

Curriculum Vitae

Irshad Hussain

Associate Professor (Tenured) and Department Chair, Department of Chemistry, SBA School of Science and Engineering (SSE), LUMS, D.H.A., Lahore, Pakistan.

Fellow, The Chemical Society of Pakistan.

Charles Wallace Visiting Fellow at the University of Cambridge, UK (2016)

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Social/Professional Webpages: [LinkedIn](#), [ResearchGate](#), [Google Scholar](#), [FB](#)



Education

Ph.D. (Chemistry), University of Liverpool, UK, 2005.

M.Sc. (Chemistry), Quaid-i-Azam University, Islamabad, Pakistan, 1993.

Professional Experience

- *Associate Professor and Department Chair of Chemistry (2010 to-date)*, SBA School of Science & Engineering (SSE), LUMS, Lahore, Pakistan.
- *Visiting Professor* at several prestigious institutions including UMass (Amherst, USA), EPFL (Lausanne, Switzerland), and KAUST (Saudi Arabia) during each summer since 2009.
- *Project Director*, 2006-08, Nanobiotech project, National Institute for Biotechnology & Genetic Engineering (NIBGE), Faisalabad, Pakistan.
- *Senior Scientist*, 2001-2008, NIBGE, Faisalabad, Pakistan.
- *Scientific Officer*, 1997-2001, NIBGE, Faisalabad, Pakistan.
- *Computer Trainee Fellow*, 1996-1997, Computer Training Centre, Islamabad, Pakistan.
- *Lecturer of Chemistry*, 1995-1996, Govt. Degree College Faridabad, Toba Tek Singh, Pakistan.

Honors and Awards

- **2016**, Charles Wallace Visiting Fellow at the University of Cambridge, UK.
- **2014**, Gold Medal in Chemistry by Pakistan Academy of Sciences for overall achievements in Chemistry.
- Honored as the first scientist interviewed at the [inaugural session for the launch of Facebook page of Bioconjugate Chemistry](#) (An ACS journal).
- **2007**, Professor Atta-ur-Rehman Gold Medal, by Pakistan Academy of Sciences, for achievements in chemistry during the last five years.
- **2005-Present**, regular recipient of Research Productivity Award each year by Pakistan Council for Science & Technology (PCST), Ministry of Science & Technology, Govt. of Pakistan.
- **2001-2005**, PhD fellowship award by Ministry of Science & Technology, Govt. of Pakistan, to study in UK.

Research Projects Awarded

- **2016-2017**, EPSRC (UK) – Global Challenge Research Fund for “Smart nanoclusters to address multidrug resistance”. **Co-PI - 92,000 GBP**
- **2016-2017**, US-Pak Center for Advanced Studies in Energy – University of Engineering & Technology (UET), Peshawar, awarded a joint research project to Dr. Saim Saher (UET) and myself for “Synthesis of non-noble electrocatalysts for anion exchange membrane fuel cells (AEMFC). **Co-PI - Rs. 3.0 million**
- **2014-2016**, UET (Peshawar)-LUMS-Cambridge collaborative project on “3rd generation solar cells: Construction of a proof-of concept preliminary prototype”. **Co-PI - Rs. 14 million.**
- **2013-2016**, Development of ultrasensitive, robust and affordable nanoparticle-based test strips for detecting bacteria – A Pak-US collaborative project funded by HEC and US National Academy of Sciences in collaboration with Prof. Vincent Rotello at the University of Massachusetts, Amherst, USA. **PI - 600,000 USD.**

- **2011-2013**, Metal alloy nanoclusters for catalytic and bio-imaging applications by DAAD jointly with Prof. Wolfgang Parak at the Philipps University, Marburg, Germany. **PI - ~50,000 Euro**
- **2006-2010**, Development of nanobiotech research at National Institute for Biotechnology & Genetic Engineering (NIBGE) by Ministry of Science & Technology, Govt. of Pakistan (PC-1). **PI/PD - ~2.5 Million USD**
- **2006-2007**, Synthesis of Plasmon resonance particles for bioanalytical applications awarded by Third World Academy of Sciences (TWAS). **PI - 6,000 USD.**

National/International Symposia/Workshops/Conferences Conducted

- One day symposium on Nanobiotechnology – The role of nanoparticles in disease diagnostics and treatment organized at NIBGE, Faisalabad, in collaboration with Pakistan Association for Advancement in Science (PAAS) on Sep 10, 2007. **Organizing Secretary.**
- An international nanomedicine workshop at COMSTECH, Islamabad, on March 13-20, 2008, sponsored by COMSTECH-HEC. **Resource person and technical organizer.**
- A university - industry workshop at SBA School of Science and Engineering (SSE), LUMS, Lahore, on “*The role of nanomaterials in drug delivery and cancer treatment*” on July 28-29, 2008, sponsored by HEC and private vendors. **Principal Organizer.**
- An international symposium/workshop on Nanomedicine at Hussain Ebrahim Jamal (HEJ) Research Institute of Chemistry at University of Karachi in collaboration with HEJ and University of Illinois, Urbana Champaign (UIUC), on Dec 20-23, 2010. **Resource person and co-organizer.**
- Chemical Trends 2013- A conference on the recent trends in chemical research organized at LUMS, Lahore, Pakistan on September 27, 2013, sponsored by Fulbright. **Co-organizer.**
- International symposium on “*Nanomaterials – Potential Applications & Challenges*” at LUMS on October 31, 2013. **Principal Organizer.**

