




MUDDASIR NAWAZ

MATERIALS SCIENCE



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OBJECTIVE

My career goal is to secure a position in a Research center, which allows me to take responsibility for the analysis and interpretation of research for a well-respected and reputed institute.

EDUCATION

Bachelors in Metallurgy and Materials Engineering | Bahauddin Zakariya University (B.Z.U), Multan.

NOV 2012 – SEP 2017

- Thesis: "Synthesis of geopolymer from fly ash as an alternative of cement."

Intermediate (F.S.C Pre-Engineering) | Punjab group of Information Technology, Multan.

SEP 2010 – SEP 2012



EXPERIENCE

Research Assistant | Center for Advanced Materials (CAM), Qatar University.

APR 2018 – PRESENT



Our research focuses on the prevention of corrosion by epoxy coatings and electrodeposition technique. We developed the self-healing smart epoxy coatings for corrosion protection, which also includes synthesis and characterization of anti-corrosive pigments the Nano-containers. The use of Electrochemistry for understanding the corrosion behavior of steel in the different environments.

Research conducted on:

- Preparing material for publication.
- Synthesis and analysis of Smart self-healing nanocomposite coatings to prevent corrosion.
- Synthesis of anti-corrosive pigments (carriers with various corrosion inhibitors) and self-healing agents with different techniques.
- Electrodeposition technique to improve surface of materials.
- Electrochemical impedance spectroscopy (EIS) technique to evaluate the Corrosion behavior and inhibition mechanism smart self-healing coatings.
- Development of composite materials with improvement in their properties with different techniques and its analysis.

Projects

- Qatar Foundation Grant **NPRP11S-1226-170132** (Smart single layer polyolefin coatings for corrosion protection of steel parts).
- Qatar Foundation Grant **NPRP9-080-2-039** (Smart corrosion protection strategies for steel materials in oil and Gas industry)
- Al-Bairaq **17th** Cycle.

Site Engineer | Zain Engineering Company (Pvt.) Ltd.

NOV 2017 – FEB 2018



Performed duty as site engineer for the sub-Contractor on TP-1000 project.

- Solving technical issue, providing advice, management and preparing reports.
- Liaise with consultant, contractors, supervisors and the general workforce in the project.
- Share responsibilities for site security, health and safety and the organization and supervision of material.

Interne | Chicago Group (Pvt.) Ltd.

24 SEP 2017 – 31 OCT 2017



- Electric Induction Furnace for melting Alloy steel and cast iron.
- Manufacturing different Parts by Die and Centrifugal Casting.
- Crucible furnace for melting Aluminum Alloy.
- Heat Treatment Process Annealing and salt bath treatment.
- Quality control department and inspection of the final product.
- Complete Machine Shop with CNC



PUBLICATIONS (I.F=36.1)

1. **Muddasir Nawaz**, R.A Shakoore, Ramazan Kahraman, M. F. Montemor “Cerium Oxide Loaded with Gum Arabic as Environmentally Friendly Anti-Corrosion Additive for Protection of Coated Steel” **Materials & Design 198 (2021) 109361 (I.F=6.2)**
2. **Muddasir Nawaz**, Sehrish Habib, Adnan Khan, R.A Shakoore, Ramazan Kahraman, “Cellulose microfibers (CMFs) as a smart carrier for autonomous self-healing epoxy coatings” **New J. Chem., 2020,44, 5702-5710. (I.F=3.28)**
3. Khuram Shahzad, Eman M Fayyad, **Muddasir Nawaz**, Osama Fayyaz, Malik Adeel Umer, Mirza N Baig, Aamir raza, Mohammad K Hassan, Aboubakr M Abdullah. “Corrosion and Oxidation Behavior of Electroless Ni-P-Ti Nanocomposite coatings deposited on HSLA steel” **Nanomaterials 2020, 10(10), 1932 (I.F=4.32)**
4. Adnan Khan, Amani Hassanein, Sehrish Habib, **Muddasir Nawaz**, R.A. Shakoore, Ramazan Kahraman, “Hybrid Halloysite Nanotubes as Smart Carriers for Corrosion Protection”, **ACS Appl. Mater. Interfaces 2020, 12, 33, 37571–3758. (I.F=8.76)**

