

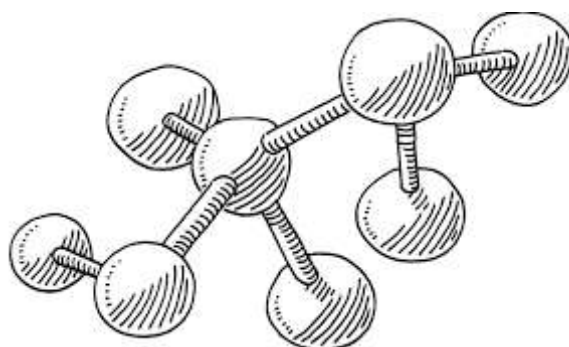


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Chemistry News

An Academic Publication of the Chemical Society and
Department of Chemistry



Department of Chemistry
N. N. Saikia College
Titabar-785630

Chemistry News, Volume: 10, 2020 is an academic publication of the Chemical Society and the Department of Chemistry, N. N. Saikia College.

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The Department at a Glance

The Department of Chemistry is one of the oldest Science departments of Nanda Nath Saikia College started in 1971. The Department has been offering three years degree course in Chemistry (B.Sc.) with honours provision along with two certificate courses. From 2019 onwards, CBCS has been implemented in the Department. Decorated by well-trained and extremely motivated faculties as well as bright students, the Department constantly strives to maintain a culture of excellence and uphold the highest standards in chemical education. The Department is housed with a research laboratory, two general laboratories and a well-equipped smart classroom. Along with teaching, the faculty members are actively engaged in research in the area of chemical sciences as well as interdisciplinary topics. Our alumni are well placed across the globe and have contributed significantly in their respective domains.

Academic Programmes

Undergraduate Degree Course (B.Sc.)

Nature: Semester system (CBCS)

Intake capacity: 30

List of Faculties



Dr. Partha Pratim Saikia, HoD

M.Sc., NET, PhD

Teaching expertise: Organic Chemistry



Mr. Dhruvajit Borah

M.Sc., NET

Teaching expertise: Inorganic Chemistry



Dr. Jayanta Madhab Borah

M.Sc., SLET, B.Ed., PhD

Teaching expertise: Physical Chemistry



Dr. Bhaskar Jyoti Saikia

M.Sc., SLET, GATE, PhD

Teaching expertise: Physical Chemistry

Library

The department has a well-maintained library with reading room facility which has a collection of around 280 text and reference books.

Research Highlights

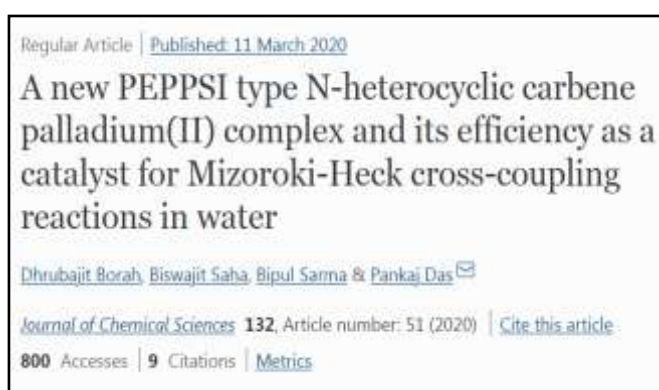
The Department of chemistry has been actively pursuing research activities in a number of research fields like coal chemistry, synthetic organic chemistry, material science, catalysis, polymer chemistry, surface chemistry etc. In spite of limited facilities and infrastructure, the Department has been dedicatedly engaged in different research-based works. So far, the Department has succeeded in securing research grants from UGC, DST, SERB and ministry of environmental science. The present areas of ongoing research are catalysis, material science and polymer chemistry.

List of research projects ongoing/recently completed in the Department

| Sl. No | Name of the PI | Funding agency | Title of the Project | Duration | Total Grant |
|--------|--------------------------|----------------|--|----------|-----------------|
| 1. | Dr. Partha Pratim Saikia | DST | <i>In situ</i> generation of cyanide from novel non-toxic source: application in a few important C-C bond forming reaction and possible extension to the synthesis of bioactive natural products | 2013-16 | 23,00,000/ - |

- **Research Publications of the Faculties**

1. A cyclometalated Ir(III)-NHC complex as a recyclable catalyst for acceptorless dehydrogenation of alcohols to carboxylic acids, **Dhrubajit Borah**, Biswajit Saha, Bipul Sarma, Pankaj Das, Dalton Transactions 2020, 49(46), 16866-16876.
2. A new PEPPSI type N-heterocyclic carbene palladium(II) complex and its efficiency as a catalyst for Mizoroki-Heck cross-coupling reactions in water, **Dhrubajit Borah**, Biswajit Saha, Bipul Sarma, Pankaj Das, Journal of Chemical Sciences, 2020, 132(1), 51.



