

# Dr. Shahzad Maqsood Khan

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## EXECUTIVE PROFILE

Chemical Engineering Professional with solid experience of approximately **FOURTEEN** years in R&D, management, production, design and teaching. Currently I am part of Punjab University in teaching faculty teaching various engineering courses to Ph.D, graduate and post graduate students and also managing departmental administrative activities covering all matters. I have also worked on projects of Higher Education Commission (HEC) Pakistan. As Assistant head of project, I was responsible for an end to end delivery of Turnkey and Non-Turnkey projects. I am rated among Top Ranked Personals of HEC Projects in Polymer Engineering Department as I delivered several important projects to the organization. The key deliverables include but are not limited to:

- Teaching Ph.D, graduate and post graduate students of engineering and sciences
- Design research projects based on real world problems of Chemical/Polymer industry or universities
- Work for project execution from zero to final stages (R&D, Installations, Designing, Erection and Commissioning of plants, machinery and instruments).
- Design and execute working plans for the execution of project.
- End to End responsible for successful project completion as per Time, Cost and Scope plan.
- Got **foreign trainings (from AMERICA)** on state of the art Characterization Instruments
- High level interface with High Officials for progress reporting.
- International tendering and bids evaluation for purchase of instruments and plants.
- Labs establishments and instruments installations.
- Managing in time and quality production on plants.
- Lead team of engineers & technicians for smooth running of instruments, Plants, machinery and continual testing of samples.
- Supervision of thesis and research papers and teaching.

## SCHOLASTIC RECORD

### Ph. D Chemical Engineering

**2009-2010**

Institute of Chemical Engineering & Technology University of the Punjab Lahore Pakistan  
Course Work CGPA 3.70.

**Diploma in Environmental Law****2013-2014**

Punjab University Law College University of the Punjab Lahore Pakistan

**M.Sc Chemical Engineering****2005-2006**Institute of Chemical Engineering & Technology University of the Punjab Lahore Pakistan 1<sup>st</sup> Div;  
GPA 3.0; 812/1100; 73.63%**B.Sc. Chemical Engineering with Spec. in Pet. & Gas Tech.****1999-2003**Institute of Chemical Engineering & Technology University of the Punjab Lahore Pakistan 1<sup>st</sup> Div;  
3356/4800; 70.00%**F. Sc****1996-1998**Board of Intermediate & Secondary Education Gujranwala 1<sup>st</sup> div; 785/1100; 71.36%**Matriculation****1994-1996**Federal Board of Intermediate & Secondary Education Islamabad 1<sup>st</sup> div; 671/850; 78.84%**EDUCATIONAL THESIS**

1. Polymer Composites to be used for Biomaterial and Engineering Applications (Ph.D Research Topic)
2. LATICES; Synthesis, Properties & Characterization. (Research Project; M.Sc Chemical Engineering Thesis)
3. Production of ISO AMYL ACETATE by Using Different Catalysts. (Process Project; B.Sc Chemical Engineering)
4. Production of Phenol from Cumene (B.Sc Chemical Engineering Final Project Report)

**PROFESSIONAL EXPERIENCE****PROFESSIONAL HISTORY at PUNJAB UNIVERSITY PAKISTAN****Assistant Professor (Contract)****Nov 2016- To date**

Department of Polymer Engineering &amp; Technology University of the Punjab Lahore Pakistan

**Lecturer (Contract)****Oct 2011- To date**

Department of Polymer Engineering &amp; Technology University of the Punjab Lahore Pakistan

**Assistant Professor/Researcher (Contract)****July 2010 – Sept 2011**

Establishment of Industrial Research Labs Project Higher Education Commission (HEC)-Institute of Chemical Engineering &amp; Technology University of the Punjab Lahore Pakistan

**Chemical Engineer/Researcher (Contract)****Feb 2009 – June 2010**

Establishment of Research Laboratories for Polymers Project Higher Education Commission (HEC)-Institute of Chemical Engineering &amp; Technology University of the Punjab Lahore Pakistan

**Research Scholar (Contract)****April 2007– Jan 2009**

Pervaporation Project Higher Education Commission (HEC)-Institute of Chemical Engineering &amp; Technology University of the Punjab Lahore Pakistan

## **Courses Taught & Academic Workings**

**Course Coordinator** M. Phil, Ph. D Polymer Technology Programme PET PU Lhr

- Helping, conducting lectures and giving assistance to teachers in **Ph.D Polymer Technology Programme**
- Bio Materials
- Polymer Process Technologies
- Polymer Characterization Instruments
- Teaching courses of Post Graduate Level of **M.Phil Polymer Technology Programme PET PU Lahore**
- Polymer Rheology and Processing
- Fundamental of Polymer Sciences
- Membrane Science and Applications
- Polymer Plant and Control
- Reaction Kinetics and Design
- Polymer Process Technologies
- Polymer Process and Design
- Rheology and Processing (Lab)
- Polymer Synthesis and Characterization (Lab)
- Teaching courses of Graduate Students of **Industrial Engineering in IQTM Department PU Lahore**
- Extruding and Injection Molding (Lab)
- Complete responsibilities for making course works, managing departmental affairs, conducting exams, management of labs and performing practical's.
- Managing departmental activities covering all departmental matters like laboratories establishment, purchases, tendering and administration etc.
- Supervising research projects of Masters and Graduate students to provide them technical as well as administrative support to complete their research objectives.

