

# Dr. Atif Islam PhD (PIEAS, Pak)

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## EXECUTIVE PROFILE

Chemistry/Polymer/Materials scientist with solid experience of approximately **15** years in research and development, management, production and teaching. Currently, I am a part of Punjab University as **Assistant Professor, teaching various courses to the post graduate students, actively involved in research/projects (ISI indexed IF=104.837)** and also managing the departmental administrative activities covering all matters.

## SCHOLASTIC RECORD

**Ph. D Materials Science & Engineering/Polymer chemistry** **May 2013**

Department of Metallurgy & Materials Engineering, Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad, Pakistan 3.62/4.00 CGPA in MS/PhD courses (**1st position**)

<b>M. Sc Chemistry</b>	<b>2001</b>
Islamia University of Bahawalpur, Pakistan	<b>2<sup>nd</sup> Position (Silver Medal)</b>
<b>B. Sc</b>	<b>1998</b>
University of the Punjab Lahore Pakistan	1 <sup>st</sup> Division
<b>F. Sc</b>	<b>1995</b>
Board of Intermediate & Secondary Education Faisalabad	1 <sup>st</sup> Division
<b>Matriculation</b>	<b>1993</b>
Board of Intermediate & Secondary Education Faisalabad	1 <sup>st</sup> Division 82.6%

## Professional History (Teaching/Job/Research Experience)

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## University of the Punjab, Lahore, Pakistan

**Assistant Professor**

**Aug 2014 – to-date**

Department of Polymer Engineering & Technology (DPET), University of the Punjab, Lahore.

**Assistant Professor (IPFP)**

**Aug 2013 – Aug 2014**

Department of Polymer Engineering & Technology, University of the Punjab, Lahore.

## PIEAS, Islamabad, Pakistan

**Teaching Assistant**

**05 Nov, 2012 - 30**

**Dec, 2012**

Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad

**Research Scholar** (under IRSIP Programme)

**June 2011 - Nov 2011**

Centre for Biomaterials and Tissue Engineering, the Kroto Research Institute, the University of Sheffield, UK

**M. Phil leading to PhD** on HEC scholarship at PIEAS

**OCT 2007 - May 2013**

'Biopolymer based pH-sensitive hydrogels for biomedical applications' (**PhD dissertation**)

## Industry

**Senior processing Chemist/Senior Chemist**  
**2007**

**Dec 2001-Oct**

(Different refined sugar industries of Pakistan)

## Awards/Distinctions/Honors/Achievements

- 1) Achieved ISI impact Factor of **104.837**.
- 2) **Award of Excellence for the poster presentation** at International Conference on Medical Textiles and International Forum on Biomedical Textile Materials (**MedTex17 and IFBMTM 2017**), **Donghua University, Shanghai, China**, May 17-19, 2017.
- 3) **Chemical Technology Award (Rs. 10000/-) for indigenously product innovation** by Pakistan Chemical Manufacturing Association (PCMA) in **6<sup>th</sup> Invention to Innovation Summit** on 8-9 Feb, 2017 at University of the Punjab, Lahore
- 4) **Incentive award (Rs. 57,038/-)** on the basis of **Research Publications** for the year **2015** granted by the University of the Punjab, Lahore
- 5) **Research Productivity Award (RPA-2015) (Rs. 44000/-)** for F.Y. **2015-16** granted by Pakistan Council for Science and Technology (**PCST**)
- 6) **2<sup>nd</sup> position and awarded Silver Medal** in M.Sc. Chemistry
- 7) **1<sup>st</sup> position** in College in B. Sc University Exams
- 8) Awarded **PhD scholarship** from **Higher Education Commission** of Pakistan (**HEC**)
- 9) **First position** in MS/PhD course work securing **3.62/4.00** CGPA at PIEAS
- 10) **First position** in **PhD qualifying** examination securing **82%** marks at PIEAS
- 11) Awarded six months **foreign scholarship** under **IRSIP** by HEC for the **University of Sheffield, UK**
- 12) **HEC Approved Supervisor**
- 13) **Research Focal Person (RFP)** from the Department for Office of Research Innovation & Commercialization (**ORIC**)

