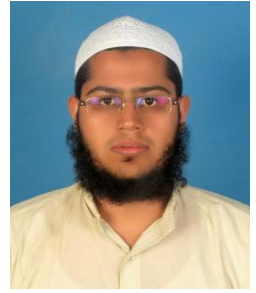


# Mudassir Farooq

Email: [enr.mudassirfarooq@gmail.com](mailto:enr.mudassirfarooq@gmail.com)



**Profile:** A bright and energetic team player having good academic and professional background seeking to join a dynamic research environment to pursue an active career.

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## Education:

### *Master of Science in Materials Science & Engineering*

King Fahd University of Petroleum & Minerals, Saudi Arabia Jan. 2015 – June 2017

- Thesis: **Effect of microstructure and densification of FeCrMo based nano-crystalline alloy on the corrosion performance in chloride environment.**
- CGPA: **3.71/4.0**

### *Bachelor of Engineering in Metallurgical Engineering*

NED University of Engineering & Technology, Pakistan Jan. 2009 – Dec. 2012

- Final Year Project: **Reasons of excessive industrial corrosion rate and its remedies on steel structures located near coastal area of Karachi.** (Proposed and facilitated by Tuwairqi Steel Mills Limited, Port Qasim, Karachi.)
  - Percentage: **81% (1218/1500)**
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## Research Experience

### *Master's Research in Materials Science & Engineering*

King Fahd University of Petroleum & Minerals, Saudi Arabia Sept. 2015 – June 2017

Fabrication, characterization and corrosion behavior analysis of nano-crystalline bulk FeCrMo alloy, produced from amorphous alloy powder through spark plasma sintering technique.

- Characterization (From initial amorphous powder to final sintered samples).
  - FE-SEM, EDS, XRD, DSC, Optical Microscope and XPS are some main characterization tools used in this work.
  - Density measurement of samples sintered at different temperatures.
  - Corrosion behavior analysis in chloride environments through electrochemical techniques such as Electrochemical Impedance Spectroscopy (EIS), Linear Polarization Resistance (LPR) and Potentiodynamic Polarization (PDP).
  - Passive Film study through XPS and FE-SEM.
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## Professional Experience:

### *Research Assistance in "Center of Excellence in Nano-Technology" (CENT)*

King Fahd University of Petroleum & Minerals, Saudi Arabia March 2015 – June 2017

- Proficient in operating Field Emission Electron Microscope equipped with EDS, FIB, GIS and EBDX camera.
- Operating XRD and proficient in using XRD data analysis software (PDXL).

- Managing Characterization & Imaging Lab of CENT having FE-SEM, XRD, DSC, TMA, Fluorescent Microscope and AFM.

### ***Teaching Assistance in Mechanical Engineering Department***

King Fahd University of Petroleum & Minerals, Saudi Arabia

Jan. 2016 – May 2016

- Grading undergraduate course ME-218: Introduction to Mechanical Engineering Design.
  - Proctoring during quiz and Exams.
  - Managing student attendance and quiz record.
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### **Industrial Experience:**

#### ***Work as a Researcher (Bachelor Final Year Project)***

Tuwairqi Steel Mills Limited, Port Qasim, Karachi, Pakistan

Jan. 2012 – Oct. 2012

- Identifying the type and causes of corrosion.
  - Determine the corrosion rate of different metals in this Industrial Environment.
  - Proposed remedies for corrosion prevention.
  - On field Test of proposed coating system.
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### **Industrial Internship Experience:**

#### ***Intern in QAD/QC***

People Steel Mills Limited, Karachi, Pakistan

May2011- June 2011

- Learn about the production of special alloy steel through scrap by using Electric Arc Furnace, Laddle Furnace, Vacuum Furnace and Electro-slag Remelting (ESR) techniques and their area of use.
- Learn about different techniques used for special steel casting such as Ingot casting and continue casting. Also, different rolling & forging operations and requirements of initial shapes for these manufacturing operations.
- Different Inspection and Testing techniques (From initial feed scrap to final products).

#### ***Intern in Cast Iron/Aluminum Foundry***

Atlas Engineering, Karachi, Pakistan

July 2011

- Learn about different casting and mold production techniques used for Cast Iron and Aluminum parts production (Include Sand Casting, Centrifugal Casting, Pressure Die Casting, etc).
  - Charge balancing of feed stock, operation of Induction and resistance furnace and their area of use.
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### **Research Publications:**

#### ***Journal Article (To be submitted):***

1. A. A. Sorour, **Mudassir Farooq**, A.Mekki, and A. M. Kumar. Characterization and corrosion behavior (in 1N Hydrochloric acid) of spark plasma sintered FeCrMo-based bulk nano-crystallized alloy produced through amorphous alloy powder.

2. A. A. Sorour, **Mudassir Farooq**, A.Mekki, and A. M. Kumar. Corrosion resistive performance & mechanism of spark plasma sintered Fe-based nano-crystallized alloy in simulated seawater environment.
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## Honors and Awards

- **Full MS-Merit Based International Scholarship**  
King Fahd University of Petroleum & Minerals, Saudi Arabia      Jan.2015 – June 2017
  - **Bachelor of Engineering with Distinction**      Dec. 2012  
NED University of Engineering and Technology, Pakistan
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## Leadership and Volunteer Work

- **Group Leader** in Final Year Project (Bachelor of Engineering)
  - **Member:** Voluntary work Unit, King Fahd University of Petroleum & Minerals
  - **Voluntary Visits:** Facility center for orphans and poor children, Dammam, Saudi Arab;  
A picnic with municipal workers, Al-Khobar, Saudi Arabia, etc.
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## Skills and Expertise:

**Research:** Hand on experience on FE-SEM/EDS, DSC, XRD, XPS, Different Optical and Light Microscopes, Spark Plasma Sintering, Different hardness Measurement Equipment, etc. Proficient in using various equipment/techniques used in metallography, electrochemical corrosion analysis and mechanical properties measurement.

**Software:** Proficient in MS Office (Word, Excel, Power Point, Front Page), Origin, PDXL for XRD data analysis, Advantage (For XPS data analysis), Minitab, Windows and software installation, etc.

**Languages:** English, Urdu (native), Punjabi.

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## Interest and Activities:

- Badminton
  - Cricket
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## References:

- **Dr. Muhammad Hawwa**  
Associate Professor, Mechanical Engineering, KFUPM  
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- **Dr. Abbas Hakeem**  
Research Scientist III, Center of Excellence in Nano Technology (CENT), KFUPM  
**Email:** [ashakeem@kfupm.edu.sa](mailto:ashakeem@kfupm.edu.sa) ; Ext. 7834