Role in National/University-Level Committees

- Member, SBASSE, LUMS, Dean’s Search Committee (2016)
- Convener, LUMS Housing Committee (2016 – 2017)
- Convener, Electrical Engineering Chair Search Committee at LUMS (2015)
- Member, School Appointment, Promotion and Tenure Committee (SAPTC) at LUMS (2016 – to date)
- Chair, National Nanotech Foresight Committee constituted by Pakistan Council for Science & Technology (2015)
- Member, Chief Minister (Punjab) committee on the assessment of Biofuel plants for tube-wells (2014)
- Convener, LUMS Disciplinary Appeals Committee (2014 – 2015)
- Member, University (LUMS) Research Council (2009 – 2016)
- Chair, Biology Chair Search Committee at LUMS (2013)
- Member, SBASSE Chair’s committee at LUMS (2009 – to date)
- Member, SBASSE Space & Equipment Committee (2008 – 2009)

Selected Research Publications (2003-2016)

Please click [Google Scholar](#) for updated citation report. Color code = **Red (corresponding author)**, **green (my graduate/undergraduate student)**. Please click the article title to view its online version.

- [Folate grafted thiolated chitosan enveloped nanoliposomes with enhanced oral bioavailability and anticancer activity of docetaxel.](#) Farhan Sohail, Ibrahim Javed, Syed Zajif Hussain, Shoaib Sarwar, Sohail Akhtar, Akhtar Nadhman, Salma Batool, Nadeem Irfan Bukhari, Rahman Shah Zaib Saleem, Irshad Hussain* and Gul Shahnaz.* *Journal of Materials Chemistry B*, 2016, 4, 6240.
- [Hydrophilic nanoparticles packed in oral tablets can improve the plasma profile of short half-life hydrophobic drugs.](#) Faisal Usman, Ibrahim Javed, Syed Zajif Hussain, Nazar Muhammad Ranjha, Irshad Hussain. *RSC Advances*, 2016 (*In press*)
- [In-situ synthesis of bi-modal hydrophobic silica nanoparticles for oil-water separation.](#) Usama Zulfiqar, Syed Zajif Hussain, Muhammad Awais, Muhammad Mohsin Jalil Khan, Irshad Hussain, S. Wilayat Husain, Tayyab Subhani. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 2016, 508, 301.
- [Catalysis by multifunctional polyelectrolyte capsules.](#) Syed Zajif Hussain, Mikhail V. Zyuzin, Irshad Hussain, Wolfgang J. Parak, Susana Carregal-Romero. *RSC Advances*, 2016, 6, 81569
- [Ziyauddin S. Qureshi, Pradip B. Sarawade, Irshad Hussain, Haibo Zhu, Hind Al-Johani, Dalaver H. Anjum, Mohamed Nejjib Hedhili, Niladri Maity, Valerio D'Elia, Jean-Marie Basset. Gold nanoparticles supported on fibrous silica nanospheres \(KCC-1\) as efficient heterogeneous catalysts for CO oxidation.](#) *CHEMCATCHEM*, 2016, 8, 1671.
- [Shumaila Razzaque, Syed Zajif Hussain, Irshad Hussain* and Bien Tan.* Design and utility of metal/metal oxide nanoparticles mediated by thioether end-functionalized polymeric ligands.](#) *Polymers*, 2016, 8, 156.
- [Khurram Joya,* Lutfan Sinatra, Lina G. AbdulHalim, Chakra P. Joshi, Mohamed Nejjib Hedhili, Osman M. Bakr and Irshad Hussain.* Atomically monodisperse nickel nanoclusters as highly active electrocatalysts for water oxidation.](#) *Nanoscale*, 2016, 8, 9695.
- [A. Ajmal, I. Majeed, R.N. Malik, M. Iqbal, M. Arif Nadeem, Irshad Hussain, S. Yousaf, Zeshan, G. Mustafa, M.I. Zafar, M. Amtiaz Nadeem. Photocatalytic degradation of textile dyes on Cu₂O-CuO/TiO₂ anatase powders.](#) *Journal of Environmental Chemical Engineering*, 2016, 4, 2138.
- [Ibrahim Javed, Syed Zajif Hussain, Atif Shahzad, Jahanzeb M. Khan, Habib-ur-Rehman, Mubashar Rehman, Faisal Usman, Muhammad T. Razi, Muhammad Raza Shah and Irshad Hussain.* Lecithin-gold hybrid nanocarriers as efficient and pH selective vehicles for oral delivery of diacerein – In-vitro and in-vivo study.](#) *Colloids and Surfaces B - Biointerfaces*, 2016, 141, 1.
- [Polysaccharide based superabsorbent hydrogel from Mimosa Pudica: Swelling-deswelling and drug release.](#) Gulzar Muhammad, Muhammad A. Hussain, Muhammad Umer Ashraf, Muhammad Tahir Haseeb, Syed Zajif Hussain and Irshad Hussain. *RSC Advances*, 2016, 6, 23310.