## **Engineering and Research Projects**

- Principal Investigator (PI) for research project "Synthesis of polymer blends and composites based on synthetic and natural polymers" 2017 **0.498 Mill Rs, HEC Pakistan (In Progress)**
- Principal Investigator (PI) for research project "Synthesis and characterization of polymers based absorbents and carrier materials" 2015-2016 **0.125 Mill Rs, Punjab University Research Grant (In Progress)**

- Principal Investigator (PI) for research project “Study on importance and use of hydrogels for bio medical and engineering applications” 2014-2015 **0.125 Mill Rs, Punjab University Research Grant (Completed)**
- Principal Investigator (PI) for research project “Study on Synthesis and Characterization of Various Polymer Composites for Engineering Applications” 2013-2014 **0.125 Mill Rs, Punjab University Research Grant (Completed)**
- Principal Investigator (PI) for research project “Polymer Composites to be Used for Bio Material and Engineering Applications” 2012-2013 **0.125 Mill Rs, Punjab University Research Grant (Completed)**
- Worked as assistant Leading and monitoring person on project of HEC “Establishment of Industrial Research Lab for Material Synthesis and Characterization of 52.982 Mill Rs
- Worked as assistant Leading and monitoring person on project of HEC “Establishment of Research Laboratories for Polymer and Material Synthesis, Characterization Rheology and Processing 38.784 Mill Rs
- Worked as assistant Leading and monitoring person on project of HEC “Establishment of Research Labs for polymers of 1.000 Mill Rs in terms of complete establishment at Punjab University Lahore Pakistan.
- Project of synthesis and characterization of bio-polymers used as implants (external fixator and biodegradable)
- Designed, fabricated and erected pilot plant for Polymer productions (Fully Automated)
- Designing of plants for chemical production and recycling.
- Designed and erected Pervaporation pilot plant for membrane separation studies (Officially project comprises of one-year duration but plant is designed, fabricated and erected just in 5 months.)
- Commissioned lab scale extruder and molding machines and Installation of polymer/materials state of the art characterization instruments.

#### **Administrative working and Project Management**

- Project Management comprising of building total infrastructure comprising civil works, imports, purchases, administration, accounts handling, budget allocations, amount distributions and instrument and plant installations
- Estimation of cost of material and determine financial resource allocation.
- Coordination with finance department for getting required amounts sanctioned on priority
- Management of international tenders for purchase of instruments
- Bids evaluation & ensure indenting of material & equipment as per specifications and cost budgets

- Liaise with technical evaluation committee for technical and commercial evaluation of bids and consequently ensure delivery of material as per specifications and in line with delivery schedules
- Procedure Optimization and Resource development

#### **PROFESSIONAL HISTORY at MASOOD PLASTICS PAKISTAN**

##### **Production Manager**

**Dec 2005 – March 2007**

- Production management of PE, PP, HDPE and LDPE films for printing and packaging industry by extruders
- Ensure time production as per requirement of clients
- Inventory control and maintenance of machinery during operation and as per scheduled on annual basis

#### **PROFESSIONAL HISTORY at ITTEHAD CHEMICALS PAKISTAN**

##### **Trainee Engineer**

**Jan 2005 - Nov 2005**

- Caustic soda production by electrolysis of brine with mercury.
- Set voltages of the electrolytic cells to save power consumption.
- High production rate achieved by process control, waste management and in time maintenance.

#### **PROFESSIONAL HISTORY at WAH NOBEL GROUP OF INDUSTRIES PAKISTAN**

##### **Management Trainee**

**Dec 2003 – Dec 2004**

- Submission of complete report of all the units
- Ensured timely production of products in compliance with applicable Quality Management System through team work, people management and leadership
- Ethyl Acetate, Butyl Acetate, Acetaldehyde, Acetic Acid continues, DCS production plants
- Formaldehyde, Urea Formaldehyde Concentrate continues DCS production plants
- Batch production of Synthetic Resins Urea Formaldehyde, Phenol Formaldehyde

#### **PROFESSIONAL HISTORY at AZIZIA INTERNATIONAL PAKISTAN**

##### **Quality Assurance Manager**

**July 2003 – Dec 2003**

- Team leader for quality assurance and material checking of surgical instruments
- Monitoring and controlling of parameters of cleaning processes using trichloroethylene or methanol.

