CURRICULUM VITAE

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INFORMATION REGARDING EMPLOYMENT

P.G. Teaching & Research Experience: Since 2003

Details of Employment

Lecturer	Dept. of Chemistry, Nagaland University	22nd July 2003 – 21st July 2007
Senior Lecturer	Dept. of Chemistry, Nagaland University	22nd July 2007 – 7th October 2012
Associate Professor	Dept. of Chemistry, Nagaland University	8th October 2012 – 7th October 2015
Professor	Dept. of Chemistry, Nagaland University	8th October 2015 onwards

Teaching Assignments

Courses Taught/ Presently Teaching			
CHEM-411	Basic Concepts of Inorganic Chemistry	CHEM-412	Structure, bonding reactive intermediates in org. molecules
CHEM-421	Chemistry of Main Group, Transition and Inner Transition Elements	CHEM-422	Oxidations, Reductions and Carbonyl reactions
CHEM-531	Organometallic and Bioinorganic Chemistry	CHEM-532	Heterocyclic, Bioorganic Chemistry
CHEM-544(A)	Green, Analytical and Sustainable Chemistry	CHEM-601	Research methodology (Ph.D.)
CHEM-543(B)	Biological Chemistry	CHEM-602	Advances in Chemistry (Ph.D.)

Highlights of Research Activities

Ph.D. Guidance		M.Sc. Projects Guided	Research Publications Total = 85			R&D Projects	Conferences/ Seminars	
Completed	Ongoing		Patents	Papers	Books	Completed	Lect. Delivered	Organized
11	8	53	12	70	2 books + 1 chapter	6	52	7

ADMINISTRATIVE EXPERIENCE

Responsibilities Assigned

1. Head, Department of Chemistry, Nagaland University, 22nd April 2022 to 21st April 2025.
2. Planning Officer, Nagaland University, 2016 – 2021.
3. MHRD NIRF Nodal Officer, 2017-2020.
4. DST-FIST coordinator, 2022 – April 2025.

Other University Assignments

- Founder and Convener, WTP-Incubation Hub, Nagaland University, Lumami
- Member, Committee for Indigenous Traditional Knowledge of Nagaland, 2025 ongoing.
- Cell in-charge, IPR Cell, Nagaland University, 28-10-23 to 06-11-2024.
- Member, Committee to examine the UGC guidelines for establishment of Research and Development Cell (RDC) in Higher Education Institutions, 2022.
- University nominee to the governing body of People's College, Mokokchung, 2022-2024.
- University nominee to the Board of Studies, St. Joseph's College, Jakhama, 2021-24, 2024-25.
- University nominee to the Board of Studies, Kohima Science College, Jotsoma, 2020-22, 2024-26
- Member, Official Language (Hindi) Implementation Committee, from July, 2021.
- Member, Editorial Board for Annual Report, Nagaland University, 2020-2023.
- Member, Prospectus review and compilation committee for PG, Ph.D. programmes, 2019-2021.
- Member, Committee for MHRD's 17-by-17 Action Plan.
- Member, Digital Learning Monitoring Cell, Nagaland University.
- Member, Planning Committee for Silver Jubilee Celebrations, Nagaland University, 2019.
- Member, Executive Committee, Bioinformatics Infrastructure Facility Centre, 2017-2019.
- Member, Committee for framing syllabus for the written test for junior level posts.
- Member, Committee for framing policy on Open Educational Resources. 19th July 2017
- Programme Coordinator for Organizing 24th NU Foundation Day, 2017.
- Convener of Management Committee for opening of Nagaland University School, 2012.
- Member for finalizing Rules and Regulations for seeking admission into M.Phil. /Ph.D. programmes. Order dated: 20th September 2012
- Member, Nagaland University Innovation Cell, from 2012 onwards
- Warden of Iliki Women Research Scholars' Hostel, 2011 – 2014
- Warden of Aliper Women's Hostel, 2011 – 2014

Member of University Statutory Bodies

1. Member of Academic Council
2. Member of School Board of Sciences
3. Member of BoS in Chemistry
4. Chairperson (Former), BoS Chemistry, as Head, Department of Chemistry

5. Chairperson (Former), BPGS Chemistry, as Head, Department of Chemistry
6. Chairperson (Former), BUGS Chemistry, as Head, Department of Chemistry
7. Member of Board of Research Studies, 2023-2025.
8. Member of BoS in Mathematics, 2023-2026
9. Member of BoS in Forestry, 2023-2026
10. Member of BPGS in Chemistry, 2011 to 2014, 2014 to 2017, 2017 to 2020, 2020-2023
11. Member of BPGS in Environmental Sciences, 2022-2024.
12. Member of BUGS in Mathematics, 1-11-2018 to 31-10-2021
13. Member of BUGS in Chemistry, 2005 – 2008, 2018-2020, 2020-2023
14. Member of BPGS in Mathematics, 26-02-2013 to 25-02-2016
15. Member, Planning Board, From 11-02-2016-2021; from 2022 - 2025
16. Member, Building Construction Committee, From 11-02-2015

Other Assignments

- Member of Subject Expert Committee for 'Environment, Climate and Sustainable Development (ECSD) under the GoI DST WISE (Women in Science and Engineering)-SCOPE Programme, from 2024 for three years

ACADEMIC INFORMATION

Educational Qualifications

Exam. passed	Year of Passing	Division/ Class	Percentage of marks	Name of the Board/ University
Matriculation	1989	I	70 %	MBOSE, Meghalaya
P.U. (Sc.)	1991	I	75.8%	N.E.H.U., Shillong
B.Sc (Hons.)	1994	I (1st position)	74 %	NEHU, Shillong
M.Sc. (Chemistry)	1996	I (2nd position)	71%	NEHU, Shillong
Ph.D. (Chemistry)	2002	-	Awarded	IIT, Guwahati
M.Phil. (Women's Studies)	2010	I	70%	The Global Open University, Nagaland
D.Sc. (Chemistry)			On-going	Nagaland University