- [Metal nanoparticles assisted polymerase chain reaction for strain typing of Salmonella typhi.](#) Asma Rehman, Yasra Sarwar, Zulfiqar Ali Raza, Syed Zajif Hussain, Tanveer Mustafa, Waheed S Khan, Muhammad Afzal Ghauri, Abdul Haque and Irshad Hussain.* *Analyst*, 2015, 140, 7366.
- [Synthesis, characterization and evaluation of lecithin based nanocarriers for enhanced pharmacological and oral pharmacokinetic profile of amphotericin B.](#) Ibrahim Javed, Syed Zajif Hussain, Irfan Ullah, Imran Khan, Muhammad Ateeq, Gul Shahnaz, Habib ur Rehman, Muhammad T. Razi, Raza Shah and Irshad Hussain.* *Journal of Materials Chemistry B*, 2015, 3, 8359.
- [Emulsion-templated poly\(acrylamide\)s by using polyvinyl alcohol \(PVA\) stabilized CO₂-in-water emulsions and their applications in tissue.](#) Wei Luo, Ran Xu, Yunfei Liu, Irshad Hussain, Qunwei Lu and Bien Tan. *RSC Advances*, 2015, 5, 92017.
- [Controlled synthesis of uniform palladium nanoparticles on novel micro-porous carbon as a recyclable heterogeneous catalyst for the Heck reaction.](#) Kunpeng Song, Peng Liu, Jingyu Wang, Lei Pang, Jian Chen, Irshad Hussain, Bien Tan and Tao Li. *Dalton Transactions* 2015, 44, 13906.
- [Novel POSS-based organic-inorganic hybrid Porous materials and their applications in gas storage.](#) S. Wang, L. Tan, C. Zhang, Irshad Hussain and Bien Tan. *Journal of Materials Chemistry A*, 2015, 3, 6542.
- [From porous gold nanocups to porous nanospheres and solid particles – A new synthetic approach.](#) Ayesha Ihsan, Habib Katsiev, Noktan Alyami, Dalaver H. Anjum, Waheed S. Khan and Irshad Hussain.* *Journal of Colloid and Interface Science*, 2015, 446, 59.
- [Dielectric studies of composite paper reinforced with polypyrrole coated pulp fibers from wasted egg holders.](#) Aamir Razaq, Muhammad Idrees, Adeel Malik, Nafeesa Mushtaq, Muhammad Nadeem, Irshad Hussain and Muhammad Yar. *Journal of Applied Polymer Science*, 2015, 132, 42422.
- [Synthesis, crystal structure, theoretical calculations, and electrochemical and biological studies of polymeric \(N, N, N', N'-tetramethylethylenediamine\) bis \(thiocyanato-κN\) copper \(II\), \[Cu \(tmeda\)\(NCS\)₂\]_n.](#) Arturo Espinosa, Manzar Sohail, Mehwish Habib, Komal Naveed, Muhammad Saleem, Habib-ur Rehman, Irshad Hussain, Aisha Munawar, Saeed Ahmad. *Polyhedron*, 2015, 90, 252.
- [Lysozyme-coated silver nanoparticles for differentiating bacterial strains on the basis of antibacterial activity.](#) Sumaira Ashraf, Mariyam A. Chatha, Wardah Ejaz, Hussain A Janjua and Irshad Hussain.* *Nanoscale Research Letters*, 2014, 9, 565.
- [Voltammetric detection of As \(III\) with Porphyrinium cruentum based modified carbon paste electrode biosensor.](#) M. Zaib, A. Saeed, I. Hussain, M.M. Athar, M. Iqbal. *Biosensors and Bioelectronics*, 2014, 62, 242.
- [Hollow microporous organic capsules loaded with highly dispersed Pt nanoparticles for catalytic applications.](#) Xinjia Yang, Kunpeng Song, Liangxiao Tan, Irshad Hussain, Tao Li and Bien Tan. *Macromolecular Chemistry and Physics*, 2014, 215, 1257.
- [Multifunctional microporous polymers.](#) Buyi Li, Zhenhong Guan, Xinjia Yang, Wei David Wang, Wei Wang, Irshad Hussain, Kunpeng Song, Bien Tan and Tao Li. *Journal of Materials Chemistry A*, 2014, 2, 11930.
- [Metal Ions in the context of nanoparticles towards biological applications.](#) Carolina Carrillo-Carrion, Moritz Nazarenus, Sara Sánchez Paradinas, Susana Carregal-Romero, Maria Jesus Almendral, Manuel Fuentes, Beatriz Pelaz, Pablo del Pino, Irshad Hussain, Martin Clift, Barbara Rothen-Rutishauser, Xing-Jie Liang and Wolfgang Parak. *Current Opinion in Chemical Engineering*, 2014, 4, 88.

