

Appendix

List of Publications

1. Chutia, B., **Chetry, R.**, Rao, K.N., Singh, N., Sudarsanam, P. and Bharali, P. Durable and stable bifunctional Co_3O_4 -based nanocatalyst for oxygen reduction/evolution reactions. *ACS Applied Nano Materials*. 7(4): 3620–3630, 2024.
2. **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.
3. Patowary, S., **Chetry, R.**, Goswami, C., Chutia, B. and Bharali, P. Oxygen reduction reaction catalysed by supported nanoparticles: Advancements and challenges. *ChemCatChem*, 14(7): e202101472, 2022.
4. Soni, R., Bhange, S.N., Athira, E., **Chetry, R.** and Kurungot, S. Synthesis of ultrathin PEDOT on carbon nanotubes and shear thinning xanthan gum- H_2SO_4 gel electrolyte for supercapacitors. *ChemElectroChem*, 6(6):1861-1869, 2019.
5. Hazarika K. K., Bhuyan S. P, **Chetry, R.** and Bharali P. Boosting oxygen electrode efficiency using engineered $\text{CuO}/\text{Cu}_2\text{O}/\text{C}$ nanostructure. *cMat*, (Accepted for publication, Manuscript ID:CMAT-2024-0022.R2).
6. **Chetry, R.**, Dutta, R., Das, M.R. and Bharali, P. Deciphering the effect of Fe and Cu in Pd lattice for oxygen reduction reaction (*Under revision*).
7. **Chetry, R.**, Bhuyan, S. P., Dutta, R., Das, S., Das, M.R. and Bharali, P. Increasing ORR kinetics of Pd/C via Ag and Cu integration: A robust and promising catalyst for oxygen reduction reaction (*Submitted*).

Book Chapters

1. **Chetry, R.**, Bhuyan, S. P., and Bharali P. Bimetallic nanoparticles & their applications for oxygen reduction reaction (ORR) and urea oxidation reaction (UOR). In Gogoi P. Sarmah J. K., Saikia, P. editors, *Bimetallics: Formation, properties and applications*, Chap 3, pp. 47-79, ISBN: 979-8-89113-496-6, Nova Science Publishers, 2024.

2. **Chetry, R.**, Goswami, C., Borah, B.J. and Bharali, P. Morphology-and size-selective Pd-Based electrocatalyst for fuel cell reactions. In Sudarsanam, P., Yamauchi, Y., Bharali P., editors, Heterogeneous nanocatalysis for energy and environmental sustainability, volume 1, Chap 8, pp. 233-257, ISBN: 9781394183517, Wiley, 2022.

List of Conference/Symposium/Seminar Attended

- i) **Poster presentation**, Pd₃Cu_{0.5}Ni_{0.5} nanowire networks stabilized on carbon towards boosting dioxygen reduction in alkaline electrolyte, “*Science for Sustainable Development (SSD)*” at B. Borooah College, Guwahati on 25-26th September 2020.
- ii) **Poster presentation**, Trimetallic Pd₃Cu_{0.5}Ni_{0.5} Nanoparticles as Enhanced Oxygen Reduction Reaction Electrocatalyst in Alkaline Medium, “*Materials Chemistry and Catalysis (MMC)*” at Tezpur University, Tezpur, 4-5th March, 2021.
- iii) **Poster presentation**, Pd₂CoCu alloy supported on vulcan carbon as a highly efficient electrocatalyst for oxygen reduction reaction, “*International Conference on Emerging Trends in Chemistry (ICETC)*” at Assam Donbosco University in collaboration with Department of Chemistry, Pandu College, Guwahati, 16-17th March, 2023.
- iv) **Poster presentation**, Deciphering the effect of Fe and Cu in Pd/C lattice for oxygen reduction reaction, “*Sustainable Chemistry & Engineering (SusChemE-2023)*” at Institute of Chemical Technology, Mumbai, 14-16th September, 2023.
- v) **Poster presentation**, Deciphering the effect of Fe and Cu in Pd/C lattice for oxygen reduction reaction, “*RSC Poster: A global online poster conference (RSC Poster-2024)*”, 5-6th March, 2024.
- vi) **Oral presentation**, Pd₂CoCu/C nanoparticles as a highly efficient electrocatalyst for oxygen reduction reaction, “*National Conference on Sustainability, Medicine and Clean Energy organized*” at Tezpur University, Tezpur, 1st March, 2022.

vii) **Participated** in the Hands-on training workshop on Sophisticated Analytical Instruments under “*Synergistic Training program Utilizing the scientific and Technological Infrastructures (STUTI)-2022*” organized by *Sophisticated Analytical Instrumentation Centre (SAIC), Tezpur University in collaboration with Sophisticated Analytical Instrumentation Facility (SAIF), Panjab University, on 31st Oct-7th November, 2022.*

Teaching assistantship/mentorship

1. **Worked** as a Tutor for *practical classes for Integrated M.Sc. & B.Sc. B.Ed. in Chemistry (Tezpur University) in 2021.*