

Dr. Faaz Ahmed
Assistant Professor
Materials Engineering department
NED University of engineering and technology
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Education

PhD (Materials Science and Engineering)	KOC University	Turkey	October 2019
M.Engg. (Materials Engineering)	NED University of Engg. and Tech.	Pakistan	January 2015
B.E. (Metallurgical Engineering)	NED University of Engg. and Tech.	Pakistan	December 2011

Professional Career

Lecture- Materials Engineering Department- April 2012 to November 2019

Assistant Professor- Materials Engineering Department- November 2019 till date.

Current responsibilities

1. Teaching courses at undergrad level.
2. Lab Incharge- Hydrogen Generation Lab.
3. Supervising various graduate and undergraduate level projects.

Grants

- PI-Approved NED SEED fund PKR 1Million for study of hydrogen evolution reaction on noble metal surfaces (Completed).
- PI- HEC NRPU Grant PKR 5.34 Million for the development of reference electrode for electrochemical experiments. (Approved).

Honors

Recipient of competitive PhD scholarship under Faculty development program by HEC in September 2015 for four years to pursue doctoral studies at KOC University, Turkey.

Research focus

1. Metal air and metal ion batteries.
2. Hydrogen evolution reaction.

Publications (Selected)

- Ahmed, Ghadia, Faaz Ahmed Butt, Faizan Raza, Saud Hashmi, G. Gnana Kumar, and Maria Christy. "The study of different redox mediators for competent Li–air batteries." *Journal of Power Sources* 538 (2022): 231379.
- Naqvi, Asad A., Awan Zahoor, Asif Ahmed Shaikh, Faaz Ahmed Butt, Faizan Raza, and Inam Ul Ahad. "Aprotic lithium air batteries with oxygen-selective membranes." *Materials for Renewable and Sustainable Energy* 11, no. 1 (2022): 33-46.
- Asad, Samra, Awan Zahoor, Faaz Ahmed Butt, Saud Hashmi, Faizan Raza, Inam Ul Ahad, Jabir Hakami et al. "Recent Advances in Titanium Carbide MXene (Ti₃C₂T_x) Cathode Material for Lithium–Air Battery." *ACS Applied Energy Materials* 5, no. 10 (2022): 11933-11946.

- Awan, Zahoor, Asad Akhter Naqvi, Zain Shahid, Faaz Ahmed Butt, and Faizan Raza. "Synthesis and Characterization of Graphene sheets from graphite powder by using ball milling." *Revista UIS ingenierías* 21, no. 3 (2022): 71-76.
- Zahoor, Awan, Raza Faizan, Khaled Elsaid, Saud Hashmi, Faaz Ahmed Butt, and Zafar Khan Ghouri. "Synthesis and experimental investigation of δ -MnO₂/N-rGO nanocomposite for Li-O₂ batteries applications." *Chemical Engineering Journal Advances* 7 (2021): 100115.

Courses Taught

Fall 2022- Surface Engineering and Coating Technologies (MM-531)

Fall 2022- Heat Treatment (MM-304)

Fall 2022- Surface Engineering (MM-412)

Spring 2022- Advanced Materials (MY-402)

Spring 2022- Materials Characterisation and Analytical Techniques (MM-308)

Fall 2021- Environmental Engineering and Solar Energy Systems (MM-605)

Fall 2021- Nanotechnology (MM-534)

Fall 2021- Surface Coatings (MM412)

Spring 2021- Advanced Materials Characterisation Techniques (MM-601)

Spring 2021- Materials Characterisation and analytical techniques (MM-308)

Other Responsibilities

Deputy Director QECII (DDQECII)/Deputy Management Representative (DMR)- Nov 2020

PhD Approved Supervisor- April 2021

Incharge Hydrogen Generation Lab

NRPU grant: Efficient energy storage devices

Member Board of Review (UL)

Member Board of Review QEC

Member Board of Faculties (BOF- ECE, AMS, ISH)

Thesis

2021-2022: M.Engg., Indigenous development Nano-emulsions for rolling mills- Hasnain

2021-2022: M.Engg., Synthesis of high surface area graphene through chemical exfoliation- Zulfikar

2021-2022: M.Engg., Cathode Materials for air batteries- Samra Asad

2021-2022: UG, Design and development of cathode materials for hydrogen evolution reaction- Hamza, Hammad, Arshan

2021-2022: UG, Design and development of cathode materials for energy storage devices- Bilal, Mahanoor, Taha, Umer

2020-2021 UG, Usama Khan, Saad Khan, Ahzam Ansari and Tayyab Azad Khan, " Design and development of supercritical drying system for aerogel production". (PI)

2019-2020 M.Engg., Ramza Siddiqui, "Hydrogen evolution reaction on noble metal surfaces". (PI)