- Synthesis of cellulose-metal nanoparticle composites -Development and comparison of different protocols. Sumaira Ashraf, Saif-ur-Rehman, Falak Sher, Zafar M. Khalid, Mazhar Mahmood, and Irshad Hussain.* *Cellulose*, 2014, 21, 395 (Front cover art).
- Synthesis of highly stable and water dispersible Ag₄₄(SR)₃₀ nanoclusters. Lina G. Abdulhalim, Sumaira Ashraf, Nuwan Kothalawala, Khabiboulakh Katsiev, Dalaver H. Anjum, Sikandar Abbas, Francesco Stellacci, Amala Dass, Irshad Hussain,* and Osman M. Bakr.* *Journal of Materials Chemistry A*, 2013, 01, 10148.
- Highly water-soluble magnetic iron oxide (Fe₃O₄) nanoparticles for drug delivery: Enhanced in vitro therapeutic efficacy of doxorubicin and MION conjugates. Irfan Majeed, Qunwei Lu, Zhen Li, Irshad Hussain,* Muhammad Nawaz Tahir, Wolfgang Tremel, and Bien Tan.* *Journal of Materials Chemistry B*, 2013, 01, 2874.
- Hydrogen storage and PL properties of novel Cd/CdO shelled hollow microspheres prepared under NH₃ gas environment. Waheed S. Khan, Chuanbao Cao, Faheem K. Butt, Zulfiqar Ali, Zahid Usman, Ghulam Nabi, Ayesha Ihsan, Asma Rehman, Irshad Hussain, M. Tanveer, and Sajad Hussain. *International Journal of Hydrogen Energy*, 2013, 38, 2332.
- Facile synthesis of metallized nanocontainers for the entrapment and controlled release of hydrophobic compounds. Ayesha Ihsan, Irshad Hussain,* Waheed S. Khan,* Asma Rehman, M.A. Ghauri, and Chuanbao Cao. *Material Letters*, 2013, 95, 78.
- Protein-mediated synthesis, pH-induced reversible agglomeration, toxicity and cellular interaction of silver nanoparticles. Sumaira Ashraf, Azhar Zahoor Abbasi, Christian Pfeiffer, Syed Zajif Hussain, Zafar M. Khalid, Pilar Rivera Gil, Wolfgang J. Parak, and Irshad Hussain.* *Colloids and Surfaces B – Biointerfaces*, 2013, 102, 511.
- Polyhexamethylene biguanide functionalized cationic silver nanoparticles for enhanced antimicrobial activity. Sumaira Ashraf, Nasrin Akhtar, Muhammad Afzal Ghauri, Muhammad Ibrahim Rajoka, Zafar M. Khalid, and Irshad Hussain.* *Nanoscale Research Letters*, 2012, 7, 267.
- Facile and surfactant-free preparation of highly blue fluorescent gold nanoclusters in organic media. Xin Huang, Buyi Li, Luo Li, Hui Zhang, Irfan Majeed, Irshad Hussain* and Bien Tan.* *Journal of Physical Chemistry C*, 2012, 116, 448.
- Control of surface tension at liquid-liquid interfaces using nanoparticles and nanoparticle-protein complexes. Subinoy Rana, Xi Yu, Debabrata Patra, Daniel F. Moyano, Oscar R. Miranda, Irshad Hussain and Vincent M. Rotello. *Langmuir*, 2012, 28, 2023.
- Photoreductive synthesis of water-soluble fluorescent metal nanoclusters. Hui Zhang, Xin Huang, Luo Li, Gaowen Zhang, Irshad Hussain, Zhen Li, and Bien Tan. *Chemical Communications*, 2012, 48, 567.
- Living fungal hyphae-templated porous gold microwires using nanoparticles as building blocks. Asma Rehman, M. Irfan Majeed, Ayesha Ihsan, Syed Zajif Hussain, Saif-ur-Rehman, M. Afzal Ghauri, Zafar M. Khalid and Irshad Hussain.* *Journal of Nanoparticle Research*, 2011, 13, 6747.
- Carriers-mediated ferromagnetic enhancement in Al- doped ZnMnO dilute magnetic semiconductors. Murtaza Saleem, Saadat. A. Siddiqi, S. Atiq, M. Sabieh Anwar, Irshad Hussain and Shahzad Alam. *Materials Characterization*, 2011, 62, 1102.
- Muskmelon (Cucumis melo) seed oil: A potential non-food oil source for biodiesel production. Umer Rashid, Hafiz Abdul Rehman, Irshad Hussain, Muhammad Ibrahim, and Muhammad Sajjad Haider. *Energy*, 2011, 36, 5632.
- Facile preparation of size-controlled gold nanoparticles using versatile and end-functionalized thioether polymer ligands. Xin Huang, Buyi Li, Hui Zhang, Irshad Hussain, Liyun Liang and Bien Tan. *Nanoscale*, 2011, 3, 1600.
- In-Situ growth of gold nanoparticles on latent fingerprints – From forensic applications to inkjet printed nanoparticle patterns. Irshad Hussain,* Syed Zajif Hussain, Habib-ur-Rehman, Ayesha Ihsan, Asma Rehman, Zafar M. Khalid, Mathias Brust and Andrew I. Cooper. *Nanoscale*, 2010, 2, 2575.
- Emulsions-directed assembly of gold nanoparticles to molecularly-linked and size-controlled spherical aggregates. Irshad Hussain,* Haifei Zhang, Mathias Brust, Justas Barauskas, Andrew I. Cooper. *Journal of Colloid and Interface Science*, 2010, 350, 368.
- Synthesis and use of self-assembled rhamnolipid microtubules as template for gold nanoparticles assembly to form porous gold microstructures. Asma Rehman, Zulfiqar Ali Raza, Saif-ur-Rehman, Zafar M. Khalid, Chandramouleeswaran Subramani, Vincent M. Rotello and Irshad Hussain.* *Journal of Colloid and Interface Science*, 2010, 347, 332
- Electron microscopy studies of the thermal stability of gold nanoparticle arrays. Roger Ristau, Ramchandra Tiruvalam, Patrick L. Clasen, Edward P. Gorskowski, Martin P. Harmer & Christopher J. Kiely, and Irshad Hussain & Mathias Brust. *Gold Bulletin*, 2009, 42, 133.
- Controlled step growth of molecularly linked gold nanoparticles – from metallic monomers to dimers to polymeric nanoparticle chains. Irshad Hussain,* Mathias Brust, Justas Barauskas and Andrew I. Cooper. *Langmuir*, 2009, 25, 1934.
- Freeze-align and heat-fuse: Microwires and networks from nanoparticle suspensions. Haifei Zhang, Jun-Young Lee, Adham Ahmed, Irshad Hussain, and Andrew I. Cooper. *Angew. Chem. Int. Ed.* 2008, 47, 4573.
- Paper and board mill effluent treatment with the combined biological-coagulation-filtration pilot scale reactor. Muhammad Afzal, Ghulam Shabir, Irshad Hussain, Zafar M. Khalid. *Bioresource Technology*, 2008, 99, 7383
- Site-specific ligation of DNA-modified gold nanoparticles activated by the restriction enzyme StyI. Antonios G. Kanaras, Zhenxin Wang, Irshad Hussain, Mathias Brust, Richard Cosstick, and Andrew D. Bates. *Small*, 2007, 1, 67.
- Design of polymeric stabilizers for size-controlled synthesis of mono-disperse gold nanoparticles in water. Zhenxin Wang, Bien Tan, Irshad Hussain, Nicholas Schaeffer, Mark Wyatt, Mathias Brust and Andrew I. Cooper. *Langmuir*, 2007, 2, 885.
- Formation of spherical nanostructures by controlled aggregation of gold colloids. Irshad Hussain,* Zhenxin Wang, Andrew I. Cooper and Mathias Brust. *Langmuir*, 2006, 22, 2941.
- Synthesis of hierarchically porous inorganic-metal site-isolated nanocomposites. Haifei Zhang, Irshad Hussain, Mathias Brust, and Andrew I. Cooper. *Chemical Communications*, 2006, 24, 2539.
- Aligned two and three-dimensional structures by directional freezing of polymers and nanoparticles. Haifei Zhang, Irshad Hussain, Mathias Brust, Micheal F. Butler, Steven P. Rannard and Andrew I. Cooper. *Nature Materials*, 2005, 4, 787.
- A new Pt-Ru model system to study the bifunctional mechanism of electrocatalysis. Christina Roth, Adam J. Papworth, Irshad Hussain, Richard J. Nichols and David J. Schiffrin. *Journal of Electro-analytical Chemistry*, 2005, 581, 79.

