

Engr. Muhammad Shafiq

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Personal Detailss

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|-------------------|---|
| Father's Name | Muhammad Ishaq |
| Permanent Address | Village Qutrowal Tehsil Shakargarh District Narowal P.O. Satuwal |
| Date of Birth | 1 st April 1982 |
| Nationality | Pakistani |
| I.D Card Number | 34502-1505594-5 |
| Religion | s Islam |

Educational Record

Ph.D Chemical Engineerig In Progress

M.Sc Chemical Engineering (2007-2009)

Institute of Chemical Engineering & Technology University of the Punjab Lahore Pakistan
1st Div

B.Sc. Chemical Engineering with Spec. in Biochemical Engineering. (2002-2006)

Institute of Chemical Engineering & Technology University of the Punjab Lahore Pakistan
1st Div

F.Sc (2000)

Board of Intermediate & Secondary Education Gujranwala 1st div

Matriculation (1995)

Board of Intermediate & Secondary Education Gujranwala 1st div

Working Experience

Lecturer

November 2012-To date

- Complete responsibilities for managing departmental affairs, conducting exams, management of labs and performing practicals.
- Teaching various courses to M.Phil students
- Testing of samples using high class characterization instruments.

HEC funded project of "Establishment of Industrial Research Labs for Polymers and Material Synthesis"

- Managing project activities covering laboratory matters like laboratories establishment, instrument installation and running of laboratories etc
- Supervising research projects of Masters and Graduate students to provide them technical as well as administrative support to complete their research objectives.
- Working with projects for synthesis and characterization of polymers
- Designing of chemical plants for chemical production and recycling
- Working on Project of synthesis and characterization of bio-polymers used as dental material
- Designed, fabricated and erected pilot plant for dipped goods synthesis
- Installed and got training of polymer characterization instruments.
- Designed & commissioned lab scale extruder and moulding machines.
- Procedure Optimization and Resource development
- SOP's for Instruments and pilot plants
- Estimation of cost of material and determine financial resource allocation.
- Project Management comprising of building total infrastructure comprising civil works, instrument and plant installations
- Machinery handling of commercial extruders in laboratories
- Inventory control and maintenance of machinery in operation and as per scheduled on annual basis

Instruments

- Fourier Transform Infra Red Spectrophotometer(**FTIR**)
- Universal Testing Machine (**UTM**)
- Gel Permeation Chromatograph (**GPC**)
- Thermal Analysis Instruments (**DSC, TGA, DMA, TMA**)
- Research Microscope
- Rheometer
- Rockwell Hardness Tester
- Spindle Viscometer
- High Temperature Press
- Lab Scale Extruder
- Mechanical Testing Instruments
- High Pressure Reactor
- Gas Permeability Tester
- RO/Pervaporation Unit
- Paint Characterization Instruments
- Lab Scale Attritor
- Pilot Plant for Polymer Synthesis
- Industrial Extruders (Pipe Extruder, Film Extruder, Blow Molding, Injection Molding)

Projects

- Plant Design Report on Production of Citric Acid from Molasses (B.Sc Chemical Engineering).
- Process Report on Reclamation of used Lubricating Oils (B.Sc Chemical Engineering).
- Research Project on Synthesis and Characterization of Natural Latex Products (M.Sc Chemical Engineering).

Professional Trainings & Seminars

- 2nd In-Service Faculty Training Program for the core modules; Professional Ethics, Management & Grooming: Assessment & Evaluation (MMG PU LHR) **Feb 4-8, 2013**
- Enhancing Quality and Productivity through Testing (TET PU LHR) **March 9-10, 2011**
- Non Destructive Weldment Evaluation and its Remedies. (MME PU LHR) **Dec 13-14, 2010**
- HAZOP Study for Process Industries (ICET PU LHR) **Aug 10, 2010**
- Implementation of ISO 17025 for QA in Testing and Research Labs (ICET PU LHR) **Aug 7 – 8, 2010**
- Energy Conservation and Sustainability (ICET PU LHR) **Aug 6, 2010**
- Heat Exchanger Design and Rating Using CHEMCAD (ICET PU LHR) **Aug 3, 2010**
- Basic Steady State Simulation Using CHEMCAD (ICET PU LHR) **Aug 2, 2010**
- Implementation of QMS (ISO 9001:2008) in Process Industries (ICET PU LHR) **July 31 – Aug 1, 2010**
- Process Integration and Intensification (ICET PU LHR) **July 28-29, 2010**
- Attended 2nd Symposium on Engineering Sciences (ICET PU LHR) **March 10, 2010**
- ISO 9001:2000 Institute of Quality & Technology Management PU Lahore.

