

Dr. Atif Islam PhD (PIEAS, Pak; The University of Sheffield, UK)

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EXECUTIVE PROFILE

Chemistry/Polymer chemist/Materials scientist with solid experience of approximately **16** years in research and development, teaching, management, and production. Currently, I am a part of Punjab University as **Associate Professor, teaching various courses to the post graduate (M. Phil and PhD) students, actively involved in research/projects (ISI indexed IF=193.745)**, and also managing the departmental administrative activities covering all matters.

SCHOLASTIC RECORD

Ph. D Polymer Chemistry/Materials Chemistry/Materials Science April 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**)

M. Sc Chemistry (specialization in Analytical Chemistry) 2001

Islamia University of Bahawalpur, Pakistan **2nd Position (Silver Medal)**

B. Sc 1998

University of the Punjab Lahore Pakistan 1st Division

F. Sc 1995

Board of Intermediate & Secondary Education Faisalabad 1st Division

Matriculation 1993

Board of Intermediate & Secondary Education Faisalabad 1st Division **82.6%**

Professional History (Teaching/Job/Research Experience)

University of the Punjab, Lahore, Pakistan

Associate Professor

23-10-2019 to date

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

Assistant Professor

Aug 2014 to 22-10-2019

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

PhD Research Scholar (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

Dec 2001-Oct 2007

(Different refined sugar industries of Pakistan)

Awards/Distinctions/Honors/Achievements

- Achieved ISI impact Factor of **193.745**.
- **Chemical Technology Award (Rs. 20000/-) for indigenously controlled release of drug product innovation** by Shafi Reso Chemicals (SRC) in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore.
- **Technology Award for indigenously hydrogel product innovation** in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore.
- **Best Poster Award for hydrogel for packaging materials** in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore.
- **Award of Technology (Poster)** in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore.
- **Award of Productive Scientist of Pakistan 2017 scoring 5.412** by Pakistan Council for Science and Technology (**PCST**).
- **Research Productivity Award (RPA-2015) (Rs. 44000/-)** for F.Y. **2015-16** granted by Pakistan Council for Science and Technology (**PCST**).
- **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.
- **Chemical Technology Award (Rs. 10000/-) for indigenously product innovation** by Pakistan Chemical Manufacturing Association (PCMA) in **6th Invention to Innovation Summit** on 8-9 Feb, 2017 at University of the Punjab, Lahore
- **Incentive award (Rs. 57,038/-)** on the basis of **Research Publications** for the year **2015** granted by the University of the Punjab, Lahore
- **2nd position and awarded Silver Medal** in M.Sc. Chemistry
- **1st position** in College in B. Sc University Exams

- Awarded **PhD scholarship** from **Higher Education Commission (HEC)** of Pakistan
- **First position** in MS/PhD course work securing **3.62/4.00** CGPA at PIEAS
- **First position** in **PhD qualifying** examination securing **82%** marks at PIEAS
- Awarded six months **foreign scholarship** under **IRSIP** by HEC for the **University of Sheffield, UK**
- **HEC Approved Supervisor**
- **Head Research** of the Department of Polymer Engineering & Technology
- **Research Focal Person (RFP)** from the Department for Office of Research Innovation & Commercialization (**ORIC**) (**2014-2017**)

Professional Memberships

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

Departmental Responsibilities

- Polymer labs management and also the Head Research of the Department of Polymer Engineering & Technology, PU.
- Member of the Committee to conduct GRE (General) & GRE (Subject) for Admission in MS/M.Phil and PhD or Equivalent of Polymer Technology
- Member of the Adhoc Committee of the Board of Studies (BOS) in the Department of Polymer Engineering & Technology