- Size-controlled synthesis of near-monodisperse gold nanoparticles in the 1-4 nm range using polymeric stabilizers. Irshad Hussain, Susan Graham, Zhenxin Wang, Bien Tan, Steven P. Rannard, David C. Sherrington, Andrew I. Cooper and Mathias Brust. *Journal of the American Chemical Society*, 2005, 127, 16398.
- Emulsion-templated gold beads using gold nanoparticles as building blocks. Haifei Zhang, Irshad Hussain, Mathias Brust and Andrew I. Cooper. *Advanced Materials*, 2004, 16, 1, 27 (*Front cover art*).
- Fullerene-linked Pt nanoparticle assemblies. Christina Roth, Irshad Hussain, Maryam Bayati, Richard J. Nichols and David J. Schiffrin. *Chemical Communications*, 2004, 1532.
- Rational and combinatorial design of peptide capping ligands for gold nanoparticles. Raphael Levy, Nguyen T. K. Thanh, Christopher R. Doty, Irshad Hussain, Richard J. Nichols, David J. Schiffrin, Mathias Brust, and David G. Fernig. *Journal of the American Chemical Society*, 2004, 126, 10076.
- Preparation of acrylate-stabilized gold and silver hydrosols and gold-polymer composite films. Irshad Hussain, Mathias Brust, Adam J. Papworth and Andrew I. Cooper. *Langmuir*, 2003, 19, 4831.

