



CURRICULUM VITAE

DR. ABBAS KHAN
(HEC APPROVED Ph.D SUPERVISOR)

PERSONAL INFORMATIONS

Father's Name: **MIR NAWAS KHAN**
 Date of Birth: **10/03/1980**
 N.I.C No: **15101-0329764-3**
 Gender: **Male**
 Domicil: **DISTRIC BUNER, Khyber Pakhtukhwa, PAKISTAN**
 Permanent Address: *Village & P.O Kawga Chamla Distric Buner Khyber Pakhtunkhwa (Old name: N. W. F. P) PAKISTAN.*
Current Official/Postal Address: *Department of Chemistry, Abdul Wali Khan University, Mardan, KPK, Pakistan. E-mail: abbas053@yahoo.com, abbas053@gmail.com Contact Number: (092)03408467885 Mobil: (092) 03335742302*

EDUCATION/ACADEMIC RECORD

Qualifications	Session	Major Subjects	Division	University/Board
PostDoc (One Year)	Dec.2012 -to- Dec. 2013	Material and Polymer Science & Engineering	-	Universiti Sains Malaysia (USM), Malaysia
Ph.D	2010	Physical Chemistry (Polymers/Colloids & Surfactants)	1 st	Quaid-i-Azam University Islamabad Pakistan
PhD Split Research Fellow (One-Year, TWAS-CAS Fellow)	2008-2009	Physical Chemistry of Polymer & Colloids (One Year)	-	University of Science & Technology of China
M.Phil	2006	Physical Chemistry (Polymers & Colloids)	1 st	Quaid-i-Azam University Islamabad Pakistan
M.Sc	2004	Chemistry/Physical Chemistry	1 st	University of Peshawar, Pakistan
B.Sc	2001	Chemistry, Botany, Zoology (Bioscience)	1 st	University of Peshawar, Pakistan
F.Sc	1999	Pre-Medical	1 st	B.I.S.E Swat, Pakistan
S.S.C	1996	Science	1 st	B.I.S.E Swat, Pakistan

PROFESSIONAL (RESEARCH & TEACHING) EXPERIENCE

1. **Associate Professor (Tenured) of Chemistry/Physical Chemistry**, *Department of Chemistry, Abdul Wali Khan University, Mardan, Pakistan* Since **13-10-2017 to-date**.
2. **Assistant Professor (BPS/TTS) of Chemistry/Physical Chemistry**, *Department of Chemistry, Abdul Wali Khan University, Mardan, Pakistan* Since **08-09-2011 to 12-10-2017 (BPS) & 13-10-2011 to 12-10-2017 (TTS)**.
3. **ONE YEAR as Postdoctoral Research Fellow** at *School of Materials & Mineral Resources Engineering, University Science Malaysia (USM) Penang Malaysia* since **10-12-2012 to 09-12-2013**.
4. **Assistant Professor of Chemistry/Physical Chemistry** under “*Interim Placement of Fresh PhDs Program (IPFP)*” of HEC at National Center of Excellence in Physical Chemistry University of Peshawar, Pakistan since **06-09-2010 to 06-09-2011 (One Year)**.
5. **ONE YEAR** Research Training on Synthesis and Characterization of Polymers/Macromolecules by Using the Light scattering (LLS), Temperature jump-stopped flow, Quartz crystal microbalance (QCM), Isothermal titration calorimetry (ITC) and Fluorescence at University of Science & Technology of China under the supervision of Prof. Dr. Guangzhao Zhang (**March, 2008 to February, 2009**).
6. **SIX YEARS** Research Experience for Ph.D and M.Phil Studies at Department of Chemistry Quaid-i-Azam University, Islamabad, Pakistan (**September, 2004 to August, 2010**).

OTHER PROFESSIONAL RESPONSIBILITIES /EXPERIENCE

1. **Head of Physical Chemistry Section** at the *Department of Chemistry, Abdul Wali Khan University, Mardan, Pakistan* Since **September 2011 till-date**.
2. Working as a **Member of Various Departmental Committees** such as *Purchase Committee, Admission Committees, Syllabus and Course Committees, Graduate Studies Committees, Board of Studies as Head/Incharge of Physical Chemistry Section* at the *Department of Chemistry, Abdul Wali Khan University, Mardan, Pakistan* Since **September 2011 till-date**.
3. **Examiner/Evaluator** of Research Thesis (M.Phil/PhD) for various Universities of Pakistan since **September 2010 till-date**.

HONOURS/AWARDS

1. Selected for Research and Productivity Award for Years 2011 and 2012 by Pakistan Council for Science & Technology (PCST).
2. Won **Postdoctoral Research Fellowship** of the Third World Academy of Sciences (TWAS) and University of Science Malaysia (USM), *School of Materials & Mineral Resources Engineering, University Science Malaysia (USM) Penang, Malaysia*.
3. Selected as an **IUPAC** Affiliate member for the period of **2011-2012** through the Chemical Society of Pakistan.
4. Won a Startup Research Grant of PKR 0.5 million on “Synthesis and Characterization of Hybrid Polymer Microgels with Tunable Optical Properties” funded by Higher Education Commission of Pakistan with **Ref. No: PM-IPFP/HRD/HEC/2010/1826**.
5. Selected as **Assistant Professor** under “*Interim Placement of Fresh PhDs Program (IPFP)*” by HEC and National Center of Excellence in Physical Chemistry University of Peshawar, Pakistan since **06-09-2010 to 06-09-2011**.
6. Won HEC Indigenous 5000 Ph.D Fellowship Scheme Batch II with **HEC Pin NO: 042-140440-Ps2-291** for M.Phil leading to Ph.D Degree at Quaid-i-Azam University

Islamabad Pakistan.

7. Won **One Year** Split Ph.D Research Fellowship of the Third World Academy of Sciences (TWAS) and Chinese Academy of Science (CAS) at Department of Chemical Physics, University of Science and Technology of China.

