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## EDUCATIONAL QUALIFICATIONS

- M.Sc. in Physics (Dibrugarh University, 2011)
- SET in Physics (SLET Commission, NE Region, 2012)

## ACADEMIC EXPERIENCES

- More than a decade of teaching experience as an Assistant Professor in the Department of Physics, Nanda Nath Saikia College, Titabar, Assam
- Working as HoD in the Department of Physics, Nanda Nath Saikia College, Titabar, Assam w.e.f. March 25<sup>th</sup>, 2025.

## AREAS OF INTEREST

- Theoretical Condensed Matter physics
- Electronics

## PUBLICATIONS

- Pronob Jyoti Saikia, Dhrubajyoti Saikia, Mukunda M. Borah, **Swagatam Deva Nath**, Biswadeep Gogoi, Priyanka Kumar, "Effect of Different Solvents on The Performance of Dye Sensitized Solar Cell (DSSC) Fabricated Using Beetroot Dye", *International Journal of Engineering Trends and Technology*, vol. 73, no. 8, pp.202-213, 2025. Crossref, <https://doi.org/10.14445/22315381/IJETT-V73I8P117>

## BOOK CHAPTERS

- **Swagatam, Deva Nath**, Himakhi Borah, "Advances in Photovoltaic Cell Efficiency: A Comprehensive Comparative Review", *Contemporary Explorations in Multidisciplinary Sciences*, ISBN: 978-93-48301-03-1
- Dhrubajyoti Saikia, **Swagatam Deva Nath**, "Exploring Organic Thin Films for Advanced Display Technologies", *Science, Technology and Society: Next Gen Research Volume I*, ISBN: 978-81-993182-2-9
- **Swagatam Deva Nath**, Chiranjit Hazarika, "Nonlinear Optical Propagation: Self-Focusing, Beam Collapse, and Filamentation in Kerr Media", *Materials Science Frontiers: From Chemical Principles to Physical Applications*, ISBN: 978-81-994425-3-5

- Rajanish Saikia, **Swagatam Deva Nath**, “Electrical Properties of Kaolinite Minerals”, *Materials Science Frontiers: From Chemical Principles to Physical Applications*, ISBN: 978-81-994425-3-5
- **Swagatam Deva Nath**, “Materials Science and Renewable Energy”, *Materials Science Frontiers: From Chemical Principles to Physical Applications*, ISBN: 978-81-994425-3-5
- Dhrubajyoti Saikia, **Swagatam Deva Nath**, “Effect of Figure of Merit on the Performance of FTO Based Organic Light Emitting Diode”, *Advances in Physical, Chemical and Biological Sciences*, ISBN: 978-93-7343-051-5
- Kangkan Borah, **Swagatam Deva Nath**, Dr. Pronob Jyoti Saikia, “Recent Advances in Tin-Based Perovskite Solar Cells through Simulation and Optimization of Materials using SCAPS-1D”, *Foundations and Emerging Trends in Contemporary Multidisciplinary Science*, ISBN: 978-93-47652-06-6
- **Swagatam Deva Nath**, Kangkan Borah, Dr. Pronob Jyoti Saikia, “Numerical Modelling and Performance Optimization of Lead-Free Perovskite Solar Cells using SCAPS-1D”, *Foundations and Emerging Trends in Contemporary Multidisciplinary Science*, ISBN: 978-93-47652-06-6

#### EDITED BOOK

- *Matter & Motion: Explorations in Physical and Chemical Science Volume I*, ISBN: 978-81-992068-8-5

#### TEXTBOOK

- **Swagatam, Deva Nath**, Dhrubajyoti Saikia, Partha Saikia, Mukunda Madhab Borah, Himakhi Borah, “Evolution of Science”, *Mahaveer Publications*, ISBN: 978-93-48070-90-6

#### SEMINARS

- “Study of Electrical properties of chemically treated Kaolinite minerals at various ambient temperatures”, *Role of Chemistry in Interdisciplinary Research* organized by the Department of Chemistry, Kakojan College in collaboration with CSIR-NEIST, ICFRE-RFRI, Teacher Unit and IQAC, Kakojan College in 2023.
- “Emerging PV technologies: Its Challenges and Future Trends”, *Reimagining Indian Knowledge System for Vikshit Bharat* organized by the IQAC, Sadiya College in collaboration with Indian Council for Social Science Research – NERC in 2025.
- “Eco-friendly Solar Innovation: SCAPS-1D Based Modelling of Lead-Free Perovskite Solar Cells”, *Science, Sustainability and Advancements in Natural World* organized by DBT-IBT Hub, Nanda Nath Saikia College in collaboration with CMBP, Hanoi, Vietnam & IUBAT, Dhaka, Bangladesh & Dibrugarh University & Gauhati University & Association of Fungal Biologists (AFBs), Mumbai, India in 2026.

#### WORKSHOPS\REFRESHER\FIP\FDP

- “Use of ICT Tools for Classroom Teaching” organized by E&ICT Academy, IIT Guwahati in collaboration with Nanda Nath Saikia College, Titabar in April, 2019.

- “Induction training of Faculty” organized by Teaching Learning Centre, Tezpur University in June, 2019.
- “Scilab and its applications” organized by E&ICT Academy, IIT Guwahati in collaboration with Debraj Roy College, Golaghat in November, 2019.
- “Python Programming” organized by JIST, Jorhat in July, 2020.
- “E-Learning Platform in Covid-19 Pandemic” organized by E&ICT Academy, IIT Guwahati in collaboration with M.C. College, Barpeta in August, 2020.
- “Online Refresher Course in natural Sciences” organized by HRDC, Goa University in September, 2020.
- “Interdisciplinary Refresher Course on Curriculum and Pedagogy” organized by Teaching Learning Centre, Tezpur University in June, 2021.
- “Trends in Teaching Learning, Institution Building and Innovations at Higher Educational Institutions” organized by Nanda Nath Saikia College, Titabar in June, 2021.
- “Gender Sensitization and Women Empowerment” organized by FDC, M. D. University, Rohtak in December, 2021.
- “Introduction to Python Programming and its Applications” organized by E&ICT Academy, IIT Guwahati in collaboration with North Eastern Regional Institute of Science and Technology, Arunachal Pradesh in February, 2022.
- “Higher Education in the 21st Century in Light of National Education Policy 2020” organized by E&ICT Academy, IIT Guwahati in collaboration with B. Borooah College, Guwahati in March, 2022.
- “Academic Research Writing, Copyright & Plagiarism” organized by Nanda Nath Saikia College, Titabar in November, 2022.
- “Academic Writing Using Latex” organized by Centre for Computer Science and Applications, Dibrugarh university in June, 2023.
- “Current Issues & Perspectives of Environmental Remediation: Special Emphasis to Detect and Remediate Micro-plastic and Nano-plastic Toxicity” organized by DBT-IBT Hub, Nanda Nath Saikia College in March, 2026.

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