Title of the Ph.D. thesis	Ph.D. Thesis guide
Peroxovanadate(V) Mediated Synthesis of Quaternary Ammonium Tribromides and Oxidative Organic Brominations, Synthesis and Structural Assessment of Newer Heteroligand Diperoxo vanadates(V) And Efficacy of a New Chromium(VI) Reagents	**Prof. Mihir K. Chaudhuri**, *F.A.Sc., F.N.A.* Dept. of Chemistry IIT Guwahati

Title of the M.Phil. thesis	M.Phil. Thesis guide
Women In Scientific Research: Explaining Gender Inequalities In India	**Prof. Sanjib Baruah**, Professor of Political Studies, Bard College, Annandale-on-Hudson, New York, USA

Title of the D.Sc. thesis	-
A Chronological Study of Chemistry in India from 1500 BC to the 21st Century: Linking Ancient Chemistry Knowledge with Modern Day Research Through Computational Simulation	-

Awards

1. **North East's Woman Leader Award** by the World Women Leadership Congress Awards, **2023**.
2. National Environmental Science Academy **Women Excellence Award-2021**.
3. **STE Meritorious Award for Excellence in Academics and Research, 2021**.
4. Selected for Indian Academy of Sciences 'summer fellowship', **2005**
5. CSIR, Individual Senior Research Fellowship, **2000-2003**.
6. IIT Research Fellowship, **1998-2000.**
7. Qualified GATE examination, **1998.**
8. Selected for National Merit Scholarship in the year **1994**.
9. Rank certificate received in **1994** for securing first position in B.Sc. Hons. (Was awarded University Merit Scholarship.)
10. Selected for National Merit Scholarship in the year **1989**.

RESEARCH ACTIVITIES AND EXPERIENCE IN CHEMISTRY

Areas of Research

- Development of Green Reaction Methodologies
- Quaternary Ammonium Tribromides as Bromine Alternatives
- Pharmaceutical Assessment of Small Organic Molecules by *in-silico* and *in-vitro* methods
- Development of Green Absorbents for Environmental Remediation

Ph.D. Guidance

S. No.	Name of the Student	Title of the thesis	Status
1.	Dr. Latonglila Jamir	Synthesis of Newer Tribromides and Studies of Some Oxidative Organic Transformations	Completed, Ph.D., **2012**
2.	Dr. Alimenla B.	Studies on Quaternary Ammonium Tribromides and Peroxovanadates Mediated Organic Halogenations	Completed, Ph.D., **2012** (as co- supervisor)
3.	Dr. Anil Kumar	Studies on Organic Transformations Reactions Using Different Quaternary Ammonium Tribromides	Completed, Ph.D., **2012**
4.	Dr. Manob Jyoti Borah	Synthesis and Characterization of some Oxygen and Nitrogen Donor Mixed Ligand Complexes of Transition Metal Ions	Completed, Ph.D., **2012**
5.	Dr. Bernadette Kuotsu	Study of New Environmentally Benign Pathways for Certain Organic Transformations	Completed, Ph.D., **2018** (as co- supervisor)
6.	Dr. Kikoleho Richa	Synthesis, i*n Silico* and *in Vitro* Studies of	Completed, Ph.D., **2021**

		isothiocyanates for Assessing their Anticancer, Antioxidant and Antimicrobial Activities	
7.	Dr. Aola Supong	Studies on surface modifications of activated carbon for removal of organic and biological pollutants from water	Completed, Ph.D., **2021** (as co- supervisor)
8.	Dr. Rituparna Karmaker	Computational and Mechanistic Investigations of Some Quaternary Ammonium and Polymeric Tribromides	Completed, Ph.D., **2023**
9.	Dr. Apuchu R. Sangtam	Synthesis and Characterization of Mixed Metal Layered Hydroxides (MMLH) and Evaluation of their Adsorbent, Antimicrobial and Thermo-kinetic Properties	Completed, Ph.D., **2023** (co-supervisor Dr.R.L. Goswamee, CSIR-NEIST, Jorhat)
10.	Dr. Naruti Longkumer	Green Synthesis of Halo-Organic Derivatives and Studies on their Biological Activities	Completed, Ph.D., **2023**
11.	Dr. Basanta Singha	*In-Silico* Design, Synthesis and Pharmaceutical Assessment of Some Phenolic Compounds	Completed, Ph.D., **2026**
12.	Ms. Angunuo Khieya	*In-Silico* Modeling of Natural Organohalogens to Assess their Biological Activity and the Role of Halogen Functionality on their Properties	Ongoing, registered, **2018**
13.	Ms. Narola Imchen	Chemical Assessment of Axone (fermented soyabean), an indigenous food item of Nagaland	Ongoing, registered, **2021**
14.	Mr. Partha Pratim Gogoi	Synthesis and Pharmaceutical Assessment of Chalcone Derivatives for Evaluating their Antimicrobial Properties	Ongoing, registered, **2022**
15.	Ms. Penlisola Longkumer	Computational and Experimental Assessment of the Pharmaceutical Properties of Small Isothiocyanate Derivatives	Ongoing, registered, **2022**
16.	Mr. Nichan Boruah	Studies on the Multifacted Applications of Selected Small Organic Molecules	Ongoing, registered, **2023**
17.	Ms. Beware Dkhar	Assessment of the Pharmaceutical Potential of Isothiocyanate Derivatives Using a Combined Experimental and Computational Approach	Ongoing, registered, **2024**
18.	Mr. Mhasilhoutuo Pucho	Synthesis and *in vitro* Pharmaceutical Evaluation of Chalcone Derivatives	Ongoing, registered, **2024**
19.	Ms. Ilavanalangki Lytan	Experimental and Computational Assessment on the Pharmaceutical Potential of Selected Pyridocoumarin Derivatives	Ongoing, registered, **2024**

M.Sc. Project Guidance 53

R&D and Extension Projects

S.No.	Title of Project	Funding Agency	Amount	Period
1.	Studies on Selected Bromo-Organic Compounds to Assess their Antibacterial and Antioxidant Properties	DBT	Rs.46,75,336/-	2021-2025
2.	The study of gamma, radon, thoron and their progeny level in Mokokchung and Zunheboto district of Nagaland (as Co-PI)	DAE-BRNS	Rs. 39,20,700/-	2016-2019
3.	Greener Synthetic Protocols for Design And Development Of Quaternary Ammonium Tribromides And Reactivity Studies Thereof	UGC	Rs.14,46,100/-	2015-2018
4.	Women Technology Park	DST – SEED	Rs. 51, 86, 337/-	2012 - 2016