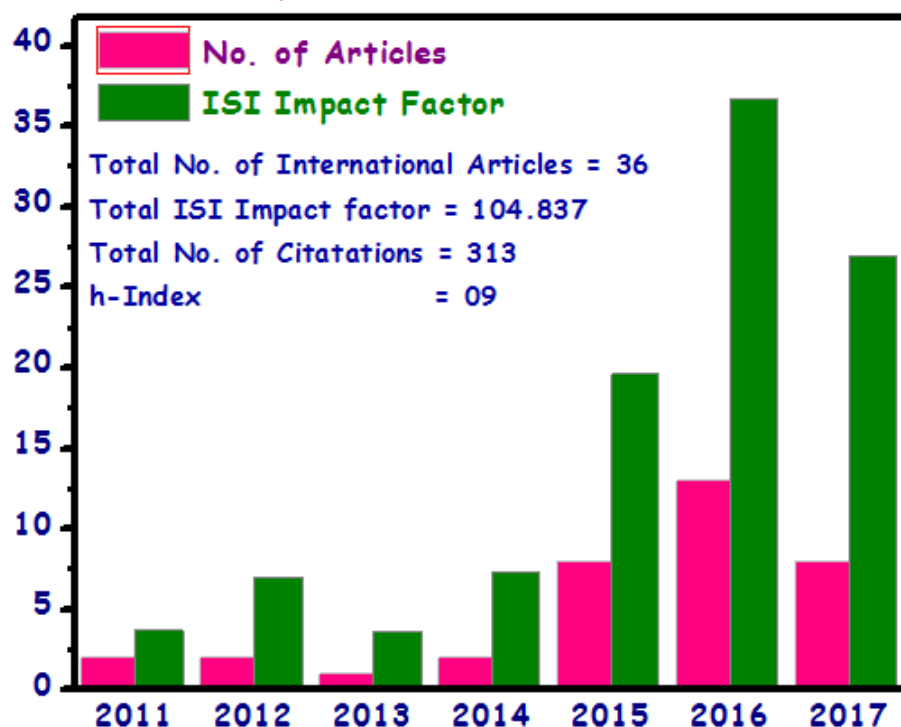
## Professional Memberships

Life Time Member of Chemical Society of Pakistan (**CSP**)

## Research Area

- Synthesis and characterization of polymeric hydrogels for drug delivery systems and other biomedical applications
- Polymeric synthesis and characterization with special focus on crosslinking, grafting, etc.
- Natural and synthetic polymers based hydrogels for *In-vitro* and *In-vivo* release of drugs,
- Anti-microbial properties and cytotoxicity/biocompatibility
- Hydrogels for Wound dressing/healing applications
- Biopolymers (chitin and chitosan) extraction from natural resources
- Electrospinning for nano/fibrous materials/membranes
- Nanofibers synthesis from natural polymers for biomedical applications: drug delivery, wound healing, tissue engineering, biosensors
- Superabsorbent hydrogels for agricultural applications
- Graphene synthesis and composites
- Controlled release of fertilizers,
- Hydrogel beads synthesis
- Impedance spectroscopy for biosensors/bioelectrodes
- Reverse Osmosis/pervaporation for desalination and other separation purposes
- Gas separation membranes
- Blends for packaging material using different extracts
- Polymer composites
- Tissue engineering using scaffolds materials

## Research Profile



International Publications	<b>36</b>
Books/Books Chapter Published	<b>02</b>
Conferences Papers	<b>06</b>
Total Impact Factor	<b>104.837</b>
Number of Citations	<b>313</b>
h-Index	<b>09</b>

**International Publications in Peer Reviewed HEC Recognized ISI Journals**

**Articles Published (IF=104.837)**

**2017 (08 Articles)**

- 1) Dilshad MR, **Islam A**, Sabir A, Shafiq M, MTZ Butt, Ijaz A, Jamil T, Fabrication