#### **PUBLICATIONS**

##### **IMPACT FACTOR: 52.065**

1. Enhanced mechanical properties of wood ash and fly ash as supplementary cementitious materials; Zaib Hussain, Rohama Maqsood, Muhammad Imran Din, Shahzad Maqsood Khan,

- Akhtar Shahnaz, Mohsin Rashid & Saba Ameen; *Advances in Applied Ceramics Structural, Functional and Bioceramics*. DOI: 10.1080/17436753.2017.1321274 **(2017) I.F 1.23**
2. Development and performance characteristics of silane cross linked poly (vinyl alcohol)/chitosan membranes for reverse osmosis. M. Shafiq, A. Sabir, A. Islam, S. M. Khan, S. N. Hussain; M. T. Z. Butt; T. Jamil; *Journal of Industrial and Engineering Chemistry* 48: 99-107 **(2016) I.F=4.179**
  3. Integrally skinned nano-cellular crosslinked asymmetric thin films infused with PEO-PPO-PEO block copolymer/ZnO-NPs for desalination using sea salt. Aneela Sabir, Wail Falath, Karl I Jacob, Muhammad Shafiq, Nafisa Gull, Atif Islam, Muhammad Azeem Munawar, Saba Zia, Shahzad Maqsood Khan, Amir Shafeeq, Muhammad Taqi Zahid Butt, Tahir Jamil. *Materials Chemistry and Physics*, 183: 595-605 **(2016) I.F. = 2.101.**
  4. Fabrication and Performance Characteristics of Tough Hydrogel Scaffolds based on Biocompatible Polymers. Atif Islam, Tariq Yasin, Nafisa Gull, Shahzad M Khan, Aneela Sabir, Muhammad A Munawar, Muhammad Shafiq, Tahir Jamil, Muhammad H Raza. *International Journal of Biological Macromolecules* 92: 1-10 **(2016) I.F 3.138**
  5. Mechanical, Thermal, and Microscopic Profile of Novel Glass Fiber-Reinforced Polyester Composites as a Function of Barium Sulfate Loading. Farheen Anjum, Nafisa Gull, Shahzad M. Khan, Muhammad A. Munawar, Atif Islam, Sajid I. Niazi, Saba Zia, Muhammad Shafiq, Nafisa Gull, Shahzad M. Khan, Muhammad A. Munawar, Atif Islam, Sajid I. Niazi, Saba Zia, Muhammad Shafiq and Tahir Jamil. *Advances in Polymer Technology* DOI: <http://dx.doi.org/10.1590/1516-1439.043715> **(2016) I.F 1.114.**
  6. Novel Green Nano Composites films fabricated by Indigenously Synthesized Graphene Oxide and Chitosan. Younas H Khan, Atif Islam, Afsheen Sarwar, Nafisa Gull, Shahzad M Khan, Muhammad A Munawar, Saba Zia, Aneela Sabir, Muhammad Shafiq and Tahir Jamil. *Carbohydrate Polymers* 146: 131-138 **(2016) I.F 4.219**
  7. Fabrication and characterization of novel zirconia filled glass fiber reinforced polyester (GFRP) hybrid composites. Muhammad Azeem Munawar, Shahzad Maqsood Khan, Nafisa Gull, Muhammad Shafiq, Atif Islam, Saba Zia, Aneela Sabir, Awaish Ghouri, Muhammad Taqi Zahid Butt, Tahir Jamil. *Journal of Applied Polymer Science* 43615: 1-9 **(2016) I.F 1.866**
  8. Polyphenylene sulphide/carbon fiber composites: study on their thermal, mechanical and microscopic properties. Shahzad Maqsood Khan, Nafisa Gull, Muhammad Azeem Munawar, Saba Zia, Farheen Anjum, Muhammad Sajid Iqbal, Muhammad Shafiq, Atif Islam, Muhammad Arif Butt, Muhammad Taqi Zahid Butt and Tahir Jamil. *Iranian Polymer Journal* 25: 475-485 **(2016) I.F 1.684**

