

## Engr. Adnan Ahmad

Department of Polymer Engineering & Technology

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### Objectives

Seeking a carrier oriented position in an environment that will utilize my technical expertise, challenge my innovation and benefits from my technical, managerial, analytical, logical and verbal skills. Empowering team leader capable of motivating employees to increase productivity and committed to creative contribution through collaborative teams. Additionally, to acquire a reputable position in teaching, research and development.

### Education

✚ **M.Phil., Polymer Technology:** Dept. of Polymer Engineering and Technology (DPET), University of the Punjab, Lahore, Pakistan (**December 2013**) **CGPA: 3.78**

- **Dissertation:** Synthesis and characterization of desalination reverse osmosis cellulose acetate and PEG-600 membrane.
- **Thesis Supervisor:** Prof. Dr. Tahir Jamil

### ✚ Courses Attended

- Polymer Synthesis and Characterization
- Polymer Rheology & Processing
- Advance Composite Materials
- Polymer Process Technologies
- Membrane Science and Application
- Advanced Polymers
- Elastomeric Materials

- Instrumental Analysis for Process Industries
- Chemistry of Nano-materials
- Chemistry and Theory of Emulsification
- Polymer Process Design and Control
- Polymer Reaction Kinetics

✚ **BSc (Hons) Chemical Engineering:** Dept. of Chemical Engineering NFC-IEFR Faisalabad (UET Lahore), (**December 2010**)

- **Dissertation:** Insulin production from pancreas glands (Major),  
Piping design of cumene plant (Minor)
- **Thesis Supervisor:** Dr. Muhammad Ashraf Dogar

✚ **FSc (Phy, Chem, Maths):** Board of intermediate and secondary education, D.G.Khan (2006)

## Experience

✚ **Research Scholar:** University of the Punjab, Lahore, Pakistan (2012- Present).

✚ **Member of editorial board** “Advance Research in Textile Engineering” Austin Publishing group (2016-Present).

## Research Projects

I have been working in the Department of Polymer Engineering and Technology, University of the Punjab, Lahore, Pakistan as a research scholar since **15-11-2012**. During this period I have completed some funded projects. I can work in any environment as a team member or alone. Now, I am working on some projects under the supervision of chairman DPET.

✚ Extraction of chitosan (biopolymer) from female crab shells (**completed**).

✚ Synthesis and characterization of breathable polyurethane for textile applications (**completed**).

✚ Cellulose acetate/PEG based membranes for salt rejection (**completed**).

- ✚ Utilization of Polyurethane and cellulose acetate based films in the extraction of textile dyes from waste water (**completed**).
- ✚ Synthesis of breathable Polyurethane for textile industry (**In progress**).
- ✚ Synthesis and characterization of sodium alginate beads for metal ions rejection (**In progress**).

## Publications

1. **A. Ahmad**, S. Waheed, S.M. Khan, S. Gul, M. Shafiq, M. Farooq, K. Sanauallah, T. Jamil, Effect of silica on the properties of cellulose acetate/polyethylene glycol membranes for reverse osmosis, *Desalination* 355 (2015) 1–10. (**Impact factor 5.527**).
2. S. Waheed, **A. Ahmad**, S.M. Khan, S. Gul, T. Jamil, A. Islam, T. Hussain, Synthesis, characterization, permeation and antibacterial properties of cellulose acetate/polyethylene glycol membrane modified with chitosan, *Desalination* 351 (2014) 59–69. (**Impact factor 5.527**).
3. S. Gul, S. Waheed, **A. Ahmad**, S.M. Khan, M. Hussain, T. Jamil, M. Zuber. Synthesis, characterization and permeation performance of cellulose acetate/polyethylene glycol-600 membranes loaded with silver particles for ultra-low pressure reverse osmosis. *Journal of the Taiwan Institute of Chemical Engineers* (**Impact factor 4.2**).
4. A. Sabir, M. Shafiq, A. Islam, F. Jabeen, A. Shafeeq, **A. Ahmad**, M.T.Z. Butt, K.I. Jacob, T. Jamil. Conjugation of silica nano particles with cellulose acetate/polyethylene glycol 300 membrane for reverse osmosis using MgSO<sub>4</sub> solution. (**Impact factor 4.8**).
5. **Adnan Ahmad**, Fahad Jamshed, Tabinda Riaz, Sabad-e Gul, Sidra Waheed, Aneela Sabir, Adnan Alhathal AlAnezi, Muhammad Adrees, and Tahir Jamil, 'Self-Sterilized Composite Membranes of Cellulose Acetate/Polyethylene Glycol for Water Desalination', *Carbohydrate Polymers*, 149 (2016), 207-216. (**Impact factor 4.8**).
6. Tabinda Riaz, **Adnan Ahmad**, Sidra Saleemi, Muhammad Adrees, Fahad Jamshed, Abdul Moqet Hai, and Tahir Jamil, 'Synthesis and Characterization of Polyurethane-Cellulose Acetate Blend Membrane for Chromium (Vi) Removal', *Carbohydrate Polymers*, 153 (2016), 582-91. (**Impact factor 4.8**).