- and performance characterization of novel zinc oxide filled cross-linked PVA/ PEG 600 blended membranes for CO<sub>2</sub>/N<sub>2</sub> separation **Journal of Industrial and Engineering Chemistry** xxx (2017) xxx-xxx **(Article in Press) (I.F= 4.421)**.
- 2) Sarwar MS, Ghaffar A, **Islam A**, F. Yasmin, Z. Oluz, E. Tuncel, H. Duran, A. Qaiser A, Controlled drug release behavior of metformin hydrogen chloride from biodegradable films based on chitosan/poly(ethylene glycol) methyl ether blend, doi: <http://dx.doi.org/10.1016/j.arabjc.2017.05.005> **(Article in Press) Arabian Journal of Chemistry (2017) xxx, xxx-xxx (I.F= 5.388)**.
  - 3) Sadia Sagar Iqbal, Fawad Inam, Shahzad Maqsood Khan, **Atif Islam**, Aneela Sabir, Arshad Bashir, Tahir Jamil, Mohammad Bilal Khan, Zaffar M Khan ABLATION, Thermal stability/transport/phase transition study of carbon nanofiber reinforced elastomeric nanocomposites, 1st Journal of Thermal Analysis and Calorimetry Conference and 6th V4 (Joint Czech-Hungarian-Polish-Slovakian) Thermoanalytical Conference (JTACC+V4)/ Budapest, Hungary / 6-9 June, 2017.
  - 4) Wasim M, Sabir A, Shafiq M, **Islam A**, Azam M, Jamil T, Mixed matrix membranes modified with electrospun (Carboxymethyl cellulose/Sepiolite) woven fibers using nanofiltration for Magnesium salts rejection **Journal of Industrial and Engineering** 50 (2017) 172-182 **(I.F= 4.421)**.
  - 5) Sultan M, Atta S, Bhatti H N, Islam A, Jamil T, Bibi I, Gull N, Synthesis, characterization and application studies of polyurethane acrylate thermoset coatings: Effect of hard segment **Polymer-Plastics Technology and Engineering** <http://dx.doi.org/10.1080/03602559.2017.1280736> **(I.F=1.232)**.
  - 6) Jabeen S, **Islam A**, Ghaffar A, Gull N, Hameed A, Bashir A, Jamil T, Hussain T Development of a novel pH sensitive silane crosslinked injectable hydrogel for controlled release of neomycin sulfate **International Journal of Biological Macromolecules** 97 (2017) 218-227 **(I.F=3.657)**. Cited by 2
  - 7) Shafiq M, Sabir A, **Islam A**, Khan SM, Hussain SN, Butt MTZ, Jamil T

Development and performance characteristics of silane crosslinked poly(vinyl alcohol)/chitosan membranes for reverse osmosis **Journal of Industrial and Engineering Chemistry** 48 (2017) 99–107 (I.F= 4.421). Cited by 1

- 8) 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** 396 (2017) 259–268 (I.F= 3.387). Cited by 1

## **2016**

## **(13 Articles)**

- 1) 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** Vol. 0, No. 0, (2016) (p. 1-8) DOI 10.1002/adv.21739 (I.F=1.389).
- 2) 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** 32 (2016) 1077–1082 (I.F= 2.764).
- 3) Sabir A, Falath W, Jacob KI, Shafiq M, Munawar MA, **Islam A**, Gull N, Butt MTZ, Sanaullah K, Jamil T Hyperbranched polyethyleneimine induced polycationic membranes for improved fouling resistance and high RO performance **European Polymer Journal** 85 (2016) 266–278 (I.F= 3.658). Cited by 7
- 4) 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** 183 (2016) 595-605 (I. F= 2.283). Cited by 2
- 5) **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=3.657). Cited by 1
- 6) 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 1.543).
  - 7) Khan YH, **Islam A**, Sarwar A, Gull N, Khan SM, Munawwar 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=5.130). Cited by 7
  - 8) Munawwar 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=1.860). Cited by 1
  - 9) Ata S, Tabassum A, Din M.I, Fatima M, Ghafoor S, **Islam A**, Ahad A, Bhatti MA Novel sonochemical single step fabrication of NiO nanoparticles **Digest Journal of Nanomaterials and Biostructures** 11(1) (2016) 65–80 (I.F=0.982).
  - 10) Gull N, Khan SM, **Islam A**, Zia S, Shafiq M, Sabir A, Munawwar 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** 172 (2016) 39-46 (I.F= 2.283). Cited by 4
  - 11) **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=3.657). Cited by 3
  - 12) **Islam A**, Yasin T, Akhtar M. J. Imran Z, Sabir A, Sultan M, Khan SM, Jamil T Impedance spectroscopy of chitosan/poly(vinyl alcohol) film **Journal of**