Reviewer of ISI - Indexed Scientific Journals: *Chemical Society reviews, ACS Nano, Nanoscale, Journal of Materials Chemistry, Langmuir, Journal of Physical Chemistry C, Carbohydrates polymers, Cellulose, Physical Chemistry Chemical Physics, International Journal of Nanomedicine, Nanoscale research letters, Applied Surface Science, International journal of environmental analytical chemistry, Journal of Chemical Society of Pakistan, Journal of Nanomaterials, and Journal of Nanoscience.*

Students Supervision

List of my graduate/undergraduate students (Color code: Blue (in progress))				
Name	University	Graduation Degree/Year	My role	Current Status
Dr. Sumaira Ashraf	Quaid-e-Azam University (QAU), Islamabad	PhD/2012	Primary supervisor	Assistant professor at PIEAS, Islamabad (2012-13). Von-Humboldt Postdoc Fellow at Philipps University, Marburg, Germany (2013-16). Marie Curie Fellow at the University of Liverpool, UK (2016 – to date)
Dr. Samia Saleemi	QAU, Islamabad	PhD/2012	Co-supervisor	Housewife & Visiting Research Fellow at the University of West Scotland, Glasgow, UK
Dr. Asma Rehman	QAU, Islamabad	PhD/2013	Primary supervisor	Senior Scientist, National Institute for Biotechnology & Genetic Engineering (NIBGE), Faisalabad
Dr. Ayesha Ihsan	QAU, Islamabad	PhD/2014	Primary supervisor	Senior Scientist, NIBGE, Faisalabad
Shazia Mumtaz	LUMS	PhD	Primary supervisor	In progress
Zill-e-Huma	LUMS	PhD	Primary supervisor	In progress
Akhtar Munir	LUMS	PhD	Primary supervisor	In progress
Muhammad Ahmad Mudassir	BZ University (BZU), Multan	PhD	Co-supervisor	In progress
Farhan Sohail	QAU, Islamabad	PhD	Co-supervisor	In progress
Samina Ghafoor	Punjab University	PhD	Co-supervisor	In progress
Muhammad Asif Tahir	University of Agriculture, Faisalabad (UAF)	PhD	Co-supervisor	In progress
Asim Jilani	UAF	MPhil/2006	Co-supervisor	Lecturer, King Abdul Aziz University, Jeddah, Saudi Arabia
Wajid Ali	BZU, Multan	MPhil/2008	Primary supervisor	
Sofia Akbar	GC University, Faisalabad	MPhil/2010	Co-supervisor	Lecturer, GC University, Faisalabad
Bareera Mehmood	Kinnaird College, Lahore	MPhil/2012	Primary supervisor	Beaconhouse School, Lahore
Mariyam Chattha	Kinnaird College, Lahore	MPhil/2013	Primary supervisor	Housewife
Syed Zajif Hussain	FC College, Lahore	MPhil/2013	Co-supervisor	Senior Lab Instructor, LUMS
Ibrahim Javed	BZU, Multan	MPhil/2014	Co-supervisor	PhD student at Monash University, Australia
Ali Khadim	Sargodha University	MPhil/2015	Co-supervisor	PhD student in Germany
Muhammad Abdullah	LUMS	MS	Primary supervisor	PhD student at the University of Massachusetts (Amherst), USA
Muhammad Abbas	LUMS	MS	Primary supervisor	In progress
Haris Bilal	LUMS	MS	Co-supervisor	In progress
Sidra Younus	UAF	MSc/2007	Co-supervisor	
Rabia Parveen	UAF	MSc/2007	Co-supervisor	
Humaira	UAF	MSc/2007	Co-supervisor	
Muhammad Affawn Ashraf	LUMS	BS/2012	Primary supervisor	PhD student, University of Massachusetts (Amherst), USA
Wardah Ejaz	LUMS	BS/2013	Primary supervisor	PhD student, University of Massachusetts (Amherst), USA
Sikandar Abbas	LUMS	BS/2013	Primary supervisor	PhD student, Carnegie Mellon University, USA
Syed Ali Moeed	LUMS	BS/2014	Primary supervisor	PhD student, Cornell University, USA
Syed Muhammad Usama	LUMS	BS/2014	Co-supervisor	PhD student, Texas A & M University, USA
Hassan javed	LUMS	BS/2015	Primary supervisor	PhD student, Rice University, USA
Muhammad Asad Masood	LUMS	BS/2015	Primary supervisor	Graduate student, Warwick University, UK
Muhammad Jahanzeb Khan	LUMS	BS/2015	Primary supervisor	Year off for graduate admission
Rimsha Mehmood	LUMS	BS/2016	Primary supervisor	PhD student at MIT, Boston, USA
Muhammad Awais Ahmad	LUMS	BS/2016	Primary supervisor	PhD student at the University of Chicago, USA
Haneen Mansoor	LUMS	BS/2016	Primary supervisor	PhD student, University of Massachusetts (Amherst), USA
Azka Amer	LUMS	BS/2017	Primary supervisor	In progress

Courses taught: (Average evaluation > 4/5)

