

Saba Zia

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PROFILE

Research Professional with experience of R&D and management of more than **fifteen years**. Currently part of University of the Punjab and working as **lecturer** at the Institute of Polymer & Textile Engineering.

SCHOLASTIC RECORD

PhD **2015-continued**
Institute of Polymer & Textile Engineering

MPhil **2013-15**
Department of Polymer Engg. & Tech.
University of the Punjab, Pakistan

M.Sc. **2011-13**
Center of High Energy Physics,
University of the Punjab, Pakistan

B.Sc. (Math, Stat, physics) **1998-00**
Government Kinnaird College Lahore Pakistan

F.Sc. (Pre-Engineering) **1993-95**
Lahore University for Women Lahore Pakistan

Matriculation (Science subjects) **1991-93**
The New School Model Town Lahore Pakistan

PROFESSIONAL HISTORY AT PUNJAB UNIVERSITY PAKISTAN

Lecturer (Contract)	Nov 2015- To date
Lab Supervisor (BPS-13)	2011-15
Research Technician	July 2010 –11

Establishment of Industrial Research Labs for Polymers and Material Synthesis (HEC-ICET PU Lahore)

- International tendering and bids evaluation for purchase of instruments for labs etc
- Project Management for establishment of industrial research laboratories
- Installation & Training
 - Universal testing Machine (UTM)
 - Dynamic mechanical Analyzer (DMA)
 - Lab Extruder
 - High-pressure Reactor
 - Lab Attritor
 - Rockwell Hardness Tester
 - Multiple Equipments for testing of mechanical properties of materials, Viscosity measurements Paint testing instruments

Research Technician June 2008 – June 2010

Establishment of Research Laboratories for Polymers and Material Synthesis, Characterization, Rheology and Processing (HEC-ICET PU Lahore)

- Research oriented project implementation to ensure laboratories establishment for R&D in polymers.
- Differential Scanning Calorimeter (DSC)
- Thermomechanical Analyzer (TMA)
- Simultaneous Differential Scanning Calorimeter/Thermogravimetric Analyzer (SDT)
- Rheometer
- Fourier Transform Infrared Spectroscopy (FTIR)
- Gel permeation chromatograph (GPC)
- Installation and training of polymer characterization instruments DSC, TGA, TMA, RHEOMETER, FTIR and GPC.

