DR. NILOY DAS

Assistant Professor (W.B.E.S.)
Chemistry
Email: niloy.prof@gmail.com

Specialization: Organic Chemistry

Major Interest Areas: Stereochemistry, Spectroscopy, Photochemistry, Bio-organic & Medicinal Chemistry, Organic Synthesis.

Academic Credentials:

- *Assistant Professor (Jan.2010-Till date): Higher Education Department, Government of West Bengal*
- *Ph.D. (Nov.2006 -Jan.2013): Jadavpur University, India*
- *M.Sc. (2004-2006): Jadavpur University* (1st class 2nd Position in M.Sc.)

Teaching Experience

Undergraduate: 8+ years and **Postgraduate:** 4+ years

- *P. R. Thakur Govt. College* – (01.03.2019 – Till date)
- *Durgapur Government College* – (01.04.2014 – 28.02.2019)
- *A. B. N. Seal College, Cooch Behar* – (04.01.2010 – 31.03.2014)

Courses taken:

As per University: UG (1+ 1+ 1) system; PG (Semester system); UG CBCS system

- Fundamental properties of organic molecules
- Stereochemistry
- Spectroscopy
- Reaction Mechanisms
- Retrosynthetic analysis
- Pericyclic Reactions
- Heterocyclic Chemistry
- Advanced Organic Synthesis
- Carbohydrate Chemistry
- Protein Chemistry

Research Interest:

- Qualitative studies and quantitative estimations of phytochemicals from different medicinal plants and their antioxidant, larvicidal and antimicrobial studies.
- Green synthesis of Nano particles (Np), characterizations and applications.

Research Grants Received:

- 2019-2020 (Gobeyshonai Bangla)-DSTBT, Govt. of West Bengal (4.2 lakhs) [Sanctioned Memo No. 1949(Sanc.)/ST/P/S&T/15G-14/2019 dt. 26/02/2020 and 96(Sanc.)/STBT-11012(25)/1/2019-ST SEC Dt. 28.04.2022]
  Title of the Project: PHYTOCHEMICAL SCREENING AND STUDIES ON FERRIC REDUCINGANTIOXIDANT POWER (FRAP), MOSQUITO LARVICIDAL AND ANTIBACTERIAL ACTIVITIES OF MEDICINAL PLANT EXTRACTS

Research Experience:

- Nov., 2006 to Jan., 2013: Ph.D. at the Department of Chemistry, Jadavpur University. Supervisor: Prof. U. C. Halder; Major Topic of Research: Isolation, purification and characterization of plant proteases.

List of Publications:

1. Das, N. (2021), A review on eco-friendly synthesis of silver nanoparticles from plants of five different families and its application in medicinal field, JASR, 12(2), 01-14.
2. Maity, S., Pal, S., Sardar, S., Sepay, N., Parvej, H., Begum, S., Dalui, R., Das, N., Pradhan, A., Halder, U.C. (2018), Inhibition of amyloid fibril formation of β-lactoglobulin by natural and synthetic curcuminoids, NJC, 42, 19260-19271
3. Das, N., Maity, S., Chakraborty, J., Pal, S., Sardar, S., Halder, U.C. (2018), Purification and characterization of a gelatinolytic serine protease from the seeds of ash gourd *Benincasa hispida* (Thunb.) Cogn.,IJBB, 55(2), 77-87.
4. Sardar, S., Maity, S., Pal, S., Parvej, H.,Das, N., Sepay, N., Sarkar, M.,Halder, U.C. (2016), Facile synthesis and characterization of beta lactoglobulin–copper nanocomposites having antibacterial applications, RSC Adv., 6, 85340-85346
5. Pal, S., Maity, S., Sardar, S., ,Parvej, H.,Das, N., Chakraborty, J., Halder, U.C. (2016), Curcumin inhibits the Al(III) and Zn(II) induced amyloid fibrillation of β-lactoglobulin in vitro, RSC Adv., 6, 111299-111307
6. Halder,U.C., Chakraborty, J., Das, N., Bose, N.(2012), Tryptophan dynamics in the exploration of micro-conformational changes of refolded β-lactoglobulin after thermal exposure: A steady state and time-resolved fluorescence approach. Journal of Photochemistry and Photobiology B: Biology, 109, 50
7. Chakraborty, J., Das, N., Halder,U.C.(2011), Unfolding diminishes fluorescence resonance energy transfer (FRET) of lysine modified beta lactoglobulin: Relevance towards anti HIV binding. Journal of Photochemistry and Photobiology B: Biology, 102, 1
8. Chakraborty, J., Das, N., Das, K.P., Halder,U.C.(2009), Loss of structural integrity and hydrophobic ligand binding capacity of acetylated and succinylated bovine β-lactoglobulin, International Dairy Journal,19, 43