Principles of Chemistry (CHEM101, Science & Engineering undergrad freshman students), Fundamentals of Organic Chemistry (CHEM231, Biology & Chemistry BS majors, sophomore), Chemistry of Organic Functional Groups (CHEM332, Biology & Chemistry BS majors), Advanced Organic Chemistry (CHEM531, MS Chemistry), Selected Topics in Organic Chemistry (CHEM731, PhD Chemistry), Nanoscale Science & Nanotechnology (CHEM315, Undergrad students in Science & Engineering) and Nanobiotechnology (MPhil & PhD students in Biotechnology at NIBGE, Faisalabad)

Invited/Keynote/Plenary Lectures at National/International Forums

I have delivered several invited, keynote and plenary lectures to promote/popularize science, chemistry and nanoscience & technology. Most of these lectures are based on nanomaterials applications in biomedical sciences, catalysis, environment, industry and energy technologies.

- [International conference on Science & Technology](#), Sheraton Hotel, Ankara, Turkey, on Oct. 3-6, 2016.
- National Symposium on Catalysis & Energy Conversion at the University of Engineering & Technology (UET), Lahore, May 16, 2016.
- [Center for Molecular Imaging & Nuclear Medicine, Soochow University](#), China, on April 6, 2016.
- [Wuhan University](#), Wuhan, China, on April 6, 2016.
- [National Center for Nanoscience & Technology \(NCNST\)](#) – Chinese Academy of Sciences, Beijing, China, on April 6, 2016.
- National symposium on Condensed Matter and Nanotechnology at the Women University, Multan, on March 17, 2016.
- International Islamic University, Islamabad, on March 9, 2016
- [International Scientific Spring](#) at National Centre for Physics, Islamabad, on March 7-11, 2016.
- International conference on Biotechnology at the University of South Asia, Lahore, on Feb 24-25, 2016.
- International conference of Biochemistry, Biotechnology and Biomaterials (ICCB-2016) at the University of Agriculture, Faisalabad, on Feb 22-24, 2016.
- Workshop on Core Techniques in Biotechnology at the University of Lahore, on Feb 15-19, 2016.
- University of Management & Technology (UMT), Lahore, on Dec 18, 2015.
- International symposium of Nanomedicine on “Nanotheranostics – New Concept in Imaging & Drug Delivery” organized by Nuclear Medicine Oncology & Radiotherapy Institute (NORI), Islamabad, on Nov 26, 2015.
- A workshop on “Advanced Techniques in Natural & Applied Sciences” organized by the University of Agriculture (UAF), Faisalabad, on Sep. 10-12, 2015.
- 2nd Conference on “Frontiers of Nanoscience and Nanotechnology” organized by Pakistan Institute of Science & Technology (PINSTECH), Islamabad, on Sep. 8-10, 2015.
- A workshop on Nanotechnology organized by Govt. College University, Lahore, on August 27, 2015.
- 2nd International conference on Drug Development” organized by COMSATS Institute of Information Technology, Abbottabad, on August 23-25, 2015.
- [King Abdul Aziz University, Jeddah](#), on July 01, 2015.
- [University of West Scotland, Glasgow](#), on Jun 15, 2015.
- A symposium on Nanomaterials at PIEAS on June 15-17, 2015.
- A symposium on Nanotechnology organized by University of Engineering & Technology (UET), Lahore, on April 21, 2015.
- A workshop on "Recent Advances and New Horizons in Chemistry" at the National Center of Excellence in Physical Chemistry, University of Peshawar, on April 6-7, 2015.
- Pak-China Business Forum, organized by CIIT, Islamabad, on March 28, 2015.
- Govt. College Wahdat Road, Lahore, on March 18, 2015.
- Center of Excellence in Analytical Chemistry (CEAC), University of Sindh (Jamshoro), on March 10, 2015.
- Federal Urdu University of Arts, Science & Technology (FUUAST), Karachi, on March 09, 2015.
- 1st International conference on “Recent Innovations in Pharmaceutical Sciences” organized by the Riphah University, Islamabad, on March 03-5, 2015.
- University of Peshawar on March 02, 2015.
- [Masdar Institute of Science & Technology \(MIST\), Abu Dhabi, United Arab Emirates \(UAE\)](#), on Feb. 17, 2015.
- A meeting on “Nanotechnology for Development of Advanced Energy Harvest and Storage Devices” at [Masdar Institute, UAE, organized by UIUC-MIST](#) on Feb. 17-18, 2015.
- University of Sargodha on Feb 09, 2015.
- Consultative meeting (Chemistry) – OIC Summit on Science & Technology at COMSTECH on Nov. 26-27, 2014.
- Science Faculty, FC College, Lahore, on Sep. 19, 2014.
- King Abdullah University of Science & Technology (KAUST), Saudi Arabia, on August 10, 2014.
- [Saudi ARAMCO R & D Center at KAUST, Saudi Arabia](#), on May 29, 2014.
- International conference on “Nanomaterials and Nanotechnology (ICNN-2014)” on April 07-09, 2014, at Federal Urdu University, Karachi.
- National Science Conference organized by Pakistan Academy of Sciences at ICCBS, University of Karachi, on May 1-2, 2014.
- [Wuhan National Labs for Optoelectronics \(NLO\), Wuhan, China](#), on April 24, 2014.

