Curriculum Vitae

Personal Information

Name, Gender:	**Shahla Imteyaz**, Female
Date-Place of birth:	18-09-1990, India
Home Address:	Mubarakpur, Azamgarh, 276404
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Education

2014-2017: PhD Chemistry, Department of Chemistry, Aligarh Muslim University, India. *Thesis title:* Preparation and electrochemical studies of inorganic precipitated membranes.

2011-2013: MSc in Physical Chemistry, Department of Chemistry, Aligarh Muslim University, India. (72.70%)

2007-2011: BSc (Hons.) in Chemistry, Women College, Department of Chemistry, Aligarh Muslim University, India. (75.93%)

Research Experience

- Membrane synthesis (composite, cation-exchange, phosphonated functionalized membrane) and characterization (XRD, FT-IR, SEM, TGA/DSC, UV-Vis, Electrodeposition).
- Green solvent synthesis and characterization (NMR).
- Physical properties (swelling ratio, water uptake percentage) of the membrane.
- Electrochemical properties calculation (Donann and Diffusion membrane potential, transport property, mobility ratio, permselectivity, and membrane fixed-charge density by Nagasawa, Kobatake, and Teorell, Meyer, Sievers theoretical models).
- Electrochemical CO_2 reduction (Cyclic Voltammetry, Linear Sweep Voltammetry, Electrochemical Impedance spectroscopy) and product analysis (NMR, GC).

Technical Skills

- Synthesis of membranes, and materials methods: Sol-gel, Co-precipitation, doctor-blade method, electrodeposition.
- Working electrode and reference electrode fabrication for electrochemical analysis.
- Scientific instruments: Potentiometer (Autolab), CHI, Potentiostat, LCR meter, pH meter, X-Ray Diffraction (X-RD), NMR, FT-IR, UV spectrophotometer, Gas Chromatography.

Work Experience

Project awarded from Council of Scientific and Industrial Research (CSIR), India, 2019-2022, *Project title:* Designing Single Track-Etched Functionalized Nanopore For Ionic Transport (File No: 09/112(0670)/2019-EMR-I). Stipend: 564000/- p.a., Contingency: 20000/- p.a., Total: 584000/- p.a. Prinicipal Investigator: Dr. Shahla Imteyaz

2020-current: Research Associate, Membrane Research Laboratory, Department of Chemistry, Aligarh Muslim University, India

- Synthesis of organic-inorganic composite membrane for ionic transport properties and their characterisation
- Fabrication of modified carbon fibre paper electrode as working electrode for detection of organic compounds in wastewater.
- Guided master's student in their dissertations.

2019-2020: Research Associate, Electro-analytical and Materials Group, Department of Chemistry, Indian institute of Technology, New Delhi, India

- Electrochemical reduction of CO_2 without being compromised with the parasitic Hydrogen evolution reaction (HER).
- Working electrode (Gold and Copper nanoparticles modified) for electrochemical reduction reaction of CO_2.
- Green Solvents as electrolyte for environmental applications.

Teaching Experience

2018-2019: Assistant Professor, Department of Chemistry, Aligarh College of Education, Aligarh, India

- Taught graduate students (theory and practical classes both)
- Demonstrated experiments and supervised practical's for a class of 60 students.
- Actively organized and taken responsibilities in various college programs namely Science and Arts Exhibition.
- Examination invigilation ensuring correct procedures and processes.

Awards and Fellowships

- Council of Scientific & Industrial Research (CSIR), New Delhi granted a project under the CSIR-Research Associate Fellowship scheme.
- University Grant Commission Fellowship by Human Resource and Development Ministry, India (2014-2017).
- MOMA Scholarship for Minority Students by Ministry of Minority Affairs, India (2012-2013).

- Uttar Pradesh Minority Scholarship by Minority Welfare Department, U.P., India (2012).
- Sultan Jahan Scholarship for Meritorious students, Aligarh Muslim University, India (2008-2011).