PH.D THESIS TITLE

“Associative and Surface Active Properties of Block Copolymers and their Interactions with Surfactants”

M.PHIL THESIS TITLE

“Laser Light Scattering Study of Cationic-Tipped Diblock Copolymers”

RESEARCH GRANTS WON

1. A Startup Research Grant of PKR 0.5 million on *“Preparation of Graphen Quantum Dots and Their Composites for Photo-Electric Chemical Hydrogen Production”* funded by Higher Education Commission of Pakistan with **Ref. No: 21-843/SRGP/R&D/HEC/2016**. (In progress). (I was Co-PI with Dr. Sayyar Ali Shah & Now I am PI).
2. Fundamental Research Grant Scheme MR 104,000 on *“Smart Polymeric Microgel with Temperature and pH Responsive Moieties Containing Inorganic Nanomaterial Via Emulsion Polymerization”* by Ministry of Science, Technology and Innovation (MOSTI) Malaysia with grant No. **FRGS/203/PBAHAN/6071242**. (Duration 3 Years). **(Completed in 2016)**
3. A Startup Research Grant of PKR 0.5 million on *“Synthesis and Characterization of Hybrid Polymer Microgels with Tunable Optical Properties”* funded by Higher Education Commission of Pakistan with **Ref. No: PM-IPFP/HRD/HEC/2010/1826**. **(Completed in 2012)**
4. *“Smart Polymer microgels for biomedical and nano-technological Applications”* Submitted to **ISESCO-COMSTECH** for Funding. **(Under Review)**

RESEARCH STUDENTS/THESIS SUPERVISED

A. PH.D. Thesis/Students Supervised/Under Supervision

S.NO	Name of Scholar	Thesis/Research Title	Current Status
1.	Dr. Hazrat Ali (<i>Institute of Chemical Science, Gomal University, Dera Ismail Khan, KPK, Pakistan</i>)	<i>“Effect of Water Soluble Polymers over Micellization Behavior of Ionic Surfactants and Characterization of Metallo-surfactants”</i> (Co-supervisor with Prof. Dr. Azeem Khan)	Completed (October, 2016)
2	Mr. Abdul Malik (<i>Deptt. Chemistry, AWKUM</i>)	<i>“Preparation and Modification of Various Adsorbents from Rice Husk and Their Use for the Removal of Toxic Dyes and Heavy Metal Ions from Aqueous Media”</i> (Main-supervisor)	Completed (April, 2019)
3	Miss. Natasha Anwar (<i>Deptt. Chemistry, AWKUM</i>)	<i>“Bio-Synthesis, Physicochemical Characterization and Preliminary Applications of Metal Nanoparticles”</i> (Main-supervisor)	Experimental Work in Progress
4	Mr. Muhammad Yaseen	Polymer Composites	In Progress

B1. M.PHIL Thesis/Students Supervised/Under Supervision			
S.NO	Name of Scholar	Thesis/Research Title	Current Status
1	Mr. Amir Zada	“Preparation and Characterization of ZnO Based Nanohybrid Materials for Hybrid Bulk Hetero Junction Solar Cells”(Main-Supervisor)	Completed (NOV. 2012)
2	Miss. Natasha Anwar	“Green Synthesis of Gold and Silver Nanoparticles Using an Aqueous Extract of <i>Monotheocabuxifolia</i> (Flac.)Dcne.” (Main-Supervisor)	Completed (DEC. 2014)
3	Mr. Iltaf Khan	“Physicochemical Investigation of some Thiobarbiturates and their Interaction with DNA” (Main-Supervisor)	Completed (OCT. 2015)
4	Mis. Hashmat Bibi	“Thermo-Chemical Conversion of waste Proteinaceous Materials into Adsorbent for the Removal of Dyes from the Waste Water” (Co-Supervisor with Prof. Dr. Zahid Hussain)	Completed (April. 2015)
5	Mr. Nawab Sultan	“The Conversion of waste Glass into Useful Materials by Thermal and Thermo-Chemical Methods” (Co-Supervisor with Prof. Dr. Zahid Hussain)	Completed (OCT. 2016)
6	Mr. Muhammad Sajjad	“Preparation and Characterization of Stimuli Responsive Chitosan-Nipam-Acrylic Acid Based Polymeric Microgels” (Main-Supervisor)	Completed (AUG. 2017)
7	Mr. Ewaz Khan	“Synthesis, Characterization and Physicochemical Investigation of Chitosan-Based Copolymeric Hydrogels” (Main-Supervisor)	Completed (SEP. 2017)
8	Mis. Mehwish Afzal	“Preparation and Physicochemical Characterization Of Stimuli-Responsive Cellulose-Pnipam-P(Acrylic Acid) Based Hydrogels” (Main-Supervisor)	Completed (March, 2018)
9	Mis. Uzma Rehmat	“Synthesis, Characterization and Physicochemical Study Of Multi-Responsive Cellulose Based Polymer Microgels” (Main-Supervisor)	Completed (March, 2018)
10	Mr. Nadeem Khan	“A Comparative Study of Electrochemical Degradations of Toxic Food Dyes in Aqueous Medium Using Ti/Ru _{0.3} Ti _{0.7} O ₂ Anode” (Main-Supervisor)	Completed (March, 2018)
11	Mr. Saeed Ur Rehman	“Study of Different Formulation of Moxifloxacin 400mg Tablets available in local Market of Mardan by using their Dissolution Profile” (Main-Supervisor)	Completed (March, 2018)
12	Miss. Mehreen Nazir	“Effect of Crosslinker on the Physicochemical and Stimuli Responsive Behaviour of Chitosan-based Microgels” (Main-Supervisor)	Completed (May, 2018)
13	Miss. Sumbal Raheem	“Quantification and Comparison of Ascorbic Acid Level in Citric Sinuses Grown in District Malakand and Charsadda” (Co-Supervisor with Dr. Muhammad Naeem)	Completed (October, 2018)
14	Mr. Muhammad Rizwan	“Preparation of Chitosan Based Polymer Microgels, Their Fabrication With Zinc Oxide Nanoparticles and Physicochemical Investigation” (Main-Supervisor)	Completed (January, 2019)
15	Mr. Muhammad Ullah	“Preparation and Functionalization of Zinc Oxide Nanoparticles with Polymer For Catalytic Application” (Main-Supervisor)	Completed (January, 2019)
16	Miss. Sehrish Rehman	“Synthesis and Characterization of Polyaniline Doped with Dodecyl Benzenesulfonic Acid and Oxalic Acid” (Main-Supervisor)	Thesis Submitted (Jan. 2019)
17	Mr. Sharif Zada	“The Biosorption Studies Of Some Metal Ions From Aqueous Media Using Oyster” (Main-Supervisor)	In Progress
18	Miss. Yusra Khan	“Green Synthesis And Characterization Of Palladium Nanoparticles For Their Potential Catalytic Applications” (Main-Supervisor)	In Progress
19	Miss. Saba Noor	“Preparation and Characterization of Graphene Quantum Dots as Adsorbents for the Removal of Toxic Dyes” (Main-Supervisor)	In Progress
20	Miss. Safia Bibi	“Adsorption of Organic Dye Using Zsm-5-Based Micro-/Mesoporous Composite Material” (Main-Supervisor)	Thesis Submitted (Feb. 2019)
21	Miss. Naila Khan	“The Physicochemical And DNA Binding Studies Of Some Medicinal Compounds” (Main-Supervisor)	In Progress
22	Mrs. Maria Asif	“Preparation and Physicochemical Study Of Stimuli-Responsive Cellulose-P(N-Isopropylacrylamide-Methacrylicacid) Microgels” (Main-Supervisor)	Thesis Submitted (2019)
24	Mr. Kashif Zaman	“Detection Of Organochlorine Pesticides In Surface And Ground Water Of District Nowshera And Mansehra Kp, Pakistan” (Main-Supervisor)	Thesis Submitted (Feb. 2019)

