

Curriculum Vitae

Dr. Shahnaz Ahmed

Assistant Professor, Dept. of Chemistry, Majuli College.

Date of Joining: 01/12/2026

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Academics Qualifications

Qualification	Institute	Board/University	% of Marks Obtained/ Grade	Year
Ph.D.	Tezpur University	Tezpur University	N/A	2024
M.Sc.	Dibrugarh University	Dibrugarh University (Specialization in Physical Chemistry)	80.60	2017
B.Sc.	North Lakhimpur College	Dibrugarh University, Chemistry (Major)	86.36	2015
HS	North Lakhimpur College	AHSEC	85.60	2012
HSLC	S.T.K High School	SEBA	88.83	2010

Title of the thesis: Development of stable perovskite-based nanocomposites and their fluorometric sensing applications

Name of the Supervisor: **Prof. Swapan Kumar Dolui**, Dept. of Chemical sciences, Tezpur University

Name of the Co-Supervisor: **Prof. Dambarudhar Mohanta**, Dept. of Physics, Tezpur University

Academic Achievement

1. State Level Eligibility Test (North-East region) 2021
2. GATE 2021
3. **DST-INSPIRE** Fellowship (2018-2023)
4. Best poster presentation award in Materials Science at **ICAST-2018**
5. IIT-JAM 2015

List of Publications in International SCI Based Journals

1. **Ahmed, S.**, Lahkar, S., Saikia, P., Mohanta, D., Das, J., and Dolui, S. K. Stable and highly luminescent CsPbX₃ (X= Br, Br/Cl) perovskite quantum dot embedded into Zinc (II) imidazole-4, 5-dicarboxylate metal organic framework as a luminescent probe for metal ion detection. *Material Chemistry and Physics*, 295:127093, 2023
2. **Ahmed, S.**, Lahkar, S., Doley, S., Mohanta, D., and Dolui, S. K. A hierarchically porous MOF confined CsPbBr₃ quantum dots: Fluorescence switching probe for detecting Cu (II) and melamine in food samples. *Journal of Photochemistry and Photobiology A: Chemistry*, 443:114821, 2023.
3. **Ahmed, S.**, Mohanta, D., Baruah, K., and Dolui, S. K. CsPbBr₃ perovskite quantum dot decorated ZIF-8 MOF: a selective dual recognition fluorometric visual probe for 4-nitroaniline and rhodamine blue. *Analytical Methods*, 15(46):6394-6403, 2023.
4. **Ahmed, S.**, and Dolui, S. K. A dual emitting CsPbBr₃/Eu-BDC composite as a ratiometric photoluminescent turn-on probe for aliphatic amine sensing. *Dalton Transactions*, 53(20):8584-8592, 2024.
5. Saikia, P., Sarmah, H. J., **Ahmed, S.**, Lahkar, S., Das, J. P., and Dolui, S. K. Synthesis of CaxCu_{3-x}Ti₄O₁₂ Perovskite Materials and House-Hold LED Light Mediated Degradation of Rhodamine Blue Dye. *Journal of Inorganic and Organometallic Polymers and Materials*, 31:2161-2167, 2021.
6. Lahkar, S., **Ahmed, S.**, Mohan, K., Saikia, P., Das, J. P., Puzari, P., and Dolui, S. K. Iron doped titania/multiwalled carbon nanotube nanocomposite: A robust electrocatalyst for hydrogen evolution reaction in aqueous acidic medium. *Electrochimica Acta*, 407(139921): 1-10, 2022.
7. Lahkar, S., **Ahmed, S.**, Bora, A., Mohan, K., Rohman, S. S., Guha, A. K., and Dolui, S. K. Modulation of electronic density states of carbon atom via multifaceted Cu doped Co₂P particle for robust and efficient electrocatalytic hydrogen evolution reaction in aqueous acidic medium. *Electrochimica Acta*, 455:142378, 2023.
8. Doley, S., Bora, A., Saikia, P., **Ahmed, S.**, and Dolui, S. K. Blending of cyclic carbonate based on soybean oil and glycerol: a non-isocyanate approach towards the synthesis of polyurethane with high performance. *Journal of Polymer Research*, 28:1-9, 2021.
9. Baruah, K., Ahmed, A., Dutta, R., **Ahmed, S.**, Lahkar, S. and Dolui, S. K. Removal of organic solvents from contaminated water surface through a fatty acid grafted polyvinyl alcohol based organogel. *Journal of Applied Polymer Science*, 139(45):53123, 2022.

Book Chapters

- [1] **Ahmed, S.**, Lahkar, S., and Dolui, S. K. Perovskite Nanomaterials as Advanced Optical Sensor. In Mohanta, D., Chakraborty, P., editors, *Nanoscale Matter and Principles in Sensing and Labeling Applications*, Springer Nature, 2023. ISBN: 978-981-99-7847-2.
- [2] **Ahmed, S.** An overview of halide based perovskite nanomaterials, *Recent trends in Nanochemistry and Nanotechnology (Volume 2)*. ISBN: 978-81-968391-0-9
- [3] **Ahmed, S.** Optoelectronic applications of Perovskite nanomaterials stabilized in porous materials, In Singh, M., Singh, A. K., editors, *Advanced Nanomaterials for Solution-Processed*

Flexible Optoelectronic Devices, CRC Press, Taylor & Francis group, 2025. ISBN: 978-1-032-96050-0

[4] An Experimental Study on the Water Content of Pukhuri Poria Region of Majuli, Bhattacharjee, D., Hatimota, A., Borah, S. J., **Ahmed, S.**, Bhuyan, B. *Sprout*,9(2025):1-154, ISSN: 2394-7748, 2026.

Conferences Attended

Poster/Oral Presentation

[1] **Ahmed, S.** and Dolui, S. K. *Fabrication and characterization of planar heterojunction inverted type inorganic-based perovskite solar cell with enhanced stability*. International Conference on Advancement of Science and Technology (ICAST-2018), organized by Visva-Bharati University, Shantiniketan, Kolkata, 3rd-4th September 2018.

[2] **Ahmed, S.** Dolui, S. K., and Mohanta, D. *Highly luminescent and stable CsPbBr₃ perovskite quantum dot embedded into Zinc(II) imidazole-4,5-dicarboxylate framework as a luminescent probe for metal ion detection*. National seminar on Research at the interface of chemical, biological and material sciences, organized by the Department of Chemical Sciences, Tezpur University, 10th march, 2023.

[3] **Ahmed, S.** *Luminescent CsPbX₃ Perovskite quantum dots stabilized in Zn-based metal organic framework for sensing application*. International Conference on Science, Economy, Culture, and Governance: India's Rise in the Global Arena, organized by IQAC Bahona College, Jorhat, Assam, 28th and 29th January, 2026.

Declaration

I do hereby declare that all information furnished above are true, complete and correct to the best of my knowledge and belief.

Shahnaz Ahmed

Dr. Shahnaz Ahmed