9. 2D Carbon Fiber Reinforced High Density Polyethylene Multi-layered Laminated Composite Panels: Structural, Mechanical, Thermal and Morphological Profile Shahzad Maqsood Khan, Nafisa Gull, Muhammad Azeem Munawar, Atif Islam, Saba Zia, Muhammad Shafiq, Aneela Sabir, Syed Muhammad Awais, Muhammad Arif Butt, Muhammad Taqi Zahid Butt and Tahir Jamil. *Journal of Material Science & Technology* 32: 1077-1082 **(2016) I.F 2.267.**
10. Effect of different oxidants on polyaniline/single walled carbon nanotubes composites synthesized via ultrasonically initiated in-situ chemical polymerization Nafisa Gull, Shahzad Maqsood Khan, Atif Islam, Saba Zia, Muhammad Shafiq, Aneela Sabir, Muhammad Azeem Munawar, Muhammad Taqi Zahid Butt, Tahir Jamil; *Materials Chemistry and Physics* 172, 39-46, **(2016) I.F 2.101**
11. Evaluation of selected properties of biocompatible chitosan/poly (vinyl alcohol) blends Islam A, Yasin T, Gull S, Khan SM, Munawar MA, Shafiq M, Sabir A, Jamil T *International Journal of Biological Macromolecules* 82, 551-556, **(2016) I.F 3.138**
12. Impedance spectroscopy of chitosan/poly (vinyl alcohol) film, Islam A, Yasin T, Akhtar M. J. Imran Z, Sabir A, Sultan M, Khan SM, Jamil T *Journal of Solid State Electrochemistry* 20, 571-578 **(2016) I.F 2.327.**
13. Synthesis, characterization and permeation performance of cellulose acetate/polyethylene glycol 600 membranes loaded with silver particles for ultra-low pressure reverse osmosis. Sabad-e-Gul, Sidra Waheed, Adnan Ahmad, Shahzad Maqsood Khan, Muhammad Hussain, Tahir Jamil, Muhammad Zuber. *Journal of Taiwan Institute of Chemical Engineers.* 57, 129-138 **(2015) I.F 2.848**
14. An investigation of AC impedance and dielectric spectroscopic properties of conducting chitosan-silane crosslinked-poly (vinyl alcohol) blended films, Islam A, Imran Z, Yasin T, Gull N, Khan S M, Shafiq M, Sabir A, Munawar M A, Raza MH, Jamil T *Materials Research* **(2015) I.F 0.788**
15. In-situ Cross Linked Nanofiber Mats of Chitosan/Poly (vinyl alcohol) Blend: Fabrication, Characterization and MTT Assay with Cancerous Bone Cells, Islam A, Yasin T, Rafiq M. A., Tahir H. Shah, Sabir A, Khan SM, Jamil T. *Fibers and Polymers* 16 (9), 1853-1860 **(2015) I.F 1.022**
16. High-temperature electrical properties of silane cross-linked chitosan/poly (vinyl alcohol) membrane: thermal, mechanical and surface characterization, Islam A, Yasin T, Sabir A, Khan SM, Sultan M, Shafiq M, Khan AU, Jamil T. *e-Polymers* 15 (4), 255-261 **(2015) I.F 0.812**
17. Synthesis and characterization of zinc oxide (ZnO) filled glass fiber reinforced polyester composites Nafisa Gull, Shahzad Maqsood Khan, Muhammad Azeem Munawar, Muhammad Shafiq, Farheen Anjum, Muhammad Taqi Zahid Butt, Tahir Jamil. *Materials and Design.* 67, 313-317 **(2015) I.F 3.997**

18. Effect of silica on the properties of cellulose acetate/polyethylene glycol membranes for reverse osmosis Adnan Ahmad, Sidra Waheed, Shahzad Maqsood Khan, Sabad-e-Gul, Muhammad Shafiq, Muhammad Farooq, Khairuddin Sanaullah and Tahir Jamil. Desalination Vol 355, pp 1–10, **(2015) I.F 4.412**
  19. Synthesis, characterization, permeation and antibacterial properties of cellulose acetate/polyethylene glycol membranes modified with chitosan, Sidra Waheed, Adnan Ahmad, Shahzad Maqsood Khan, Sabad-e- Gul, Tahir Jamil. Atif Islam, Tousif Hussain. Desalination 351, 59–69, **(2014) I.F 4.412**
  20. Influence of Polyethylene Glycol 600 on Cellulose Acetate Membranes for Reverse Osmosis Desalination. Aneela Sabir, M. Shafiq, Atif Islam, Shahzad M. Khan, Tahir Jamil1, M. Taqi Zahid, Amir Shafeeq, Arslan Shehzad, Arshad S. Bhatti, Younas Habib, Saba Behzad, and Sarwat Jabeen. Polymer Research Journal. 9 (2) 291-302 **(2015)**
  21. Polymer Fiber Composites; A prodigious breakthrough in Medical Arena. Article submitted in Pakistan Plastic Manufacturing Association (PAK PLAS) Engr. Shahzad Maqsood Khan **(2015)**
  22. Chemistry in Every Day Use. Participated in article writing for Dunicllif Chemical Society **(2015)**
  23. Synthesis and Characterization of Flexible and Rigid Polyurethane Foam, Shoaib Suleman, Shahzad Maqsood Khan, Tahir Jamil, Waqas Aleem, Muhammad Shafiq, Nafisa Gull, Asian Journal of Applied Sciences. 2(5) **(2014)**
  24. Synthesis and Characterization of Visco-Elastic (VE) Polyurethane Foam, Shoaib Suleman, Shahzad Maqsood Khan, Nafisa Gull, Waqas Aleem, Muhammad Shafiq, and Tahir Jamil1; International Journal of Innovation and Applied Studies 9 (4) 1878-1886, **(2014) SJIF 3.50**
  25. A Comprehensive Short Review on Polyurethane Foam; Shoaib Suleman, Shahzad Maqsood Khan, Nafisa Gull, Waqas Aleem, Muhammad Shafiq, and Tahir Jamil; International Journal of Innovation and Scientific Research, 12, 165-169 **(2014) SJIF 3.50**
  26. Polymers: A prodigious Revolution in Medical Arena, Shahzad Maqsood Khan, Saba Zia, Prof. Dr. Muhammad Taqi Zahid Butt, Prof. Dr. Tahir Jamil, Pakistan Plastic Manufacturers Association (PAK PLAS) 91-93 **(2014)**
  27. A Study On Synthesis and Testing of Polyols Using Soybean Oil and Castor Oil; Shahzad Maqsood Khan, Nafisa Gull, Muhammad Yaseen Akram, Hakim Ali Haider, Muhammad Yasir Akram, Muhammad Imran, Muhammad Taqi Zahid Butt and Tahir Jamil, Asean Journal of Chemical Engineering 13 (2) 27-38 **(2013)**
  28. Dehydration of Industrial Ethanol by Pervaporation; S.M. Khan, M. Usman, N. Gull, M.T.Z. Butt & T. Jamil, Journal of Quality and Technology Management (JIQTM) IX (II) 163-170 **(2013)**
- Category X**