(See Next Page for More Please)

B2. M.PHIL Thesis/Students Supervised/Under Supervision (Continued from Previous Page)			
S.NO	Name of Scholar	Thesis/Research Title	Current Status
25	Miss. Summaya Naz	"Synthesis, Characterization and Physicochemical Evaluation of Cellulose Based Polymer Microgels" (Main-Supervisor)	In Progress
26	Mr. Wali Muhammad	"The Degradation Studies of Some Toxic Food Dyes in Aqueous Media Using Magnetite Catalyst" (Main-Supervisor)	In Progress
27	Mr. Ziad Ali	"Preparation and Functionalization Of Nickel Nanoparticles With Polymer Microgels For Catalytic Applications" (Main-Supervisor)	In Progress
28	Miss. Muneeba Shakir	"Physiochemical and Volumetric Properties of Some Antidiabetic Compounds And Their Interaction With DNA" (Main-Supervisor)	In Progress
29	Mr. Nasir Khan	"Effect of Functionalization of Cellulose on The Self-Assembly Behavior of Cellulose-Surfactant Mixtures" (Main-Supervisor)	In Progress
30	Mr. Ubaid Ur Rahman	"Isolation and Thermo-Chemical Modification of Cellulose and its Application as Adsorbent" (Main-Supervisor)	In Progress
31	Miss. Saiqa Naz	"Synthesis and Characterization of Trypan Blue Imprinted Core Shell Polymer" (Main-Supervisor)	In Progress
32	Mr. Muhammad Arif	"Prediction of Water Quality Parameters by Multivariate Linear Regression and Artificial Neural Network" (Co-Supervisor with Dr. Muhammad Naem)	In Progress
33	Miss. Haseeba	"Synthesis And Characterization Of Conductive PolyanilinePoly(Methyl-Methacrylate) Composites" (Co-Supervisor with Dr. Muhammad Naem)	In Progress
34	Mr. Muhammad Numan Yousaf	"Synthesis, Characterization and Biological Activities of Diaryl N-Acyl Urea Derivatives" (Co-Supervisor with Dr. Gul Shahzada Khan)	Thesis Submitted
35	Mr. Atta Ullah	"Oxidation of Octanol to the Desired Product by Nanostructured Cerium Oxide Based Catalyst Supported on Silica"(Co-Supervisor with Dr. Muhammad Naem)	In Progress
36	Mr. Inam Ullah	"The Conversion of Algal Biomass to Fuels and Valuable Chemicals and Thermochemical Process Using Nickle (Ni) as Catalyst"(Co-Supervisor with Dr. Muhammad Naem)	In Progress
37	Mr. Sher Shah Khan		In Progress
	Miss. Shaista Khan	"Micellar Enhanced Solubilization Behavior of Medicinal Organic Compounds and their Interaction with DNA" (Main-Supervisor)	Project is Approved by ASRB
	Mr. Mahid Ali	"Synthesis and Physicochemicalstudy Of Palladium Nanoparticles Hybridized With Stimuli Responsive Copolymer Microgels" (Main-Supervisor)	Thesis Write-up Completed & Will be Submitted Soon
	Mr. Muhammad Humayun	"Synthesis and characterization of ZnO based Nanohybrid materials for photovoltaic applications" (Main-Supervisor)	Thesis Evaluated by Examiners &International Paper Published