**Solid State Electrochemistry (2016) 20:571–578 (I.F 2.316).** Cited by 1

- 13) Sabir A, Shafiq M, **Islam A**, Jabeen F, Shafeeq A, Ahmad A, Butt MTZ, Jacob KI, Jamil T Conjugation of silica nanoparticles with cellulose acetate/polyethylene glycol 300 membrane for reverse osmosis using MgSO<sub>4</sub> solution **Carbohydrate Polymers 136 (2016) 551–559 (I.F=5.130).** Cited by 9

## **2015**

## **(08 Articles)**

- 1) **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-Ibero-american Journal of Materials (2015) (2015)**; 18(6): 1256-1263 **(I.F=0.884).** Cited by 4
- 2) **Islam A**, Yasin T, Rafiq M. A., Tahir H. Shah, Sabir A, Khan SM, Jamil T In-situ Crosslinked Nanofiber Mats of Chitosan/Poly(vinyl alcohol) Blend: Fabrication, Characterization and MTT Assay with Cancerous Bone Cells **Fibers and Polymers 16(9) (2015) 1853-1860 (I.F=1.211).** Cited by 2
- 3) 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=5.130).** Cited by 14
- 4) Atta S, Khaliq S, **Islam A**, Javeria I, Jamil T, Athar MM, Shafiq MI, Ghaffar A Injectable biopolymer based hydrogels for drug delivery applications **International Journal of Biological Macromolecules 80 (2015) 240–245 (I.F=3.657).** Cited by 12
- 5) **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=0.949).
- 6) 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=5.905). Cited by 13
  - 7) 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).
  - 8) Sultan M, **Islam A**, Gull N, Bhatti H N, Safa Y Structural variation in soft segment of waterborne polyurethane acrylate nanoemulsions **J Applied Polymer Science** 132, 41706 (2015) 1-10 (I.F=1.860) Cited by 8

## **2011-2014**

## **(07 Articles)**

- 1) Waheed S, Ahmad A, Khan S. M, Gul S, Jamil T, **Islam A**, Hussain T Synthesis, characterization, permeation and antibacterial properties of cellulose acetate/polyethylene glycol membrane modified with chitosan **Desalination** 351 (2014) 59–69 (I.F=5.905) Cited by 14
- 2) **Islam A**, Yasin T, Rehman I. U Synthesis of hybrid polymer networks of irradiated chitosan/poly(vinyl alcohol) for biomedical applications **Radiation Physics and Chemistry** 96 (2014) 115–119 (I.F=1.390) Cited by 26
- 3) **Islam A**, Riaz M, Yasin T Structural and viscoelastic properties of chitosan-based hydrogel and its drug delivery application **International Journal of Biological Macromolecules** 59 (2013) 119–124 (I.F= 3.657) Cited by 25
- 4) **Islam A**, Yasin T, Bano I, Riaz M Controlled release of aspirin from pH sensitive chitosan/ Poly (vinyl alcohol) hydrogel **Journal of Applied Polymer Science** 124 (2012) 4184-4192 (I.F=1.860) Cited by 35
- 5) **Islam A**, Yasin T Controlled delivery of drug from pH sensitive chitosan/poly (vinyl alcohol) blend **Carbohydrate Polymers** 88 (2012) 1055-1060

(I.F=5.130) Cited by 68

- 6) Gul R, **Islam A**, Yasin T, Mir S Flame-retardant synergism of sepiolite and magnesium hydroxide in a linear low-density polyethylene composite **Journal of Applied Polymer Science** 121 (2011) 2772–2777 (I.F=1.860) Cited by 26
- 7) Nasir A, Yasin T, **Islam A** Thermo-oxidative degradation behavior of recycled polypropylene **Journal of Applied Polymer Science** 119 (2011) 3315–3320 (I.F=1.860) Cited by 17