- **Seminars/Conferences Participated by the Faculties**

1. **Dr. Dhrubajit Borah** presented a paper entitled 'Synthesis and Characterization of Ir(III) NHC complexes and their application as catalyst in acceptorless dehydrogenation of alcohols to acids' in the International Conference on 'Emerging Trends in Chemical Science' organized by Department of Chemistry, Gauhati University during 13th to 15th February, 2020.
2. **Dr. Partha Pratim Saikia** presented a paper entitled 'Heavy metal adsorption studies on functionalized graphene/clay bilayer nano-composite' in the national conference on 'Science, Technology and Innovation' organized by Arya Vidyapeeth College, Guwahati on 29th February, 2020.

3. **Dr. Jayanta Madhab Borah** presented a paper entitled ‘Kinetics of Erichrome Black-T dye on Mg-Al layered double hydroxide in aqueous medium’ in the national seminar on ‘Science, Technology and Innovation’ organized by the Department of Chemistry, Arya Vidyapeeth College, Guwahati on 29th February, 2020.
4. **Dr. Bhaskar Jyoti Saikia** presented a paper entitled ‘Investigating The Sustained-Release Behavior of Cellulose Nanofibers Embedded Urea Formaldehyde Resin Microcapsules Containing Model Agrochemical’ in the national seminar on ‘Science, Technology and Innovation’ organized by the Department of Chemistry, Arya Vidyapeeth College, Guwahati on 29th February, 2020.

- **Workshop/Course Participated by the Faculties**

1. Dr. Jayanta Madhab Borah participated in the Faculty Induction Programme (Orientation Programme) in North-Eastern Hill University (NEHU), Shillong during 28th September -27th October, 2020 sponsored by HRDC, NEHU, Shillong.
2. Dr. Jayanta Madhab Borah participated in the online Refresher Course in Chemistry for Higher Education organized by Sri Guru Tegh Bahadur Khalsa College, University of Delhi during September 2019 to February, 2020 sponsored by SWAYAM, MHRD, India

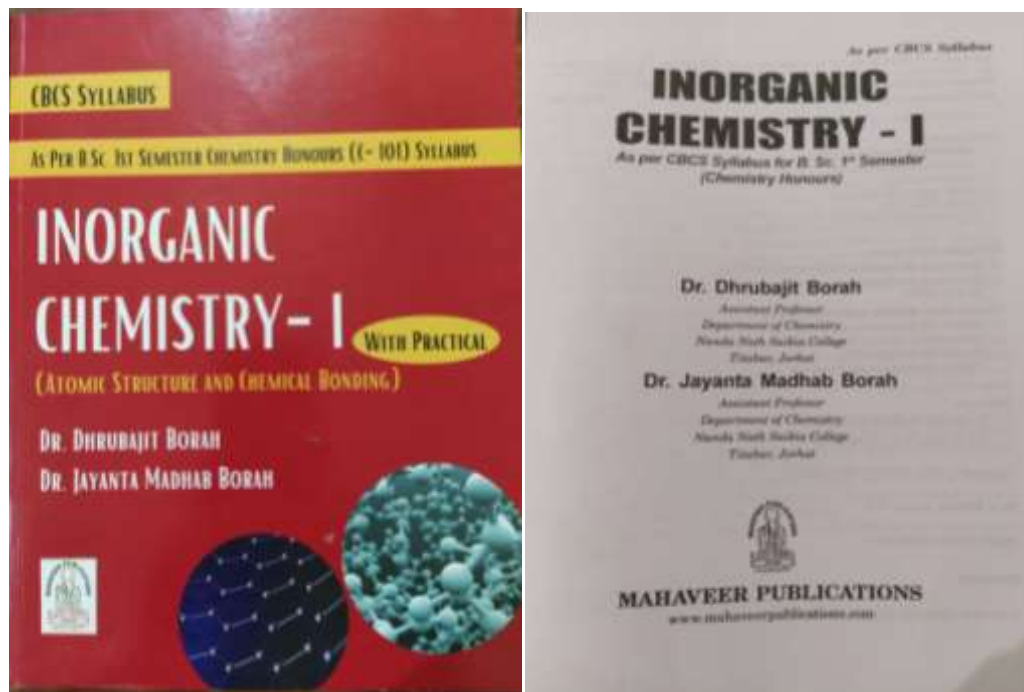
- **Chapters Contributed to Edited Books by the Faculties**

1. Palladium NHC complexes with N Donor throw away ligands: An Efficient Class of Precatalyst for Suzuki-Miyaura Cross-coupling Reactions. Saptrashi Roy, Dhrubajit Borah, Research Trends in Multidisciplinary Research and Development, Weser Books, 2020 (ISBN: 978-3-96492-201-4).