B. M.Sc/B.S Thesis/Students Supervised/Under Supervision			
S.NO (Project)	Name of Scholar	Thesis/Research Title	Current Status
1	i. Mis. Alia Shah ii. Zafar Ullah	“The Physio-chemical Characterization of some Drugs in Aqueous Media by using Surface Tension, Conductance and Density Measurements” (Main-Supervisor)	Completed (2012)
2	i. Asma Gul, ii. Sonia Kanwal iii. Muhammad Salman	“ The Study of Aggregation Behavior of Water-soluble Drugs by using Surface Tension, Conductance and Density Measurements ” (Main-Supervisor)	Completed (2012)
3	i. Muhammad Asim ii. Shabana Shaheen	Investigations of the effect of Co-solvent and Co-solute on the Adsorption and Micellization Behavior of Sodium Dodecyl Sulfate and its Interaction with Bromocresol Green in Aqueous Media” (Main-Supervisor)	Completed (2013)
4	i. Farkhanda Wakeel ii. Laila Shahab	“Removal of Hazardous Textile Dye From Industrial Wastewater Using Adsorption Technique” (Main-Supervisor)	Completed (2014)
5	i. Muneeba, ii. Ammara iii. Naila Khan	“Removal of Anionic Amaranth Dye From Artificial wast water Via Batch Mode Adsorption” (Main-Supervisor)	Completed (2014)
6	i. Ambreen ii. Sumyya iii. Nida Aziz iv. Saddiq Anwar	“ Removal of Hazardous Textile Dyes From Wast Water by Adsorption Method” (Main-Supervisor)	Completed (2014)
7	Hira Sobia	“Preparation and Characterization of Gold Nanoparticles via Green Synthetic Method by Using an aqueous extract of Dismodium Allegiance” (Main-Supervisor)	Completed (2015)
8	i. Sharif Zada ii. M. Tariq	“Synthesis and physicochemical studies of stimuli responsive polymer hydrogels and their interaction with surfactants” (Main-Supervisor)	Complete (2016)
9	i.Sumaira ii. Benish iii. Gulai	“Preparation of Stimuli-Responsive Polymer Microgels, Their Physicochemical Studies and Interaction with Medicinal Compounds” (Main-Supervisor)	Completed (2016)
10	Saima Hidayat	“A Physicochemical Investigations of the Stimuli-Sensitive- Polymer Microrogels Plus Surfactants Mixed Systems ” (Main-Supervisor)	Completed (2017)
11	i. Uzma Khan ii. Rabia Maryam	“The Preparation, Physicochemical Study Of Stimuli Responsive Chitosan Based Polymer Hydrogel And Its Interaction With Organic Dyes”	Completed (2018)
12	i. Tabinda Imtiaz ii. Husna	The Physicochemical Study Of Chitosan Based Polymer Microgels In Aqueous Media” (Main-Supervisor)	Completed (2018)
13	i. Sabiha ii. Rabail	“Synthesis and Physicochemical Study of Copolymer Microgels” (Main-Supervisor)	Completed (2018)
14	i. Asma ii. Hira Shah	“Preparation, Physicochemical Characterization Of Polymeric Microgels And Their Interaction With Organic Dye” (Main-Supervisor)	Completed (2018)
15	i. Shaukat Rehman ii. Sardar Hussain	Thermo-chemical Modification of Rice for Removal of Heavy Metal ions from Water (Main-Supervisor)	Completed (2018/19)

MAJOR COURSES STUDIED IN CHEMISTRY

Physical Chemistry	Physical Chemistry	General Chemistry
Gen. Physical Chemistry	Phys. Chemistry of High Polymers	Basic Analytical Chemistry
Basic Mathematics for Chemists	Nuclear and Radiation Chemistry	Basic Inorganic Chemistry
Quantum Chemistry	Solid State Chemistry	Basic Organic Chemistry
Advanced Chemical Kinetics	Colloids and Surfactants Science	Basic Biochemistry
Chemical Thermodynamic	Solution Chemistry	Basic Environmental Chemistry
Statistical Mech. & Thermodynamics	Magnetic Resonance Spectroscopy	Physical Chem. Practicals
Molecular Spectroscopy	Chemistry of Adv. Composites Materials	Inorganic Chem. Practicals
Electrochemistry/ Electrode Process	Special Topics for Research	Organic Chem. Practicals
Surface Chemistry	Review Paper Writing Course	Biochemistry Practicals
Biophysical Chemistry	Semi- and Superconductors Chemistry	Environmental Chem. Practicals
Advanced Lab. Work for Physical Chemistry Specialization		
<i>Note: As a Physical Chemistry Teacher, I have Taught/ am Teaching Almost All the Main Courses of Physical Chemistry at Undergraduate and Postgraduate Levels (University Level)</i>		

RESEARCH INTEREST

- ❖ Polymer Nanocomposites Materials
- ❖ Synthesis and Characterization of Linear/Block Copolymers, Functional Polymers, Polymer Micro-gel and Polymer-composites
- ❖ Synthesis and Characterization of Pure and Hybrid Polymer Microgels for various Potential Applications
- ❖ Functionalization of Inorganic Materials with Organic and Polymeric Compounds
- ❖ Characterization and Physicochemical Study of Amphiphilic Polymers/Molecules
- ❖ Self-assembly, Surface Activity, Adsorption and Micellization of Amphiphilic Block Copolymers and Conventional Amphiphilic Compounds
- ❖ Surfactants and Colloidal Science, Interactions of Polymer/Copolymers with Conventional Surfactant Systems
- ❖ Physicochemical and Associative properties of Drugs and Their Interactions with Proteins, Biopolymers, Polymers and Surfactants

INSTRUMENTS USED (HIMSELF)

- Brookhaven Laser Light Scattering Instrument For Static and Dynamic Light Scattering
- ALV Laser Light Scattering Instrument For Static and Dynamic Light Scattering
- DAWN EOS Enhanced Optical System (Laser Light Scattering Instrument)
- Malvern Zetasizer Nano ZS
- TE 2/3 LAUDA Tensiometer
- Anton Paar Digital Densitometer
- Anton Paar Digital Viscometer
- UV-Visible Spectrophotometer
- QCM-D, Quartz Crystal Microbalance with Dissipation
- Stopped-flow with Temperature- jump
- LS 55, Fluorescence Spectrophotometer

- Torsion Balance (White Elec. Inst. Co. Ltd.) for Surface and Interfacial Tension Measurement
- Polarimeter
- Conductometer, pH meters, Centrifuge Machine and other small equipment
- Synthetic and Purification Setups
- Differential Refractometer
- I. R. Spectrometer
- Isothermal Titration Calorimetry (ITC)
- Anton Paar Digital Rheometer, Physica MCR 301

GENERAL INTEREST

- ❖ Reading News Papers, Magazines & Books
- ❖ Net Surfing for research work and general science
- ❖ Command over Spoken & written English and Urdu
- ❖ Presentation skills