5.	Women in Scientific Research – Examining the Challenges and Identifying Their Needs	DST-NCSTC	Rs.5,50,000/-	2011 -2012
6.	Design and development of peroxo-metal mediated environmentally benign reagents and reactions thereof	DST – SERC	Rs.21,94,800-	2004- 2008

Research Publications

Patents

1. Halogenated Gentisyl Alcohol Derivatives for Multi-target Pharmacological Profiling, Basanta Singha, Penlisola Longkumer, Nichan Boruah, Partha Pratim Gogoi, Benzir Ahmed, Bipul Bezbaruah, Konda Mani Saravanan, Upasana Bora Sinha, Indian Published Patent; Application No: 202531050810 A dated 06-06-**2025**.
2. A Process for Synthesizing 4-Bromo-2-Methylphenylisothiocyanate for Wound Healing, Nichan Boruah, Bendangtula Walling, Basanta Singha, Penlisola Longkumer, Partha Pratim Gogoi, Sudharsan Parthasarathy, Kikoleho Richa, Giridharan Bupesh, **Upasana Bora Sinha**, Indian Granted Patent: No: 571104 dated 24-09-**2025**.
3. Aktivkohlebeimischtes Biofiltersystem zur nachhaltigen Entfernung von Bakterien aus Wasser (Biofilter System mixed with Activated Carbon for the Sustainable Removal of Bacteria from Water), Aola Supong, Dipak Sinha and **Upasana Bora Sinha**, German Utility Patent No:, Patent publication date 10.07.**2024**.
4. Ein Rechnergestutztes System zur Bwertung des Potenzias von halogenierten Gentisylakoholderivaten als pharmazeutishce Wirkstoffe (*Evaluation of Some Designed Halogenated Variants of Gentisyl Alcohol: Molecular Docking, DFT, Druglikeness, and ADMET Studies for Assessing Biological Properties*), Basanta Singha, Nichan Boruah, Partha Pratim Gogoi, Penlisola Longkumer, **Upasana Bora Sinha**, German Utility Patent no : 20 2024 103 106, Patent publication date 27.06.**2024**.
5. Ein System zur umweltfreundlichen und schnellen Synthese vonBromographen (BG) unter Verwendung eines umweltfreundlicheren Bromierreagenz, (*A System for the Environmentally Friendly and Rapid Synthesis of Bromographene (BG) using a more Environmentally Friendly Brominating Agent*), Kumar Suraj, Rangappa Dinesh, Singha Basanta, Sinha Dipak, **Sinha Upasana Bora** and Supong Aola, Registered German Utility Patent no : 20 2024 101 833, Patent publication date 22.04.**2024**.
6. Ein System zur umweltfreundlichen Synthese von Tetrabutylphosphoniumtribromid (TBPTB) and organischen Verbindungen durch das Reagenz (*A System for the Environmentally Friendly Synthesis of tetrabutylphosphonium tribromide (TBPTB) and Organic Compounds with the Reagent*), Imkongyanger Ao, Ketiyala Ao, Latonglila Jamir, Tsenbeni N. Lotha, Vevosa Nakro, Vimha Ritse, Lemzila Rundithongru, Upasana Bora Sinha, German Utility Model No. 20 2024 101 576 Publication Date: 08.05,**2024**
7. Activated Carbon-Amended Biofilters for Sustainable Removal of Total Heterotrophic, Coliform and Escherichia Coli Bacteria from Water, Application No.202331084823 A, Aola Supong, Temsurenla Jamir, T Ajungla, Pranjal Bharali, **Upasana Bora Sinha** and Dipak Sinha, Indian Published Patent, Publication date: 19.01.**2024**
8. A Process for the Synthesis of Antibacterial Activity Exhibiting Brominated Activated Carbon and Product Thereof, Application No.202331055555 A, Aola Supong, Parimal Chandra Bhomick, Suraj Kumar, Shisak Sharma,Dipak Sinha and **Upasana Bora Sinha**, Indian Published Patent, Publication date: 29.09.**2023**

9. Process for the Preparation of Metal Acetylacetonates, B.M.Choudary, M.L.Kantam, M. K. Chaudhuri, S. K. Dehury, S. S. Dhar, **U. Bora,** WO 2004/056737 A1, Publication date: 08.07.**2004**
10. Process for Preparing Pyridinium Fluorochromate(VI), M. K. Chaudhuri, S. K. Dehury, **U. Bora**, J.Nath, B.M.Choudary, M.L.Kantam, WO 2004/054976 A1, 01.07.**2004**
11. Process for Preparing Quaternary Ammonium Tribromides, M. K. Chaudhuri, **U. Bora**, S. K. Dehury, D. Dey, S. S. Dhar, W. Kharmawphlang, B.M.Choudary, M.L.Kantam, WO 2004/054962 A1, 01.07.**2004**
12. A Process for the Preparation of the Isolable and Storage Stable Tetrabutyl ammonium Tribromide, **U. Bora**, M. K. Chaudhuri, A. T. Khan, B. K.Patel, 28/CAL/2000 of 19 January, 2000, 10.03. **2006**.

Books Written

1. Quaternary Ammonium Tribromides (QATBs) - Green Reagents for Organic Brominations (ISBN No : 978-3-659-51351-0), **Upasana Bora Sinha**, Lambert Academic Publishing, Germany, **2014**
2. Aspects of Green Chemistry (ISBN No: 978-93-83403-01-1), **Upasana Bora Sinha**, M.R. Publisher, Guwahati, **2014**

Chapters in Books

1. **Name of Chapter:** Metal Acetylacetonates: Newer Strategies for Direct Synthesis and Reactions, Evidence for Ion-Association/ Ion-Pair Formation in M(acac) and Mass Spectrometry (Chapter 4 of the book.); **Title of Book**: "Chemistry and Applications of Alkoxy, Aryloxy and Allied Derivatives of Elements" (ISBN 10:8176111716 , ISBN 13: 9788176111713), M. K. Chaudhuri, **U. Bora**, (Ed. R Bohra, A Singh and R C Mehrotra), RBSA Publisher, Rajasthan, **2003**

Papers Published

1. Nichan Boruah, Bendangtula Walling, Basanta Singha, Partha Pratim Gogoi, Penlisola Longkumer, Pranjal Bharali and Upasana Bora Sinha, Extensive integrated in vitro and computational investigation of the antibacterial activity of 4-Bromo-2-methylphenyl isothiocyanate against nine bacterial pathogens. *Current Biotechnology (Bentham)*. (in press), **2026**.