- [Hubei University, Wuhan, China](#), on April 23, 2014.
- [Department of Chemistry and Chemical Engineering, Huazhong University of Science and Technology \(HUST\), Wuhan, China](#), on April 21, 2014.
- [Pak-China Business Forum at Pak-China Friendship Center, Islamabad](#), on March 21-23, 2014. It was organized by CIIT, Islamabad.
- [UET \(Peshawar\) – Cambridge University “Energy Workshop”](#) at Serena Hotel, Islamabad, on March 20-22, 2014. It was sponsored by British Council and I was one of the 02 focal persons from Pakistan.
- International conference of Biochemical and Chemical Sciences (ICBCS-2014) on Feb. 24-26, 2014, at University of Agriculture, Faisalabad.
- 11th International Bhurban conference on Applied Sciences & Technology (IBCAST) at National Center for Physics on Jan 15-19, 2014.
- A conference on “Recent Advances in Nanotechnology” held at Preston Institute of Nanoscience & Technology (PINSAT), Islamabad, on Jan 06, 2014.
- International symposium on design of dye-sensitized solar cells for cost-effective energy harvesting at GIK Institute of Engineering Sciences & Technology on December 13-14, 2013.
- [Second conference on Nanotechnology for Biological and Biomedical Applications \(Nano-Bio-Med 2013\) held at ICTP, Trieste, Italy](#), on October 14-18, 2013.
- Islamia University, Bahawalpur, on April 02, 2013.
- Bahauddin Zakariya University, Multan, on April 01, 2013.
- FC College, Lahore, on March 25, 2013.
- Quaid-e-Azam University, Islamabad, on March 20, 2013.
- Biophotonics symposium at Pakistan Institute for Engineering and Applied Sciences (PIEAS) on March 19, 2013.
- 10th International Bhurban conference on Applied Sciences and Technology (IBCAST) at National Centre for Physics, Islamabad, on Jan 15-19, 2013.
- 11th International and 23rd National Chemistry conference at National Center of Excellence in Physical Chemistry, University of Peshawar, on Oct. 15-17, 2012.
- International seminar on Nanomaterials at University of Agriculture, Faisalabad, Pakistan, on June 12, 2012.
- [Center of Nanotechnology \(CENT\), King Fahd University of Petroleum and Minerals \(KFUPM\)](#) on May 26, 2012.
- [King Abdullah University of Science & Technology \(KAUST\)](#) on May 22, 2012.
- [Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China](#) on March 27, 2012.
- [Pakistan Academy of Sciences, Islamabad](#), on March 06, 2012.
- 10th International and 22nd National Chemistry conference at University of Agriculture, Faisalabad, on Nov 21-23, 2011.
- [Department of Materials Science & Engineering, EPFL, Lausanne, Switzerland](#), on August 03, 2011.
- Lahore College for Women University, Lahore, on May 4, 2011.
- University of Engineering & Technology (UET), Lahore, on May 14, 2011.
- 8th International Bhurban conference on Applied Sciences and Technology (IBCAST) at National Centre for Physics, Islamabad, on Jan 10-13, 2011.
- International nanomedicine symposium/workshop at HEJ research institute of Chemistry, University of Karachi, on Dec 20-23, 2010.
- Second National Training Workshop on Electron and Confocal Microscopy held at NIBGE, Faisalabad on Dec 06-15, 2010.
- [Micro and Nanotechnology Lab, University of Illinois at Urbana-Champaign, USA](#), June 08, 2010.
- [Department of Materials Science & Engineering, MIT, Boston](#), on June 01, 2010.
- [Department of Chemistry & Chemical Engineering, Huazhong University of Science & Technology, Wuhan, China](#), on April 27, 2010.
- [National Center for NanoScience & Technology \(NCNST\), Chinese Academy of Sciences, Beijing, China](#), on April 20, 2010.
- International scientific spring at National Centre for Physics (NCP), at Quaid-i-Azam University, Islamabad, Pakistan on March 01-06, 2010.
- Quaid-i-Azam University, Islamabad, Pakistan on Feb 15-17, 2010.
- Departments of physics and chemistry at GC University, Lahore, on Jan 21, 2010.
- 7th International Bhurban conference on Applied Sciences and Technology (IBCAST) at National Centre for Physics, Islamabad, on Jan 11-14, 2010.
- 1st National conference on Radiations, Particles and Matter at GC University, Lahore, on December 22, 2009.
- [Micro and Nanotechnology Lab, University of Illinois at Urbana-Champaign, USA](#), July 30, 2009.
- Forman Christian College (A Chartered University), Lahore, on December 21, 2009.
- [Department of Chemistry, University of Massachusetts, Amherst, USA](#), on July 08, 2009.
- First NCP (National Centre for Physics) scientific spring 2009, April 6-9, 2009 at National Centre for Physics, Quaid-i-Azam University, Islamabad, Pakistan.
- International Nanomedicine workshop at COMSTECH (March 13-20, 2008), Islamabad.