Acting As Reviewer of The Following International Journals & Some Others

S.No	Name of the Journal	S.No	Name of the Journal
1	Journal of Applied Polymer Science	2	Journal of Polymer Research
3	Polymer Chemistry	4	Polymer Bulletin
5	Polymer Science Part A and B	6	Chinese Journal of Polymer Science
7	Soft Matter	8	Materials & Design
9	Journal of Chemical Society of Pakistan	10	Polymer International
11	Chinese Journal of Chemistry	12	Journal of Chemical Physics
13	Journal of Inorganic and Organometallic Polymers and Materials	14	Journal of Physics and Chemistry of Solids
15	Carbohydrate Polymers	16	Progress in Natural Science: Materials International
17	RSC Advances	18	Journal of Industrial and Engineering Chemistry
19	Polymer Composites Journal	20	Polymers for Advanced Technologies
21	Royal Society of Chemistry, Thomas Graham House	22	Journal of Chemical Thermodynamic
23	Industrial Crop & Products	24	Thermochemical Acta.
25	Journal of Colloids and Interface Science	26	Journal of Dispersion Science and Technology
27	Journal of The Physical Chemistry A, B and C	28	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy

PUBLICATIONS IN HEC RECOGNIZED JOURNALS (Having Impact Factor)

1. Zahid Hussain, **Abbas Khan**, Nawab Sultan, Murad Ali, Muhammad Yasin Naz, Khalid Saed, Shaharin Anwar Sulaiman “*Thermo-Chemical Conversion of Waste Glass into Non-vitreous Porous Material for Adsorption Application*” (**Manuscript ACCEPTED by Journal of Material Cycles and Waste Management with Ms. No. JMCW-D-18-00410R1, on April 18, 2019 DOI: <https://doi.org/10.1007/s10163-019-00864-y>**).
2. Siti Zalifah Md Rasib, Hazizan MD Akil, **Abbas Khan**, Zuratul Ain Abd Hamid “*Controlled Release Studies through Chitosan-based Hydrogel Synthesized at Different Polymerization Stages*” (**International Journal of Biological Macromolecules Volume 128, Pages 531-536, May 2019, With DOI: <https://doi.org/10.1016/j.ijbiomac.2019.01.190>**).
3. Luqman Ali Shah, Rida Javed, **Abbas Khan**, Irum Bibi, Noor Saeed Khattak, Sultan Alam “*One-Pot Synthesis and Rheological Study of Cationic Poly (3-*

- acrylamidopropyltrimethyl ammoniumchloride) P(APTMACl) Polymer Hydrogels” (Manuscript ACCEPTED by Zeitschrift für Physikalische Chemie, on December 11, 2018 with DOI: <https://doi.org/10.1515/zpch-2018-1310>).
- Muhammad Humayun, Zhewen Hu, Abbas Khan, Wei Cheng, Yang Yuan, Zhiping Zheng, Qiuyun Fu, Wei Luo “Highly efficient degradation of 2,4-dichlorophenol over CeO₂/g-C₃N₄ composites under visible-light irradiation: detailed reaction pathway and mechanism” (Journal of Hazardous Materials Volume 364, Pages 635–644, 2019 with DOI: <https://doi.org/10.1016/j.jhazmat.2018.10.088>).
 - Momin Khan, Sehrish Khan, Amir Ul Mulk, Anis Ur Rahman, Abdul Wadood, Sulaiman Shams, Muhammad Ashraf, Jameel Rahman, Abdul Hameed, Zahid Hussain, Abbas Khan, Khair Zaman, Khalid Mohammed Khan, Shahnaz Perveen “Synthesis, molecular modeling and biological evaluation of 5-arylidene-N,N-diethylthiobarbiturates as potential α -glucosidase inhibitors” (Medicinal Chemistry, Volume 15, Pages 175-185, 2019. With DOI: [10.2174/1573406414666180912114814](https://doi.org/10.2174/1573406414666180912114814)).
 - Abdul Malik, Abbas Khan* and Muhammad Humayun “Preparation and Chemical Modification of Rice Husk Char for the Removal of a Toxic Dye (Orange G) from Aqueous Medium” (Manuscript ACCEPTED by Zeitschrift für Physikalische Chemie, on May 10, 2018 with <https://doi.org/10.1515/zpch-2018-1190>).
 - Luqman Ali Shah, Majid Khan, Rida Javed, Murtaza Sayed, Muhammad Saleem Khan, Abbas Khan, Mohib Ullah “Superabsorbent polymer hydrogels with good thermal and mechanical properties for removal of selected heavy metal ions” (Journal of Cleaner Production, Volume 201 Pages 78-87, August 2018 with DOI: <https://doi.org/10.1016/j.jclepro.2018.08.035>).
 - Fazal Raziq, Muhammad Humayun, Asad Ali, Tingting Wang, Abbas Khan, Qiuyun Fu, Luo Wei, Heping Zeng, Zhiping Zheng, Bilawal Khan, Huahai Shen, Xiaotao Zu, Sean Li, Liang Qiao “Synthesis of S-Doped Porous gC₃N₄ by Using Ionic Liquids and Subsequently Coupled with Au-TiO₂ for Exceptional Cocatalyst-Free Visible-Light Catalytic Activities” (Applied Catalysis B: Environmental, Applied Catalysis B Environmental VOL 237 Pages 1082–1, May/June 2018, <https://doi.org/10.1016/j.apcatb.2018.06.009>).
 - M. Humayun, F. Raziq, Abbas Khan & W. Luo “Modification strategies of TiO₂ for potential applications in photocatalysis: A critical review” (Green Chemistry Letters and Reviews, Volume 11 Issue 2, Pages 86-102, March/April 2018). <https://doi.org/10.1080/17518253.2018.1440324>
 - Faheem Ullah, Fatima Javed, MBH Othman, Abbas Khan, Rukhsana Gul, Zulkifli Ahmad, Hazizan Md Akil “Synthesis and Functionalization of Chitosan built Hydrogel with Induced Hydrophilicity for Extended Release of Sparingly Soluble Drugs” (Journal of Biomaterials Science: Polymer Edition, Volume 29, Issue 4, Pages 376-396, January 5, 2018). <https://doi.org/10.1080/09205063.2017.1421347>
 - S.Z.M. Rasib, Z. Ahmad, Abbas Khan, H.M. Akil, M.B.H. Othman, Z.A.A. Hamid, F. Ullah “Synthesis and evaluation on pH- and temperature-responsive chitosan-p(MAA-co-NIPAM) hydrogels” (International Journal of Biological Macromolecules Volume 108, Pages 367–375, March 2018), (<https://doi.org/10.1016/j.ijbiomac.2017.12.021>)
 - Abbas Khan*, Iltaf Khan, Momin Khan, Hussain Gulab “Physicochemical Investigation of Some Thiobarbiturate Derivatives and Their Binding Study with DNA” (Russian Journal of Physical Chemistry B, 2018, Vol. 12, No. 3, pp. 485–494 DOI: [10.1134/S1990793118030028](https://doi.org/10.1134/S1990793118030028)).