- **Book Published by the Faculties**

- Inorganic Chemistry-I, Dr. Dhrubajit Borah & Dr. Jayanta Madhab Borah, Mahaveer publication, 1st Edition, 2020. (*For semester I, CBCS syllabus*)



B.Sc. Results (2020): Appeared-24*Passed-18 (75 %)*

| List of 1st class holders in B.Sc., 2020 | | |
|--|----------------------------|-------------------|
| Sl. No. | Name of the student | Percentage |
| 1 | Abhimanyu Nayak | 83.07 |
| 2 | Mridul Jyoti Hazarika | 78.07 |
| 3 | Shekhar Borah | 76.00 |
| 4 | Abinash Saikia | 74.00 |
| 5 | Mriganka Sharma | 72.78 |
| 6 | Manash Jyoti Saikia | 68.92 |
| 7 | Bitupan Gogoi | 67.85 |
| 8 | Ranjit Gogoi | 66.92 |
| 9 | Mousumi Borah | 63.71 |
| 10 | Dipramjit Hazarikia | 63.57 |
| 11 | Deepnita Shil | 63.57 |
| 12 | Mintu Kataki | 63.50 |
| 13 | Asinta Dutta | 63.07 |
| 14 | Dipankar Hazarika | 61.71 |
| 15 | Abhusekh kachari | 61.64 |
| 16 | Ankur Gogoi | 60.71 |
| 17 | Joydeep Hazarika | 60.35 |
| 18 | Mintu Saikia | 60.21 |

Students' Progression

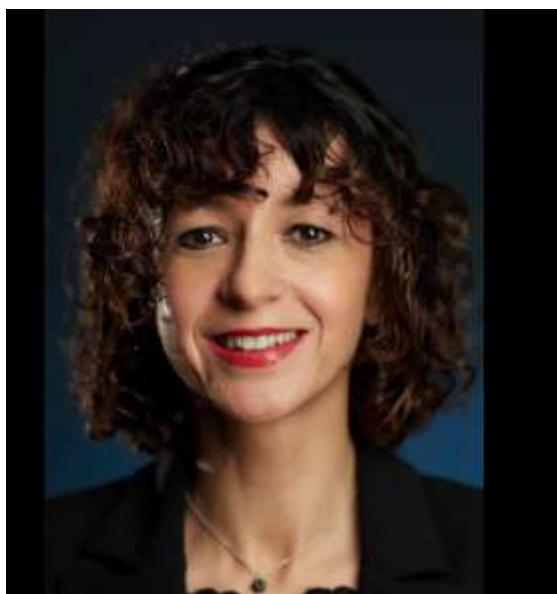
1. Sekharjyoti Bora got selected in North East Regional Institute of Science & Technology (NERIST) for pursuing *M.Sc.*
2. Rodali Buragohain got selected in DIET, Dergaon for pursuing *D.El.Ed.*

Placement of Students

1. Debajit Saikia got a placement in the *CISF*.
2. Dhurbajyoti Bhagawati and Jagat Chutia got placement *as Assistant Teachers* in Department of Elementary Education, Assam.

The Nobel Prize in Chemistry-2020

Emmanuelle Charpentier, Max Planck Unit for the Science of Pathogens, Berlin, Germany and Jennifer A. Doudna, University of California, Berkeley, USA have got the Nobel prize in chemistry-2020 *“for the development of a method for genome editing”*. Emmanuelle Charpentier and Jennifer A. Doudna have discovered one of gene technology’s sharpest tools: the CRISPR/Cas9 genetic scissors. Using these, researchers can change the DNA of animals, plants and microorganisms with extremely high precision. This technology has had a revolutionary impact on the life sciences, is contributing to new cancer therapies and may make the dream of curing inherited diseases come true.



Emmanuelle Charpentier



Jennifer A. Doudna

Notable Alumni of the Department

| Sl. No. | Name | Address with Designation |
|---------|-------------------------|---|
| 1 | Dr. Dipu Borah | UCC, Ireland |
| 2 | Dr. Kula Kamal Senapati | IIT, Guwahati |
| 3 | Dr. Pranjal Saikia | Gauhati University |
| 4 | Mr. Ananta Saikia | Scientist, DRDO |
| 5 | Mr. Tarun Saikia | Asst. Professor, DCB Girls' College |
| 6 | Dr. Subhangsu Dutta | Asst. Professor, DR College |
| 7 | Mrs. Nandita Dutta | Branch Manager, State Bank of India |
| 8 | Mr. Niranjan Dutta | Numaligarh Refinery Limited |
| 9 | Mr. Utpal Goswami | Numaligarh Refinery Limited |
| 10 | Mr. Biraj Das | APS, Govt. of Assam |
| 11 | Dr. Anjan Bora | Post Doctoral Fellow |
| 12 | Mrs. Bornali Hazarika | Development Officer, LIC |
| 13 | Monuj Bihani | Businessman |
| 14 | Dr. Manisha Bihani | Post Doctoral Fellow |
| 15 | Dr. Bishwapran Kashyap | Tocklai Tea Research Institute, Silliguri campus |
| 16 | Mr. Anupam Konwar | Dept. of Chemistry, POWIET |
| 17 | Mr. Bishwajyoti Sarmah | Faculty, Pragjyotika Academy, Eminent writer |