29. An Overview on Pervaporation (An Advanced Separation Technique); S.M. Khan, M. Usman, N. Gull, M.T.Z. Butt & T. Jamil, Journal of Quality and Technology Management (JIQTM) IX (1) 155-161 **(2013) Category X**
30. Effect of additives on the properties and performance of cellulose acetate derivative membranes in the separation of isopropanol/water mixtures; Muhammad Zafar, Muddassir Ali, Shahzad Maqsood Khan, Tahir Jamil, Muhammad Taqi Zahid Butt, Desalination, 285 359–365 **(2012) I.F 4.412**
31. A Study on Synthesis and Testing of Polymer Modified Concrete; Shahzad Maqsood Khan, Khurram Javed, Muhammad Taqi Zahid Butt, and Tahir Jamil, Engineering News, A Quarterly journal of the Pakistan Engineering Congress (PECC) 44 (5-6) 55-63 **(2012)**
32. Synthesis and Characterization of Polyacrylonitrile Copolymers, Waqar Ahmad, Shahzad Maqsood Khan, Muhammad Arif Butt and Tahir Jamil, Journal of Pakistan Institute of Chemical Engineers (JPICHE) XXXVII, 61-67 **(2009)**
33. Synthesis, Properties and Characterization of rubber Latices; A Review, Shahzad Maqsood Khan, Arshad Chughtai, Abdual Sattar, Muhammad Arif Butt and Tahir Jamil Journal of Pakistan Institute of Chemical Engineers (JPICHE) XXXVI, 9-16 **(2008) Y Category**
34. Determination of Solubility Parameter of Latices. Shahzad Maqsood Khan and Prof. Dr. Tahir Jamil, Journal of Pakistan Institute of Chemical Engineers (JPICHE) XXXVI, 17-34 **(2008) Y Category**

## **AWARDS & PRESENTATIONS**

1. Nominated for Research Incentive Award Punjab University Lahore for the year 2016 for research publication **May 2017**
2. Presented Technical Presentation in Conference Recent Advances in Chemistry-2017 Recent Advancements in Chemical Trends; R&D and Production in University of Lahore (UoL) Lahore Pakistan **May 13-14 2017**
3. Presented Technical Presentation in Conference of Orthopedic Association of Saarc Countries (OASAC) 2017 "Fiber Reinforced Polymer Composites for Orthopedic Applications" in PC Lahore **April 07-09 2017**
4. Presented Technical Presentation in Invention to Innovation Summit 2017 in Session of PIDE on topic Polymers for Biomaterial applications in Punjab University Lahore **March 08-09 2017**
5. Presented Technical Presentation in **National Seminar on Engineering Materials & Their Performances-2013** jointly organized by College of Engineering & Emerging Technologies (CEET) PU Lhr, Pakistan Institute of Metallurgy & Material Engineers (PIMME) and Material

Chapter Punjab University (MCPU) on "Synthesis and Characterization of Polyacrylonitrile (PAN)" in PU Lhr. **April 30, 2013**

6. Presented Technical Presentation in **4<sup>th</sup> International Conference on Textile and Clothing** (ICTC 2013) on the theme of Sustainable Products on Textile Exports jointly organized by Society of Dyes and Colorists (SDC), The Textile institute Lahore, School of Textile & Design (SDT) of University of Management and Technology (UMT) Lahore on "Synthesis and Characterization of Polyacrylonitrile (PAN) for Carbon Fiber" in Lahore Expo Center.

**March 28-30, 2013**

7. Nominated for Research Incentive Award Punjab University Lahore for the year 2013 for research publication

8. Presented Paper in **4<sup>th</sup> Symposium on Engineering Sciences** on Dehydration of Aqueous Ethanol Using Cellulose Acetate Membranes in Pervaporation Process (ICET PU LHR) Best Presenter Award

**March 01, 2011**

9. Presented Paper in **1<sup>st</sup> Symposium on Engineering Sciences** on "Synthesis, Properties and Characterization of rubber Latices; A Review" (ICET PU LHR)

**April 30, 2009**

10. Presented Paper In **1<sup>st</sup> Symposium on Engineering Sciences** on "Determination of Solubility Parameter of Latices" (ICET PU LHR)

**April 30, 2009**

11. Project management presentations in HEC funded projects in Planning and Commission meetings in Islamabad

12. Presentations in of projects on successful project completion in inaugurations and in different forums for HEC funded projects in Department of Polymer Engineering and Technology University of the Punjab Pakistan Lahore representing as a focal person from university for the projects.