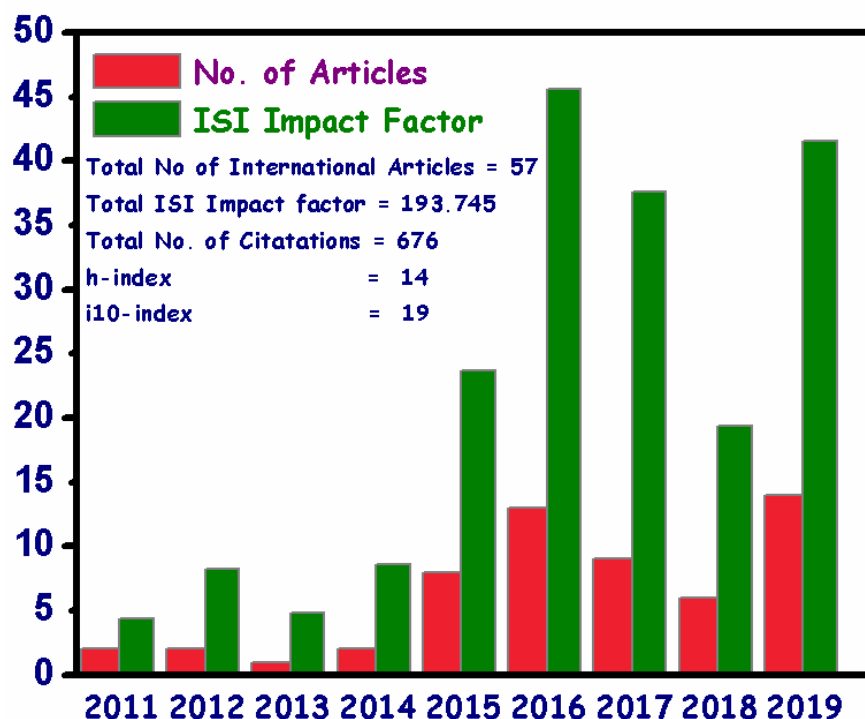
Research Area

- Synthesis and characterization of polymeric hydrogels (Natural and synthetic polymers based) for drug delivery systems (*In-vitro* and *In-vivo*) and other biomedical applications (for Wound dressing/healing applications)
- Polymeric synthesis and characterization with special focus on crosslinking, grafting, etc.
- Anti-microbial properties and cytotoxicity/biocompatibility
- Biopolymers (chitin and chitosan) extraction from natural resources

- Electrospinning for nano/fibrous materials/membranes from natural/synthetic polymers for drug delivery, wound healing, tissue engineering, biosensors
- Superabsorbent hydrogels for agricultural applications
- Graphene synthesis and Polymer composites
- Controlled release of fertilizers,
- Tissue engineering using scaffolds materials and hydrogel as beads synthesis
- Impedance spectroscopy for biosensors/bioelectrodes
- Reverse Osmosis/pervaporation membranes for desalination and other separation purposes, Gas separation membranes
- Blends for packaging material using different extracts

Research Profile

Research Graph



International Publications **57**

Books/Books Chapter Published **04**

Conferences Papers **12**

Total Impact Factor **193.745**

Number of Citations **676**

h-index **14**

i10-index **19**

International Publications in Peer Reviewed HEC Recognized ISI Journals

Articles Published **(IF=193.745)**

2019 **(14 Articles)**

- 1)** Sadia Ata, Atta Rasool, **Atif Islam**, Ismat Bibi, Muhammad Rizwan, Muhammad Khalid Azeem, Anees ur Rehman Qureshi and Munawar Iqbal. Loading of Cefixime to pH sensitive chitosan based hydrogel and investigation of controlled release kinetics **International Journal of Biological Macromolecules** **(Accepted Manuscript)** Accepted on 10 November 2019 **(2019)** xxx (xxxx) xxx **(I.F= 4.784)**.
- 2)** Nafisa Gull, Shahzad Maqsood Khan, Muhammad Taqi Zahid Butt, Syed Khalid, Muhammad Shafiq, **Atif Islam**, Sumreen Asim, Sadaf Hafeez and Rafi Ullah Khan. *In-vitro* study of chitosan based multi-responsive hydrogels as drug release haulier: A preclinical study **RSC Advances** **(2019)** 9; 31078–31091 **(I.F=3.049)**.
- 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 DOI: 10.1002/pat.4688; Accepted: 25 May 2019 **Polym Adv Technol** **(2019)**; 30:2414–2424 **(I.F=2.162)**.
- 4)** Misbah Sultan, Rahid Masood, Ismat Bibi, Imran Sajid, **Atif Islam**, Sadia Atta, Maliha Uroos, Yusra Safa, Haq Nawaz Bhatti. Impact of soft segment size on physicochemical and antimicrobial properties of waterborne polyurethane