5. Sehrish Habib, Eman Fayyad, **Muddasir Nawaz**, Adnan Khan, R.A Shakoore, Ramazan Kahraman, Aboubakr Abdullah, "Self-healing performance of smart coatings modified with difference corrosion inhibitors" **Nanomaterials 2020, 10, 791 (I.F=4.32)**
6. Adnan Khan, M. Penchal Reddy, **Muddasir Nawaz**, M. Manohar Reddy, Guruaj Parande, Vyasraj Manakari, R.A Shakoore, Ammina S. Aljaber, Manoj Gupta, "Microstructure and mechanical behavior of hot extruded aluminum/tin-bismuth composites produced by powder metallurgy" **Applied Sciences 2020, 10(8), 2812 (I.F=2.47)**
7. **Muddasir Nawaz**, Noor Yusuf, Sehrish Habib, R.A Shakoore, Fareeha Ubaid, Zubair Ahmad, Ramazan Kahraman, Said Mansour, Wei Gao, "Development and Properties of Polymeric Nanocomposite Coatings", **Polymers 2019, 11(5), 852; (I.F=3.42)**
8. Sehrish Habib, Adnan Khan, **Muddasir Nawaz**, Mostafa Sliem, R.A. Shakoore, Ramazan Kahraman, Aboubakr Abdullah and Atef Zekri, "Self-healing Performance of Multifunctional Polymeric Smart Coatings", **Polymers 2019, 11(9), 1519; (I.F=3.42)**
9. **Muddasir Nawaz**, Fareeha Ubaib, A. Bahgat Radwan, Himyan M. Akbar, R.A Shakoore, Ramazan Kahraman, "Synergetic behavior of polyethyleneimine loaded mesoporous silica as a corrosion inhibitor for self-healing epoxy coating" (**Under-review in Chemical Engineering science**).
10. **Muddasir Nawaz**, Nazal Naeem, R. A. Shakoore, Ramazan Kahraman, M. F. Montemor, "Impact of epoxy coating modified with yttrium oxide loaded with imidazole on the corrosion protection of Steel" (**Under-review in Materials & Design**).



CONFERENCE PUBLICATIONS & PRESENTATIONS

POSTER PRESENTATION

1. **Muddasir Nawaz**, Sehrish Habib, Adnan Khan, R. A. Shakoore, Ramazan Kahraman, "Cellulose Microfibers as a smart carrier for anticorrosive pigment in the corrosion protection of steel", **NACE European corrosion management Virtual conference, 17-18 November 2020**.
2. **Muddasir Nawaz**, Fareeha Ubaid, Sehrish Habib, Adnan Khan, R.A. Shakoore, Ramazan Kahraman, M.F. Montemor, "Exploring self-healing performance of novel polymeric nano composites", **SANIA 10-13 Nov 2019 | Paris, France**.

3. **Muddasir Nawaz**, Noor Yusuf, R.A Shakoore, Fareeha Ubaid, Sehrish Habib, Zubair Ahmad, Ramazan Kahraman “Smart polymeric Nanocomposite coatings: Effect of pH of environment, **The Silver jubilee Assembly of Advanced Materials Congress 24 – 27 March 2019 | Stockholm, Sweden.**
4. **Muddasir Nawaz**, Fareeha Ubaid, R.A Shakoore, Ramazan Kahraman “Multifunctional nanocomposite coatings for corrosion protection”. **Nanotech France 2020 Int. Conference and Exhibition 23-25 June 2020| Paris, France.**



SKILLS

- **Material characterization tool:** XRD, SEM, FTIR, Vickers hardness, Zeta potential
- **Data Analysis Software:** Gamry software for EIS
- **Courses:** Professional computer course
- **Tools:** MS. Office (Word, Power Point, Excel), Origin



AWARDS & HONORS

- Among the Top 5 students in the class of Bachelors.
- Best poster award in **The Silver jubilee Assembly of Advanced Materials Congress 24 – 27 March 2019 | Stockholm, Sweden.**



PERSONAL INFORMATION

- **Date of Birth:** 1st Aug 1993
- **Nationality:** Pakistani
- **Religion:** Islam
- **Languages:** English, Urdu



REFERENCES

References will be provided on request.