## **PROFESSIONAL TRAININGS & SEMINARS**

### **FOREIGN TRAININGS**

1. Theory and Application Training Course of Q600 SDT, Q200 DSC & AR 1500 EX Rheometer **(TA Instruments; Houston, Woodland USA)** **Aug 2009**
2. Theory, Application and Hands on Working Training Course of Q400 TMA, DMA & MDSC **(TA Instruments; Delaware USA)** **Aug 2009**

### **LOCAL TRAININGS & SEMINARS**

3. Participated in world IPO day Marriot Hotel Islamabad **May 2017**
4. Participated as **Organizer** in 6Invention to Innovation Summit 2017 in Session of PIDE on topic Polymers for Biomaterial applications in Punjab University Lahore **March 08-09 2017**
5. Attended Seminar on World Quality Day Punjab University Lahore **February 08 2017**

6. 6<sup>th</sup> Symposium in Engineering Sciences University of the Punjab and University of Engineering & Technology Lahore **Dec 21-22, 2016**
7. Workshop on Entrepreneurship, Use of Business Intelligence for Development **Nov 8, 2016**
8. 4<sup>th</sup> One Week In-Service Faculty Training Program, Department of Microbiology and Molecular Genetics (MMG), University of the Punjab **Nov 21-25, 2016**
9. Article Writing "Chemistry in Every Day Life Dunnicliff Chemical Society, GCU Lhr **March 2015**
10. 25<sup>th</sup> National and 13<sup>th</sup> International Chemistry Conference, Institute of Chemistry PU Lhr **Oct 20-22, 2014**
11. 5<sup>th</sup> Symposium on Engineering Sciences ICET PU Lhr **April 2<sup>nd</sup>, 2014**
12. Chromatography Techniques & Sample Preparation Seminar Agilent Technologies **Jan 23, 2014**
13. Short course on porous carbon materials & polymer fiber composites Pakistan Institute of Engineering & Applied Sciences (PIEAS) Department of Nuclear Engineering **May 28-30, 2013**
14. 4<sup>th</sup> International Conference on Textile and Clothing (ICTC 2013) **March 28-30, 2013**
15. In Service Faculty Training programme at University of the Punjab, for the core modules: professional Ethics, Management & Grooming: Assessment a& Evaluation; Department of Microbiology and Molecular Genetics in collaboration with Learning Innovation Division HEC Pakistan **Feb 4-8, 2013**
16. 3<sup>rd</sup> International Symposium on Biomedical Materials: Recent Advances and Challenges. Interdisciplinary Research Center in Biomedical Materials, CIIT Lahore King Edward Medical University & De'montmorency College of Dentistry **Dec 18-20, 2012**
17. Corrosion and Corrosion Control Symposium (SOCEP-CEET PU LHR) **Oct 27, 2011**
18. Enhancing Quality and Productivity through Testing (TET PU LHR) **March 9-10, 2011**
19. Non-Destructive Testing Equipments (Sumico LHR) **Feb 26, 2011**
20. Non-Destructive Weldment Evaluation and its Remedies. (MME PU LHR) **Dec 13-14, 2010**
21. Plastic Injection molding (PITAC LHR & SCCI SKT) **Nov 1, 2010**
22. HAZOP Study for Process Industries (ICET PU LHR) **Aug 10, 2010**
23. Implementation of ISO 17025 for QA in Testing and Research Labs (ICET PU LHR) **Aug 7 - 8, 2010**
24. Storage Tank Designing (NIDA LHR) **July 26 - Aug 6, 2010**
25. Energy Conservation and Sustainability (ICET PU LHR) **Aug 6, 2010**
26. Heat Exchanger Design and Rating Using CHEMCAD (ICET PU LHR) **Aug 3, 2010**

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| 27. Basic Steady State Simulation Using CHEMCAD (ICET PU LHR)  | <b>Aug 2, 2010</b>              |
| 28. Implementation of QMS (ISO 9001:2008) in Process Industries (ICET PU LHR)                                | <b>July 31 – Aug 1, 2010</b>    |
| 29. Process Integration and Intensification (ICET PU LHR)  | <b>July 28-29, 2010</b>         |
| 30. Pipe Line designing (NIDA LHR)   | <b>June 28 – July 9, 2010</b>   |
| 31. Project Planning and Scheduling; P-6 (CCPEC LHR)   | <b>May 24 – June 16, 2010</b>   |
| 32. HVAC designing (NIDA LHR)  | <b>May 3 – 14, 2010</b>         |
| 33. Attended 3 <sup>rd</sup> Symposium on Engineering Sciences (ICET PU LHR)                                 | <b>March 10, 2010</b>           |
| 34. Seminar on Scientific Writing & Publishing in High Impact Journals (KEMU LHR)                            | <b>Feb 4 – 5, 2010</b>          |
| 35. Operational and Installation Training of GPC (ICET PU LHR)   | <b>May 18 – 22, 2009</b>        |
| 36. Operational Instrumental Training of Q600 SDT, Q200 DSC, Q400 TMA and AR 1500 EX Rheometer (ICET PU LHR) | <b>April 9 – 11, 2009</b>       |
| 37. Selection of Stainless Steel for Surgical Instruments (SIMTEL SKT)                                       | <b>Jan 14, 2009</b>             |
| 38. Operational and Installation Training of FTIR (ICET PU LHR)  | <b>Oct 25 – 28 2008</b>         |
| 39. Matlab Programming (ICET PU LHR)   | <b>April 24 – June 28, 2008</b> |
| 40. Industrial Training (WAH NOBEL ACETATE WAH CANTT)  | <b>July 5 – Aug 3, 2002</b>     |
| 41. Advance AutoCAD (IGE PU LHR)   | <b>Oct 15 – Nov 15, 2002</b>    |