PUBLICATIONS IN ISI INDEXED JOURNALS

1. Muhammad Maaz Arif, Shahzad Maqsood Khan, Nafisa Gull, Tanveer A. Tabish, **Saba Zia**, Rafi Ullah Khan, Sayed Muhammad Awais, Muhammad Arif Butt. Polymer-based biomaterials for chronic wound management: Promises and challenges. **International Journal of Pharmaceutics**, 598 (2021) <https://doi.org/10.1016/j.ijpharm.2021.120270> (I.F. = 5.8).
2. Nafisa Gull, Shahzad Maqsood Khan, Syed Khalid, **Saba Zia**, Atif Islam, Aneela Sabir, Misbah Sultan, Farieha Hussain, Rafi Ullah Khan, Muhammad Taqi Zahid Butt. Designing of biocompatible and biodegradable chitosan based crosslinked hydrogel for in vitro release of encapsulated povidone-Iodine: A clinical translation. **International Journal of Biological Macromolecules**, 164 (2020) 4370-4380. <https://doi.org/10.1016/j.ijbiomac.2020.09.031> (I.F. = 8.2).
3. Nafisa Gull, Shahzad Maqsood Khan, Muhammad Taqi Zahid Butt, **Saba Zia**, Syed Khalid, Atif Islam, Imran Sajid, Rafi Ullah Khan, Martin William King. Hybrid crosslinked hydrogels as a technology platform for in vitro release of cephadrine. **Polymers for Advanced Technologies**, 30 (2019) 2414-2424. <https://doi.org/10.1002/pat.4688> (I.F. = 3.4).
4. Sadaf Hafeez, Atif Islam, Nafisa Gull, Abbas Ali, Shahzad Maqsood Khan, **Saba Zia**, Kalsoom Anwar, Saba Urooge Khan, Tahir Jamil. γ -irradiated Chitosan Based Injectable Hydrogels for Controlled Release of Drug (Montelukast Sodium). **International Journal of Biological and Macromolecules**, 114 (2018) 890-897. <https://doi.org/10.1016/j.ijbiomac.2018.02.107> (I.F. = 8.2).
5. Farheen Anjum, Nafisa Gull, Shahzad Maqsood Khan, Muhammad Azeem Munawar, Atif Islam, Sajid Iqbal Niazi, **Saba Zia**, Muhammad Shafiq, Muhammad Taqi Zahid Butt, Tahir Jamil. "Mechanical, thermal and microscopic profile of novel glass fiber reinforced polyester composites as a function of barium sulphate loading". **Advances in Polymer Technology**, 37 (2018) 929-936. <https://doi.org/10.1002/adv.21739> (I.F. = 3.1).
6. 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, Tahir Jamil. "2D Carbon Fiber Reinforced High Density Polyethylene Multi-layered Laminated Composite Panels: Structural, Mechanical, Thermal and Morphological Profile". **Journal of Materials Science & Technology**, **10**, 32 (2016) 1077-1082. <https://doi.org/10.1016/j.jmst.2016.06.011> (I.F. = 10.9).
7. Younas Habib Khan, Atif Islam, Afsheen Sarwar, Nafisa Gull, Shahzad Maqsood Khan Muhammad Azeem Munawar, **Saba Zia**, Aneela Sabir, Muhammad Shafiq, Tahir Jamil. "Novel green nano composites films fabricated by indigenously synthesized graphene oxide and chitosan". **Carbohydrate Polymers**, 146 (2016) 131-138. <http://dx.doi.org/10.1016/j.carbpol.2016.03.031>. (I.F. = 11.2).
 8. Muhammad Azeem Munawar, Shahzad Maqsood khan, Nafisa Gull, Muhammad Shafiq, Atif Islam, **Saba Zia**, Aneela Sabir, Awais Sattar Ghouri, Muhammad Taqi Zahid Butt, Tahir Jamil. "Fabrication and characterization of novel zirconia filled glass fiber reinforced polyester (GFRP) hybrid composites". **Journal of Applied Polymer Science**, 43615 (2016) 1-9. <https://doi.org/10.1002/app.43615> (I.F. = 3.0).
 9. Shahzad Maqsood khan, Nafisa Gull, Muhammad Azeem Munawar, **Saba Zia**, Farheen Anjum, Sajid Iqbal Niazi, Muhammad Shafiq, Atif Islam, Muhammad Arif Butt, Muhammad Taqi Zahid Butt, Tahir Jamil. "Polyphenylene Sulphide/Carbon Fiber Composites: Study on their Thermal, Mechanical and Microscopic Properties". **Iranian Polymer Journal**, 25 (2016) 475-485. <https://doi.org/10.1007/s13726-016-0439-3> (I.F. = 3.1).
 10. Nafisa Gull, Shahzad Maqsood khan, Atif Islam, **Saba Zia**, Muhammad Shafiq, Aneela Sabir, Muhammad Azeem Munawar, Muhammad Taqi Zahid Butt, Tahir Jamil. "Effect of Different Oxidizing Agents on Polyaniline/Single Walled Carbon Nanotube Composites synthesized via Ultrasonically Initiated in-situ Chemical Polymerization". **Materials Chemistry and Physics**, 172 (2016) 39-46. <https://doi.org/10.1016/j.matchemphys.2015.12.048> (I.F. = 4.6).
 11. Influence of Polyethylene Glycol 600 on Cellulose Acetate Membranes for Reverse Osmosis Desalination. Aneela Sabir, M. Shafiq, Atif Islam, Shahzad Maqsood Khan, Tahir Jamil, 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).

12. 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**).
13. Polymers: Polymer fiber composites; a prodigious breakthrough 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 (**2015**).

Chapters in International Books

1. Muhammad Saad Fasih, Shahzad Maqsood Khan, **Saba Zia**, Nafisa Gull, Tanveer A. Tabish. Handbook of Functionalized Nanostructured Mxenes, Synthetic Strategies and Applications from Energy to Environment Sustainability, 16th Chapter “Functionalized Mxene Conjugates in Removal of Pharmaceuticals and Other Pollutants” ISBN: 978-981-99-2037-2, **Springer Nature (2023)** 267-282.
2. Ayesha Sharif, Shahzad Maqsood Khan, Tanveer A. Tabish, Nafisa Gull, **Saba Zia**. Handbook of Functionalized Nanostructured Mxenes, Synthetic Strategies and Applications from Energy to Environment Sustainability, 19th Chapter “Biosensing Applications of MXene-Based Composites” ISBN: 978-981-99-2037-2, **Springer Nature (2023)** 325-343.
3. Shahzad Maqsood Khan, **Saba Zia**, Nafisa Gull. “Hybrid Nanomaterials: Biomedical, Environmental and Energy applications” 7th Chapter “Organic–Inorganic NanoHybrids in Tissue Engineering and Drug Delivery Applications” ISBN 9789811945380, Springer, Germany, (2022) 133-150.
4. Shahzad Maqsood Khan, Osama Majeed Butt, Saba Ayub, Nafisa Gull, **Saba Zia**. “Dye-Sensitized Solar Cells: Emerging Trends and Advanced Applications” 04th Chapter “Electron Kinetics and Interface Engineering of dye-sensitized solar cell sandwich structure. ISBN: 9780128182079, **Elsevier**, UK, (**2022**) 75-90.