Research Profile

Total Impact Factor

64.554

International Publications in Peer Reviewed HEC Recognized ISI Journals

- 1) **M.Shafiq**, A.Sabir; A.Islam, S. M. Khan, S. N.Hussain; M.T.Z.Butt; T.Jamil, Development and performance characteristics of silane crosslinked poly(vinyl alcohol)/chitosan membranes for reverse osmosis **Journal of Industrial and Engineering Chemistry(Accepted Manuscript) (2016) (I.F=4.179)**

- 2) Saba Khurshid, Amna Shoaib, Arshad Javaid, Fozia Akhtar, **Muhammad Shafiq**, Uzma Qaisar, Management of Fusarium wilt of tomato by soil amendment with *Cenchrus pennisetiformis* under chromium stress Physiological and Molecular Plant Pathology **(Accepted Manuscript) (2016) (I.F= 1.66)**
- 3) Shahid Rafi, Amna Shoaib Zoia Arshad Awan, Nayab Batool Rizvi, Nafisa, **Muhammad Shafiq**, Chromium tolerance, oxidative stress response, morphological characteristics and FTIR studies of phytopathogenic fungus *Sclerotium rolfsii* Folia Microbiologica **(Accepted Manuscript) (2016) (I.F= 1.335)**
- 4) Aneela Sabir, Wail Falath, Karl I. Jacob, **Muhammad Shafiq**, Muhammad Azeem Munawar, Atif Islam, Nafisa Gull, Muhammad Taqi Zahid Butt, Khairuddin Sanaullah, Tahir Jamil Hyperbranched polyethyleneimine induced polycationic membranes for improved fouling resistance and high RO performance European Polymer Journal **(Accepted Manuscript) (2016) (I.F= 3.485)**
- 5) Wasim M, Sabir A, **Shafiq M**, Islam A, Jamil T Preparation and characterization of composite membrane via layer by layer assembly for desalination Applied Surface Science **(Accepted Manuscript) (2016) (I.F= 3.150).**
- 6) Sabir A, Falath W, Jacob KI, **Shafiq M**, Gull N, Islam A, Munawar MA, Zia S, Khan SM, Shafeeq A, Butt MTZ, Jamil T Integrally skinned nano-cellular crosslinked asymmetric thin films infused with PEO-PPO-PEO block copolymer/ZnO-NPs for desalination using sea salt Materials Chemistry and Physics XXX **(2016) 1-11 (I. F 2.503).**
- 7) Islam A, Yasin T, Gull N, Khan SM, Sabir A, Munawwar MA, **Shafiq M**, Jamil T, Raza MH Fabrication and performance characteristics of tough hydrogel scaffolds based on biocompatible polymers International Journal of Biological Macromolecules 92 **(2016) 1–10 (I.F=3.220).**
- 8) Khan SM, Gull N, Munawwar MA, Zia S, Anjum A, Iqbal MS, **Shafiq M**, Islam A, Awais SM, Butt MA, Butt MTZ, Jamil T. Polyphenylene sulphide/carbon fiber composites: study on their thermal, mechanical and microscopic properties Iranian Polymer Journal Iran Polym J 25 **(2016) 475–485 (I.F 1.806).**
- 9) Anjum F, Gull N, Khan SM, Munawar MA, Islam A, Niazi SI, Zia S, **Shafiq M**, Butt MTZ, Jamil T Mechanical, thermal and microscopic profile of novel glass fiber reinforced polyester composites as a function of barium sulphate loading Advances in Polymer Technology **(Accepted Manuscript) (2016) (I.F=1.114).**

