Curriculum Vitae of Dr. Uma Devi Newar

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Language known: English, Hindi, Assamese, Bodo, Bengali, Nepali

OBJECTIVE

To utilize my chemistry skills in a challenging environment, driving organizational growth and expanding my expertise.

CURRENT POSITION

- **Assistant professor,** Department of Chemistry, Gyanpeeth Degree College, Nikashi, Baksa.

EDUCATIONAL QUALIFICATIONS

- **Senior Project Associate** (18.10.202402.06.2025) at CSIR-Central Drug Research Institute (CSIR-CDRI), Lucknow (Host: **Dr. Ajay Kumar Srivastava**; (Senior Principal Scientist) project- "Therapeutic targeting of neutrophil extracellular traps nets in pulmonary fibrosis" under Mission Covid Suraksha".

- **Ph.D.** (Organic Chemistry, 2025) Supervisor: **Dr. Ram Awatar Maurya**, Principal Scientist, CSIR-NEIST, Jorhat, Assam, India. Thesis title: "Studies on Novel Carbon-Carbon and Carbon-Heteroatom Bond Forming Reactions of α-Azidoketones."
- **M.Sc.** in Organic Chemistry (91.8%), Bodoland University, Kokrajhar, Assam (2015-2017).
- **B.Sc.** in Chemistry (63.12%), B. H. College, Howly, Gauhati University (2012-2015).
- **H.S.** in Science (87.2%), Jawahar Navodaya Vidyalaya (J N V), Kokrajhar, Assam (2010-2012).
- **H.S.L.C** (91.2%), Jawahar Navodaya Vidyalaya (J N V), Kokrajhar, Assam (2010).

AREAS OF INTEREST

Synthetic Organic Chemistry, Visible-light photocatalysis, Vinyl-azide chemistry, Development of biologically active heterocyclic scaffolds, Medicinal chemistry

ACADEMIC AND SCHOLASTIC ACHIEVEMENTS

- University Gold Medallist M.Sc. 2017, Bodoland University
- First Position, Higher Secondary (Science stream)
- **DST-INSPIRE Fellowship, 2018**
- **Qualified, State Level Eligibility Test (SLET), 2021, Assam, India**

WORKING EXPERIENCE

- 1-year experience of Teaching (Assistant professor, Chemistry) at U.N. Academy Degree College, Kokrajhar, Assam (6th July 2017 to 30th June 2018)

SCIENTIFIC AND TECHNICAL SKILLS

- Expertise in organic synthesis, heterocycle construction, and photochemical reactions

- Skilled in interpreting the structure of synthesized compounds using ^{1}H, ^{13}C, 2D-NMR, IR, and HRMS spectroscopy.
- Proficient in operating advanced instrumentation, including FTIR, NMR, and UV-vis spectrophotometry.
- Proficient in chemistry-related software, including Chem Draw, MestReNova, and Origin.
- Mentored and guided dissertation/project students in the laboratory.
- Experienced in scientific writing and publication.

RESEARCH PUBLICATIONS

1. S. Kumar, A. K. Pathak, **U. D Newar**, A. Nayak, M. Bora, H. Sarmah, S. Ghosh, R.A. Maurya, "C(3)–H alkenylation of quinoxalin-2(1*H*)-ones with Hantzsch esters and *in silico* studies". *Org. Biomol. Chem.* **2026**, 24, 921-933. **[IF-2.8]**
2. **U. D. Newar**, S. Kumar, A. Borah, S. Borra, P. Manna, S. Gokulnath, R. A. Maurya, "Access to Isoxazoles *via* Photo-oxygenation of Furan Tethered *α*-Azidoketones". *J. Org. Chem.* **2024**, *89*, 12378–12386. **[IF-3.6]**
3. **U. D. Newar**, D. J. Boruah, A. Bhuyan, A. Nayak, R.A. Maurya, "Visible-light-induced copper-catalyzed oxidative esterification of *α*-azidoketones with diazoacetates: access to *α*-acyloxyacetates". *Org. Biomol. Chem.* **2024**, *22*, 5414–5418. **[IF-2.8]**
4. **U. D. Newar**, D. J. Boruah, R. A. Maurya, "Recent Advances in the Use of *α*-Azidochalcones in Heterocycle Synthesis". *Adv. Synth. Catal*. **2024**, *366*, 2859–2897. **[IF-4.0]**
5. **U. D. Newar**, K. Bora, S. Borra, R. A. Maurya, "DBU mediated coupling of isatin with phenacyl azides: synthesis of 2-oxoindolin-3-ylbenzoates". *New J. Chem.* **2023**. *47*, 2464–2473. **[IF-2.5]**