Publications in International Peer-reviewed Journals

1. Deep Eutectic Solvent (DES) for low overpotential CO_2 electrochemical reduction. (Manuscript in Progress)
2. Nanocomposite coated carbon fiber electrode for electrochemical sensing of phenols. (Manuscript in Progress)
3. Ethaline as green solvent for Electrochemical CO_2 reduction (Review in Progress)
4. Iqbal, M. Z., **Imteyaz, S.,** Ghanty, C., and Sarkar, S. A review on electrochemical conversion of CO_2 to CO: Ag-based cathode catalyst and cell configuration for industrial application. (Manuscript Submitted)
5. Sibhatu, A. K., Weldegebrieal, G. K., **Imteyaz, S**., Sagadevan, S., Tran, N. N., and Hessel, V, Synthesis and Process Parametric Effects on the Photocatalyst Efficiency of CuO Nanostructures for Decontamination of Toxic Heavy Metal Ions. *Chemical Engineering and Processing- Process Intensification*, 2022, 173, 108814.
6. Sagadevan, S., **Imteyaz, S.,** Murugan, B., Lett, J. Anita., Sridewi, N., Weldegebrieal, G. K., Fatimah, Is., and Oh, W-C, A comprehensive review on green synthesis of titanium dioxide nanoparticles and their diverse biomedical applications. *Green Processing and Synthesis*, 2022, 11, 44–63.
7. **Imteyaz, S.,** and Rafiuddin, Electrochemical effect and permselectivity of monovalent ions in polystyrene-bismuth oxyiodide composite membrane. *Groundwater for Sustainable Development*, 2021, 14, 100635.
8. Sagadevan, S., Lett, J. A., Weldegebrieal, G. K., **Imteyaz, S.**, and Johan, M. R, Synthesis, characterization, and photocatalytic activity of PPy/SnO_2 nanocomposite. *Chemical Physics Letters*, 2021, 783, 139051.
9. **Imteyaz, S.**, and Rafiuddin, Synthesis of phosphonated poly (vinyl alcohol) based composite membrane: Effects of counter and co-ions on its electrochemical properties for separation applications. *Industrial & Engineering Chemistry Research*, 2016, 55, 12655-12666.
10. **Imteyaz, S.,** Rafiuddin. Transport studies of ions across polystyrene based composite membrane: Evaluation of fixed charge density using theoretical models. *Journal of Molecular Structure*, 2016, 1123, 116-123.
11. Arsalan, M., **Imteyaz, S.,** Zeeshan, M., Rafiuddin. Synthesis, characterization, and electrochemical observation of PVC-supported strontium tungstate inorganic precipitated composite membrane, *Desalination and Water Treatment*, 2016, 57, 15293-15303.

12. **Imteyaz, S.,** Rafiuddin. Effects of monovalent ions on membrane potential and permselectivity: evaluation of fixed charge density of polymer-based zirconium aluminophosphate composite membrane, *RSC Advances*, 2015, 5, 96008-96018.

Conferences

Presented poster in International Conference on "Emerging trends in Chemical Sciences (ETCS-2020)", Aligarh Muslim University, Aligarh (2020).

Participated in the "DAE-BNRS 5th National workshop on Materials Chemistry (NWMC-2019)", Manipal University, Jaipur (2019).

Attended the National Conference on "Advance Functional Materials", Jamia Millia Islamia, New Delhi, 2019.

Delivered a lecture in National Conference on "Recent Advances in Chemical Sciences" Aligarh Muslim University, Aligarh (2017).

Presented Poster in International Conference on "Recent Advances in Chemical Sciences" Aligarh Muslim University, Aligarh (2016).

Presented Poster in "9th National Conferences on Solid State Chemistry and Allied Areas" University of Delhi, Aligarh (2015).

Attended "National Symposium on Chemistry" Aligarh Muslim University, Aligarh (2014).

Personal Skill

- Languages: Hindi (mother tongue, native proficiency)
  Urdu (native proficiency)
  English (professional proficiency)
  Computer Skills (Word, Excel, Internet), Origin Lab, Chem Office, Chem Draw, Nova, Mendley

References

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