

PERSONAL INFORMATION



Assistant Professor Dr. Imran Ullah Khan

Department of Chemical and Energy Engineering, Pak-Austria Fachhochschule Institute of Applied Sciences and Technology, Haripur, Pakistan

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Pakistan Engineering Council Number (PEC No): CHEM/6073

Date of Birth: 20-02-1983

Marital status: Married

Number of Dependence: 4

OBJECTIVE

To attain a challenging position in a reputable and progressive organization that provides an opportunity for cutting edge research and professional growth where my qualifications are appreciated through demanding responsibilities.

WORK EXPERIENCE

Feb 2020 – Till Present

Assistant Professor

Working as an Assistant Professor in the Department of Chemical and Energy Engineering, Pak-Austria Fachhochschule Institute of Applied Sciences and Technology, Haripur, Pakistan

Responsibilities

- Working as a Pioneer to establish the Department of Chemical and Energy engineering
- To design CLO's for undergraduate courses according to Pakistan Engineering Council
- Working as a Head of industrial training department
- Working as a team member for establishing department Labs

October 2018 – Jan 2020

Assistant Professor

Working as an Assistant Professor in the Department of Chemical Engineering, National University of Sciences and Technology (NUST), H-12, Islamabad, Pakistan

Responsibilities

- To deliver lectures on Chemical Engineering undergraduate and postgraduate courses i.e. Chemical Process Principles-I, Chemical Process Principles II, Chemical Process Technology, Petroleum Refinery Process, Membrane Technology, Natural gas and Environment, Mass Transfer and Heat Transfer.
- To design CLO's for undergraduate courses according to Washington Accord Engineering Qualifications and Professional Competence
- To supervise undergraduate and postgraduate research students

- March 2014 – Oct 2015 **Lecturer**
 Worked as a Lecturer in the Department of Chemical Engineering, National University of Sciences and Technology (NUST), H-12, Islamabad, Pakistan
- Responsibilities
- To deliver lectures on Chemical Engineering undergraduate courses i.e. Fluid Mechanics and Chemical process principles
 - Supervising projects of final year undergraduate students in the chemical engineering department
 - Performing duty for purchasing lab equipment from local and international vendors
- Jan 2012 – Jan 2014 **Research Engineer**
 After completing master, worked as a Researcher in the Department of Chemical engineering, Karlstads universitet, Sweden
- Responsibilities
- To conduct the research on Pulp, Paper and Surface treatment Technology
 - To supervise research experiment on the undergraduate level
- July 2006 – July 2009 **Senior Instructor**
 Worked as a Senior Instructor (Chemical) in the Department of Chemical Engineering, Dr. A. Q Khan Institute of Engineering, Mianwali, Pakistan
- To deliver lectures on Chemical Engineering undergraduate courses
 - To hold administrative duties of the department as Student Coordinator.

EDUCATION AND TRAINING

- 2018 PhD in Chemical Engineering (Membrane Technology for Gas separation)
Universiti Teknologi Malaysia
- 2011 Masters in Chemical Engineering Technology (Pulp, Paper, Surface Treatment, and Graphic Technology)
Karlstad University, Sweden
- 2010 Advance Course on Tissue Technology with the collaboration of USA (100 hours)
Karlstad University, Sweden
- 2006 Bachelors In Chemical Engineering Technology
Bahauddin Zakariya University Multan, Pakistan

MAJOR COURSES

- Heat Transfer Technology
- Mass Transfer Technology
- Chemical Reactors Design
- Environmental Engineering
- Petro chemicals and refinery
- Engineering Economics

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|---------------------------------|---------------------------------------|
| ▪ Chemical Reaction Engineering | - Applied Chemistry |
| ▪ Chemical Process Technology | - Pulp technology advance course |
| ▪ Colloidal Chemistry | - Paper technology advance Course |
| ▪ Chemical Process Principles | - Surface treatment technology |
| ▪ Combustion Operations | - Simultaneous Heat and Mass Transfer |

RESEARCH

- Membrane technology
- Gas separation processes
- Wastewater treatment
- Biogas upgrading processes
- Renewable energy technologies
- Synthesis and characterization of nanomaterials
- CHEMCAD as a tool when teaching Chemical Engineering
- Pulp, paper, and surface treatment technology

