

*List  
Of  
Publications*

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

- [1] **Bora, A.**, Mohan, K., Pegu, D., Gohain, C. B., and Dolui, S. K. A room temperature methanol vapor sensor based on highly conducting carboxylated multi-walled carbon nanotube/polyaniline nanotube composite. *Sensors and Actuators, B: Chemical*, 253:977-986, 2017.
- [2] **Bora, A.**, Mohan, K., Phukan, P., and Dolui, S. K. A low cost carbon black/ polyaniline nanotube composite as efficient electro-catalyst for triiodide reduction in dye sensitized solar cells. *Electrochimica Acta*, 259:233-244, 2018.
- [3] **Bora, A.**, Mohan, K., Doley, S., and Dolui, S. K. Flexible asymmetric supercapacitor based on functionalized reduced graphene oxide aerogels with wide working potential window. *ACS Applied Materials and Interfaces*, 10(9):7996-8009, 2018.
- [4] **Bora, A.**, Mohan, K., Doley, S., Goswami, P., and Dolui, S. K. Broadening the sunlight response region with carbon dot sensitized TiO<sub>2</sub> as a support for a Pt catalyst in the methanol oxidation reaction. *Catalysis Science and Technology*, 8(16):4180-4192, 2018.
- [5] **Bora, A.**, Mohan, K., and Dolui, S. K. Enhancing the efficiency of dye sensitized solar cell by employing green emitting carbon dots as co-sensitizers. (*Communicated*)
- [6] **Bora, A.**, Mohan, K., and Dolui, S. K. Gallic acid derived hydrophobic carbon dots as fluorescence sensor for 2,4,6-trinitrophenol detection in organic medium. (*Communicated*)

### Other publications in journals:

- [1] Mohan, K., **Bora, A.**, Nath, B. C., Gogoi, P., Saikia, B. J., and Dolui, S. K. A highly stable and efficient quasi solid state dye sensitized solar cell based on polymethyl methacrylate(PMMA)/polyaniline nanotube(PANI-NT) gel electrolyte. *Electrochimica Acta*, 222:1072-1078, 2016.
- [2] Mohan, K., Dolui, S., Nath, B. C., **Bora, A.**, Sharma, S., and Dolui, S. K. A highly stable and efficient quasi solid state dye sensitized solar cell based on polymethyl methacrylate (PMMA)/carbon black (CB) polymer gel electrolyte with improved open circuit voltage. *Electrochimica Acta*, 247:216-228, 2017.
- [3] Doley, S., Agarwal, V., **Bora, A.**, Borah, D., and Dolui, S. K. Development of sunflower oil-based nonisocyanate polyurethane/multiwalled carbon nanotube composites with improved physico-chemical and microwave absorption properties. *Polymer Composites*, 40(S2):E1120-E1130, 2018.
- [4] Mohan, K., **Bora, A.**, and Dolui, S. K. Efficient way of enhancing the efficiency of a quasi-solid-state dye-sensitized solar cell by harvesting the unused higher energy visible light using carbon dots. *ACS Sustainable Chemistry & Engineering*, 6(8):10914-10922,

2018.

- [5] Mohan, K., **Bora, A.**, Roy, R. S., Nath, B. C., and Dolui, S. K. Polyaniline nanotube / reduced graphene oxide aerogel as efficient counter electrode for quasi solid state dye sensitized solar cell. *Solar Energy*, 186:360-369, 2019.

#### **List of publications (in books):**

- [1] **Bora, A.** and Mohan, K. All-solid-state flexible supercapacitor based on self assembled polyaniline/reduced graphene oxide aerogel. In Paul, S. and Doley, S., editors, *Recent Progress in Application of Functional Materials*, pages 17-32, ISBN:9786200102690. LAP Lambert Academic Publishing, Mauritius, 2019.
- [2] Mohan, K. and **Bora, A.** Quasi-solid-state dye sensitized solar cell based on reduced graphene oxide/poly(methyl methacrylate) blend polymer gel electrolyte. In Paul, S. and Doley, S., editors, *Recent Progress in Application of Functional Materials*, pages 2-16 ISBN:9786200102690. LAP Lambert Academic Publishing, Mauritius, 2019.

#### **Papers presented in academic conferences:**

- [1] Bora, A. and Dolui, S. K. **Poster presentation** entitled 'Pt@CD@TiO<sub>2</sub> as an efficient catalyst for methanol oxidation reaction', OrganiX-2018, An International Conference in Chemistry, Tezpur University, Assam, 2018.
- [2] Bora, A. and Dolui, S. K. **Poster presentation** entitled 'All-solid-state flexible supercapacitor based on self assembled polyaniline nanotube/reduced graphene oxide aerogel,' Fourth International Symposium on Advances in Sustainable Polymers, IIT Guwahati, Assam, 2018.
- [3] Bora, A. and Dolui, S. K. **Oral presentation** entitled 'Carbon black/ polyaniline nanotube composite as electro-catalyst for tri-iodide reduction in dye sensitized solar cells', 25<sup>th</sup> National Conference on Condensed Matter Physics CMDAYS17, Tezpur University, Assam, 2017.
- [4] Bora, A. and Dolui, S. K. **Poster presentation** entitled 'A novel carbon nanotube/polyaniline nanotube composite as room temperature methanol vapor sensor', UGC-SAP (DRS III) sponsored National seminar on Advances in Material Science, Guwahati University, Assam, 2017.
- [5] Bora, A. and Dolui, S. K. **Oral presentation** entitled 'A novel carbon nanotube/polyaniline nanotube composite with high conductivity as room temperature methanol vapor sensor', 104<sup>th</sup> Indian Science Congress, S.V. University, Tirupati, 2017.
- [6] **Participated** in 'Workshop on arsenic nitride & fluoride nitride', Department of

Chemical Sciences, Tezpur University, Assam, 2018.

- [7] **Participated** in workshop on science academies lecture workshop on 'Emerging trends in Chemical Sciences', Department of Chemical Sciences, Tezpur University, Assam, 2016.