13. Maria Arshad, **Abbas Khan***, Zahoor H. Farooqi, Muhammad Usman, M. Abdul Waseem, Sayyar Ali Shah, Momin Khan” *Green Synthesis, Characterization and Biological Activities of Silver Nanoparticles Using The Bark Extract of Ailanthus Altissima*” (*Materials Science-Poland, Vol. 36, No. 1, Pages 21-26, 2018*).
14. **Abbas Khan***, Iltaf Khan, Muhammad Usman, Zahoor H. Farooqi, Momin Khan, Shoaib Khan “*A Physicochemical Study of Some Thiobarbiturate Derivatives and Their Interaction with DNA in Aqueous Media*” (*Russian Journal of Physical Chemistry A, Vol. 92, No. 10, pp. 1987–1996, 2018 DOI: 10.1134/S0036024418100023*).
15. Natasha Anwar, **Abbas Khan***, Mohib Shah, Saeed Anwar “*The Green Synthesis of Silver Nanoparticles Using an Aqueous Extract of Monotheca Buxifolia(Flac.)Dcne*” (*Russian Journal of Physical Chemistry A, Vol. 92, No. 1, Pages. 124–131, January 2018*).
16. **Abbas Khan***, Muhammad Sajjad, Ewaz Khan, Hazizan Md. Akil , Luqman A. Shah³, Zahoor H. Farooqi “*Synthesis, Characterization and Physiochemical Investigation of Chitosan-Based Multi-Responsive Copolymeric Hydrogels*” (*Journal of Polymer Research Volume 24, Pages 170-183, September 2017 & DOI: 10.1007/s10965-017-1332-2*).
17. Muhammad Khan, Li Tiehu, Ting Kai Zhao, Zafar Ali, Abdul Malik, **Abbas Khan**, Imran Khan, Azeem Ullah, Shasha Jiao, Muhammad Idrees, Chuanyin Xiong “*Effect of multi walled carbon nanotubes and diamond nanoparticles on the structure and properties of carbon foams.*” (*Diamond & Related Materials Volume 79, Pages 119-126, October 2017, DOI: 10.1016/j.diamond.2017.09.008*).
18. Afrasiab Ur Rehman, **Abbas Khan***, Muhammad Humayun, Gulnaz Bibi, Keying Shi, and Fazal Raziq “*Effect of Biocides and Anionic Homopolymeric Inhibitors on the Precipitation Behavior of Calcium Fluoride*” (*Bulletin of the Chemical Society of Ethiopia, Bull. Chem. Soc. Ethiop., Volume 31, Issue No. 1, Pages 115-126, July 2017*).
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Manuscripts Submitted to Journals for Publication

65. Muhammad Humayun, Zafar A. K. Khattak, **Abbas Khan**, Muhammad Yousaf, Farman Ali “Photodegradation of Metribuzin dye over novel SnO₂/LaFeO₃-XNX composite and mechanism” (*Manuscript Submitted to Journal of Colloid and Interface Science on January 07, 2019 with Manuscript ID: JCIS-19-51 and Under Review*).
66. Nadeem Khan, Sajjad Hussain, Shakeel Zeb, **Abbas Khan**, Hammad Khan, Khurram Imran Khan, Sabir Khan, Saima Gul, Abdeltif Amrane “Performance of Indirect Electrochemical Process for the Abatement of Food Dyes in Aqueous Solution” (*Manuscript Submitted to International Journal of Environmental Science and Technology on April 15, 2019 with Manuscript ID: JEST-D-19-00746 and Under Review*).
67. Mohib Shah, Natasha Anwar, Samreen Saleem, Iqbal Munir, Niaz Ali Shah, Baseerat Fida, **Abbas Khan**, Anwar Hussain and Faiz Ul Amin “Synthesis of silver nanoparticles from Anagalis arvensis and their biomedical applications” (*Manuscript Submitted to Bioinorganic Chemistry and Applications on October 15, 2018 and Under Review*).