PUBLICATIONS

1. Khan, Imran Ullah, et al. "Biogas as a renewable energy fuel—A review of biogas upgrading, utilization, and storage." *Energy Conversion and Management* 150 (2017): 277-294. **(IF= 8.208, Q1)**
2. Khan, Imran Ullah, et al. "Status and improvement of dual-layer hollow fiber membranes via a co-extrusion process for gas separation: A review." *Journal of Natural Gas Science and Engineering* 52 (2018): 215-234. **(IF= 3.841, Q2)**
3. Khan, Imran Ullah, et al. "Structural transition from two-dimensional ZIF-L to three-dimensional ZIF-8 nanoparticles in aqueous room temperature synthesis with improved CO₂ adsorption." *Materials Characterization* 136 (2018): 407-416. **(IF= 3.562, Q1)**
4. Khan, Imran Ullah, et al. "Economical, environmental friendly synthesis, characterization for the production of zeolitic imidazolate framework-8 (ZIF-8) nanoparticles with enhanced CO₂ adsorption." *Arabian Journal of Chemistry* 11.7 (2018): 1072-1083. **(IF= 4.762, Q1)**
5. Khan, Imran Ullah, Mohd Hafiz Dzarfan Othman, Asim Jilani, A. F. Ismail, Haslenda Hashim, Juhana Jaafar, A. K. Zulhairun, Mukhlis A. Rahman, and Ghani Ur Rehman. "ZIF-8 based polysulfone hollow fiber membranes for natural gas purification." *Polymer Testing* 84 (2020): 106415. **(IF= 3.275, Q1)**
6. Khan, Imran Ullah, et al. "Rapid synthesis and characterization of leaf-like zeolitic imidazolate framework." *Malaysian Journal of Analytical Sciences* 22.3 (2018): 553-560. (Scopus Index)
7. Khan, Imran Ullah. "CHEMCAD as a tool when teaching Chemical Engineering." (2011).
8. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "Facile spectroscopic approach to obtain the optoelectronic properties of few-layered graphene oxide thin films and their role in photocatalysis." *New Journal of Chemistry* 41.23 (2017): 14217-14227. **(IF= 3.288, Q1)**
9. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "A simple route to layer-by-layer assembled few layered graphene oxide nanosheets: optical, dielectric and antibacterial aspects." *Journal of Molecular*

- Liquids 253 (2018): 284-296. **(IF= 5.065, Q1)**
10. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "A comprehensive study on the surface chemistry of particulate matter collected from Jeddah, Saudi Arabia." *Journal of Atmospheric Chemistry* 75.3 (2018): 271-283. **(IF= 1.783, Q3)**
 11. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "Graphene and its derivatives: synthesis, modifications, and applications in wastewater treatment." *Environmental chemistry letters* (2018): 1-23. **(IF= 5.922, Q1)**
 12. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "Structural, optical, and photocatalytic investigation of nickel oxide@ graphene oxide nanocomposite thin films by RF magnetron sputtering." *Journal of materials science* 53.21 (2018): 15034-15050. **(IF= 3.553, Q1)**
 13. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "Structural and optical characteristics and bacterial decolonization studies on non-reactive RF sputtered Cu-ZnO@ graphene-based nanoparticles thin films." *Journal of Materials Science* 54.8 (2019): 6515-6529. **(IF= 3.553, Q1)**
 14. Jilani, Asim, Othman, M. H. D, Khan, Imran Ullah, et al. "Linear/nonlinear optical susceptibility spectroscopic constants of polyaniline@ graphene oxide nanocomposite thin films." *Synthetic Metals* 251 (2019): 30-39. **(IF= 3.286, Q2)**
 15. Rehman, Ghani Ur, Muhammad Tahir, P. S. Goh, A. F. Ismail, and Imran Ullah Khan. "Controlled synthesis of reduced graphene oxide supported magnetically separable Fe₃O₄@ rGO@ AgI ternary nanocomposite for enhanced photocatalytic degradation of phenol." *Powder Technology* 356 (2019): 547-558. **(IF= 4.142, Q1)**
 16. Raza, Ayesha, Sarah Farrukh, Arshad Hussain, Imran Ullah Khan, Tayyaba Noor, Mohd Hafiz Dzarfan Othman, and Muhammad Fahad Yousaf. "Development of high performance amine functionalized zeolitic imidazolate framework (ZIF-8)/cellulose triacetate mixed matrix membranes for CO₂/CH₄ separation." *International Journal of Energy Research* (2020). **(IF= 3.741 , Q1)**
 17. Raza, Ayesha, Sarah Farrukh, Arshad Hussain, Imranullah Khan, Mohd Hafiz Dzarfan Othman, and Muhammad Ahsan. "Performance Analysis of Blended Membranes of Cellulose Acetate with Variable Degree of Acetylation for CO₂/CH₄ Separation." *Membranes* 11, no. 4 (2021): 245. **(IF= 3.094 , Q2)**
 18. Ayub, Muhammad, Mohd Hafiz Dzarfan Othman, Imran Ullah Khan, Siti Khadijah Hubadillah, Tonni Agustiono Kurniawan, Ahmad Fauzi Ismail, Mukhlis A. Rahman, and Juhana Jaafar. "Promoting sustainable cleaner production paradigms in palm oil fuel ash as an eco-friendly cementitious material: A critical analysis." *Journal of Cleaner Production* (2021): 126296. **(IF=7.246, Q1)**
 19. Rehman, Ghani Ur, Muhammad Tahir, Pei Sean Goh, Ahmad Fauzi Ismail, Asif Hafeez, and Imran Ullah Khan. "Enhancing the photodegradation of phenol using Fe₃O₄/SiO₂ binary nanocomposite mediated by silane agent." *Journal of Physics and Chemistry of Solids* (2021): 110022. **(IF= 3.442)**

