

Nawaz, Ayyaz

Assistant Professor, Chemical and Materials Engineering Department, King Abdulaziz University

Education

<i>Degree</i>	<i>Field of Study</i>	<i>Institution</i>	<i>Year</i>
PhD	Chemical Engineering	UniversitiTeknologi PETRONAS	2009
MS	Chemical Engineering	University of the Punjab	2003
BS	Chemical Engineering	University of the Punjab	2001

Academic Experience

<i>From</i>	<i>To</i>	<i>Institution</i>	<i>Rank</i>	<i>Title</i>	<i>Full or Part Time</i>
2002	2010	ICE&T, PU	Lecturer		Full
2010	2012	ICE&T, PU	Assist. Prof.		Full
2012	date	King Abdulaziz university	Assist. Prof.		Full

Non Academic Industrial Experience (including Consultations)

<i>From</i>	<i>To</i>	<i>Company/Entity</i>	<i>Title</i>	<i>Position Description (Brief)</i>	<i>Full or Part Time</i>
2001	2002	Textile/Polyester, Lahore Pakistan	Trainee Engineer		Full

Funded Research Projects and Patents from the Past Five Years

1. Design and process study for liquid-liquid extraction, PU (Pak. Rs. 0.125 million) for 2011-2012.
2. Post-Combustion CO₂ capture using Amines, Ionic liquids (ILs) and Metal-organic frame works (MOFs) funded by KAU, KSA (25K USD), 2013-2014.
3. Benzene removal from model gasoline using ionic liquids (ILs), funded by KAU, KSA (20K USD), 2012-2013.
4. Synthesis and Characterization of Aluminium oxide/cellulose acetate/Polyethylene glycol hybrid membranes for the separation of CO₂ from Natural gas, PU (Pak. Rs. 0.3 million) 2012-2013
5. Design a packed column for the separation of oil from oil-water emulsion using a bed of polymeric resin, PU (Pak. Rs. 0.2 million) 2012-2013

Certifications and Professional Registrations

Life time Registered Professional Engineer of Pakistan Engineering Council (PEC) since 2001.

Current Membership in Professional Societies and Organizations

	<i>Society/organization</i>	<i>Rank</i>	<i>Member Since</i>
1.	International Association of Engineers (IAENG)	Member	2008
2.	Pakistan Engineers Forum (PEF)	Member	2002
3.	Pakistan Institute of Chemical Engineers (PIChE)	Executive member	2011

Honours and Awards

1. Earned scholarship as Graduate Assistantship (GA) scheme for PhD research work at UTP (Jan. 2006 Sept. 2009)
2. Earned TWO gold Medals for obtaining 1st position in M.Sc. (Chem. Eng.) at I.C.E&T-PU
3. Faculty tuition fee award for M.Sc. (Chem. Eng.) at I.C.E&T-PU (2002-2003)
4. Merit scholarships for 2nd, 3rd and final year for B.Sc. (Chem. Eng.) degree at I.C.E&T-PU (1996-2001)
5. Merit scholarships for secondary and higher secondary schooling at Pakistan steel cadet college, Karachi, and Government college, Multan, Pakistan

Institutional and Professional Services (*administration, committees, units, etc.*)

1. Incharge: Examinations (2010-2011)
2. Assistant-Coordinator: M.Sc./Ph.D Chem. Engg. Program (2010-2012)
3. Incharge: Industrial Internship training program & Industrial tours (2010-2012)
4. Team Leader: Quality Enhancement Cell (QEC) Program at ICE&T (2010-2012)
Member: Board of studies, Scholarship Committee, Hardship Committee, Course Review and
5. Curriculum Development Committee (2010-2012).), ABET Committee and Postgraduate studies Committee (since Aug., 2013).

Principal Publications/Presentations from the Past Five Years

1. Y. A. Elsheikh, F. H. Akhtar, M. H. Abdel Aziz, S. B. Hamouda, Ayyaz Muhammad, Kinetics of Citrus Colocynthis Oil Transesterification, Journal of the Chemical Society of Pakistan, (Accepted for publication), 36(5) **2014**.
2. Faheem H. Akhtar, Yasir A. Elsheikh, M. Bassyouni, Monazza Kaukab, Ayyaz Muhammad, Nadeem Feroze, An alkali catalyzed trans-esterification of rice bran, cottonseed and waste cooking oil, Hemijiska Industrija (Accepted for publication), **2013**.
3. A. Shafeeq, R. Aslam, S. A. Shahid, Ayyaz Muhammad¹, A. Ijaz, A. M. Ali, I. Ullah, M. Mushtaq, U. Rashid, Poly (vinyl alcohol): An economical substitute to calcium lignosulphonate for PVC/PET separation using froth flotation, Asian Journal of Chemistry, 25(13), **2013**, 7509-7512.
4. Y. A. Elsheikh¹, Z. Man, M. A. Bustam, F.H. Akhtar, S. Yusup, Ayyaz Muhammad, Preparation and Characterization of Citrus Colocynthis Oil Biodiesel: Optimization of Alkali-Catalyzed Transesterification, The Canadian journal of Chemical Engineering, Volume 9999, 2013, 1-6.
5. F. Aziz, M. Saif Ur Rehman, A. Batool, Ayyaz Muhammad, Tariq Mahmood, Pretreatment of Municipal, Industrial and Composite Wastewater by Ozonation, Environmental Processes & Engineering, 1(2) 2012, 1-8.
6. A. Ijaz, A. Shafeeq, Ayyaz Muhammad, S. S. Daood, Optimized values for a sieve plate pulsed column for acetic acid, water and kerosene system, Journal of Quality and Technology Management, VI(I) **2010**, 119-133.
7. Ayyaz Muhammad, M. I. Abdul Mutalib, T. Murugesan, A. Shafeeq, Thermophysical properties of aqueous piperazine and aqueous (N-methyldiethanolamine + piperazine) solutions at temperatures (298.15 to 338.15) K, J. Chem. Eng. Data, 54(8), **2009**, 2317-2321.

Recent Professional Development Activities (*Workshops, training, etc.*)

1. 2014: The Center of Excellence in Desalination Technology (CEDT) at King Abdulaziz University, Jeddah, KSA. Training course on process engineering: "Part I: Advanced Topics in Membrane Engineering", (5- 6 Jan.) and Part II: "Membrane Contactors, Reactors and Integrated Membrane Systems", (7 - 8 Jan.)
2. 2013: The Center of Excellence in Desalination Technology (CEDT) at King Abdulaziz University, Jeddah, in collaboration with KWR Water cycle Research Institute, Netherlands, "Advanced membrane desalination of contaminated brackish groundwater to improve Jeddah urban water cycle" (Two days: 3-4th, November).