



ARNAB DUTTA

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PROFILE

A proactive postgraduate student in Physics from Tezpur University, Assam, India, with strong academic achievement and a keen research interest. A socially active student with volunteering experience, leadership capabilities and communication skills with fluency in English, Hindi and Assamese. Interested to pursue a career in research on applied materials, experimental condensed matter physics and green energy based technologies, so that I become instrumental in making this planet a better place to live for the future generations.



EDUCATION

Integrated MSc in Physics | Tezpur University , Assam, India **2015 - 2020**

Grade: 1st Class (1st Rank) CGPA: 8.45

Specialization: Condensed Matter Physics

Dissertation Work: Dual Ion Batteries and the use of Graphite

Project Supervisor: Dr. Shyamal K. Das

Senior School | Kendriya Vidyalaya Duliajan, Assam, India **2013 - 2015**

All India Senior School Certificate Examination 2015

Percentage: 93.8%

Subjects: Physics, Chemistry, Mathematics, Biology, English

High School | Kendriya Vidyalaya Duliajan, Assam, India **2003 – 2013**

All India Secondary School Examination (Session 2011-2013)

CGPA : 10

Subjects: Science, Mathematics, English, Social Science, Sanskrit

Received **Certificate of Merit** from Central Board of Secondary Education for obtaining Grade A1 in all five subjects.



EXPERIENCE

Materials Laboratory of Dr Shyamal K Das | Tezpur University, Assam, India **2019 - 2020**

Worked for one year in the Materials Laboratory under the supervision of Dr Shyamal K Das sir (Tezpur University, Assam, India) for the final year Master's Project.

Project title: Dual Ion Batteries and the use of Graphite.

Skills and techniques learnt:

- Preparation of electrode material through graphite exfoliation (thermal exfoliation and electrochemical process)

- Preparation of electrolytes for battery
- SEM, TEM and XRD analysis
- Galvanostatic Charge Discharge and Cyclic Voltammetry

Instruments handling experience:

Biologic Sp300, Mitrohm, Centrifuge, Muffle Furnace, Hot Air Oven etc.



PUBLICATION

Nandi S., Dutta A., Das S.K. (2021) **A Concept Note on Aqueous Type Graphite Dual-ion Battery: A Promising Low-Cost Electrical Energy Storage Technology**. In: Mahapatra S., Shahbaz M., Vaccaro A., Emilia Balas V. (eds) *Advances in Energy Technology. Advances in Sustainability Science and Technology*. Springer, Singapore.

https://doi.org/10.1007/978-981-15-8700-9_10



SKILLS AND QUALITIES

Programming Skills:

- C
- Python
- Matlab

Other Soft Skills:

- Microsoft Powerpoint, Excel, Word
- Latex

Language Skills:

- English, Hindi, Assamese
- Preliminary French

Qualities:

- Innovative Presenter
- Teaching Experience
- Leadership Capability
- Team work spirit
- Compassionate
- Calm and Patient
- Active Participant in events
- Committed and Hard worker
- Responsible and Socially Active



ACHIEVEMENTS

- To be awarded the Gold Medal for the session 2015-2020 of Integrated MSc in Physics program of Tezpur University, Assam, India.
- Coordinator of inSCignis 2019, the Science fest of Tezpur University, biggest in the North East region of India. inSCignis is celebrated every year in Tezpur University on 28th February marking the National Science Day of India.
- Participated in National Children’s Science Congress 2012, held at Begumpet, Hyderabad, India by Department of Science and Technology (DST), Government of India, after getting selected in the regional level. Focal theme of the project: Energy: Explore, Harness and Conserve.
- Ankan Bivakar certificate awarded by Bangya Sangeet Parishad, West Bengal, for securing First Division with Distinction in 5th Year of Painting.



HOBBIES AND INTERESTS

- Cycling: Bronze Medal winner in cycle race of 22nd Annual Meet of Tezpur University. Also did a marathon cycling from Tezpur University(Assam) to Tipi(Arunachal Pradesh) with a total of 112km of cycling in a single day.
- Astronomy: Part of the Astronomy Club of Tezpur University. Participated in North East Meet of Astronomers (NEMA) in 2015 and 2016.
- Art and Music: Like to draw sketches and play flute and percussion instruments.