2. Structure-Activity Relationship of Graphene Oxide-Organic Small Molecule Composites, Nichan Boruah, Sonit Kumar Gogoi, Partha Pratim Gogoi and Upasana Bora Sinha, *Langmuir*, https://doi.org/10.1021/acs.langmuir.6c0197, **2026**. [I.F.:4.4]

3. Structural and Electronic Determinants Underlying the Biofunctional Profile of Isothiocyanates: A structure-activity insight. Penlisola Longkumer, Basanta Singha, Partha Pratim Gogoi, Nichan Boruah and Upasana Bora Sinha, *Mini-Reviews in Medicinal Chemistry*, *26*. https://doi.org/10.2174/0113895575463663260417064103., **2026.** [I.F.:4.0]

4. Computational Innovations in Cancer Research and How Computing is Transforming Drug Discovery and Development: A Review, I. Lytan, Basanta Singha, Nichan Boruah, Partha Pratim Gogoi, Penlisola Longkumer, Mhasi Pucho, Beware Dkhar and Upasana Bora Sinha, *Mini-Reviews in Medicinal Chemistry*, *26*. 10.2174/0113895575418750251204104229 **2026.** [I.F.:4.0]

5. A review on varied mechanistic pathways of four major isothiocyanates in cancer suppression and their synergistic action in cancer therapy, Beware Dkhar, Partha Pratim Gogoi, Basanta

Sinha, Penlisola Longkumer, Nichan Boruah, Mhasilhoutuo Pucho, Ilavanalangki Lytan and Upasana Bora Sinha, *Current Topics in Medicinal Chemistry*, Jun 5. DOI: 10.2174/0115680266394550251205071956, **2026.** [I.F.:3.6]

6. Classical docking to machine learning based docking: Molecular Docking in Drug Discovery. Partha Pratim Gogoi, Basanta Singha, Penlisola Longkumer, Nichan Boruah and Upasana Bora Sinha (2026). *Current Topics in Medicinal Chemistry*, *26*. https://doi.org/10.2174/0115680266424314251204071847, **2026.** [I.F.:3.6]

7. Penlisola Longkumer, Basanta Singha, Partha Pratim Gogoi, Nichan Boruah and Upasana Bora Sinha, Antioxidant strategy via dual targeting of SIRT2 and KEAP1: a computational study of isothiocyanate derivatives. *Journal of Applicable Chemistry*, *14*(3), 612–624. **2025**. [Peer Rev]

8. Angunuo Khieya, Basanta Singha, Penlisola Longkumer and Upasana Bora Sinha, Biochemical insights into naturally occurring organohalogens as SARS-CoV-2 Omicron protease inhibitors: An in-silico and DFT-based study, *Biochemical and Cellular Archives*, *26*(1), 335–347. **2025**. [Peer Rev]

9. Chalcones as Emerging Antibacterial Scaffolds: A Mini Review, Partha Pratim Gogoi, Mhasilhoutuo Pucho, Pangerkokba Jamir, Nichan Boruah, Basanta Singha, Penlisola Longkumer, Beware Dkhar, Ilavanalangki Lytan and Upasana Bora Sinha, *Mini-Reviews in Medicinal Chemistry* (Bentham), 25 (19), **2025.** [I.F.:3.3]

10. Multistep In-Silico Pipeline for Targeting FimH Adhesin with Chalcones as Anti-Adhesion Therapeutics, Partha Pratim Gogoi, Basanta Singha, Penlisola Longkumer, Nichan Boruah and Upasana Bora Sinha, *Current Biotechnology (Bentham)*, 14.10. **2025**. [Scopus Indexed]

11. Antioxidant, antimicrobial and in silico investigations on pyrolytic bio-oil from invasive Stachytarpheta jamaicensis, Chongloi, V., Gogoi, P. P., Sangma, S. R., Sinha, U. B., Bora, P., & Phukan, M. M., *Environmental Science and Pollution Research (Springer)*, *32*(30), 18260–18277. **2025**. [Cite Score: 12.1]

12. Integrated Approach: Synthesis, *in vitro* Evaluation and Computational Analysis of Bromoanilines as Potential Antioxidants, Naruti Longkumer, Kikoleho Richa, Rituparna Karmaker, Basanta Singha, Benzir Ahmed, Penlisola Longkumer, Partha Pratim Gogoi, Nichan Boruah, Rituraj Barman, Bipul Bezbaruah and Upasana Bora Sinha, *Asian Journal of Chemistry*, 37 (9), **2025**. [Scopus Indexed]

13. In-Silico evaluation of chalcone derivatives as potent antifungal agents targeting N-Myristoyltransferase. Partha Pratim Gogoi, Nichan Boruah, Basanta Singha, Penlisola Longkumer and Upasana Bora Sinha, *Journal of Applicable Chemistry*, *14*(3), 633–651, **2025**. [Peer Reviewed]

14. A Holistic Computational Exploration of AZD7762 as a Potent Selective Modulator of LXRα, LXRβ and FXR: An Underexplored Pathway in Cancer Therapeutics, Basanta Singha; Partha Pratim Gogoi; Penlisola Longkumer; Benzir Ahmed; Nichan Boruah; Bipul Bezbaruah; Upasana Bora Sinha, *Computers in Biology and Medicine* (Elsevier), 194, 110433, **2025.** [Cite Score: 13.1]

15. Photocatalytic Degradation of Chlorpyrifos using Fe-doped ZnO/ Activated Carbon Nanocomposite, Soremo L. Ezung, Mridushmita Baruah, Shisak Sharma, Raplang Steven Umdor, Imotila T. Longchar, Bupesh Gridharan, Upasana Bora Sinha, Dipak Sinha, *Journal of Molecular Structure* (Elsevier), 1319 (2), 139434, **2024** [I.F.:4]