- dispersions for textile applications, Accepted 15 April 2019, **Progress in Organic Coatings** 133 (2019) 174–179 (I.F=3.420).
- 5) Atta Rasool, Sadia Ata, **Atif Islam**, Rafi Ullah Khan. Fabrication of novel carrageenan based stimuli-responsive injectable hydrogels for controlled release of cephadrine **RSC Advances** (2019); 9, 12282–12290 (I.F=3.049).
 - 6) Numrah Nisar, Omamah Ali, **Atif Islam**, Aftab Ahmad, Muhammad Yameen, Abdul Ghaffar, Munawwar Iqbal, Arif Nazir and Nasir Masood. A Novel Approach for Modification of Biosorbent by Silane Functionalization and its Industrial Application for Single and Multi-Component Solute System; accepted Jan 18, 2019 ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE-International Journal of Research in Physical Chemistry & Chemical Physics **Z. Phys. Chem. 2019**; aop xx(xx): xx-xx (I.F=0.975).
 - 7) Sadia Atta, Anila Tabassum, Ismat Bibi, Samina Ghafoor, Abdul Ahad, Muhammad Arif Bhatti, **Atif Islam**, Hina Rizvi and Munawwar Iqbal. Synthesis and Characterization of ZnO Nanorods as Adsorbent for Cr(VI) Sequestration accepted Oct 23 2018; ZEITSCHRIFT FUR PHYSIKALISCHE CHEMIE-International Journal of Research in Physical Chemistry & Chemical Physics **Z. Phys. Chem. 2018**; aop ISSN (Online) 2196-7156, ISSN (Print) 0942-9352, DOI: <https://doi.org/10.1515/zpch-2018-1203> (I.F=0.975). Cited by 1
 - 8) Shahzad Maqsood Khan, Samandar Ali Malik, Nafisa Gull, Sidra Saleemi, **Atif Islam**, Muhammad Taqi Zahid Butt. Fabrication and modelling of the macro-mechanical properties of cross-ply laminated fiber reinforced polymer composites using artificial neural network **Advanced Composite Materials** Doi 10.1080/09243046.2019.1573448 Received 07 Jul 2018, Accepted 20 Jan 2019, Published online: 14 Feb 2019; 28(9) 409-423 (2019) (I.F=1.393).
 - 9) Muhammad Asim Raza, **Atif Islam**, Aneela Sabir, Nafisa Gull, Israr Ali, Rashid Mehmood, Gul Hassan, Muhammad Umair Khan, Jinho Bae, PVA/TEOS cross-linked membranes incorporated by ZnO-NPs and NaAlg to improve reverse osmosis performance for desalination **J Applied Polymer Science** accepted 1 January 2019; 136 (2019) 47559 (p.1-10) (I.F=2.188). Cited by 1
 - 10) Misbah sultan, Alina Waheed, **Atif Islam** and Ismat Bibi, Eco-Friendly Reduction of Methylene Blue with Polyurethane Catalyst; **International Journal of**

Polymer Science Volume 2019, Article ID 3168618, 9 pages.
<https://doi.org/10.1155/2019/3168618> (2019) (I.F= 1.892).

- 11) Atiya Butt, Sehrish Jabeen, Numrah Nisar, **Atif Islam**, Nafisa Gull, Sadia Sagar Iqbal, Shahzad Khan, Basit Yameen; Controlled release of cephradine by biopolymers based target specific crosslinked hydrogels **International Journal of Biological Macromolecules** accepted on 2 Oct 2018 (121) (2019) 104-112 (I.F= 4.784). Cited by 5
- 12) Atta Rasool, Sadia Ata, **Atif Islam**; Stimuli responsive biopolymer (chitosan) based blend hydrogels for wound healing application **Carbohydrate Polymers** accepted on 29 Sep 2018; 203 (2019) 423–429 (I.F=6.044). Cited by 8
- 13) Muhammad Rizwan Dilshad, **Atif Islam**, Usamah Hamidullah, Fahd Jamshaid, Adnan Ahmad , Muhammad Taqi Zahid Butt, Aamir Ijaz; Effect of alumina on the performance and characterization of cross-linked PVA / PEG 600 blended membranes for CO₂/N₂ **Separation and Purification Technology** accepted on 2018; 210 (2019) 627-635 (I.F=5.107). Cited by 3
- 14) Irtaza Javeria, **Atif Islam**, 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 injectable hydrogels **Polymer-Plastics Technology and Engineering** Published online: 14 Sep 2018; 58:9, (2019); Pages: 948-956 (I.F=1.705).

2018

(06 Articles)

- 1) 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 Macromolecules** 114 (2018) 890–897 (I.F=4.784). Cited by 5
- 2) Shafiq M, Aneela Sabir, **Atif Islam**, Shahzad Maqsood Khan, Nafisa Gull, Syed Nadir Hussain, Muhammad Taqi Zahid Butt; Cellulose acetate based thin film nanocomposite reverse osmosis membrane incorporated with TiO₂ nanoparticles for improved performance **Carbohydrate Polymers** 186 (2018) 367–376 (I.F=6.044). Cited by 2

- 3) Bashir A, Jabeen S, Gull N, **Islam A**, Sultan M, Ghaffar A, Khan SM, Sadia Sagar Iqbal, Jamil T; Co-concentration effect of silane with natural extract on biodegradable polymeric films for food packaging **International Journal of Biological Macromolecules** 106 (2018) 351–359 (I.F=4.784). Cited by 8
- 4) S.S. Iqbal, A. Sabir, **A. Islam**, S. M. Khan, M. Yasir, T. Jamil, Z. M. Khan, Effect of Graphene for Ablation Study of Advanced Composite Materials for Aerospace Applications, (2018) **Key Engineering Materials**; TRANS TECH PUBLICATIONS LTD Vol. 778, pp 118-125.
- 5) Sadia Atta, Mehreen Fatima, **Atif Islam**, Nafisa gull, Grafting of silica particles with linoleic acid via modified Stober’s method for preconcentration of pesticides in drinking water (2018) **Key Engineering Materials**; TRANS TECH PUBLICATIONS LTD Vol. 778, pp 316-324.
- 6) Muhammad Azeem Munawar, Dirk Wolfram Schubert, Shahzad Maqsood Khan, Muhammad Atiq Ur Rehman, Nafisa Gull, **Atif Islam**, Aneela Sabir, Muhammad Shafiq, Bilal Haider, Mudassar Azam, Saba Urooge Khan, Monika M. Voigt; Investigation of functional, physical, mechanical and thermal properties of TiO₂ embedded polyester hybrid composites: A design of experiment (DoE) study **Progress in Natural Science: Materials International** 28 (3) (2018) 266-274 (I.F=3.764). Cited by 1