## **INSTRUMENTS**

Got expertise and trainings in installations and operating of number of equipments including

1. Differential Scanning Calorimeter (DSC)
2. Thermo mechanical Analyzer (TMA)
3. Dynamic Mechanical Analyzer (DMA)
4. Simultaneous Differential Scanning Calorimeter Thermo Gravimetric Analyzer (SDT)
5. Rheometer
6. Fourier Transform Infra-Red Spectrophotometer (FTIR)
7. Gel Permeation Chromatograph (GPC)
8. Universal Testing Machine (UTM)
9. Rock Well Hardness Tester
10. Barcol Hardness Tester
11. Tubular Impact Tester
12. Pendulum Impact Tester
13. Wet Abrasion Scrub Tester
14. High Temperature Press
15. Lab Attritor

16. Lab Scale High Pressure Reactor
17. Gas Permeability Tester
18. Lab Scale Extruder
19. Paint Testing Equipments

## PROFESSIONAL TOOLS AND SOFTWARES

1. Primavera Project Planner V-6.0
2. Microsoft Visio 2003, 2010
3. Microsoft Office
4. AutoCad

## ENGINEERING PROJECTS

1. Involved in Designing of Large Scale Water Treatment Plants 2016
2. Designing and Fabrication of lab Scale Reactors and Treatment Units 2015-2016
3. Designing and Fabrication of High Pressure Lab Scale Pervaporation Plant 2014
4. Designing and Drafting of Caustic Soda Recycling Plant (Industrial Project) 2011
5. Designing of Lab Scale Dipped Goods Synthesis Plant 2010
6. Designing of Lab Scale Polymer Synthesis Pilot Plant 2009
7. Designing and fabrication of Lab Scale Pervaporation Plant 2008

## THESIS SUPERVISED M.PHIL POLYMER TECHNOLOGY PET LHR

Sr. No.	Student name	Roll No	Topic	Session
1	Muhammad Azeem Munawar	MPE-02-11	Particulate Filled Polyester Hybrid Composites	2011-2013
2	Muhammad Sajid Iqbal Khan	MPE-03-11	Processing and Characterization of TiO <sub>2</sub> filled Polyester-Glass Fiber Composites	2011-2013
3	Ammad Yamin	MPE-04-11	Synthesis of Acrylic Polyol	2011-2013
4	Nafisa Gull	MPE-07-11	Assessment of Thermal and Mechanical Properties of ZNO Filled Glass Fiber Reinforced Polyester Composites	2011-2013
5	Munir Ahmad	MPE-09-11	Synthesis of Rigid Polyurethane Foam and Effect of Filler on its Properties	2011-2013
6	Muhammad Basharat	MPE-12-11	A Study of Effect on Physicochemical Properties of Acrylic Lattices by Varying Concentrations of Ionic and Non-Ionic Emulsifiers in Continuous Emulsion Co-	2011-2013