16. Synthesis and Characterization of Brominated Activated Carbon Using a Green Strategy: Combined Experimental and Theoretical Study, Aola Supong, Parimal Chandra Bhomick, Rituparna Karmaker, Dipak Sinha and Upasana Bora Sinha, *Chemical Physics Lett.* (Elsevier), 850, 141477, **2024**.[I.F.: 2.8]

17. Sustainable Synthesis of Guanidine Dervatives and Computational Assessment of their Antidiabetic Efficacy, Imkongyanger, Kikoleho Richa, Tsenbeni N. Lotha, Ketiyala Ao, Lemzila Rudthongru, Vevosa Nakro, Vimha Ritse, Nima D. Namsa, Pranay Punj Pankaj, Upasana Bora Sinha and Latonglila Jamir, *Endocrine, Metabolic and Immune Disorders-Drug Targets* (Bentham), July 2, **2024** [I.F.: 2.0]

18. Preparation of Co-doped TiO_2 activated carbon nanocomposite and its photocatalytic degradation of Soremo phenol wastewater, Mridushmita Baruah, Suraj Kumar, Soremo L Ezung, Latonglila Jamir, Upasana Bora Sinha, Dipak Sinha, *Inorganic Chemistry Communications* (Elsevier), 166, 112644, **2024**. [I.F.: 3.8]

19. Some Co(II)-Schiff Base Complexes as Promising Anticancer Agents: A DFT and Molecular Docking Study, Pratyashee Barukial, Benzir Ahmed, Basanta Singha, Pankaj Chetia, Nipu Kumar Das, Samir Thakur, Upasana Bora Sinha, Bipul Bezbaruah, *Indian Journal of Biochemistry and Biophysics*, 61, 6, **2024**. [I.F.: 1.4]

20. Evaluating Terrestrol A as an Inhibitor Against SARS-CoV-2 and Invasive Fungal Pathogens: A Comprehensive Computational Analysis, Basanta Singha, Bhoomika Arora, Rituparna Karmaker, Kikoleho Richa, Naruti Longkumer, Haider Thaer Abdulhameed, Mohammad Abid, and Upasana Bora Sinha, *ChemistrySelect* (Wiley-VCH), 12(9), **2024**. [I.F.: 2.3]

21. Evaluation of Some Designed Halogenated Variants of Gentisyl Alcohols: Molecular Docking, DFT, Druglikeness, and ADMET Studies for Assessing Biological Properties, Basanta Singha, Partha Pratim Gogoi, Penlisola Longkumer**,** Nichan Boruah and Upasana Bora Sinha, *Journal of Applicable Chemistry*, 13(2), **2024**. [Peer Reviewed]

22. Experimental and Theoretical Investigations on the Antibacterial Activity of some Bromoaniline Compounds, Naruti Longkumer, Kikoleho Richa, Rituparna Karmaker, Basanta Singha and Upasana Bora Sinha, *Anti Infective Agents* (Bentham), 21, 3, **2023**. [Scopus Cite Score: 1.2]

23. A non-isothermal thermokinetic degradation study of the mesoporous Ni-Co layered double hydroxide using isoconversional approaches, Apuchu R Sangtam, Pinky Saikia, Rajib L Goswamee, Upasana B Sinha, *Materials Today Chemistry* (Elsevier), 29, 101426, **2023** [I.F.: 7.3]

24. Green Synthesis of mesoporous Ni-Co layered double hydroxide and its application for removal of 2,4-dinitrophenol from water: A theoretical study complemented by the first principle density functional theory-Monte Carlo approach, Apuchu R. Sangtam, Pinky Saikia, Rajib Lochan Goswamee, Dipak Sinha and Upasana Bora Sinha, *Journal of Environmental Chemical* Engineering (Elsevier), 10, 108378, **2022.** [I.F.: 7.7]

25. A Computational Approach to Understanding the Mechanism of Aromatic Bromination using Quaternary Ammonium Tribromides, Rituparna Karmaker, Naruti Longkumer, Kikoleho Richa, Dipak Sinha, Upasana Bora Sinha, *Journal of the Indian Chemical Society* (Elsevier), 99, 100574, **2022**. [I.F.: 1.3]

26. Mechanistic insight into the antibacterial activity of isothiocyanates via cell membrane permeability alteration, Kikoleho Richa, Temsurenla, Aola Supong, T Ajungla and Upasana Bora Sinha, *Pharmaceutical Chemistry Journal* (Springer), 56:3, **2022**. [I.F.: 0.9]

27. Synthesis and Characterization of Ni-doped TiO_2 activated carbon nanocomposite for the photocatalytic degradation of Anthracene, Mridushmita Baruah, Soremo L. Ezung, Shisak Sharma, Upasana Bora Sinha, Dipak Sinha, *Inorganic Chemistry Communications* (Elsevier), 144, 109905, **2022**. [I.F.: 3.8]

28. Synthesis and characterization of Co(II)–Co(III) LDH and Ac@Co(II)–Co(III) LDH nanohybrid and study of its application as bactericidal agents, Apuchu R. Sangtam, Kikoleho Richa, Pinky Saikia, Naruti Longkumer, Upasana B. Sinha, Rajib L. Goswamee, *Results in Chemistry* (Elsevier), 4, 100671, **2022**. [I.F.: 2.3]

29. Density Functional Theory Calculations of the Effect of Oxygenated Functionals on Activated Carbon towards Cresol Adsoprtion, Aola Supong, Upasana Bora Sinha and Dipak Sinha, *Surfaces* (MDPI), 5, 280-289, **2022**. [I.F.: 2.0]

30. Facile Green Synthesis of Bromoaniline Molecules: An Experimental and Computational Insight into their Antifungal Behaviour, Naruti Longkumer, Kikoleho Richa, Rituparna Karmaker, Basanta Singha, and Upasana Bora Sinha, *Asian Journal of Chemistry;* 34, 12, **2022**. (Scopus Indexed)