2017

(09 Articles)

- 1) Muhammad Waheed Mushtaq, Farah Kanwal, **Atif Islam**, Khalil Ahmed, Zia-ul-Haq, Tahir Jamil, Muhammad Imran, Syed Mustansar Abbas, Qingrong Huang; Synthesis and characterization of doxorubicin-loaded functionalized cobalt ferrite nanoparticles and their in vitro anti-tumor activity under an AC-magnetic field **Tropical Journal of Pharmaceutical Research** (July 2017); 16 (7): 1663-1674 (I.F=0.439).
- 2) Ahmad A, Jamshaid F, Adrees M, Iqbal SS, Sabir A, Riaz T, Zaheer H, **Islam A**, Jamil T; Novel Polyurethane/Polyvinyl chloride-co-vinyl acetate crosslinked membrane for reverse osmosis (RO) **Desalination** 420 (2017) 136–144 (I.F=6.566). Cited by 3

- 3) 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 CO₂/N₂ separation **Journal of Industrial and Engineering Chemistry** 55 (2017) 65–73 (I.F= 4.978). Cited by 8
- 4) 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= 4.039).
- 5) Wasim M, Sabir A, Shafiq M, **Islam A**, Azam M, Jamil T; Mixed matrix membranes: Two step process modified with electrospun (carboxymethylcellulose sodium salt/sepiolite) fibers for nanofiltration **Journal of Industrial and Engineering Chemistry** 50 (2017) 172–182 (I.F= 4.978). Cited by 11
- 6) 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** 56 (15) (2017) 1608–1618 (I.F= 1.705). Cited by 3
- 7) 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=4.784). Cited by 18
- 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= 5.155). Cited by 14
- 9) 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= 4.978). Cited by 12

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. 37, No. 3, 2018 Accepted June 10, **2016** 21739 (p. 1-8) (**I.F=2.663**).
- 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(10) (**2016**) 1077–1082 (**I.F= 5.040**). Cited by 8
- 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= 3.621**). Cited by 9
- 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= 2.781**). Cited by 7
- 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=4.784**). Cited by 9
- 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** 25 (**2016**) 475–485 (**I.F 1.707**). Cited by 7
- 7) 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=6.044). Cited by 26
- 8) 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 (p.1-9) (I.F=2.188). Cited by 4
- 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=0.638).
- 10) 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** 172 (2016) 39–46 (I.F=2.781).Cited by 9
- 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=4.784). Cited by 14
- 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=2.531). Cited by 5
- 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 MgSO4 solution **Carbohydrate Polymers** 136 (2016) 551–559 (I.F=6.044). Cited by 19

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); 18(6): 1256-1263 (I.F=1.16). Cited by 10
- 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=1.439). Cited by 3
 - 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=6.044). Cited by 33
 - 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=4.784). Cited by 33
 - 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=1.491).
 - 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=6.566). Cited by 25
 - 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=2.188) Cited by 14

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=6.566) Cited by 48
- 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=1.984) Cited by 31
- 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= 4.784) Cited by 41
- 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=2.188) Cited by 63
- 5) **Atif Islam**, Tariq Yasin Controlled delivery of drug from pH sensitive chitosan/poly (vinyl alcohol) blend **Carbohydrate Polymers** 88 (2012) 1055-1060 (I.F=6.044) Cited by 109
- 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=2.188) Cited by 38
- 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=2.188) Cited by 33

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**, Pages 56, Published on 2017/01/09.

Book Chapter:

- 1) Nafisa Gull, Shahzad Maqsood Khan, **Atif Islam**, Muhammad Taqi Zahid Butt **"Hydrogels for biomedical applications"** (accepted for publication) Book entitled **"Bio Monomers for Green Polymeric Composites Materials"** Published by; **Wiley-Blackwell, UK**.
- 2) Nafisa Gull, Shahzad Maqsood Khan, **Atif Islam**, Muhammad Taqi Zahid Butt, Tahir Jamil **Chapter: 'Modification of Polyaniline'; Book: "Polyaniline Blends, Composites, and Nanocomposites"**, Edited By: P. M. Visakh, Cristina Della Pina, Ermelinda Falletta; Published by **Elsevier**, ISBN: 978-0-12-809551-5 (<https://www.elsevier.com/books-and-journals.>); Published: 6th November 2017; Chapter No.3 (p. 61-93); <http://dx.doi.org/10.1016/B978-0-12-809551-5.00003-5>.
- 3) Muhammad Munawar, Dirk Wolfram Schubert, Shahzad Maqsood Khan, Nafisa Gull, **Atif Islam**, Muhammad Atiq Ur Rehman and Monika M Voigt; **Chapter: "PARTICULATE FILLED POLYESTER HYBRID COMPOSITES"** **Book: "Polyester - Production, Characterization and Innovative Applications"**; Edited By: Nurhan Onar Camlibel; Published by **INTECHOPEN**; **ISBN: 978-953-51-5876-9 Accepted: December 22, 2017**

