MUHAMMAD USMAN RASHID

Assistant Professor
Institute of Chemical Engineering and Technology,
University of the Punjab, Lahore.

Looking for a challenging position in an eminent academic organization to disseminate research expertise and academic knowledge with the aim of personal and professional growth in the field of Chemical Engineering.

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ACADEMIC QUALIFICATION

Ph.D. (Chemical Engineering)
University of Malaya (UM), Malaysia
2013-2017

Master of Engineering (Chemical)
Universiti Teknologi Malaysia (UTM)
2010-2012

B.Sc. Chemical Engineering
NFC Institute of Engineering and Technology, Multan (BZU Multan)
2004-2009

SUPERVISION

I have supervised 04 Master students research thesis.

Under my supervision, 02 groups of Final year design project completed their project.

02 groups completed their research Process report (6th semester) under my supervision.

ACADEMIC EXPERIENCE

Assistant Professor
March 2020-till Now

I am currently serving as an Assistant Professor (TTS) at the Institute of Chemical Engineering & Technology, University of the Punjab, Lahore, Pakistan from 12- March.2020 till now.

Assistant Professor
Nov 2019- March 2020

I served as an Assistant professor (TTS) on contract basis for a period of 04 month at NFC Institute of Engineering and Technology Multan.

Assistant Professor
May 2018- May 2019

I served for one year as an Assistant Professor at NFC Institute of Engineering and Technology Multan, Pakistan under Interim Placement of fresh PhDs (IPFP) program by Higher Education Commission, Pakistan from 03 May 2018 to 02 May 2019.

ADMINISTRATIVE SERVICES

- ·Member of Outcome based Education (OBE) accreditation committee.
- ·Secretary of Curriculum review Committee
- ·Member of Sports committee
- ·Member of Scholarship & Fee Committee
- ·Member of Admission committee.
- ·Co-oridnator for Research Process Report (6th Sem student) and Final year design Project.
- ·Incharge of In-organic Lab in the department.

RESEARCH EXPERIENCE

Reaction Engineering Lab, University of Malaya, Malaysia
Duration: February 2013 to July 2017

During Ph.D. studies, I worked on the synthesis of novel Ni-based catalysts prepared by Microemulsion approach and supported on different metal oxides (MgO and CeO2). These nano catalysts were applied for the utilization of greenhouse gases (CH4 and CO2) for the production of synthesis gas. During the research work, I gained detailed knowledge and experience in the morphological and structural analysis of catalysts using various characterization techniques TGA, FE-SEM, EDX, H2-TPR, CO2-TPD and TEM.

Advance Materials and Process Engineering (AMPEN) Laboratory, Universiti Teknologi Malaysia (UTM)
Duration: September 2011 to June 2012

As a Master student, I worked on the synthesis of modified biosorbent derived from coconut pith to adsorb Au(III) resulted from electrical and electronic waste (e-waste). My research work included detailed analysis of adsorption capacity data, selectivity studies, pH effect, Adsorption isotherms, kinetics and thermodynamic data. The modified and unmodified biosorbent were characterized by various techniques included TGA, FT-IR, AAS, SEM and EDX.

CONFERENCE PAPER

Usman, M., & Wan Daud, W. M. A. (2015). Production of synthesis gas by utilization of municipal solid waste via dry reforming of methane. International Journal of Technology and Engineering Studies, 1(1), 1-8. ITMAR 2015, 20-21 October, Istanbul, Turkey.

SUBJECTS TAUGHT

- ·Environmental Engineering
- ·Renewable Energy Engineering
- ·Chemical reaction Engineering
- ·Chemical Engineering Thermodynamics
- ·Chemical Plant Design
- ·Particulate Technology
- ·Applied Chemistry
- ·Chemical Process Industries

MEMBERSHIP

Pakistan Engineering Council. (PEC REG#chem-08157)

REFERENCES

Dr. Ayyaz Muhammad
Associate Professor
Institute of Chemical Engineering & Technology
University of the Punjab, Lahore, Pakistan
Email : ayyazmuhammad.icet@pu.edu.pk

Prof. Dr. Wan Ashri Wan Daud
Professor
Department of chemical Engineering
University of Malay, KualaLumpur, Malaysia
Email : ashri@um.edu.my

