, 4295–4303.
9. Corrosion inhibitive behavior of 7-hydroxyphenoxazone on mild steel in 1.0 M HCl, *Res Chem Intermed.* DOI: 10.1007/s11164-014-1722-6.
8. Inhibitive Assessment of N-(8-Bromo-3H-Phenoxazin-3-Ylidene)-N, N'-Dimethylammonium, as A Novel Corrosion Inhibitor for Mild Steel In 1.0 M HCl, *Journal of Advanced Materials and Processing*, 2014, 3, 27-38. C
7. Corrosion performance and metal ion release of amorphous and nanocrystalline Fe-Based alloys under simulated body fluid conditions, *Materials Letters*, 2013, 94, 193-1962.
6. Thermodynamic Study of Metal Corrosion and Inhibitor Adsorption in Mild Steel, Hexamine/Hydrochloric Acid, *Asian Journal of Chemistry*, 2011, 23, 466.
5. Fracture Toughness of TiN Coating as a Function of Interlayer Thickness, *Advanced Materials Research*, 2014, 829, 466-470.
4. Multi-step heat treatments in creep forming of 7075 Al alloy for improvement of springback and exfoliation corrosion while maintaining high strength, *Materials Characterization*, 2012, 73, 8-15.
3. Characterization and protective performance of acrylic-based nanocomposite coating reinforced with silica nanoparticles, *Materials & Corrosion*, 2017; 9999: 1–6.
2. Properties and corrosion behavior of Al based nanocomposite foams produced by the sintering-dissolution process, *International Journal of Minerals, Metallurgy, and Materials*, 2018, 25, 94–101.
1. Functional Multi-Nanolayer Coatings of Amorphous Carbon/Tungsten Carbide with Exceptional Mechanical Durability and Corrosion Resistance, *ACS applied materials & interfaces*, 2017, 9 (35), 30149-30160.

## **TEACHING EXPERIENCE**

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### **Graduate**

- Introduction to the History of Materials Engineering
- Physical Chemistry of Materials
- Corrosion and Protection of Materials

### **Under Graduate**

- Advanced Thermodynamic
- Measurement Error