Appendix

List of Publications

1. **Patowary, S.,** Watson, A., Chetry, R., Sudarsanam, P., Russell, A. E. and Bharali, P. Oxygen-Vacancy Rich Co_3O_4/CeO_2 Interface for Enhanced Oxygen Reduction and Evolution Reactions. *ChemCatChem*, 17(6): 202401759, 2024.

2. Bhattu, S., Singh, N., **Patowary, S.**, Bharali P., Madras, G., and Sudarsanam P. Efficient glycolysis of used PET bottles into a high-quality valuable monomer using a shape-engineered MnO_x nanocatalyst. *Catalysis Science & Technology*, 14:5574−5587, 2024.

3. Chetry, R., Chutia, B., **Patowary, S.**, Borah, B. J., Sudarsanam, P., and Bharali, P. Electronic modulation of Pd/C by simultaneous doping of Cu and Co tendering a highly durable and methanol-tolerant oxygen reduction electrocatalyst. *Energy & Fuels*, 37(13):9557−9567, 2023.

4. **Patowary, S.**, Chetry, R., Goswami, C., Chutia, B., and Bharali, P. Oxygen reduction reaction catalysed by supported nanoparticles: advancements and challenges. *ChemCatChem*, 14(7):1−23, 2022.

5. Chutia, B., **Patowary, S.**, Misra, A., Rao, K. N., and Bharali, P. Morphology effect of Co_3O_4 nanooctahedron in boosting oxygen reduction and oxygen evolution reactions. *Energy & Fuels*, 36: 13863−13872, 2022.

6. **Patowary, S.**, Chutia, B., Gogoi, P. M. and Bharali, P. A robust bifunctional $Co_3O_4/Co_xCe_{1-x}O_{2-\delta}/C$ electrocatalyst with crystalline-amorphous interfaces toward ORR and OER. (**Submitted**)

7. **Patowary, S.**, Watson, A., Bhattu, S., Sudarsanam, P., Russell, A. E. and Bharali. P. Simple hydrothermal route to synthesize $CoOOH/CeO_2/C$ oxyhydroxide composite for enhanced oxygen reduction and evolution reaction. (**Manuscript under preparation**)

Book Chapters

1. **Patowary, S.**, Chutia, B., Hazarika, K. K., and Bharali, P. Hybrid electrocatalysts with oxide/oxide and oxide/hydroxide interfaces for oxygen electrode reactions. In: *Heterogeneous Nanocatalysis for Energy and Environmental Sustainability*. Vol 1; 2022:111-132.

List of Conference/Symposium/Seminar Attended

1. **Poster presentation**, A robust bifunctional Co_3O_4–CeO_2 electrocatalyst with crystalline-amorphous interfaces toward ORR and OER, '*SusChemHeca*' at Tezpur University, Tezpur, from March 14–15, 2024.

2. **Oral presentation,** CeO_2-modified Oxygen Vacancy-rich Co_3O_4 on Graphene Nanoplatelets for Enhanced Oxygen Reduction and Evolution Reaction, "*SusChemE 2.0"* at ICT, Mumbai, from September 14 - 16, 2023.

3. **Poster presentation**, Graphene nanoplatelet supported Co_3O_4@CeO_2 as bifunctional electrocatalyst for oxygen reduction and evolution reactions in alkaline media, "*Electrochem 2022"* at The University of Edinburgh, Scotland, from September 4–6, 2022.

4. **Workshop**, Training program on analytical instruments, at SAIC Tezpur University, Tezpur, from March 9–15, 2021.

5. **Poster presentation,** Partially embedded interfacial CuCo/CuO–Co_3O_4/C nanohybrids (NHs) as highly stable oxygen reduction reaction (ORR) catalyst in 0.1M KOH solution, '*MCC2021*' at Tezpur University, Tezpur, from March 4–5, 2021.

6. **Poster presentation,** Interfacial CuCo/CuO_x–Co_3O_4/C Nanohybrids as Highly Stable Electrocatalysts for Oxygen Reduction Reaction, '*SSD-2020*' at B. Borooah College, Guwahati, from September 25–26, 2020.

7. **Workshop**, Workshop on Interpretation of Instrumental Methods (WIIM-2020) at Sathyabama Institute of Science and Technology, Karapakkam, Chennai, from January 6–8, 2020.

Awards/Achievements

1. Commonwealth Split-site scholarship 2021 (awarded by Commonwealth Scholarship Commission, UK)