

Dr. Jewel Hossain



PERSONAL INFORMATION:

Name: Dr. Jewel Hossain
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jewel_agartala@rediffmail.com
Academic Qualifications: M.Sc., Ph.D.
Present Designation: Asst. Professor, Department of Chemistry
Kabi Nazrul Mahavidyalaya, Sonamura

❖ ACADEMIC QUALIFICATIONS:

| Degree | Institution /Subject | University | Year |
|--------|----------------------|--------------------|------|
| Ph.D. | Chemistry | Tripura University | 2017 |
| NET | Chemical Science | UGC | 2005 |
| M.Sc. | Organic Chemistry | Tripura University | 2001 |
| B.Sc. | M.B.B.College | Tripura University | 1999 |

❖ **Ph.D. Thesis Title** “*Studies on the Synthesis of Macro-heterocycles from Sugar Derivatives by Intra-molecular 1, 3-Dipolar Cycloaddition*” under Supervisor of Prof (Dr.). Swapan Majumdar, Department of Chemistry Tripura University.

❖ Teaching & Research Experience: 13 years

| Designation | College/ University | Date of joining | |
|---------------------|--|-----------------------------|-----------------------------|
| | | From | To |
| Assistant Professor | K.N.M. Sonamura | 14 th Nov. 2008 | Till date |
| Assistant Professor | N.S.M. Udaipur | 21 st April 2008 | 13 th Nov. 2008 |
| JRF(CSIR) | IICB, Kolkata, West-Bengal under Supervisor of Dr. Asish Kr. Banerjee, Department of Medical Chemistry | April 2006 | 17 th April 2008 |
| Research Scholar | Tripura University under Supervisor of Dr. R. K. Nath, Department of Chemistry | October 2005 | March 2006 |

❖ **Fields of specialization under the subject /discipline:** Synthetic Organic Chemistry

❖ **Orientation Course/Refresher Course attended:**

| Name of the Course | Place | Duration | Sponsoring Agency |
|--------------------|---|-----------------------------|-------------------|
| Orientation | Academic Staff College, Jadavpur University, Kolkata | 14/02/2011 to 14/03/2011 | UGC |

❖ **Research interests:**

Synthesis of biologically active natural products, medicinal chemistry, Heterocyclic and carbohydrate chemistry and development of novel synthetic methodologies.

❖ **Research Projects:**

i) **Minor Research Project Completed:** one

Synthesis of higher amino sugar derivatives by intra-molecular 1, 3-dipolar nitrile oxide cycloaddition of Rs. 1.10 lac funded by UGC, North Eastern Regional Office, Guwahati-781006, INDIA. **Year:** May 2011- December 2012,

❖ **List of selected publications:**

a) **Papers published in journals:**

| Sl.No. | Title of the paper | Journal, year, vol., pages | ISSN & Impact Factor |
|--------|---|---|----------------------|
| 1. | Synthesis of macrocyclic conjugated ψ -disaccharides via nitrile oxide cycloaddition: alkenyl chain length controlled unprecedented formation of di-oxaheterocycles from monosaccharides. Jewel Hossain , Ramalingam Natarajan, Ashish K Banerjee and Swapan Majumdar; | <i>Tetrahedron</i> 73 (2017) 3139-3146 | 0040-4020 & 2.377 |
| 2. | Phthalate tethered strategy: carbohydrate nitrile oxide cycloaddition to 12-15 member chiral macrocycles with alkenyl chain length controlled orientation of bridged isoxazolines. Swapan Majumdar, Jewel Hossain , Ramalingam Natarajan, Ashish K. Banerjee and Dilip K. Maiti. | <i>RSC Adv.</i> 2015, 5, 106289-106293. | 2046-2069 & 3.289 |
| 3. | Activation of 1, 3-dioxolane by protic ionic liquid in aqueous media: a green strategy for the selective hydrolytic cleavage of acetals and ketals. Swapan Majumdar, Mithun Chakraborty, Dilip K. Maiti, Sandip Chowdhury and Jewel Hossain | <i>RSC Adv.</i> 2014, 4, 16497-16502. | 2046-2069 & 3.84 |
| 4. | Formylation of amines catalysed by protic ionic liquids under solvent-free condition Swapan Majumdar, Jhinuk De, Jewel Hossain , Ajoy Basak; | <i>Tetrahedron Lett.</i> 2013, 54, 262-266. | 0040-4039 & 2.379 |
| 5. | Spectral Studies on the Interaction of Cationic Dye / Surfactants with <i>Klebsiella K28</i> Capsular Polysaccharide. Dasgupta, S.; Nath, R. K.; Biswas, S.; Hossain, J. ; Mitra, A. and Panda, A. K. | <i>Colloids & Surfaces A</i> , 2007, 302 (17), 17-23. | 0927-7757 & 1.65 |

b) Articles/Chapters published in Book:

- i) Chapter-02 in “Natural Products’ Chemistry” published by Write and Print Publications, New Delhi-110015, **2017, ISBN: 978-93-86283-54-2.**
- ii) Proceedings of National seminar on Recent Trend of Research in Chemistry-A New Horizon of Hopes, 8-9th August, **2015**; Department of Chemistry, Women’s College, **page: 44-53, ISBN:978-93-81631-36-2.**

c) Papers presented in National and International Seminars/Symposium

| SL. No. | Title of the paper | Seminars/ Conferences / Workshop / Symposium | Date & Duration | Organized by |
|---------|---|--|-----------------------------------|---|
| 1. | Highly diastereo- and regioselective synthesis of chiral macrolide fused heterocycle via Intramolecular nitrile oxide cycloaddition | National seminar on Recent Advances in Natural Products Chemistry for Drug Discovery | 28-29th November, 2015 | Netaji Subhas Mahavidyalaya, Udaipur, Tripura |
| 2. | Synthesis of Macro-heterocycle by intramolecular alkenyl-carbohydrate nitrile oxide cycloaddition using phthaloyl template. | National seminar on Recent Trend of Research in Chemistry-A New Horizon of Hopes | 8-9th August, 2015 | Department of Chemistry, Women’s College, Agartala, Tripura |
| 3. | Formylation of amines catalyzed by protic ionic liquids under solvent free condition. | National seminar on Green Chemistry and Nanoscience: theory and applications | 20-21st July 2012 | Department of Chemistry, M. B. B. College, Tripura |
| 4. | Acidic Ionic liquid Promoted catalytic approach of N-Formylation of amine | Fifteenth National conference on Surfactants, Emulsions and Biocolloids | 27-29 th December 2011 | Department of Chemistry, Tripura University, Suryamaninagar, Tripura |
| 5. | Synthesis of medium sized macrocyclic lactones from sugar derivatives by intramolecular 1,3-dipolar nitrile oxide cycloaddition | International Conference on Emerging Areas of Chemistry | 12-14th January 2011 | Department of Chemistry, Tripura University, Suryamaninagar, Tripura |
| 6. | Synthesis of chiral macrocyclic lactone by the Intramolecular nitrile oxide cycloaddition (INOC) of phthaloyl tether O-allyl carbohydrate oxime (This was selected as best poster award among three posters) | State level Seminar on Frontier Areas of Chemistry | 3rd September 2010 | Tripura University in association with Tripura Chemical Society and Tripura State Council for Science & Technology, Government of Tripura |

d) Participation in Regional / National and International Seminars/ Conferences / Workshop / Symposium

| SL. No. | Seminars/ Conferences / Workshop / Symposium | Date & Duration | Organized by |
|----------------|---|--|---|
| 1. | International Seminar on “ Patriarchy and Gender in Colonial and Post-Colonial South Asia” | 16-17 January, 2015, | Kabi Nazrul Mahavidyalaya, Sonamura, Sepahijala, Tripura. |
| 2. | Workshop on “Development of the Deprived Groups with Special Reference to Women” | 15 th March, 2014 | Kabi Nazrul Mahavidyalaya, Sonamura, Sepahijala, Tripura. |
| 3. | “National conference on Recent Trends of Research in Physics”, University, Tripura. | 3 rd & 4 th February, 2012 | Department of Physics & Alumino Association of Physics, Tripura University, |
| 4. | State Level Seminar on “Right to Development: Issues and Challenges in North –East India” , | 20-21 September, 2011, | Kabi Nazrul Mahavidyalaya, Sonamura, Sepahijala, Tripura. |
| 5. | “Inter University Accelerator Centre (IUAC) Acquaintance Program” | 3 rd October, 2010 | Department of Physics, Tripura University & IUAC, New Delhi |
| 6. | “State Institute of Public Administration and Rural Development” , | 26-28 th August 2010 | Implementation of Plan Training Scheme at SIPARD, Agartala. |
| 7. | A Two day State level Seminar on “Emerging areas & opportunities for studies & research in Science” , | 13-14 th August 2010, | DHE, Govt. Of Tripura in collaboration with Womens College, |
| 8. | National Seminar on “Identities in North East India with special reference to Tripura” , | 17-18 July, 2010 | Kabi Nazrul Mahavidyalaya, Sonamura, Sepahijala, Tripura. |
| 9. | Workshop on Syllabus preparation for Undergraduate Courses (TDC & TDCH), | 21 st March 2009 | Tripura University |
| 10. | National Symposium on Recent Challenges in Chemistry | 29-31 st March 2001 | Department of Chemistry, Tripura University, Suryamaninagar. |
| 11. | National Seminar on Preventive strategies against chemical hazards, | 12-14 th December 1998 | M. B. B. College, Agartala, Tripura |

❖ **Awards and fellowships:**

- i) Best Poster Award (among three Posters), State level Seminar on Frontier Areas of Chemistry 3rd September 2010, Tripura University in association with Tripura Chemical Society and Tripura State Council for Science & Technology, Government of Tripura
- ii) Junior Research Fellowship (JRF) from the CSIR, New Delhi, India (2005)

❖ **Other Notable Activities:**

State level committee Member for monitoring the Madrasas (both Grant-in-Aid & under centrally scheme) “Scheme for Providing Education in Madrasa/Minorities (SPEMM)” in the state.Govt. of Tripura.

❖ **Topics Taught :**

Organic chemistry:

Structure, Reactivity in Organic Molecules, Organic reaction Mechanism, Synthetic application of active methylene compounds and Grignard Reagents, Aromaticity, Stereochemistry, Heterocyclic compounds, carbohydrates, Amino Acids, Peptides& Proteins, Rearrangement reactions, Pericyclic& Photochemical reactions, Dyes, Drugs & Pesticides, Industrial & Green Chemistry.

Physical Chemistry:

Gaseous States, Real gases, Solid State, Liquid State, Solution Properties, Thermodynamics, Chemical Kinetics, Electrical conduction through solution, Chemical & Ionic Equilibrium, Surface Chemistry, Atomic & Molecular spectra, Macromolecules.