JOURNAL PUBLICATIONS

- Mohidem, N. A., Mohamad, M., Rashid, M. U., Norizan, M. N., Hamzah, F., & Mat, H. b. (2023). Recent Advances in Enzyme Immobilisation Strategies: An Overview of Techniques and Composite Carriers. Journal of Composites Science, 7(12), 488.
- Rashid, M. U., Daud, W. M. A. W., Mohidem, N. A., Mohamad, M. B., Akhtar, J., Azam, M., & Miran, W. (2022). Methane dry reforming with CO2 over ceria supported Ni catalyst prepared by reverse microemulsion synthesis. Fuel, 317, 123433. (First author/Corresponding author)
- Ali, R., Zafar, M., Manzoor, T., Kim, W. Y., Rashid, M. U., Abbas, S. Z., Ali, M. (2022). Elimination of solidification shrinkage defects in the casting of aluminum alloy. Journal of Mechanical Science and Technology, 36(5), 2345-2353.
- Ashraf, M., Ramzan, N., Azam, M., Anwar, A., Khan, R. U., Durrani, A. K., & Rashid, M. U. (2022). Cattle dung conversion to syngas: solar photovoltaic integrated gasification system. Biomass Conversion and Biorefinery, 1-12.
- .Fatima, A., Daood, S. S., Inaam, S., Babar, Z. B., Ahmed, A., Zafar, M., Kim, S. (2022). Investigation on the Beneficiation of Fluorite-ore using a mixture of Oleic acid and Palmitic acid via Froth Flotation. Environmental Engineering Research, 28(3), 220123.
- Suleman, M., M. Zafar, A. Ahmed, M. U. Rashid, S. Hussain, A. Razzaq, N. A. Mohidem, T. Fazal, B. Haider and Y.-K. Park (2021). "Castor Leaves-Based Biochar for Adsorption of Safranin from Textile Wastewater." Sustainability 13(12): 6926.https://www.mdpi.com/2071-1050/13/12/6926 (Corresponding author)
- Mohidem, N. A., H. Bin Mat, M. Mohamad, F. Hamzah and M. U. Rashid (2021). "Strategy to enhance catalytic activity and stability of sol–gel oxidoreductases." Journal of Sol-Gel Science and Technology 98(3): 462-469. https://link.springer.com/article/10.1007/s10971-021-05522-0#citeas
- Ali, K., R. Amna, M. Usman, M. I. Malik and K. Kim (2019). "An investigation of the influence of surface roughness, water quality and nozzle on spray cooling of Aluminum alloy 6082." Thermal Science and Engineering Progress 280-286. https://www.sciencedirect.com/science/article/abs/pii/S2451904917305000
- Saman, N., M. U. Rashid, J. W. P. Lye and H. Mat (2018). "Recovery of Au(III) from an aqueous solution by aminopropyltriethoxysilane-functionalized lignocellulosic based adsorbents." Reactive and Functional Polymers 123: 106-114. https://www.sciencedirect.com/science/article/pii/S1381514817302997. Journal Name: Reactive and Functional Polymers
- Usman, M., & Daud, W. W. (2016). Microemulsion based synthesis of Ni/MgO catalyst for dry reforming of methane. RSC Advances, 6(44), 38277-38289. http://pubs.rsc.org/-/content/articlelanding/2016/ra/c6ra01652a/unauth#!divAbstract . Journal Name: Royal Society of Chemistry (RSC) Advances. (First author/Corresponding author)
- .Usman, M., & Wan Daud, W. M. A. (2016). An investigation on the influence of catalyst composition, calcination and reduction temperatures on Ni/MgO catalyst for dry reforming of methane. RSC Advances, 6(94), 91603-91616. doi:10.1039/C6RA15256B. http://pubs.rsc.org/-/content/articlelanding/2016/ra/c6ra15256b/unauth#!divAbstract. Journal Name: Royal Society of Chemistry (RSC) Advances (First author/Corresponding author)
- .J Akhtar., NAS Amin., & Usman, M., (2016) Effectiveness of Granular Activated Carbon for Removal of Sulfamethoxazole during Ozonation. Chaing Mai journal of Science, 44(3), 1040-1048. http://it.science.cmu.ac.th/ejournal/journalDetail.php?journal_id=8292
- Usman, M., & Daud, W. W. (2015). Recent advances in the methanol synthesis via methane reforming processes. RSC Advances, 5(28), 21945-21972. http://pubs.rsc.org/en/content/articlelanding/2015/ra/c4ra15625k/unauth#!divAbstract Journal Name: Royal Society of Chemistry (RSC) Advances. (First author/Corresponding author)
- .Usman, M., Daud, W. W., & Abbas, H. F. (2015). Dry reforming of methane: Influence of process parameters—A review. Renewable and Sustainable Energy Reviews, 45, 710-744. http://www.sciencedirect.com/science/article/pii/S1364032115001148. Journal Name: Renewable and Sustainable Energy Reviews.(First author/Corresponding author)