#### Under Review/Revisions/Submitted/to be submitted

- 1) Anbreen Bashir, Sehrish Jabeen, Nafisa Gull, **Islam A**, Misbah Sultan, Abdul Ghaffar, Shahzad M Khan, Sadia Sagar Iqbal, Tahir Jamil Co-concentration effect of silane with natural extract on biodegradable polymeric films for food packaging (**Accepted with revisions in International Journal of Biological Macromolecules**) (I.F= 3.657).
- 2) Hafeez S, **Islam A**, Shafiq M, Saba B, Khan SM, Athar M, Shafeeq A, Jameel T. Synthesis and characterization of novel gamma irradiated chitosan based pH sensitive hydrogels crosslinked with glycerol for controlled release of drug (**Under Review in Arabian journal of Chemistry**) (I.F=4.136).
- 3) Irtaza Javeria, **Islam A**, Nafisa Gull, Abdul Ghaffar, Shahzad Maqsood Khan, Aneela Sabir, Shaista Khaliq, Muhammad Taqi Zahid Butt, Tahir Jamil, Sadia Atta Controlled release of Montelukast Sodium from pH-sensitive hydrogels based on different molecular weight chitosan blended with poly(vinyl alcohol) (**Under Review in Journal of Materials Science**) (I.F= 2.302).
- 4) **Islam A**, Yasin T, Jamil T, Ahmad A, Khan SM, Shafiq M, Sabir A, Raza HMH, Athar M. M. Electrospun nanofibrous scaffolds from chitosan and PVA for tissue engineering applications **Iranian Journal of Chemistry and Chemical Engineering** (**Under Review**) (I.F=0.325).
- 5) Khan SM, Malik SA, Gull N, Saleemi S, **Islam A**, Butt MA, Butt MTZ, Jamil T, Experimental investigation and modelling of the macro-mechanical properties of cross-ply laminated fiber reinforced polymer composites using artificial

neural network technique **Modelling and Simulation in Materials Science and Engineering (Submitted) (I.F= 1.859).**

- 6) Sadia Sagar Iqbal, Fawad Inam, **Islam A**, Aneela Sabir, Adnan Ahmad, PhD Scholar, Ali Bhadur, Arshad Bashir, Tahir Jamil Synergistic effects of Silane treated nanokaolinite coated single walled carbon nanotubes on Thermo-Mechanical Response of EPDM Polymeric Nanocomposites. **Journal of Thermal Analysis and Calorimetry (Submitted) (I.F= 1.74).**
- 7) Muhammad Azeem Munawar, Shahzad Maqsood Khan, Nafisa Gull, Islam A, Aneela Sabir, Muhammad Shafiq, Sajid Iqbal Niazi, Monika M Voigt, Dirk Wolfram Schubert, Tahir Jamil Investigation of functional, physical, mechanical and thermal properties of hybrid composites (HCs) with imbedded TiO<sub>2</sub> particles in unsaturated polyester along reinforcement of E-glass fiber sheets **(Under Review in Composite Science and Technology) (I.F= 4.50).**
- 8) Khalid Azeem, **Islam A**, Nafeesa Gull, SM Khan, Tahir Jamil, MTZ Butt Kinetics and thermodynamic study of heavy metals uptake from water systems employing chitosan based hydrogel beads **(Submitted in Adsorption).**