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66. Synthesis of Cetyltrimethylammonium tribromide (CTMATB) and its Applications in Selective Oxidation of Sulfides to Sulfoxides, Gopa Kar, Anil K. Saikia, Upasana Bora, Sanjoy K. Dehury and Mihir K. Chaudhuri, *Tetrahedron Letters* (Elsevier), 44, 4503-4505, **2003**. [I.F.: 1.8]

67. Green Chemistry in Indian Context-Challenges, Mandates and Chances of Success, Upasana Bora, Mihir K. Chaudhuri and Sanjay K. Dehury, *Current Science* (Indian Academy of Sciences), 82(12), 1427-1435, **2002**. [I.F.: 1.00]

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69. 3,5-Dimethylpyrazolium fluorochromate(VI), $C_5H_8N_2H[CrO_3F]$, (DmpzHFC) : a convenient new reagent for oxidation of organic substrates, Upasana Bora, Mihir K. Chaudhuri, Deepa Dey, Dipak Kalita, Wancydora Kharmawphlang and Gagan C. Mandal, *Tetrahedron* (Elsevier), 57, 2445-2449, **2001**. [I.F.: 2.1]

70. Regioselective Bromination of Organic Substrates by Tetrabutyl ammonium Bromide Promoted by V_2O_5-H_2O_2: An Environmentally Favourable Synthetic Protocol, Upasana Bora, Gopal Bose, Mihir K. Chaudhuri, Siddhartha S. Dhar, Rangam Gopinath, Abu T. Khan and Bhisma K. Patel, *Organic. Letters* (ACS), 2(3), 247-249, **2000**. [I.F.: 5.2]

Conferences/ Workshops/ Symposia Attended

Sl. No.	**Title of Lecture/ Academic Session**	**Title of Conference/ Seminar etc.**	**Organized by**
1.	Chemistry in Indian Knowledge Systems: From Indigenous Foundations to Contemporary relevance (**Invited Speaker)**	13th Lecture of RDC Lecture Series, **15th July, 2026**	R&D Cell and Dept. of Chemistry, Tripura University
2.	From Tradition to Sustainability Science: Lessons from Indian Knowledge Systems for Biodiversity Conservation and Resilient Cities (**Keynote Speaker**)	One Day National Conference on Sustainable Cities & Biodiversity Conservation – An Indian Knowledge System (IKS) Perspective – World Environment Day**, 5th June, 2026**	PM College of Excellence Govt. Madhav College, Ujjain
3.	Enhancing Women's Participation in Higher Education: Lessons from Indian Knowledge Traditions and Future Directions (**Resource Person**)	Refresher Course on "Indian Knowledge Tradition, Ethics and Values: relevance and Implications for Higher Education, **27th April, 2026**	MMTTC, Assam University, Silchar
4.	Colonial Education and Indian Knowledge Systems: Revisiting Knowledge Hierarchies	**Invited Speaker**, **23rd April, 2026**	KKHS Open University, Guwahati
5.	Decoding Indian Knowledge Traditions: Ethics, Values and Academic Relevance **(Resource Person**)	Refresher Course on "Indian Knowledge Tradition, Ethics and Values: relevance and Implications for Higher Education, **22nd April, 2026**	MMTTC, Assam University, Silchar
6.	Colonial Education Policy and its Impact on Indian Scientific Knowledge Systems	**Invited Speaker**, **6th April, 2026**	NIT Nagaland , Dimapur
7.	Career Preparation for College Students: Aligning Skills with Opportunities	**Invited Speaker**, **2nd April, 2026**	Tetso College, Dimapur
8.	Skills, Choices and Opportunities: Career Planning for College Students	**Invited Speaker**, **1st April, 2026**	Patkai Christian College, Chumukedima
9.	From Legacy to Leadership: Gender Mainstreaming and Women's Participation in Indian Science	**Invited Speaker**, **1st April, 2026**	Dept of Agricultural Extension Education, SAS, NU
10.	Indian Knowledge Systems and Women in Science: Legacy and the Way Forward (**Speaker**)	National Science Day 2026, **28th February, 2026**	Krishna Kanta Handiqui State Open University, Guwahati
11.	Planning for a Career in Research:	One day National Level Workshop on	Dept. of Anthropology,

	Strategies for Securing Research Fellowships and Grants (**Plenary Speaker**)	Emerging Areas of Research in Biological and Cultural Anthropology: An Interdisciplinary Approach, **21st March, 2025**	Nagaland University
12.	A Mix of Growth, Challenges and Innovation – My Journey after IIT Guwahati (**Invited Speaker**)	Celebrating 30 Years of Chemistry at IIT Guwahati, **8th March, 2025**	Dept. of Chemistry, IIT Guwahati
13.	Empowering Women in Science: Challenges and Prospects (**Keynote Address**)	IUPAC, Global Women's Breakfast, **11-02-2025**	Kohima Science College in collaboration with ACT
14.	Empowering Women in Research & Guidelines for Writing a Successful Grant Proposal (**Resource Person**)	Webinar organized by the Department of Pharmaceutical Chemistry & Women Empowerment Cell, **9th January, 2025**	Vignan Pharmacy College, Vadlamudi, AP
15.	Current Trends and Challenges of Girls in Society and Career (**Resource Person**)	Webinar organized by the Women Empowerment Cell, **19th August, 2024**	PB Siddhartha College of Arts and Sciences, Vijayawada, AP
16.	Strategies for Identifying Small Molecules with Pharmaceutical Properties (**Invited Speaker**)	International Seminar on "Need and Role of Next Generation Therapeutics", **3rd July, 2024**	Sri Siddhartha Pharmacy College, Nuzvid
17.	Strategies for Enhancing Women Participation in STEM Research **(Invited Lecture)**	Invited talk, **1st July, 2024**	KBN College, Vijayawada, AP
18.	Exploring the Pharmaceutical Potential of Small Bromo-Organic Compounds (**Invited Lecture)**	2-Day International Conference on "New Age Technologies in Therapeutics-2024 (NTT-2024)" **1st-2nd July, 2024**	Department of Chemistry, PBSCAS, Vijayawada
19.	Essential Soft Skills for a Career in Scientific Research (**Invited Speaker**)	Orientation Programme for UG and PG students, **12th September, 2023**	Assam down town University, Guwahati
20.	Breaking Barriers in Science (**Resource Person**)	IUPAC Global Women's Breakfast (GWB) program, **14th Feb 2023**	IIT Guwahati
21.	From Waste to Wealth – Relooking at Some Commonly Synthesized Bromoorganic Compounds for their Pharmaceutical Properties (**Invited)**	41st Annual Conference of the Indian Council of Chemists, **27th – 29th December, 2022**	Indian Council of Chemists, Agra University
22.	Towards greater participation of women in STEM research – Setting the agenda (**Invited Speaker**)	IUPAC Global Women's Breakfast (GWB) program, **16th Feb 2022**	NSC Science College, Nashik in collaboration with ACT
23.	Soft Skills, communication skills and role of personality in organizational behaviour (**Invited Speaker**)	Invited talk, **8th January, 2022**	University of Science and Technology, Meghalaya (USTM)
24.	**Resource person and Judge**	ACT Research Convention 2021 "Appreciation of Research Papers AORP-21", **7th January, 2022**	Association of Chemistry Teachers
25.	**Session Chair**	International Conference on Progress and Challenges in Modern Day Science (PCMDS-2021), 17th & **18th June, 2021**	Department of Chemistry, B. Borooah College, Guwahati-7
26.	Strategies for Scientific Research (**Resource Person**)	STTP on 'Recent Trends in Teaching and Research' **20th March, 2021** (15.3.2020-20.3.2020)	GIMT, Guwahati
27.	Examining the Challenges of Women	National Seminar on Women in	Tripura University