68. Siti Zalifah Md Rasib, **Abbas Khan**, and Hazizan MD Akil “*Modulation of Chitosan-based Hydrogel for Drug Delivery Application*” (**Manuscript Submitted ACS Applied Bio Materials on January 29, 2019, With Manuscript ID: mt-2019-000815 & Under Review**).
69. **Abbas Khan**^{1*}, Muhammad Sajjad¹, Hazizan Md. Akil², Natasha Anwar¹, Muhammad Humayun³ and Luqman A. Shah “*Preparation and Physicochemical Study of Stimuli-Responsive (Chitosan)-(N-isopropyl Acrylamide)-(Acrylic Acid) Based Polymeric Microgels*” (**Manuscript Submitted to Iranian Polymer (Korea), on December 30, 2018 and Under Review**).
70. Abdul Malik & **Abbas Khan*** “*Enhancement Of The Adsorption Efficiency Of Rice Husk Ash By Chemical Modification For The Removal Of Crystal Violet Dye From Aqueous Media*” ” (**Manuscript Submitted to the Journal of the Chilean Chemical Society, With Manuscript ID Number: 817-10-10 on October 10, 2018 and Under Review**).
71. **Abbas Khan***¹, Abdul Malik,¹ Muhammad Humayun,² Tauqeer Ahmad “*A Physicochemical Investigation on the Thermo-Chemical Modification of Rice Husk for the Removal of Pb²⁺ from Aqueous Media*” (**Manuscript Submitted to the CROATICA CHEMICA ACTA, on March 07, 2019 and Under Review**).
72. Abdul Malik and **Abbas Khan***, Natasha Anwar, Muhammad Naeem” *A Comparative Study of the Adsorption of Congo Red Dye on Rice Husk (RH), Rice Husk Char (RHC) and Chemically Modified Rice Husk Char (CMRHC) from Aqueous Media*” (**Manuscript Submitted to Bulletin of the Chemical Society of Ethiopia with Manuscript EN-3281, on February 06, 2019 and Under Review**).
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Manuscripts in Preparation for Submission to Journals for Publication

1. Muhammad Bisyrul Hafi Othman,, Hasnah Osman, Zulkifli Ahmad, **Abbas Khan**, and Hazizan Md Akil1, “*Effect of Curing Temperature on Degree Imidization of Melamine-BPADA Hyperbranched Polyimide Studied by FT-IR*” International Conference on Advanced Material Engineering & Technology, held in December 04 to 05, 2014), Malaysia.
2. Hazrat Ali, Azim Khan, Tauqeer Ahmad, Ian Fallis, **Abbas Khan**, Arshad Hussain and Peter Griffiths “*Interfacial Activity and Micellar Morphology of a New Imidzaolium Ring Containing Zwitterionic Surfactants*” (**Manuscript to be submitted in Journal of The Physical Chemistry B**)
3. **Abbas Khan**, Mohammad Siddiq, Guangzhao Zhang, Shiyong Liu and Peter M. Budd. “*Light Scattering, Surface Tension and mT-jump Stopped-flow studies on the Associative behaviour of a dimethylamino- and a trimethylammonium- tipped oxyethylene-oxybutylene diblock copolymers in aqueous media: An Effect of End-group*” (**Manuscript to be submitted in Journal of The Physical Chemistry B**)
4. **Abbas Khan**, Mohammad Siddiq and Peter Budd “*Micellar behaviour of a dimethylamino- and a trimethylammonium- tipped oxyethylene-oxybutylene diblock copolymers in aqueous media*”. (**Manuscript to be submitted in PCCP**)
5. **Abbas Khan**, Iram Bibi, Zahoor H. Farooqi and Mohammad Siddiq “*Surface tension, Density and Viscosity studies on the associative behaviour of oxyethylene-oxybutylene*

diblock copolymers in aqueous media at various temperatures” (**Manuscript to be submitted in eXPRESS Polymer Letters**).

6. **Abbas Khan**, Mohammad Siddiq Guangzhao Zhang and Peter M Budd “*Micellization and Interactions of Different Block Copolymers with Surfactants*” (**In Preparation for Journal of Colloids and Interface Science**).
7. **Abbas Khan**, Mohammad Siddiq, Guangzhao Zhang and Peter M. Budd. “*Light Scattering and Surface Tensiometric Studies on the Micellar Behaviour of Hydrophilic Tip-Modified PEO-PBO Diblock Copolymers in Water*”(In Preparation for **European Polymer Journal**)
8. Musammir Khan, **Abbas Khan** and Mohammad Siddiq “*Physico-chemical study of ultra-high molar mass Poly (N-Isopropylacrylamide), P(NIPAM), in 0.1M NaCl Aqueous solution using laser light scattering and viscometry*” (**In Preparation for Chinese Journal of Chemical Physics and Under Review**).

Oral/ Posters Presentations in Conferences and Seminars

1. **Abbas Khan** and Mohammad Siddiq “*Micellar behaviour for aqueous solutions of dimethylamino-tipped oxyethylene-oxybutylene diblock copolymers by Densitometry and Viscometry*” **Oral Presentation** in 7th International and 17th National Chemistry Conference held in February 26-28, 2007 Gomal University Dera Ismail Khan, N.W.F.
2. **Abbas Khan** and Mohammad Siddiq “*Effect of the hydrophobic block length on the micellar behaviour of oxyethylene-oxybutylene diblock copolymers in water: density and viscosity studies*” **Poster Presentation** in 18th National Chemistry Conference held in February 25-27, 2008 at Punjab University, Lahore Pakistan.
3. **Abbas Khan** and Mohammad Siddiq “*Density and viscosity studies of micellar properties of a dimethylamino- and a trimethylammonium- tipped oxyethylene-oxybutylene diblock copolymers in aqueous media*” **Oral Presentation** in 19th National Chemistry Conference held in June 9-11, 2009 at Bara Gali Peshawar University summer campus, Pakistan.
4. Mohammad Siddiq and **Abbas Khan** “*Effect of end-group modification on the adsorption of poly(ethylene oxide)-b-poly(butylene oxide) diblock copolymers at the solid-liquid interface*” **Poster Presentation** in Seminar on Frontiers of Chemistry and First Chemistry Alumni Meeting, May 15-16, 2009 at Department of Chemistry, Quaid-I-Azam University Islamabad Pakistan.
5. **Abbas Khan**, Mohammad Siddiq and Gulrez Fatima Durrani, “*Light Scattering and Surface Tensiometric Studies on Associative Behaviour of a Dimethylamino- and a Trimethylammonium-tipped Oxyethylene-Oxybutylene Diblock Copolymers in Aqueous media*” **Oral Presentation** in 8th International and 20th National Chemistry Conference held in February 15-17, 2010 at Department of Chemistry, Quaid-I-Azam University Islamabad Pakistan.
6. Zahoor H. Farooqi, **Abbas Khan** and Mohammad Siddiq “*Volume phase transition and glucose sensitivity of poly(N-isopropylacrylamide-acrylamide-phenylboronic acid) microgels*” **Oral Presentation** in 1st National Conference on Physical and Environmental Chemistry (PEC-2010) held in September 26-30, 2010, at Bara Gali Summer Campus University, Pakistan.
7. **Abbas Khan** and Mohammad Siddiq “*Light Scattering, Surface Tension and mT-jump Stopped-flow studies on the Associative behaviour of a dimethylamino- and a trimethylammonium- tipped oxyethylene-oxybutylene diblock copolymers in aqueous*