## **Conferences Papers**

- 1) Radhika V, Tushar B, Harirpiya H, Aneela S, **Islam A**, Jamil T, KING MW, **Characterization of poly (vinyl alcohol) (PVA) and cellulose acetate (CA) based films and their evaluation for wound dressing applications** at the International Conference on Medical Textiles and International Forum on Biomedical Textile Materials (**MedTex17 and IFBMTM 2017**), **Donghua University, Shanghai, China**, May 17-19, 2017 and received an **Award of Excellence for the poster (Poster presentation).**
- 2) Sadia Sagar Iqbal, Fawad Inam, Shahzad Maqsood Khan, **Atif Islam**, Aneela Sabir, Arshad Bashir, Tahir Jamil, Mohammad Bilal Khan, Zaffar M Khan **ABLATION, THERMAL STABILITY/TRANSPORT/PHASE TRANSITION STUDY OF CARBON NANOFIBER REINFORCED ELASTOMERIC NANOCOMPOSITES, 1st Journal of Thermal Analysis and Calorimetry Conference and 6th V4 (Joint Czech-Hungarian-Polish-Slovakian)**

- Thermoanalytical Conference (JTACC+V4)/ Budapest, Hungary / 6-9 June, 2017.**
- 3) Athar M, Raza H. M. H, Farooq U, Jamil T, Khalid Z, Salman M, **Islam A. Natural and Treated Dalbergia Sissoo: An Efficient Biosorbent for the Removal of Acid Blue 25 Dyes from Waters.** Int'l Conference on Chemical, Biological, and Environmental Sciences (ICCBES'14) May 12-13, 2014 Kuala Lumpur (Malaysia), (Section-II, Page 54).
  - 4) **Islam A.** Yasin T, Gull S-E, Jamil T, Khan S. M, Waheed S, Ahmad A. **Selected properties and in-vitro Cytotoxicity Evaluation of Biocompatible Chitosan/poly(vinyl alcohol) Blends.** 1st International Young Engineers Convention (FEIIC IYEC-2014), April 18-20, 2014, held at University of Engineering and Technology, Lahore.
  - 5) Ahmad I, Shafiq M, **Islam A.** Yasin T, Saeed S. **Influence of gamma irradiation and flame retardant additives on the thermal and flammability properties of Linear low Density Polyethylene/Maleated polyethylene blends.** 2<sup>nd</sup> National Conference on Radiation, Particles and Matter, held in G.C University Lahore on October 26-28, 2010.
  - 6) **Islam A.** Yasin T, Bano I, Presented poster on **Synthesis and characterization of chitosan/poly (vinyl alcohol) hydrogel** in Symposium on Materials Research at Nilore, Islamabad, Pakistan, 03-04 August, 2010 (**Poster presentation**).

## Books/Books Chapter Published

### Books:

1. Maria Wasim, Aneela Sabir, Muhammad Shafiq, **Atif Islam**, Tahir Jamil; **Modification of Polysulphone membrane via Layer by Layer Assembly;** ISBN-13:978-3-330-03025-1, ISBN-10:3330030259, EAN:9783330030251, LAP LAMBERT Academic Publishing, **Omni Scriptum Ara Pers GmbH, Germany.**

## Book Chapter:

1. Nafisa Gull, Shahzad Maqsood Khan, **Atif Islam**, Tahir Jamil, Muhammad Taqi Zahid Butt, Tahir Jamil "**Polyaniline Blends, Composites, and Nanocomposites**" published by Elsevier.

## Reviewing of Journal Papers

1. Characterization of chitosan dense films prepared using lactic, Citric and acetic acids and glutaraldehyde as crosslinking agent; Carbohydrate Polymers (Impact Factor Journal) On 09 Jan 2017.

## Evaluation

### Evaluation of Research Work

- 1- M. Phil = 07

### Evaluation of Research Technology

- 2- As a Judge in **6<sup>th</sup> Invention to Innovation Summit** on 8-9 Feb, 2017 at University of the Punjab, Lahore.

### Evaluation of Quality

1. Member of the audit team as an **Expert by the Quality Enhancement Cell (QEC)** for the **audit of the Institute of Chemistry, University of the Punjab, Lahore.**

## Projects

- Synthesis and characterization of pH sensitive hydrogels/nanofibrous material from biopolymers/carboxymethyl chitosan/chitosan for different controlled drug delivery systems and other biomedical applications (**Approved, HEC, 0.5 Million, Nearly to completion**)
- Development and performance characterization of biopolymers based pH-

sensitive blended films/membranes/electrospun fibrous materials for various applications **(2015-2016, Approved, Punjab University, 150,000 Rs, completed)**

