

Introduction to Advanced Nanomaterials Laboratory (Dr. Uday Narayan Maiti)

Energy storage and conversion possess huge technological importance and are regarded as the key to the sustainable growth of our society. Huge research activities are going on worldwide in this direction to fulfill the energy need. Our group works on the experimental realization of electronically tuned nanomaterials for real practical applications in energy storage and conversion. We also employ density functional theory calculations to theoretically understand the experimentally realized electronic tunability. More details of our work can be found in our recently published very high-standard journals (**Advanced Functional Materials** year 2024, page 2315460; **Advanced Functional Materials** year 2022, volume 32, page 2204622; **Small** year 2024, page 2400119) and in media coverage (<https://www.edexlive.com/campus/2024/May/10/high-performance-supercapacitors-developed-at-iit-guwahati>; <https://economictimes.indiatimes.com/news/science/iit-guwahati-develops-high-performance-materials-for-supercapacitors/articleshow/110016898.cms>)

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