Under Review/Revisions/Submitted/to be submitted

- 1) Sumayya, Mehvish Tanveer, Nafisa Gull, Sehrish Jabeen, **Atif Islam**, Abdul Ghaffar, Sadia Sagar Iqbal, Shahzad Maqsood Khan Development of novel biodegradable superabsorbent hydrogels for soil conditioning **Polymer (Under Review) (I.F= 4.00)**.
- 2) 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 **(To be submitted)**.

- 3) Mehvish Tanveer, **Islam A**, Development of Acrylic Acid and Biopolymer Based Superabsorbent Hydrogels using Vinyltrimethoxysilane Crosslinker for Anti-Desertification Applications **(To be submitted)**.
- 4) Asma Khalid, **Islam A**, Saia Atta Development of biopolymers based food packaging materials
- 5) Asma Khalid, Islam A, Saia Atta Synthesis of chitosan/alginate/PVP BASE hydrogels for wound healing **(To be submitted)**.
- 6) Asma Khalid, **Islam A**, Saia Atta Synthesis of carrageenan/alginate /PEG base hydrogel blends and use as packing material **(To be submitted)**.
- 7) Asma Khalid, **Islam A**, Saia Atta Synthesis of k-carrageenan/alginate /PEG (different Mol Wt) base hydrogel for controlled release of cephradine **(To be submitted)**.

Conferences Papers Published

- 1) Saba Urooge Khan, Sadaf Hafeez, Shahzad Khan, **Atif Islam**, Misbah Sultan, Muhammad Shafiq, Nafisa Gull, Saba Zia and Muhammad Taqi Zahid Butt **Synthesis and Characterization of amphiphilic triblock Polyurethane copolymers membrane for reverse osmosis**, International Conference on Solid State Physics (ICSSP-2017) PU Lhr, **Dec 10-14, 2017**
- 2) Shahzad Khan, Saba Zia, Nafisa Gull, **Atif Islam**, Sadia Sagar Iqbal, Muhammad Shafiq, Aneela Sabir, Adnan Ahmed, Fahd Jamshed and Muhammad Taqi Butt; Invited Lecture in International Conference on Solid State Physics (ICSSP-2017) title **"Polymers; An Exclusive Trademark to Modern Ear"**, at University of the Punjab Lahore Pakistan; **Dec 10-14 2017**.
- 3) Shahzad Maqsood Khan, Saba Zia, Nafisa Gull, **Atif Islam**, Sadia Sagar Iqbal, Saba Urooge Khan, Sehrish Jabeen, Muhammad Taqi Zahid Butt Technical Presentation in 6th International Symposium Biomedical Materials (ISBM-2017) title **"Polymers; A phenomenal Invention to Innovation in Medical Show Ground"** in Pearl Continental arranged by Interdisciplinary Research Center of Biomedical Comsats University Lahore Pakistan; **Dec 14-16 2017**.
- 4) S. M. Khan, S. Zia, S. Bano, N. Gull, **A. Islam**, S. S. Iqbal, M. Abid, S. Jabeen, M. T. Z. Butt, T. Jamil **An Investigation of Rheological Behaviour of**