PROFESSIONAL TRAININGS & SEMINARS

- Training course, ir-prestiage-21(ftir)(shimadu),held at department of chemical engineering &technology, university of the punjab,lahore , oct 25-28 2008
- Training course, gel permeation chromatograpg(gpc) series 200, held at icet polymer lab, university of the punjab, lahore, may 18-28, 2008

- Symposium on engineering sciences, icet, university of the punjab, apri-30, 2009
- Operational instrumental training of q600 sdt, q200 dsc, q400 tma and ar 1500 ex rheometer (rizvi & company) (icet pu lhr) , april 9-11, 2009
- 3rd symposium on engineering sciences ,icet,university of the punjab lahore, march-10, 2010
- Professional development workshop, energy conservation and sustainability (icet pu lhr), aug-6, 2010.
- Professional development workshop, implementation of iso 17025 for qa in testing and research labs (icet pu lhr), aug-7-10, 2010.
- Professional development workshop ,hazop study for process industries (icet pu lhr), aug-10, 2010.
- Enhancing quality and productivity through testing (tet pu lhr), march-9-10, 2011.
- Interdisciplinary research center in biomedical materials, ciit lahore king edward medical university & de'montmorency college of dentistry, dec-18-20, 2012.
- Electronics project exhibition held at centre of high energy physics,pu, lahore. July 12-2012.
- Operational instrumental training of q800 dma, utm, paint testing equipments, hardness tester, lab attritor, lab extruder (rizvi & company), feb-8, 2012.
- National seminar on engineering materials & their performance, april-30, 2013.
- Chromatography techniques & sample preparation seminar, held by agilent technologies. Jan-23, 2014.
- Awareness seminar on wemen's health,mnch,misp. Feb-06,2014.
- 5thsymposium on engineering sciences, apri-2,2014.

- 25th national and 13th international chemistry conference, institute of chemistry pu lhr., oct-20-22, 2015.
- World quality day. Feb-08, 2016.
- 4th one-week in-service faculty training program, department of microbiology and molecular genetics (mmg), university of the punjab. Nov-21-25, 2016.
- Office of research innovation &commercialization(oric), workshop on patent filling & introduction to intelectual property system of pakistan. May-17-18, 2017.
- Sixth invention to inovation summit 2017. March-8-9, 2017.

RESEARCH GRANT UNIVERSITY OF THE PUNJAB

- ✓ **Principal investigator (pi)** for research project “preparation of hydrogels using modified polymers”, 2015-2016. 0.125 mill rs, **punjab university research grant (completed)**

- ✓ **Principal investigator (pi)** for research project “development of polysaccharide-based films with nano fillers for medical and industrial applications” 2017-2018 0.125 mill rs, **punjab university research grant (approved)**

THESIS AND RESEARCH PROJECTS ASSISTED

- ✓ Tensile properties enhancement in PC/ABS blends
- ✓ Preparation and characterization of low-density polyethylene (LDPE)/recycled polyethylene terephthalate (rPET) blend
- ✓ Synthesis of Pervaporation membrane for the removal of 2-EHA from water steam during the production of metal octoate
- ✓ Preparation and Characterization of Thermoplastic Elastomer based on Polystyrene and Natural Rubber Blend (PS/NR)
- ✓ To study the Blend of Low-Density Polyethylene (LDPE) and Ethylene Propylene Diene Monomer (EPDM) Rubber
- ✓ To study the effect of compatibilizer on blending of polystyrene (PS) and ethylene propylene diene monomer (EPDM) rubber
- ✓ Effect of natural and Synthetic fiber on impact strength of polyester and epoxy fiber reinforced polymer composites
- ✓ Development and characterization of low-density polyethylene (LDPE)/recycled polyethylene terephthalate (rPET) blend
- ✓ To Study the Blend of Low-Density Polyethylene (LDPE) And Ethylene Propylene Diene Monomer (EPDM) Rubber

PERSONAL DETAILS:

Father's Name	Zia Ahmed Khan
Telephone No's	0092-333-423-6577
Date of Birth	1976
Nationality	Pakistani
Religion	Islam