- 10) Khan SM, Gull N, Munawar MA, Islam A, Zia S, **Shafiq M**, Sabir A, Awais SM, Butt MA, Butt MTZ, Jamil T. 2D Carbon Fiber Reinforced High Density Polyethylene Multi-layered Laminated Composite Panels: Structural, Mechanical, Thermal and Morphological Profile **Journal of Materials Science & Technology (Accepted Manuscript) (I.F= 2.267)**.
- 11) Khan YH, Islam A, Sarwar A, Gull N, Khan SM, Munawar MA, Zia S, Sabir A, **Shafiq M**, Jamil T Novel green nano composites films fabricated by indigenously synthesized graphene oxide and chitosan **Carbohydrate Polymers** 146 (2016) 131–138 (I.F=4.689). Cited by 1
- 12) Munawar MA, Khan SM, Gull N, Islam A, **Shafiq M**, Zia S, Sabir A, Ghouri AS, Butt MTZ, Jamil T Fabrication and characterization of novel zirconia filled glass fiber reinforced polyester (GFRP) hybrid composites **J Applied Polymer Science** 133 (2016) 43615 (I.F=1.866).
- 13) Gull N, Khan SM, Islam A, Zia S, **Shafiq M**, Sabir A, Munawar MA, Butt MTZ, Jamil T Effect of Different Oxidizing Agents on Polyaniline/Single Walled Carbon Nanotube Composites synthesized via Ultrasonically Initiated in-situ Chemical Polymerization **Materials Chemistry and Physics** xxx (2016) 1-8 (Article in Press) (I. F 2.503).
- 14) Islam A, Yasin T, Gull S, Khan SM, Munawwar MA, **Shafiq M**, Sabir A, Jamil T Evaluation of selected properties of biocompatible chitosan/poly (vinyl alcohol) blends **International Journal of Biological Macromolecules** 82 (2016) 551–556 (I.F=3.22).
- 15) Ahmad A, Waheed S, Khan S. M, Sabad-e-Gul, **Shafiq M**, Farooq M, Sanaullah K, Jamil T Effect of silica on the properties of cellulose acetate/polyethylene glycol membranes for reverse osmosis **Desalination** 355 (2015) 1–10 (I.F=4.8).
- 16) Sabir A, **Shafiq M**, Islam A, Jabeen F, Shafeeq A, A Ahmad, Butt MTZ, Jacob KI, Jamil T Conjugation of silica nanoparticles with cellulose acetate/polyethylene glycol 300 membrane for reverse osmosis using MgSO₄ solution **Carbohydrate Polymers** 136 (2016) 551–559 (I.F=4.689).
- 17) Islam A, Imran Z, Yasin T, Gull N, Khan S M, **Shafiq M**, Sabir A, Munawar M A, Raza MH, Jamil T An investigation of AC impedance and dielectric spectroscopic properties of conducting chitosan-silane crosslinked-poly (vinyl alcohol) blended

films **Materials Research (2015) (I.F=0.793)** 10.1590/1516-1439.043715; Page 1-8.

- 18) Sabir A, **Shafiq M**, Islam A, Sarwar A, Dilshad MR, Shafeeq A, Butt MTZ, Jamil T Fabrication of tethered carbon nanotubes in cellulose acetate/polyethylene glycol-400 composite membranes for reverse osmosis **Carbohydrate Polymers 132 (2015) 589–597 (I.F=4.689)**. Cited by 2
- 19) Islam A, Yasin T, Sabir A, Khan SM, Sultan M, **Shafiq M**, Khan AU, Jamil T High-temperature electrical properties of silane cross-linked chitosan/poly(vinyl alcohol) membrane: thermal, mechanical and surface characterization **e-Polymers 15(4) (2015) 255–261 (I.F=0.569)**.
- 20) Sabir A, Islam A, **Shafiq M**, Shafeeq A, Butt M. T. Z, Ahmad N. M, Sanaullah K. Jameel T Novel polymer matrix composite membrane doped with fumed silica particles for reverse osmosis desalination **Desalination 368 (2015) 159–170 (I.F=4.8)**. Cited by 3
- 21) Sabir A, **Shafiq M**, Islam A, Khan SM, Jamil T, Zahid MT, Shafeeq A, Shahzad A, Bhatti AS, Habib Y, Behzad S and Jabeen S Influence of polyethylene glycol 600 on cellulose acetate membranes for reverse osmosis desalination **Polymer Research Journal 9(2) (2015) 291-302 (Nova Publishers)**.
- 22) Gull N, Khan SM, Munawar MA, **Shafiq M**, Anjum F, Butt MTZ, Jamil T Synthesis and characterization of zinc oxide (ZnO) filled glass fiber reinforced polyester composites **Materials & Design 67 (2015) 313-317 (I.F=3.997)**
- 23) Suleman S, Khan SM, Gull N, Aleem W, **Shafiq M**, Jamil T Synthesis and Characterization of Visco-Elastic (VE) Polyurethane Foam **International Journal of Innovation and Applied Studies 9 (2014) 1878-1886**
- 24) Suleman S, Khan SM, Jamil T, Aleem W, **Shafiq M**, Gull N Synthesis and Characterization of Flexible and Rigid Polyurethane Foam **Asian Journal of Applied Sciences 2 (2014)**
- 25) Suleman S, Khan SM, Gull N, Aleem W, **Shafiq M**, Jamil T A Comprehensive Short Review on Polyurethane Foam **International Journal of Innovation and Scientific Research 12 (2014) 165-169**

- 26)** Zia KM, Mahmood K, Zuber M, Jamil T, **Shafiq M** Chitin based polyurethanes using hydroxyl terminated polybutadiene. Part I: Molecular engineering **International Journal of Biological Macromolecules** 59 (2013) 320-327 **I.F=(3.220)**

Professional Tools and Softwares

- Microsoft Office
- Chem Draw
- Internet surfing

Affiliations

- Pakistan Engineering Council
- Associate member of PIche
- Member of chemical society of Pakistan

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Abilities

- Confident & Optimistic.
- Flexible – Dynamic Personality.
- Excellent Orientation & Work Ethics