	Scientists (**Invited Speaker**)	Science: the Northeast Chapter, **7th November, 2020**	
28.	Soft Skills (**Resource Person**)	Training cum Workshop on Academic Administration, **14th October 2020** (24.9.2020-22.10.2020)	IQAC, Nagaland University
29.	Introduction to the realms of research (**Speaker)**	Webinar, **7th August, 2020**	Immanuel College, Dimapur
30.	Indian Science Congress (under Chemical Sciences) (**Session Chair)**	Indian Science Congress, **3-7 Jan, 2020**	Indian Science Congress Association
31.	Project Proposal Preparation for Competitive Research Grant (**Invited Lecture)**	Workshop on Research Ethics, Paper Writing & IPR, **14-15 November, 2019**	Biotech Hub, Nagaland University
32.	Sustainable Development – Challenges and Strategies (**Invited Lecture)**	Regional Seminar on Science for Sustainable Development (SSD-2019), **9th January 2019**	Department of Chemistry, B. Borooah College, Guwahati
33.	Funding Agencies and Project Funding (**Invited Lecture)**	DBT Sponsored National Workshop on Newer Frontiers in Bioinformatics and Research Methodology, **13-19th November, 2018**	Bioinformatics Infrastructure Facility (BIF) Centre, NU, Lumami
34.	QATBs – Smart Reagents having Interesting Chemical and Biological Applications, (**Invited Lecture**)	National Conference on Emerging Materials (NCEM-2018), **20-22 March, 2018**	Department of Chemistry, Assam University, Silchar
35.	Green Chemistry Strategies for Sustainable Development (**Paper presentation**)	National Seminar on Climate Change and Sustainable Development with Special Focus on North East India **17-18 May, 2017**	NUTA, Nagaland University
36.	Tribromides As Versatile Reagents For Organic Synthesis (**Invited Lecture**)	National Seminar on Interdisciplinary Research in Chemical Sciences, NSIRCS-2016, **28-29 September, 2016**	Kohima Science College, Jotsoma
37.	Quaternary Ammonium Tribromides – Smart Reagents through a Bio Inspired Pathway (**Paper presentation**)	International Conference on Emerging Trends in Science and Engineering Research, **2-4 December, 2015**	Dept. of Basic Sciences and Humanities, NIT Manipur
38.	Understanding the Nature of Quaternary Ammonium Tribromides Through Spectroscopic Analysis (**Paper presentation**)	UGC-SAP National Seminar on Emerging Trends in Chemical Sciences 2015, **5-6 November, 2015**	Department of Chemistry, Gauhati University
39.	Women and Environment-A look into the issues, problems and opportunities (**Keynote Speaker**)	National Seminar on Women and Environment-A look into the issues, problems and opportunities, **31 March – 1 April, 2013**	D.K. College, Mirza, Guwahati
40.	Peroxometal-Mediated Bromide Oxidation And Reactions Thereof (**Invited Speaker**)	National Seminar on Emerging Trends in Chemical Sciences-2012, **30-31 March, 2012**	Department of Chemistry, Gauhati University
41.	Green Chemistry and its Relevance (**Invited Speaker**)	National Seminar on Material Science **17-18 February, 2012**	Dept. of Chemistry, Patkai Christian College, Dimapur
42.	Ethyltriphenylphosphonium Tribromide – A versatile New Reagent (**Paper presentation**)	18th International Conference on Perspective and Challenges in Chemical and Biological Sciences Innovation Cross Roads, **28-30 January, 2012**	IASST, Guwahati & ISCB, Lucknow
43.	Microwave-Induced Solvent Free Organic Brominations Using Organic Ammonium Tribromide (**Paper presentation**)	18th International Conference on Perspective and Challenges in Chemical and Biological Sciences Innovation Cross Roads, **28-30 January, 2012**	IASST, Guwahati & ISCB, Lucknow
44.	The Changing Challenges of Indian Women Scientists – an Analysis (**Presented a paper**)	A Two-Day National Seminar on "Women in Science and Social Science in North East India", **11th-12th**	Imphal College, Imphal