Book Chapter

1. Khan, Imran Ullah, Mohd Hafiz Dzarfan Othman, and Asim Jilani. "High Performance Membrane for Natural Gas Sweetening Plants." In *Membrane Technology Enhancement for Environmental Protection and Sustainable Industrial Growth*, pp. 59-72. Springer, Cham, 2021.

CONFERENCES

1. Khan, Imran. Ullah., Othman, M. H. D., Ismail, A. F., Ismail, N., Jaafar, J., & Hashim, H. (2016). Status and improvement of dual-layer hollow fiber membranes via a co-extrusion process for gas separation. NATIONAL CONGRESS ON MEMBRANE TECHNOLOGY 2016 (NatCom 2016). 24th –25th August 2016, Pulau Spring Resort, Johor Bahru, Malaysia.
2. Khan, Imran. Ullah., Othman, M. H. D., Ismail, A. F., Ismail, N., Jaafar, J., & Hashim, H. (2016). Rapid Synthesis and Characterization of Leaf-like Zeolitic Imidazolate Framework (ZIF-L) With Base Type Additive. 2nd INTERNATIONAL CONFERENCE ON SEPARATION TECHNOLOGY (ICoST 2017). 15th–16th April 017, Johor Bahru, Malaysia.
3. Khan, Imran. Ullah., Othman, M. H. D., Ismail, A. F., Ismail, N., Jaafar, J., & Hashim, H. (2017). Improvement of CO₂ Adsorption on ZIF-L Particles by Increasing Basicity of Surface at High Temperature. REGIONAL POST-GRADUATE CONFERENCE ON ENVIRONMENTALLY SUSTAINABLE TECHNOLOGY (RCET 2017). 16th –17th October 2017, Faculty of Chemical & Energy Engineering Universiti Teknologi, Malaysia.
4. Khan, Imran. Ullah. Othman, M. H. D., Ismail, A. F., Ismail, N., Jaafar, J., & Hashim, H. (2017). 3rd CONFERENCE ON EMERGING MATERIALS AND PROCESSES (CEMP17). 13th–14th November 2017, School of Chemical and Materials Engineering, NUST, Islamabad, Pakistan.
5. Khan, Imran Ullah, et al. “Formation of defect-free PSf/ZIF-8 hollow fiber membrane for gas separation. NATIONAL CONGRESS ON MEMBRANE TECHNOLOGY 2018 (NatCom 2018). 30th –31st October 2018, Pulau Spring Resort, Johor Bahru, Malaysia.

PERSONAL SKILLS

Communication skills:

- ✓ Highly critical thinker with effective researching skills proven through work experience and project management
- ✓ Excellent written, verbal and professional communication skills
- ✓ Extremely good in creating research ideas and its execution
- ✓ Motivated to thrive as an independent researcher and problem solver

Computer skills:

- ✓ Proficient with Microsoft Word, Excel, PowerPoint, CHEMCAD, Origin, Mendeley, and EndNote

ACHIEVEMENTS

1. Awarded Best Postgraduate Student Award (The prestigious award) for PhD Degree from University Teknologi Malaysia in 2019
2. Awarded Scholarship Award for PhD at Universiti Teknologi Malaysia under Faculty Development Program of HEC Pakistan in 2015
3. Awarded Scholarship Award for Master at Karlstad University Sweden from HEC Pakistan in 2009
4. Officially appointed as Student Recruitment Representative of Universiti Teknologi Malaysia for Pakistan, Bangladesh, Afghanistan, and India in 2018 (Educational Ambassador)

EXTRACURRICULAR ACTIVITIES

1. Served as a President International Student Society- Central. Universiti Teknologi Malaysia (ISS-Central. UTM) for the session 2017/2018
2. Served as a President International Student Society- Pakistan. Universiti Teknologi Malaysia (ISS Pakistan. UTM) for the session 2017/2018
3. Played a Vital role in Signing Research MOU on behalf of School of Chemical and Materials Engineering (SCME), NUST and Advanced Membrane Technology Research Centre (AMTEC), UTM, Malaysia
4. Working as a Registered Reviewer in the Jurnal Teknologi (Sciences & Engineering, EISSN 2180-3722)