7. Adnan Alhathal Alanezi, H. Abdallah, E. El-Zanati, **Adnan Ahmad**, Adel O. Sharif, 'Performance investigation of O-ring vacuum membrane distillation 1 module for water desalination', Journal of Chemistry (Hindawi Publishing)., (**Impact factor 1.3**).
8. **Adnan Ahmad**, Fahd Jamshaid, Muhammad Adrees, Sadia sagar Iqbal, Aneela sabir, Tabinda riaz, Hira Zaheer, Atif islam, Tahir Jamil. Novel Polyurethane/Polyvinyl chloride-co-vinyl acetate crosslinked membrane for desalination of saline water; Desalination 420 (2017) 136–144. (**Impact factor 5.527**).
9. Cellulose acetate and chitosan crosslinked membranes for Cr (VI) removal via ultrafiltration (*comments submitted in Carbohydrate Polymers, I.F 4.8*).
10. Tuning the interlaminar shear strength and thermo-mechanical properties of glass fiber composites by incorporating (3-Mercaptopropyl) trimethoxysilane functionalized carbon black. (*comments submitted in Iranian polymer journal, Springer, I.F 1.422*)
11. The effect of Nanocrystalline cellulose/Gum Arabic conjugates in crosslinked membrane for antibacterial, chlorine resistance and boron removal performance (*comments submitted in Journal of industrial and engineering chemistry, I.F 4.412*)

## Total impact factor

**47.134**

## Books

1. Reverse osmosis membrane based on cellulose acetate PEG-600 and silica.  
(**ISBN-13:** 978-3-330-79717-8, **ISBN-10:** 3330797177, **EAN:** 9783330797178)

## Equipment Expertise

- ✚ Pipe Extruder
- ✚ Wet Scrubber
- ✚ Injection molding machine
- ✚ Blow molding machine
- ✚ Rheometer
- ✚ Viscometers
- ✚ FTIR (Fourier Transform infrared spectroscopy)
- ✚ Pin hole detector
- ✚ Optical microscope for surface morphology

- ✚ Reverse osmosis & Pervaporation rig
- ✚ Melt Press
- ✚ Drop Shape Analyzer (DSA30, KRUSS Germany) for contact angle measurement

### Computer Skills

- ✚ Microsoft Office
- ✚ Origin lab
- ✚ Endnote
- ✚ Visual Basic
- ✚ C++
- ✚ Maple
- ✚ Matlab

### References:

#### **Prof. Dr. M. Taqi Zahid Butt**

Dean of Engineering and Technology,  
University of the Punjab Lahore, Pakistan

#### **Dr. Shahzad Maqsood Khan**

Assistant Professor, Department of Polymer Engineering and Technology,  
University of the Punjab Lahore, Pakistan

#### **Dr. Aneela Sabir**

Assistant Professor, Department of Polymer Engineering and Technology,  
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#### **Dr. Sadia Sagar**

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