		April 2011	
45.	Presided as Co-Chairperson.	A Two-Day National Seminar on "Women in Science and Social Science in North East India", **11th-12th April 2011.**	Imphal College, Imphal
46.	Women in Scientific Research- A Study of North East in India (**Presented a paper**)	XXXIV Indian Social Science Congress. Indian Academy of Social Sciences, **27th - 31st December 2010.**	Indian Academy of Social Sciences
47.	Capacity Building of Rural Women Through Scientific Intervention (**Presented a paper**)	12th Annual Conference. North Eastern Economic Association. **10-11 November 2010.**	North Eastern Economic Association
48.	Tetrabutyl Ammonium Tribromide – A Green Reagent (**Paper presentation**)	National Symposium on Advances in Chemistry and Environmental Impact **2-3 November, 2006**	NEHU Shillong
49.	Indo-US Workshop on Green Chemistry (**Participated in the workshop)**	Indo-US Workshop on Green Chemistry, **7-9 January, 2006**	Green Chemistry Institute, American Chemical Society & University of Delhi
50.	Indo-US Workshop on Green Chemistry (**Participated in the workshop)**	Indo-US S&T Forum Workshop on Green Chemistry, **17-20 November, 2003**	Indo-US Science and Technology Forum
51.	Cetyltrimethyl Ammonium Tribromide, $C_{19}H_{42}NBr_3$ (CTATB): A New Efficient and Environmentally Favourable Brominating Agent (**Paper presentation**)	Second National Symposium in Chemistry, **27-29 January, 2000**	IICT, Hyderabad
52.	Bio-resource Exploration and Utilization: Applications in Modern Biology (Participated)	DBT Sponsored National Seminar **9-10 October, 2018**	BIF Centre, Nagaland University

Member of Professional Bodies

1. Life member of the Association of Chemistry Teachers (LM No. 2623)
2. Life member of Chemical Research Society of India (LM 857)
3. Life member of Indian Science Congress Association (L11775)
4. Life member of Indian Council of Chemists (LF 1547)
5. Life member of National Environmental Science Academy (L/M No. 2277)
6. Life member of Save The Environment (L/M No. 59)
7. Fellow member of Scholars Academic and Scientific Society (SAS/ FSASS/254)

Seminars/ Workshops/ Events Organized

- In **2025**, Convenor for the International Conference on Chemistry in Multidisciplinary Research (ICCMR-2025), organized by the Department of Chemistry on 25-27th March, 2025.
- In **2019**, Coordinator for DST-Sponsored Sensitization Workshop on DST Women Scientist Scheme, held at SASRD, Medziphema on 4-5th March, 2019
- In **2018**, Convener for National Seminar on Chemistry in Interdisciplinary Research, NSCIR-2018, held on 9-10th November, 2018.
- In **2013**, was Organizing Secretary of the 3rd Convocation of Nagaland University for which the President of India had been invited as Chief Guest.

- In **2011-2012,** a series of national level workshops were organized through a DST sponsored project. The roving seminars were organized under the theme "Women in Scientific Research – Examining the challenges and identifying their needs".
  - On *23-24 August, 2011* --- Nagaland University; Lumami
  - On *21-22 October, 2011*--- North Eastern Hill University, Shillong
  - On *2-3 March, 2012*--- Gauhati University, Guwahati

New Course(s) Developed

1. Value Added Course - Essential Soft Skills for a Research Career (Approved by the 36th Academic Council, 2023)

2. Value Added Course - Chemistry In Indian Knowledge Systems (Approved by the 41st Academic Council, 2025)

EXTENSION ACTIVITIES

Areas of Interest

- Indian Knowledge Systems (IKS)
- Indigenous Chemical Knowledge of India
- Impact of Educational Policies on Indigenous Knowledge
- NEP-2020 and Revival of Indian Knowledge Systems
- Gender and Science in IKS
- Women Participation in STEM Research
- Essential Soft Skills in Academics and Leadership
- Strategies and Skills for a Sustainable Career in Research

Activity worth mentioning

- **Setting up of Women Technology Park – Incubation Hub –** which is a Capacity Building Centre for Grassroot Women Entrepreneurs. As part of the ongoing activities, a café 'Toti-La Café as well as a market for local produce, 'Toti-La Local Market' have been set up in Lumami Campus.

Papers published

1. Are Indian women scientists victims of the 'glass ceiling'? Upasana Bora Sinha and Dipak Sinha, Curr. Sc., Vol. 100, No. 6, 25th March, 2011. This article has been translated to Hindi: Srote, Vol.5, No.7. July, 2011
2. The Changing Challenges of Indian Women Scientists – An Analysis**,** Upasana Bora Sinha, Women's Writ, (Souvenir of the UGC-Sponsored National Seminar on Women in Science and Social Science in North East India), 14-23, 2011

3. Women Participation In Scientific Research –A Study Of North East India, Upasana Bora Sinha, Proceedings of the XXXIV Indian Social Science Congress, 2011

Books Written

1. **From Bilbari To Paris, Professional Biography Of An IITian**, Upasana Bora Sinha, Longpok

Press, Nagaland, 2004.

2. **Ways to a healthy pregnancy – what every woman should know**, Upasana Bora Sinha, Bani Prokash Pvt. Ltd., Guwahati, 2009.

Chapters in Books on Invitation

3. **Lower Women Participation in Scientific Research – *Strategies for Change*,** in "*Changing World : Challenges and Issues*" being brought out by D.C.B. Girls' College, Jorhat, Assam, 2012.

4. **Status of Education in Nagaland-Examining the Past to Assess the Present**, in "*Education in North East India: Issues and Challenges*", DVS publishers Guwahati, 2013.

Newspaper Articles (on IKS)

S. No. Title of Article

1. 'Lost in Translation': Decline of indigenous languages as a threat to knowledge systems and Why National Education Policy 2020 Matters, *Eastern Mirror*, May 30, **2026**
2. National Science Day 2026: Women in Science-Catalysing Viksit Bharat, *Nagaland Post,* 28th Feb. **2026**
3. The Story of INSV Kaundinya and Why it Matters to Us, *Eastern Mirror*, Jan 19, **2026**
4. Understanding our indigenous knowledge heritage through NEP 2020, *Nagaland Post,* November 27, **2025**
5. Importance of Soft Skills in an AI-Driven World, *Eastern Mirror*, Sep 11, **2025**
6. Acharya Prafulla Chandra Ray: The Father of Indian Chemistry, *Eastern Mirror*, Aug 1, **2025**
7. Linking Traditional Indian Knowledge System with the Modern – the Role of NEP-2020, university newsletter, **2024**
8. Role of NEP in reclaiming our educational heritage, *Nagaland Post,* 23rd Nov. **2023**

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