

# List of Publications

## List of publications in journals (included in the thesis):

- [1] **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  $\text{Co}_2\text{P}$  particle for robust and efficient electrocatalytic hydrogen evolution reaction in aqueous acidic medium. *Electrochimica Acta*, 455: 142378, 2023.
- [2] **Lahkar, S.**, Ahmed, S., Mohan, K., Saikia, P., Das, J., 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, 2022.
- [3] **Lahkar, S.**, Brahma, R., and Dolui, S.K. Iron Doped Titania/Polyaniline Composite: An Efficient Electrocatalyst for Hydrogen Evolution Reaction in Acidic Medium. *Catalysis Research*, 3(1): 1-18, 2023.
- [4] **Lahkar, S.**, Baruah, K., Puzari, P., and Dolui, S. K. Hierarchically porous N, P co-doped graphitic carbon as a symmetric supercapacitor material and a hydrogen evolution reaction electrocatalyst, *Journal of Energy Storage, communicated*.
- [5] Ahmed, S., **Lahkar, S.**, Saikia, P., Mohanta, D., Das, J., and Dolui, S.K. Stable and highly luminescent  $\text{CsPbX}_3$  (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. *Materials Chemistry and Physics*, 295: 127093, 2023.
- [6] Ahmed, S., **Lahkar, S.**, Doley, S., Mohanta, D., and Dolui, S.K. A hierarchically porous MOF confined  $\text{CsPbBr}_3$  quantum dots: Fluorescence switching probe for detecting Cu (II) and melamine in food samples. *Journal of Photochemistry and Photobiology A: Chemistry*, 443: 114821, 2023.
- [7] Saikia, P., Sarmah, H.J., Ahmed, S., **Lahkar, S.**, Das, J.P., and Dolui, S.K. Synthesis of  $\text{Ca}_x\text{Cu}_{3-x}\text{Ti}_4\text{O}_{12}$  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.
- [8] 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. (Just accepted)

### **Conferences.**

- [1] **Lahkar, S.**, and Dolui, S. K. *Development of electrocatalyst for water splitting reaction in acidic medium*. International Conference on Advancement of Science and Technology (ICAST-2018), September 3-4, 2018, organized by Visva-Bharati University, Shantiniketan, Kolkata, India.
- [2] **Lahkar, S.**, and Dolui, S. K. *Fe doped TiO<sub>2</sub> as an electrocatalyst for hydrogen evolution reaction in acidic medium*. An international Conference in Chemistry (OrganiX-2018), December 20-21, 2018, organized by Tezpur University, Tezpur, Assam, India.