- Extraction of chitin/chitosan from natural sources and its improved utilization as novel/commercial products **(2014-2015, Approved, Punjab University, 150,000 Rs, completed)**
- Working with the Principal Investigator in the project **(HEC-USAID) of "Development of Innovative Technical and Medical Textile Products"** at the Department of Polymer Engineering and Technology, University of the Punjab, Lahore.
- Working in the **HEC Project "Synthesis and Characterization of Amphiphilic Triblock Polyurethane Copolymers to Mimic Biomembranes"** at the Department of Polymer Engineering and Technology, University of the Punjab, Lahore.
- Development of biomaterials for biomedical and bioelectrodes/biosensing applications **(Submitted to PHEC in May 2017, 3.0 Millions).**

## Current Profile

- **Published thirty three (36) international journals papers (ISI impact Factor = 104.837, Total No of Citations = 313)), One book and one chapter book, Four** conference preceding and four are under review/revisions/submitted/to be submitted
- Serving as **Assistant Professor** in the **Department of Polymer Engineering and Technology, University of the Punjab, Lahore** from **05-08-2013 to date**
- **Subjects Taught:** Teaching **M. Phil/PhD Polymer Technology** course work
  - ✓ Biomaterials **(PhD)**
  - ✓ Introduction to Polymer Science and Technology **(PhD)**
  - ✓ Instrumental Techniques in Polymer Research **(PhD)**
  - ✓ Advance Polymer technology **(PhD)**

- ✓ Polymer synthesis and characterization (**M. Phil**)
- ✓ Nanomaterials and its Applications (**M. Phil**)
- ✓ Advance Polymers (**M. Phil**)
- ✓ Polymer Composites (**M. Phil**)
- ✓ Polymer Process Technologies (**M. Phil**)
- Polymer labs management of the Department
- **HEC Approved Supervisor**
- **Research Focal Person (RFP)** from the Department for Office of Research Innovation & Commercialization (**ORIC**)
- Working on natural and synthetic polymers for variety of biomedical and other applications
- Extraction of chitin/chitosan from crabs/prawns shells for commercial purpose and development a variety of commercial products from natural polymer
- Synthesis of superabsorbent materials
- Development of membranes Reverse Osmosis/desalination, pervaporation and gas applications
- Development of hydrogels from chitosan/CM chitosan for drug delivery systems/wound healing materials/fertilizers/antimicrobial wipes
- Development of chitosan nanoparticles, natural-synthetic polymer blends/composites for textile applications
- Installation of electrospinning apparatus for fibrous films / membranes
- Working on packaging materials

## PhD/MPhil/MSc Research students/scholars

### PhD Students:

- Supervisor of 10 **PhD students of the department.**
- Supervisor of Mr. Ata Rasool (**PhD scholar of Institute of Chemistry**), Title: Biopolymer based stimuli responsive pH sensitive blend hydrogels: Synthesis, characterization applications in biomedicines (**PhD Near to Completion**).
- Supervised **01 PhD student** of the DPET **on reverse osmosis Membranes.**



- Dealing with **02 PhD students of DPET, PU for their PhD research work doing project on pervaporation and gas separation (PhD Near to Completion)**

### **MPhil/MSc Students:**

- Co-supervised **03 M. Phil Chemistry** research students of Mirpur University of Science and Technology (**MUST**) at **PIEAS during PhD**
- Supervised **09 (M. Phil, MSc and BS Hons Chemistry)** research students of **Institute of Chemistry, University of the Punjab and the Department of Chemistry, UET, Lahore.**
- Supervised **23 MPhil students of the Department of Polymer Engineering and Technology (DPET), University of the Punjab** (Extraction of chitosan, Graphene synthesis and composites, Controlled release of fertilizers, hydrogel, beads synthesis, Adhesives, nanofibers, Electrospinning), **04 are doing projects under my supervision.**
- Supervisor of the **five (05) students (M Phil chemistry of the Department of Chemistry, UET, Lahore and Environmental Sciences (LCWU, Lahore)** for their research work (Wound healing applications, blends for packaging material using different extracts and Hydrogels for biomedical applications).