- media:An Effect of End-group*” **Poster Presentation** in 1st National Conference on Physical and Environmental Chemistry (PEC-2010) held in September 26-30, 2010, at Bara Gali Summer Campus University, Pakistan.
8. Musammir Khan, **Abbas Khan** and Mohammad Siddiq “*Synthesis and characterization of ultra-high molar mass Poly (N-Isopropylacrylamide), P(NIPAM), in 0.1M NaCl Aqueous solution using laser light scattering and viscometry*” **Poster Presentation** in 1st National Conference on Physical and Environmental Chemistry (PEC-2010) held in September 26-30, 2010, at Bara Gali Summer Campus University, Pakistan.
 9. **Abbas Khan**, Z. H. Farooqi and Mohammad Siddiq “*Interaction of the hydrophilic tip modified oxyethylene-oxybutylene diblock copolymers with conventional surfactants in aqueous media*” Accepted for **Oral Presentation** in 9th International and 21st National Chemistry Conference held in March 14-16, 2011 at Department of Chemistry/HEJ, University of Karachi Pakistan.
 10. **Abbas Khan**, Z. H. Farooqi and Mohammad Siddiq “*The Kinetics of Aggregation Behaviour of Oxyethylene-Oxybutylene Diblock Copolymers in Water by Using mT-jump Stopped-Flow Technique*” **Oral Presentation** in the National Symposium on Kinetics & Catalysis (KC-2011) organized by National Centre of Excellence in Physical Chemistry University of Peshawar at Summer Campus Baragali, Distt. Abbotabad 26th-28th September, 2011.
 11. **Abbas Khan**, Z. H. Farooqi and Mohammad Siddiq “*The Interaction of Ionic Surfactants with Hydrophilic Tip-modified Oxyethylene-Oxybutylene Diblock Copolymers in Water*” **Oral Presentation** in 10th International and 22nd National Chemistry Conference held in November 21-23, 2011 at Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad, Pakistan.
 12. **Abbas Khan*** Mohammad Siddiq and Zahoor H. Farooqi “*Light scattering, surface tension and mT-jump stopped-flow studies on the associative behaviour of di- and triblock copolymers of oxyethylene and oxybutylene in aqueous media*” **Oral Presentation** in 25th National and 13th International Chemistry Conference held in October 20-22, 2014 at Institute of Chemistry, University of the Punjab, Lahore Pakistan.
 13. Muhammad Bisyrul Hafi Othman,, Hasnah Osman, Zulkifli Ahmad, **Abbas Khan**, and Hazizan Md Akil, “*Effect of Curing Temperature on Degree Imidization of Melamine-BPADA Hyperbranched Polyimide Studied by FT-IR*” **Oral Presentation** in International Conference on Advanced Material Engineering & Technology, held in december 04 to 05, 2014), Malaysia.

Participation in Academic Conferences and Seminars

1. Two Days Training Workshop on “ Microteaching Skill” held from December 11 to December 12, 2013, Organized by University of Swabi, Khyber Pakhtunkhwa, Pakistan
2. International Polymer Technology Conference and Exhibition 2013 (IPTCE’13) held from April 16 to April 17, 2013; Organized by Faculty of Applied Sciences, University of Technology MARA (UiTM), Shah Alam, Malaysia.
3. Two Days Workshop on “Self Assessment Report Writing” held from January 03, 2012 to January 04, 2012 at Abdul Wali Khan University, Mardan Pakistan
4. 10th International and 22nd National Chemistry Conference held in November 21-23, 2011 at Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad, Pakistan.

5. National Symposium on Kinetics & Catalysis (KC-2011) organized by National Centre of Excellence in Physical Chemistry University of Peshawar at Summer Campus Baragali, Distt. Abbotabad from 26th-28th September, 2011.
6. 9th International and 21st National Chemistry Conference held in March 14-16, 2011 at Department of Chemistry/HEJ, University of Karachi Pakistan.
7. "First Pakistan Knowledge Festival" 21st to 25th January, 2011, organized by Federal Ministry of Education Pakistan at Convention Center Islamabad, Pakistan.
8. One Day Workshop on "Contribution of the National Center of Excellence in Physical Chemistry in National Development" 17th JANUARY, 2011 at NCE, University of Peshawar Pakistan.
9. 8th International and 20th National Chemistry Conference held in February 15-17, 2010 at Department of Chemistry, Quaid-I-Azam University Islamabad Pakistan.
10. 1st National Conference on Physical and Environmental Chemistry (PEC-2010) held in September 26-30, 2010, at Bara Gali Summer Campus University, Pakistan.
11. 19th National Chemistry Conference held in June 9-11, 2009 at Bara Gali Peshawar University summer campus, Pakistan.
12. Seminar on Frontiers of Chemistry and First Chemistry Alumni Meeting, May 15-16, 2009 at Department of Chemistry, Quaid-I-Azam University Islamabad Pakistan.
13. Conference on Polymer Science, University of Science and Technology of China (USTC) Hefei, Anhui Province. P. R. China. June 13-16, 2008.
14. 18th National Chemistry Conference held in February 25-27, 2008 at Punjab University, Lahore Pakistan.
15. 7th International and 17th National Chemistry Conference held in February 26-28, 2007 at Gomal University Dera Ismail Khan.N.W.F. P.
16. 5th International and 15th National Chemistry Conference held in November 2004 at Department of Chemistry, Quaid-I-Azam University Islamabad Pakistan.
17. Scientific Exhibition held in Peshawar November 2003.

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