

MARIA PERVEZ

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SKILLS

INSTRUMENT BASED SKILLS

- Organic synthesis of targeting ligands, macro-RAFT agents and monomers
- Synthesis of organometallic complexes and Inorganic nanomaterials
- Experience with Air sensitive techniques – Glove box usage
- NMR spectra analysis (1D and 2D)
- Column Chromatography – Auto/Manual
- UV-Vis spectroscopy, FTIR, Mass Spectrometry
- Light, fluorescence and confocal microscopy
- Crystallization and Single Crystal Analysis
- Thermal Gravimetric analysis
- Dynamic light scattering

COMPUTER SKILLS

- MS Office (Outlook, Word, excel, Power point)
- Origin, ChemDraw
- Crystallography software (Olex, Mercury, CrysPro Alis)

LANGUAGE SKILLS

- English (Excellent), Urdu (Excellent), Punjabi (Good)

DISTINCTION / HONORS

- Awarded Gold Medal in Bachelors.
- Achieved First Position and Merit scholarships in Masters and M.Phil.
- Awarded Indigenous Scholarship in M.Phil.
- Awarded Chancellor int. scholarship for Ph.D.
- Won English debates and essay writing competitions at Inter-college, district and provincial levels :2008 - 2010

PUBLICATIONS

- Turgay Yildirim, **Maria Pervez**, Bo Li and Rachel K. O'Reilly, *Size-controlled clustering of iron oxide nanoparticles within fluorescent nanogels using LCST-driven self-assembly*, *J. Mater. Chem. B*, 2020, **8**, 5330.
- Two in progress.

EDUCATION

University of Birmingham, UK 2017 – Ongoing
Ph.D. Chemistry

Quaid-i-Azam University, Pakistan 2012 – 2016
M.Sc. M.Phil. Inorganic/Analytical Chemistry (**Distinction, 4.2 GPA**)

University of Punjab, Pakistan 2010 – 2012
B.Sc. (**First Class Honors, Gold Medal**)

RESEARCH EXPERIENCE

Ph.D. Student (Full time)

University of Birmingham, UK

Supervisor: Prof. Rachel K. O'Reilly

Oct. 2017 – Jan. 2022
(Expected)

- Synthesis of novel organic molecule and organometallic complexes based probes and their purification by column chromatography etc.
- Characterization by NMR, MS, UV-Vis, FTIR, TGA, DLS, SCXD.
- Optimization of the optical properties of organic/organometallic probes
- Investigation and validation of fluorescence behavior of the organic-inorganic compounds.
- Investigation of the redox and fluorescence properties of metal complexes
- Liaise with collaborators for exploring the correlation between the structure optimization and optical properties by simulation studies
- Extensive training in Single crystal X-ray crystallographic analysis
- Coordinate with other lab fellows for developing responsive polymeric nanoparticles

Research Associate

Allama Iqbal Open University, Pakistan

Supervisor: Prof. Naghmana Rashid

Sept. 2016 – Aug. 2017

- Synthesis of heterocyclic organic synthesis and their complexes, purification involving glass plates TLC, column chromatography
- In addition to research activities, taught theory courses, developed MS level courses conducted labs
- Played a key role in script writing and production of videos for laboratory health and safety teaching
- Focal person for the E-learning activities of the department
- Stage secretary and organizing committee member for International/National conferences, seminars etc.

Assistant Editor

Journal of Contemporary Research in Chemistry

Allama Iqbal Open University, Pakistan

- Assisted the publisher and commissioning editor with the development and delivery of a manuscript
- Communicate with authors, their team and colleagues from other departments
- Proofread manuscripts, worked with authors to make sure that any comments or corrections are passed from them to the production team
- Liaise with colleagues in design for creating the cover design and wrote the cover briefs

M.Phil. Student

Quaid-i-Azam University, Pakistan

Supervisor: Prof. Zia-ur-Rehman

Sept. 2015 – Jun. 2016

Honors Thesis: **Photocatalytic H₂ Generation form Water Splitting on Transition Metals Decorated CdS Nanostructures**

WORK EXPERIENCE

School of Chemistry - University of Birmingham

Teaching Assistant

Oct. 2018 – Present

- Deliver laboratory demonstrations and provide guidance to students on using laboratory equipment
- Provide report writing insights
- Offer guidance in tutorial sessions
- Assist lecturers in conducting remote workshops

Student Ambassador for Open Days

Oct. 2018 – Dec. 2020

- Assisted with talks and presentations about the university, department, course modules and research. Ran demonstrations of the current research projects

School of Chemistry - Allama Iqbal Open University

Teaching and Lab Demonstrator

Aug. 2016 – Sept. 2017

- Delivered laboratory demonstrations to students in the laboratory
- Delivered lectures to the undergraduate students, conducted and marked exams
- Developed modules for the masters students and revised the curriculum

Allama Iqbal Open University

Event Organizer and Facilitator

Aug. 2016 – Sept. 2017

- Organized national & international events like conferences designed for disseminating the research and knowledge of recent trends in chemistry across various universities globally

FM Radio Station 91.6

Radio Jockey and News Anchor

Sept. 2016 – Sept. 2017

- Hosted a live broadcast. Responsible for scripting, music programming, taking live calls, live messages for educational to entertainment based themes

School of Chemistry – Quaid-i-Azam University

Teaching Assistant

Oct. 2015 – Jan. 2016

- Instructed groups of undergraduate students (1st, 2nd and 3rd year) in the laboratory
- Assisted with problem solving sessions and tutorials
- Marked exams and assignments

Meritorious Public School & Academy, Pakistan

Tutor (Chemistry & Biology)

Apr. 2010 – Aug. 2014

- Assessing student learning needs and weakness areas, referring to library sources and explaining theory, answering to student inquiries, helping with assignments, and recommending learning methods

CONFERENCES/WORKSHOPS AND PRESENTATIONS

- *Refining crystal structures (Olex2)* workshop by *National Crystallography Service (NCS)* – 17 Feb 2021, UK.
- *Young Researcher Macromolecule Conference 2020* – Oral presentation.
- *14th International conference on materials chemistry (MC14)*, 8-11 July 2019, Birmingham, UK – Poster.
- *Women International Conference*, Feb 2020, Nottingham, UK.
- *Young Researcher Macromolecule Conference 2019*, University of Kent, Canterbury UK – Poster.
- *International Conference on Recent Trends in Chemistry-2016*, AIOU, Pakistan - Stage Secretary (Host)
- *National Graduate Conference-2017*, AIOU, Pakistan – won “Best Oral Presentation” award.
- Participated in *Leadership and Character-building workshop-2011* held in Youth Development Centre, Pakistan.
- Participated at *3-days workshop* arranged by US-Pakistan Centers- 2016 for *Advanced studies in Energy*.

COMMUNITY INVOLVEMENT AND LEADERSHIP

- 2018 – Present: Royal Society of Chemistry member
- 2020 – Mental Health Awareness course – Vital Skills
- 2020: PGR- Virtual consultancy challenge at University of Birmingham - Runner-up
- 2018 – 2019: Mentored at Peer-mentor scheme
- 2018 – 2020: Outreach activities (Spectroscopy in suitcase, Halloween potion and many more)
- 2020: Participated in #IAS STAY AT HOME during lockdown.
- 2018 – Present: Fire warden School of Chemistry.
- 2019 – Present: Vice President of UBVR Student Society
- 2018 – 2020: Social club member at Badminton at University of Birmingham