<b>Sr. No.</b>	<b>Student name</b>	<b>Roll No</b>	<b>Topic</b>	<b>Session</b>
	Saeed		Polymerization of Methyl Methacrylate and Butyl Acrylate to produce on Stable Product	
7	Muhammad Shafiq	MPE-13-11	Synthesis of Rigid Polyurethane Foam and effect of Silicon Surfactant on its Properties	2011-2013
8	Adnan Ahmad	MPE-19-11	Cellulose Acetate and Polyethleneglycol-600 (PEG-600) based Membranes Modified by Silica	2011-2013
9	Sabad E Gul	MPE-21-11	Synthesis & Characterization of Cellulose Acetate and PEG blended Membranes Impregnated with Silver Nitrate	2011-2013
	Sidra Waheed	MPE-29-11	Synthesis and Characterization of 3-Component Membranes for Water Treatment	2011-2013
11	Farheen Anjum	MPE-31-11	Evaluation of Mechanical and Thermal Properties of Barium Sulphate Filled Glass Fiber Reinforced Polyester Composites	2011-2013
12	Hina Saleem	MPE-09-12	Synthesis and characterization of Cellulose Acetate Membrane with PEG 600 and 300 By Oven and Freeze Drying Method	2012-2014
13	Muhammad Abid	MPE-11-12	Synthesis and Characterization of Waterborne Polyurethane Coatings with Hydrophilically modified Aliphatic Polyisocyanate	2012-2014
14	Saba Urooge Khan	MPE-16-12	Synthesis and Characterization of CA Membrane by using PEG 300/600 by Freeze and Vacuum Dry Method for the Application of Hemodialysis	2012-2014
14	Ali Abbas	MPE-18-12	Synthesis and Characterization of Cellulose / Na-CMC Hydrogel for Controlled Drug Delivery Application	2012-2014
15	Younas Habib Khan	MPE-03-13	Synthesis of Graphene Oxide and Fabrication of Novel Graphene Oxide Green Nano Composite with Chitosan	2013-2015
16	Saba Zia	MPE-05-13	Synthesis and Characterization of Hydrogel for Biomedical and Industrial Applications	2013-2015
17	Muhammad Omer Yasin	MPE-07-13	Preparation and Characterization of Nano hydroxyapatite (n-HA) Powder from Eggshells and n-HA Reinforced Polyamide 6 Bio nanocomposite	2013-2015

Sr. No.	Student name	Roll No	Topic	Session
17	Saood Hamid	MPE-09-13	Preparation and Characterization of Nano Hydroxyapatite Utilizing Hen's Eggshells and nHa Reinforced PP Composite as Bone Analogue biomaterial	2013-2015
19	Mohsin Farooq	MPE-19-13	Eva Functionalized Aero silica Doped Composites, Thermal, Dynamic Mechanical and Insulation Characteristics	2013-2015

### RESEARCH PROJECTS & THESIS (OTHER DEPARTMENTS)

1. Synthesis and Characterization of different polymers and copolymers (M.Sc Chemistry Thesis PU Lhr)
2. Infra-Red Spectroscopic Studies of In Dental Binding Material Healed by LED and Halogen Light In vitro Conditions (De'montmorency College of Dentistry Lhr M.Phil Project)
3. Production of Poly Acrylic Acid on Polymer Synthesis Pilot Plant
4. Separation of Alcohol Water System by Pervaporation (M.Sc Chemical Engineering ICET PU Lhr)
5. Separation of Caustic Soda-Water system by RO Membrane (M.Sc Chemical Engineering ICET PU Lhr)
6. Separation of Potassium Hydroxide-Water system by RO Membrane (M.Sc Chemical Engineering ICET PU Lhr)
7. Separation of Ethanol-Water system by RO Membrane (M.Sc Chemical Engineering ICET PU Lhr)
8. Synthesis and Characterization of Viscoelastic Polyurethane Foam (M.Sc Chemical Engineering ICET PU Lhr)
9. Dipped goods Production from Natural Latex (M.Sc Chemical Engineering ICET PU Lhr)
10. Synthesis of Polymer Composite for Targeted Drug Delivery Releases using Gelatin and Glycolic Acid (D-Pharmacy PU Lhr)
11. Process Report on the Production of Polyol used for making Polyurethane Foams from Soybean and Castor Oil (B.Sc Chemical Engineering ICET PU Lhr)
12. Process Report on the Formation of Polymer Modified Concrete (B.Sc Chemical Engineering ICET PU Lhr)
13. Plant design on Pervaporation Plant (B.Sc Chemical Engineering ICET PU Lhr)
14. Waste Water Treatment of Water Based Dyes (B.Sc Chemical Engineering ICET PU Lhr)

15. Manufacturing of Bullet Proof Jacket Composite using Fibers and PP (B.Sc Metallurgical Engineering MME PU Lhr)

### AFFILIATIONS

- |   |                         |
|---|-------------------------|
| 1. Pakistan Engineering Council (PEC)               | <b>CHEM / 4818</b>      |
| 2. Pakistan Engineering Congress (PECC)             | <b>4362</b>             |
| 3. Pakistan Institute of Chemical Engineers (PICHE) | <b>A10033</b>           |
| 4. Society of Corrosion Engineers Pakistan (SOCEP)  | <b>M-105</b>            |
| 5. Institute of Engineers Pakistan (IEP)            | <b>M-17416 LHR-4733</b> |
| 6. The Chemical Society of Pakistan (CSP)           | <b>P0435</b>            |

### PAST SELECTIONS

1. Assistant Professor (Permanent) BPS 19 at University of the Gujrat in 2010.
2. Lab Engineer/Lecturer at University of Engineering & Technology Lahore Faisalabad Campus in 2009.
3. Chemical Engineer at Cleaner Production Center Sialkot in 2008.
4. Consultant Chemical Engineer at Punjab Seed Corporation of Pakistan in 2007.

### REFERENCES

Will be submitted on demand

### PERSONAL DETAILS:

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Telephone No's	+92-0300/0321/0331-7152120
Date of Birth	18 <sup>th</sup> January 1981
I.D Card & Passport Number	34603-9762389-7 & ZH410389