- Lubricating Oils Used for Motor Bike Engines, International Symposium on Advanced Materials (ISAM)** National Centre for Physics, Islamabad, Pakistan, (ISAM-2017) 16-20 October 2017
- 5) **Islam A**, Sehrish Jabeen, Ambreen Bashir, Asma Khalid; Synthesis of biopolymer based crosslinked biodegradable thin films for packaging application using mint and grapefruit peel extracts; **Best Poster Award for hydrogel for packaging materials** in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore (**Poster presentation**).
 - 6) Radhika V, Tushar B, Harirpiya H, Aneela S, Zia S, **Islam A**, Khan SM, KING MW **Award of Technology (Poster)** in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore (**Poster presentation**).
 - 7) Development of Hybrid Hydrogel for Biomedical Applications. Nafisa Gull, Shahzad Maqsood Khan, Muhammad Taqi Zahid Butt, **Atif Islam**, Muhammad Shafiq. "**7th Invention to Innovation Summit 2018**" held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
 - 8) Supper Absorbing Hydrogels. Saba Zia, Shahzad Maqsood Khan, **Atif Islam**, Aneela Sabir, Radhika Vaid, Tushar Bambharoliya, Martin W. King, Muhammad Taqi Zahid Butt. "**7th Invention to Innovation Summit 2018**" held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
 - 9) Synthesis of Biopolymer based Crosslinked Biodegradable Thin Films for Packaging Application using Mint and Grapefruit Peel Extracts. Sehrish Jabeen, Ambreen Bashir, Asma Khalid, **Atif Islam**, Shahzad Maqsood Khan, Muhammad Taqi Zahid Butt. "**7th Invention to Innovation Summit 2018**" held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
 - 10) Study of Self Assembled Amphipathic Novel Polyurethane Membranes for Water Treatment. Saba Urooge Khan, Sadaf Hafeez, Azeem Munawar, Shahzad Maqsood Khan, **Atif Islam**, Shahzad Maqsood Khan, Muhammad Shafiq, Muhammad Taqi Zahid Butt. "**7th Invention to Innovation Summit 2018**" held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
 - 11) Auxetic Sandwich Composites for Crash Protection. Muhammad Ameer, Shahzad Maqsood Khan, **Atif Islam**. "**7th Invention to Innovation Summit 2018**" held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**

- 12) Characterization of polyvinyl Alcohol (PVA) and Cellulose Acetate based Films and Their Evaluation for Wound Dressing Applications. Radhika Vaid, Tushar Bambharoliya, Saba Zia, Aneela Sabir, **Atif Islam**, Tahir Jamil, Shahzad Maqsood Khan, Martin W. King. **"7th Invention to Innovation Summit 2018"** held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
- 13) Novel Crosslinked Ultrafiltration Membranes for Chromium Ion Removal. Hira Zaheer, **Atif Islam**, Adnan Ahmad, Aneela Sabir, Fahd Jamshaid, Shahzad Maqsood Khan. **"7th Invention to Innovation Summit 2018"** held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
- 14) Multi-Scale Hybrid Glass Fiber Composites with nano and (3-Mercaptopropyl) Trimethoxysilane (MPTS) Functionalized Carbon Black Inclusions. Fahd Jamshaid, Shahzad Maqsood Khan, Adnan Ahmad, Aneela Sabir, Sadia Sagar Iqbal, Muhammad Shafiq, **Atif Islam**. **"7th Invention to Innovation Summit 2018"** held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
- 15) Polyvinyl Chloride and Polyvinyl Pyrrolidone Blended Membrane for Desalination. Muhammad Faisal Shafiq, Dure Najaf Iqbal, Shahzad Maqsood Khan, Sadia Sagar Iqbal, Nafisa Gull, **Atif Islam**, Sehrish Jabeen. **"7th Invention to Innovation Summit 2018"** held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
- 16) Polyvinyl Chloride and Cellulose Acetate Blended membrane for Desalination. Nafees Ali, Dure Najaf, Shahzad Maqsood Khan, Sadia Sagar Iqbal, Nafisa Gull, **Atif Islam**, Sehrish Jabeen. **"7th Invention to Innovation Summit 2018"** held in University of the Punjab, Lahore, Pakistan. **Mar. 7-8th, 2018**
- 17) Saba Zia, Shahzad Maqsood Khan, Nafisa Gull, **Atif Islam**, Younas Habeeb Khan, Azeem Munawar, Muhammad Shafiq, Aneela Sabir, Saba Urooge Khan, Sadaf Hafeez, Sehrish Jabeen, Muhammad Taqi Zahid Butt **Hydrophilic gels for biomedical applications** in 4th International Conference on **Frontiers of Advanced Engineering Materials (FAEM-18), 19-20 Feb 2018 at PCSIR, Lahore (Poster presentation)**.
- 18) Nafisa Gull, Shahzad M Khan, Muhammad T Z Butt, Saba Zia, Saba U Khan, Sadaf Hafeez, Sehrish Jabeen, Muhammad A Munawar, **Atif Islam**, Aneela Sabir, Sadia S Iqbal, Muhammad Shafiq **Synthesis and Characterization of**

