Dr. Manisha Yadav

Ph.D. Physics: 2023

Thesis title: Study of Reaction Mechanisms for the Formation of Complex Interstellar Molecules in the Interstellar Space.

University of Lucknow, Lucknow, India

M.Sc. Physics: 2012

Specialization: Condensed Matter Physics
Dayanand Anglo-Vedic Degree College, Chhatrapati Shahu Ji Maharaj University, Kanpur,

B.Sc. Physics & Mathematics: 2010

Brahmanand Degree College, Chhatrapati Shahu Ji Maharaj University, Kanpur

Research Associate *in the Department of Mathematics & Astronomy, University of Lucknow, 2025.*

Publications

- ***Probing proton transfer reactions of nccnh+ in the interstellar medium: a quantum computational approach.*** Biochem. Cell. Arch. Vol. 25, No.1,pp. 0000-0000, 2025. *https://doi.org/10.51470/bca.2025.25.1.0000*
- **ab-Initio and DFT study of HCN: Role of temperature for the formation of HCN molecule in the Interstellar Medium**. Journal of Molecular Structure, 1248,131460,2022 https://doi.org/10.1016/j.molstruc.2021.131460.
- ***Quantum chemical study on the formation of isopropyl cyanide and its linear isomer in the interstellar medium***. *International journal of Astrobiology, 20, 2-72, 2021.https://doi.org/10.1017/S147355042000035X*
- ***Formation of Aminomethanol in Ammonia-water Interstellar Ice***. *Monthly Notices of the Royal Astronomical Society, 506, 2059–2065, 2021. https://doi.org/10.1093/mnras/stab1778*
- ***Theoretical study of possible reaction mechanism for the formation of carbodiimide in interstellar medium (ISM) and polarizabilities of carbodiimide***. *Origins of Life and Evolutions of Biospheres (OLEB), 49(1), 89-103, 2019. https://doi.org/10.1007/s11084-019-09577-6*

- ***Theoretical study of formation of Propanal (CH3CH2CHO) in interstellar medium.*** Proceeding of International Symposium on Advances in functional and Biological Materials (ISAFBM-2019).

Poster presentations-06

- **International-03**
- **National-03**
-

Workshops/Symposium/Seminar: 11

- **International-05**
- **National-06**

UDEEPAN AWARD for best Research Publications by University of Lucknow, for papers entitled:

- Theoretical study of possible reaction mechanism for the formation of carbodiimide in interstellar medium (ISM) and polarizabilities of carbodiimide.
- Formation of Aminomethanol in Ammonia-water Interstellar Ice.
- ab-initio and DFT study of HCN: Role of temperature for the formation of HCN molecule in the Interstellar Medium.

Extra-Curricular Activities

- Participation and assisting the NSS activities in Social Service activities organized by NSS, University of Lucknow, Lucknow.