6. **U. D. Newar**, S. Borra, R. A. Maurya, "Visible-Light 2,4-Dinitrophenol-Mediated Photoannulation of *α*-Azidochalcones into 2,5-Diaryloxazoles". *Org. Lett.* **2022**, *24*, 4454–4458. **[IF-5.0]**
7. K. Bora, **U. D. Newar**, R. A. Maurya, "One-Pot, Five-Component Condensation Reaction of Isatin, Secondary Amines, Malononitrile, Alcohols, and Molecular Oxygen to Access 3-Functionalized 2-Oxindoles". *J. Org. Chem.* **2023**, *88*, 14216−14221. **[IF-3.6]**
8. L. Borkotoky, **U. D. Newar**, B. Sarma, R. A. Maurya, "Redox-Neutral Three-Component Coupling of Phenacyl Azides, Aldehydes, and 1,3-Dicarbonyls to Access *β*-Enaminodiones". *J. Org. Chem.* **2023**, *88*, 5329−5340. **[IF-3.6]**
9. D. J. Boruah, L. Borkotoky, **U. D. Newar**, R. A. Maurya, P. Yuvaraj, "Transition-Metal-Free Synthesis of *N*-Heterocyclic Compounds *via* Multi-Component Reactions". *Asian J. Org. Chem.* **2023**, e202300297. **[IF-2.7]**
10. S. Borra, L. Borkotoky, **U. D. Newar**, B. Das, R. A. Maurya, "Photocatalyst-Free Visible-Light Enabled Synthesis of Substituted Pyrroles from *α*-Keto Vinyl Azides". *Adv. Synth. Catal.* **2020**, *362*, 3364– 3368. **[IF-4.0]**
11. S. Borra, D. Chandrasekhar, **U. D. Newar**, R. A. Maurya, "Access to 2,3-Fused Pyrroles *via* Visible Light Driven Coupling of α-Azidochalcones with 1/2-Naphthols, or 2-Hydroxy-1,4-Naphthoquinone". *J. Org. Chem.* **2019**, *84*, 1042−1052. **[IF-3.6]**
12. S. Borra, L. Borkotoky, **U. D. Newar**, A. Kalwar, B. Das, R. A. Maurya, "Visible light-triggered photo-decomposition of vinyl azides to (*E*)-stilbene derivatives via 1,2-acyl migration". *Org. Biomol. Chem.* **2019**, *17*, 5971−5981. **[IF-2.8]**

CONFERENCES

- Poster presentation at the International Conference on "Emerging Trends in Chemical Sciences" (ETCS-2020), Gauhati University.
- Poster presentation at the International Conference on "Engineering Sciences and Technologies for Environmental Care" (ESTEC-2020), CSIR-NEIST, Jorhat.
- Participation in the Science Communication 101 workshop, 2020, CSIR-NEIST, Jorhat
- Attended Symposium jointly organized by CSIR-NEIST and Royal Society of Chemistry on "Chemical Education in Self Reliance: A Global Perspective" on 25th June 2022, Jorhat.
- Attended the National Conference on "Science for Society, Environment and Sustainability" (SSES-2022), CSIR-NEIST, Jorhat.
- Attended the National Seminar on "Ethnopharmacology for Bioeconomy: The New Paradigm" (EBNP, 2023) CSIR-NEIST, Jorhat.
- 9th International Conference on "Current Trends in Drug Discovery Research" (CTDDR-2025), CSIR-CDRI, Lucknow, India.
- Participated in one week Faculty Development Programme on "Communication and Presentation Skills" organized by IQAC and R&D Cell, Gyanpeeth Degree College, Assam.
- Attended two days RUSA 2.0/PM-USHA Assam Sponsored Teacher's Training Programme on Mentoring Cutting Edge Research in the Light of NEP-2020, organized by Kokrajhar University on 9th-10th October, 2025.
- Attended one day Faculty Development Programme (FDP) on single used plastics cum industrial Exposure on Plastics Technology, organized by CIPET: CSTS Guwahati on 28th November 2025.

BOOK CHAPTERS

1. S. Brahma[1], S. F. Basumatary[1], B. Basumatary[1], **U. D. Newar**[2], and S. Basumatary[1]*

"The Production of Biodiesel and Related Fuel Additives" (Chapter 2, Production of Biodiesel from Soyabean oil), volume 6, page no. 29-72, Bentham Science Publishers Ltd., **2024**, **ISBN:978-981-5196-74-0.**

2. **U. D. Newar**, "Bio-Based Technology: Contemporary Trends" (Chapter 2, Extraction, Physical, and Chemical Treatments for the Modification of Biofiber Surface), LAP Lambert Academic Publishing **2024**, **ISBN:978-620-8-06508-9**, page no. 39-91.

3. Ranjita Brahma, Angita Sarkar, **Uma Devi Newar** and Sanjay Basumatary, "RESONANCE- A collection of Research-Based Articles of Basic Sciences" (Chapter 2, Development of waste potato peel derived activated carbon modified montmorillonite (MMT/PAC) biochar for efficient removal of methylene blue dye. Published by Tinsukia College, **2024**, **ISBN: 978-81-19322-77-0**.

4. **Uma Devi Newar** and Suraj Sharma "Trends and Issues in Pure and Applied Sciences" Chapter 5- Continuous Flow Chemistry towards the Synthesis of Heterocycles. Published by B. Borooah College Teachers Unit, Global Net Publication, **2025, ISBN:978-93-6761-064-0.**

5. Dr. Satheesh Borra and **Dr. Uma Devi Newar** "Vigyanprabha: Exploring New Horizons in Science and Technology" Chapter 13- Continuous Flow Chemistry: Principles, Advances, and Applications" Published by Vigyan Sora & Research and Publication Cell, B. B. Kishan College, Jalah, **2026, ISBN: 978-81-980803-8-7 2026,** page no. 150-162.