Scientific Journals in College

1. Das, N. (2013), Plant serine protease: Purification and Physicochemical Characterization. BN Seal J. Sci., Vol. V, 35
2. Das, N., Bhar, S. (2010), Effect of phosphorus tribromide on cyclopropane ring in cyclopropanochromanol : A ring expansion study. BN Seal J. Sci., Vol. III, 24
3. Das, N., Bhar, S. (2010), Insertion of a methylene group in a chromone system. BN Seal J. Sci., Vol. III, 38

List of Honours/Awards:

- Received a "Certificate of excellence in reviewing" in recognition of the contribution made to the quality of the journal in the year 2021 by Indian Journal of Science and Technology (IJST).
- Received senior research fellowship (SRF) of CSIR, INDIA, 2008-2009.
- Received Junior Research Fellowship (JRF) of CSIR, INDIA, 2006-2008.
- Qualified National Eligibility Test (NET) in Chemical Science
- Qualified all INDIA Graduate Aptitude Test for Engineering (GATE) with 489 score (All India rank 79) in Chemistry, 2006
- **Prof. Bidyut Kamal Bhattacharyya Memorial Silver Medal (By Jadavpur University)** for securing the highest total marks in Organic Chemistry Paper (Theory & Practical) at the M.Sc. Part-I & Final Examination, 2006.

Membership in scientific bodies:

- Life member of Science Congress

Editor/or Editorial Board Member/Reviewer:

- Served as reviewer of IJST (Indian Journal of Science and Technology)

Lecture Presentations:

- National level e-poster competition in COVID-19 lockdown 'March towards better future with clean environment" on 5th – 12th June, 2020 jointly organized by IQAC and PG Department of Conservation Biology of Durgapur Govt. College and Durgapur Wildlife Information & Nature Guide Society (WINGS) and presented e-poster on "Covid-19 Lockdown: A blessing for environment".

- National seminar on "Modern Era of Bioscience: Lab to Land" on 05th December, 2019 organized by Department of Conservation Biology and Department of Zoology of Durgapur Govt. College and presented paper entitled "Phytochemical analysis and green synthesis of silver nanoparticles from leaves of *Ziziphus mauritiana"*.

- I had delivered an invited lecture on "FOOD ADULTERATION: THREATENING TO HUMAN LIFE" on the Orientation Programme of Department of Sociology on 04.09.2019 at P. R. Thakur Govt. College.

- DSTBT, Govt. of West Bengal sponsored National seminar on "Contemporary Era of Sciences: Biological and Chemical Interface" on 26-27th March, 2019 organized by Durgapur Govt. College and presented paper entitled "Quantitative estimation of polyphenols and iron reducing antioxidant activity studies from sepals of *Spathodea campanulata*"

- National seminar on "Interface between Chemistry and Biology (IBCB-2017)"on 01.01.2017 at Department of Chemistry, School of Science, Adamas University and presented a paper entitled "Quantitative estimation of flavonoids and antioxidant activity studies from leaves of *Ziziphus mauritiana*."

- UGC sponsored National Level Seminar on "Enthralling Facets of Molecular Manifestation in Chemical Sciences" during September 15 & 16, 2016 at Department of Chemistry, Bidhannagar Govt. College, Kol-700064 and presented a paper entitled "Phytochemical analysis and eco-friendly synthesis of silver nanoparticles from medicinal plant of Durgapur region".

- I had delivered an invited lecture on "Social Awareness through Activities of National Service Scheme: Plantation of Medicinal Plants" on 24th February, 2016 at the Special Camp organized by National Service Scheme (NSS) unit of Durgapur Govt. College.

- National seminar on "Recent trends in applied sciences and humanities on recent trends in applied sciences and humanities" during February 19-20, 2016 at Department of Applied Science and HU, DIATM, Durgapur-12 and presented a paper entitled "Phytochemical Screening of Fenugreek Seeds and Green Synthesis of Silver Nanoparticles from Barokhervi Leaves"

- UGC sponsored National Level Seminar on "Design, Synthesis, Interactions, Chemical and Biochemical Activities of Different Functional Molecules" during February 04-06, 2016 at Burdwan University and presented a paper entitled "Qualitative analysis and quantitative estimation of phytochemicals from *Euphorbia hirta* plant and biosynthesis of silver nanoparticles".

- One day State level Seminar on Recent Trends in Chemical Sciences, organized by Department of Chemistry, Bankura Sammilani College, Bankura, held on 16th July, 2015 and presented a paper entitled "Bioactivity Studies and Determination of Kinetic Parameters of a Protein Purified from *Benincasa hispida*".

- National conference on “Chemistry for Better Tomorrow – Current Trends and Opportunity”(CBT-2014)”,during December 2-3, 2014, at Sidho–Kanho-Birsha University, Purulia and presented a paper entitled “Kinetic and Spectral Studies on Serine Protease Purified from *Benincasa hispida*”