- Polysaccharide Based Hydrogels** in 4th International Conference on Frontiers of Advanced Engineering Materials (FAEM-18), **19-20 Feb 2018 at PCSIR, Lahore (Poster presentation).**
- 19)** Saba Urooge, Shahzad Maqsood, **Atif Islam**, Sadaf Hafeez, Misbah Sultan, Muhammad Shafiq, Sadia Sagar, Azeem Munawar, Aneela Sabir, Nafisa Gull, Saba Zia, Khadija Rafiq, Shumaila Fayyaz, Muhammad Taqi Zahid Butt. **Preparation and characterization of polyurethane-grafted calcium alginate membranes** in 4th International Conference on **Frontiers of Advanced Engineering Materials (FAEM-18), 19-20 Feb 2018 at PCSIR, Lahore (Poster presentation).**
- 20)** Asma Khalid, Sadia Atta, **Atif Islam**, Sehrish Jabeen, Huma Raza, Mahpara Alam, Shumaila Fayyaz, Muhmmad Faizan, Muhammad Toqeer, Waqar Ahmad, Hassan Shah, Shahzad Maqsood Khan, Makshoof Athar. **Development of biopolymers based food packaging material** in 4th International Conference on **Frontiers of Advanced Engineering Materials (FAEM-18), 19-20 Feb 2018 at PCSIR, Lahore (Poster presentation).**
- 21)** Sadaf Hafeez, **Atif Islam**, Kalsoom Anwar, Muhammad Shafiq, Shahzad Maqsood, Abbas Ali, Aneela Sabir, Nafisa Gull, Saba zia, Saba Urooge Sehrish Jabeen, Muhammad Taqi Zahid Butt. **Study of Release Profile of Montelukast Sodium by Cross linked Injectable hydrogels** in 4th International Conference on **Frontiers of Advanced Engineering Materials (FAEM-18), 19-20 Feb 2018 at PCSIR, Lahore (Poster presentation).**
- 22)** Sehrish Jabeen, **Atif Islam**, Aneela Sabir, Muhammad Shafiq, Nafisa Gull, Saba Zia, Adnan Ahmed, Fahad Jamshaid, Azeem Munawar, Saba Urooge, Sadaf Hafeez, Shahzad Maqsood Khan, Taqi Zahid Butt **Study of biopolymer based pH responsive hydrogels for controlled release of antibiotic** in 4th International Conference on **Frontiers of Advanced Engineering Materials (FAEM-18), 19-20 Feb 2018 at PCSIR, Lahore (Poster presentation).**
- 23)** Sadia Atta, Mehreen Fatima, **Atif Islam**, Nafisa gull, Grafting of silica particles with linoleic acid via modified Stober's method for preconcentration of pesticides in drinking water **(2018) 15th International Symposium on**

- Advanced Materials;** National Centre for Physics, **Islamabad**, Pakistan, (**ISAM-2017**) 16-20 October 2017.
- 24) S.S. Iqbal, A. Sabir, **A. Islam**, S. M. Khan, M. Yasir, T. Jamil, Z. M. Khan, **Effect of Graphene for Ablation Study of Advanced Composite Materials for Aerospace Applications** at The International Symposium on Advanced Materials, National Centre for Physics, **Islamabad**, Pakistan, (**ISAM-2017**) 16-20 October 2017 (**Poster presentation**).
- 25) Mehwish Jabeen, Sehar Sarwar, Sadia Sagar Iqbal, Sumera Nosheen, **Atif Islam**, Faiza Hassan, Shahzad Maqsood Khan, Muhammad Yasir, Synergistic effect of calcium ion on structural, thermal, and dielectric properties of chromium magnesium nanoferrites, **International Conference of Solid State Physics Dec 10-14, 2017. Centre of Excellence in Solid State Physics, University of the Punjab, QAC, Lahore-54590, Pakistan (Oral presentation)**
- 26) 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)**.
- 27) 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.**
- 28) 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).

- 29) **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.
- 30) 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.** 2nd National Conference on Radiation, Particles and Matter, held in G.C University Lahore on October 26-28, 2010.
- 31) **Islam A.** Yasin T, Bano I, Presented poster on **Synthesis and characterization of chitosan/poly (vinyl alcohol) hydrogel** in Symposium on Materials Research at PINSTECH, Nilore, Islamabad, Pakistan, 03-04 August, 2010 (**Poster presentation**).

Projects

- Development of wound healing/dressing materials using biocompatible polymer chitosan: a natural solution for wound healing **(2017-2018, Completed), Punjab University, 150,000 Rs) (Principal investigator).**
- Development of biomaterials for biomedical and bioelectrodes/biosensing applications **(Submitted to PHEC in May 2017, 3.0 Millions) (Principal investigator).**
- Worked (2016-2018) 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 with the Principal Investigator as Focal Person 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.

- Synthesis and characterization of pH sensitive hydrogels/nanofibrous material from biopolymers/carboxymethyl chitosan/chitosan for different controlled drug delivery systems and other biomedical applications **(HEC, 0.5 Million, Completed) (Principal investigator)**.
- Extraction of chitin/chitosan from natural sources and its improved utilization as novel/commercial products **(2015-2016), Punjab University, 150,000 Rs Completed) (Principal investigator)**.
- Development and performance characterization of biopolymers based pH-sensitive blended films/membranes/electrospun fibrous materials for various applications **(2014-2015), Punjab University, 150,000 Rs Completed) (Principal investigator)**.