### **Characterization Techniques/Analysis**

- Fourier Transform Infrared Spectroscopy (FTIR)
- UV-Visible Spectroscopy
- Thermogravimetric Analysis (TGA)
- Differential Scanning Calorimetry (DSC)
- X-ray Diffractometry (XRD)
- Scanning Electron Microscopy (SEM)
- Tensile testing
- Atomic Force Microscope (AFM)
- Rheometer (Rheology)
- Contact Angle Analysis

- High Performance Liquid chromatography (HPLC)
- Atomic Absorption Spectroscopy (AAS)
- Cell toxicity and Biocompatibility Analysis
- Drug release analysis

## Symposiums/Conferences/Seminars/Workshops

- 1) Participated in the **6<sup>th</sup> Invention to Innovation Summit** on 8-9 Feb, 2017 at University of the Punjab, Lahore.
- 2) Participated in **World Quality Day 08 Feb, 2017**, Organized by Quality Enhancement Cell, University of the Punjab, Lahore.
- 3) Participated in **4<sup>th</sup> In-Service Faculty Training Program** (21-25 November), **2016**, on the Modules (Patent System Of Pakistan and Patent Filing and Communication Skills, University of the Punjab, Lahore.
- 4) Participated in **Workshop on Entrepreneurship, Use of Business Intelligence for Development on 8<sup>th</sup> November, 2016** at the Institute of Chemical Engineering and Technology, University of the Punjab, Lahore.
- 5) Participated in **4<sup>th</sup> Invention to Innovation Summit 2015**, March 4-5, **2015**, University of the Punjab, Lahore.
- 6) Participated in **'13<sup>th</sup> International and 25<sup>th</sup> National Chemistry Conference The Chemical Society of Pakistan-Silver Jubilee Event'** on October 20-22, 2014 at Institute of Chemistry, University of the Punjab, Lahore.
- 7) Participated in **'CHEMICAL TRENDS 2014, one day Conference on Recent Trends in Chemical Research'** on October 17, 2014 at SBASSE, Lahore University of Management Sciences (LUMS), Lahore.
- 8) Participated in **'5<sup>th</sup> Symposium on Engineering Sciences'** on 2<sup>nd</sup> April, 2014 at Institute of Chemical Engineering and Technology (ICET), University of the Punjab, Lahore.

- 9) Participated in '**International conference on the impact of Nanoscience on energy technologies (NanoSET-2014)**' from 18-20 March 2014 at COMSATS Institute of Information Technology, Lahore.
- 10) Participated in '**Chromatography Techniques and Sample Preparation Seminar**' held by Agilent Technologies at Avari Hotel, Lahore on 23<sup>rd</sup> January, 2014.
- 11) Selected as participant in the *Second Conference on Nanotechnology for Biological and Biomedical Applications* (Nano-Bio-Med 2013), 14 – 18 October, 2013 by **The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.**
- 12) Attended work shop on **carbon porous materials and polymer-fiber composites**, Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad, Pakistan, 28-30 May, 2013.
- 13) Participated in two days chemistry conference 2010 on "**Recent Trends in Chemistry**", Chemistry Division, Directorate of Science, PINSTECH, Islamabad, December 28-29, 2010.
- 14) Participated in **Physical and Environmental Chemistry Conference** (PEC-2010) by NCE in Physical Chemistry, University of Peshawar, Sep 26-30, 2010.
- 15) Attended workshop on **application of Nanotechnology** (WANT-2010), **National Centre for Physics**, QAU, Islamabad, Pakistan, 31<sup>st</sup> May to 4<sup>th</sup> June, 2010.
- 16) Participated in **Symposium on Nanomedicine**, NIBGE, Faisalabad, Pakistan, March, 2010.
- 17) Participated in **8<sup>th</sup> International and 20<sup>th</sup> National Chemistry Conference**, QAU, Islamabad Pakistan, February 15-17, 2010.
- 18) Participated in IAEA/RCA regional meeting on **Applications of Nanotechnology**, Serena Hotel, Islamabad, Pakistan, October 29-02 November, 2007.