Evaluation

Reviewing of Journal Papers

1. Preparation and in vitro, in vivo characterisation of pioglitazone Loaded chitosan/peg blended PLGA biocompatible nanoparticles; Bio Nanoscience (Impact Factor Journal) on 13 March 2018.
2. 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.
3. Bio-Inspired Layered Chitosan/Graphene Oxide Nanocomposite Hydrogels with High Strength and pH-Driven Shape Memory Effect; Carbohydrate Polymers (Impact Factor Journal) on 17 Jun 2017.
4. Development of pH-responsive chitosan-based hydrogel modified with bone ash for controlled release of amoxicillin Carbohydrate Polymers; Carbohydrate Polymers (Impact Factor Journal) on 17 July 2017.

Evaluation of Research Work

- 1- M. Phil = **22**

2- BS = **24**

3- B.Sc. Polymer Engineering = **19 groups (56 students)**

“Senior Design Project-II (PE-4101)” on July 24-25, 2017 of the final year class comprising of 19 groups (56 students) of B.Sc. Polymer Engineering graduating on August 04, 2017

Evaluation of Research Technology

1- As a Judge in **6th 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.**

Current Profile

- **Published thirty three (57) international journals papers (ISI impact Factor = 193.745, Total No of Citations = 524), One book and three book chapters, Five** conference preceding and **07** are under review/revisions/submitted/to be submitted
- Serving as **Associate Professor** in the **Department of Polymer Engineering and Technology, University of the Punjab, Lahore. 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
- 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:

- Co-Supervised **01 PhD student** of the DPET **on reverse osmosis membranes.**
- Supervisor of **07 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**).
- Co-Supervising **02 PhD students of DPET, PU for their PhD research work doing project on pervaporation and gas separation (PhD Near to Completion)**
- Co-Supervisor of the **two (02) PhD students of the Department of Chemistry and Environmental Sciences (LCWU, Lahore)** for their research

work (Chitosan derivatives, and hydrogels for controlled anticancer drug release studies). **(PhD Near to Completion)**

MPhil/MSc Students:

- Supervised **11 (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 **27 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.**

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)
- Cell toxicity and Biocompatibility Analysis
- Drug release analysis

Symposiums/Conferences/Seminars/Workshops

- 1)** Poster Presentation in **7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore **and awarded Best Poster Award for hydrogel for packaging materials.**

- 2) **Poster presentation in 7th Invention to Innovation Summit** on 7-8 March, 2018 at University of the Punjab, Lahore and won **Award of Technology (Poster)**.
- 3) Poster Presentation (**06 Presentations**) in 4th International Conference on **Frontiers of Advanced Engineering Materials (FAEM-18), 19-20 Feb 2018 at PCSIR, Lahore.**
- 4) Participated in the **2 Days Workshop on training of "Patent Filing & Introduction to Intellectual Property System of Pakistan"** on 17-18 May, 2017 at Khorana Hall, Institute of Chemistry, University of the Punjab, Lahore.
- 5) Participated in the **6th Invention to Innovation Summit** on 8-9 March, 2017 at University of the Punjab, Lahore.
- 6) Participated in **World Quality Day 08 Feb, 2017**, Organized by Quality Enhancement Cell, University of the Punjab, Lahore.
- 7) Participated in **4th 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.
- 8) Participated in **Workshop on Entrepreneurship, Use of Business Intelligence for Development on 8th November, 2016** at the Institute of Chemical Engineering and Technology, University of the Punjab, Lahore.
- 9) Participated in **4th Invention to Innovation Summit 2015**, March 4-5, **2015**, University of the Punjab, Lahore.
- 10) Participated in '**13th International and 25th 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.
- 11) 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.

- 12) Participated in '**5th Symposium on Engineering Sciences**' on 2nd April, 2014 at Institute of Chemical Engineering and Technology (ICET), University of the Punjab, Lahore.
- 13) 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.
- 14) Participated in '**Chromatography Techniques and Sample Preparation Seminar**' held by Agilent Technologies at Avari Hotel, Lahore on 23rd January, 2014.
- 15) 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.**
- 16) 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.
- 17) Participated in two days chemistry conference 2010 on "**Recent Trends in Chemistry**", Chemistry Division, Directorate of Science, PINSTECH, Islamabad, December 28-29, 2010.
- 18) Participated in **Physical and Environmental Chemistry Conference** (PEC-2010) by NCE in Physical Chemistry, University of Peshawar, Sep 26-30, 2010.
- 19) Attended workshop on **application of Nanotechnology** (WANT-2010), **National Centre for Physics**, QAU, Islamabad, Pakistan, 31st May to 4th June, 2010.
- 20) Participated in **Symposium on Nanomedicine**, NIBGE, Faisalabad, Pakistan, March, 2010.
- 21) Participated in **8th International and 20th National Chemistry Conference**, QAU, Islamabad Pakistan, February 15-17, 2010.
- 22) Participated in IAEA/RCA regional meeting on **Applications of Nanotechnology**, Serena Hotel, Islamabad, Pakistan, Oct 29-02 November, 2007.

