

Suman Kumar Mondal



Institute Address: Indian
Centre for Space Physics,
43, Chalantika, Garia Sta-
tion Road, Kolkata-700084

Curriculum vitae

Personal and contact details:

Name - Suman Kumar Mondal

Permanent address: Vill- South Dearock, P.O- Kuleswar Dist-South
24 Parganas, P.S- Diamond Harbour, Pin-743375

Date of Birth-10/12/1991

Blood Group - O⁺

Citizenship-Indian

Gender-Male

Gmail: sumanphys39@gmail.com

Contact No.(Mob.) +91 9836846812

Present affiliation- Senior research fellow at Indian Centre for Space
Physics.

Research Interest

(i) Synthesis of complex organic molecules (COMs) in star-forming
regions,(ii) Millimeter and sub-millimeter observation (v) Gas-grain
Chemical modeling, (iv) Prebiotic Chemistry.

Education and Qualifications

1. **Madhyamik (M.P)**- From Ramakrishna Mission Sikshamandir, Sarisha (Board-WBBSE)
-completed in 2007 – First division.
2. **Higher Secondary (H.S)**- From Fatepur Sreenath Institution (Board-WBCHSE) -completed
in 2009 - First division.
3. **Bachelor of Science (B.Sc)** - From Asutosh College (Culcatta University)-PHYSICS
HONOURS -completed in 2012 - Second class.
4. **Master of Science (M.Sc)**-Ramakrishna Mission Residential College (Culcatta Univer-
sity) -completed in 2014 -First class.

5. **Bachelor of Education (B.Ed)**-From Happy College of Education (Maharshi Dayanand University) -completed in 2015 -First class.
6. At present (from 15th January 2018) continuing a **PhD** from **Indian Centre for Space Physics** under the Supervision of **Dr. Ankan Das** and **Prof. Sandip K. Chakrabarti**.

Additional qualifications and awards:

1. National Eligibility Test(**NET**) qualified in 2017.
2. Joint Entrance Screening Test(**JEST**) qualified in 2016.
3. Graduate Aptitude Test in Engineering(**GATE**) qualified in 2016.
4. State Eligibility Test (**SET**) qualified in 2018.

Computer Skill:

Linux, Windows

Language known- Fortran

Plotting tools: Xmgrace, gnu plot

Software known- CASSIS, CASA

Seminar and workshop attended:

1. Attended the conference 'Exploring the Universe: Near Earth Space Science to Extra- Galactic Astronomy' from November 14 th-17th November, 2018 at S.N.B.N.C.B.S, Kolkata, India. Oral presentation: **Complex Organic Molecules In Hot Core (10 min)**
2. COSPAR 2021 virtual conference. Oral presentation: **A combined observational and theoretical study to understand the evolution of nitrogen -bearing species in high-mass star-forming regions.**
3. Poster presentation in International Conference on Infrared Astronomy and Astrophysical Dust 22 th- 25th october, 2019 at IUCAA, Pune, INDIA Title: **Extracting physical condition from the observation of hot molecular core, G31**
4. 44th COSPAR Scientific Assembly, 16-24 July 2022, Athens, Greece Oral presentation: **Aldehydes and their corresponding alcohols in the Interstellar Medium.**

Publications in peer reviewed journals:

1. **Is there any linkage between interstellar aldehyde and alcohol?** Suman Kumar Mondal, Prasanta Gorai, Milan Sil, Rana Ghosh, Emmanuel E.Etim, Sandip K Chakrabarti, Takashi Shimonish ,& Ankan Das, 2021, The Astrophysical Journal, 922, 194
2. **Identification of Prebiotic Molecules Containing Peptide-like Bond in a Hot Molecular Core, G10.47+0.03**, Prasanta Gorai, Bratati Bhat, Milan Sil, Suman K. Mondal, Rana Ghosh, Sandip K. Chakrabarti, and Ankan Das, 2019, The Astrophysical Journal,895(2),86

3. **Identification of Methyl Isocyanate and Other Complex Organic Molecules in a Hot Molecular Core, G31.41+0.31**, Gorai, P., Das, A., Shimonishi, T., Sahu, D., Mondal, S.K., Bhat, B., & Chakrabarti, S.K., 2021, ApJ, 907, 108.
4. **Radiative transfer modeling of the observed line profiles in G31.41+0.31**, Bhat, B., Gorai, P., Mondal, S.K., Chakrabarti, S. K., & Das, A., 2021, ASR, 69, 415-437.
5. **Chemical complexity of phosphorous bearing species in various regions of the Interstellar medium**, Milan Sil, Satyam Srivastav, Bratati Bhat, Suman Kumar Mondal, Prasanta Gorai, Rana Ghosh, Takashi Shimonishi, Sandip K. Chakrabarti, Bhalamurugan Sivaraman, Amit Pathak, Naoki Nakatani, Kenji Furuya, Ankan Das, The Astronomical Journal, 2021, 162, 119.
6. **Exploring the Possibility of Forming Phenol and Propargyl Ether in the ISM**, Rana Ghosh, Milan Sil, Prasanta Gorai, Bhalamurugan Sivaraman, Sandip K. Chakrabarti and Ankan Das, Research in Astronomy and Astrophysics, 22(6), 065021.
7. **Investigating the hot molecular core, G10.47+0.03, a pit of nitrogen-bearing complex organic molecules**, Suman Kumar Mondal, Wasim Iqbal, Prasanta Gorai, Bratati Bhat, Valentine Wakelam, Ankan Das, Accepted in Astronomy & Astrophysics, <https://arxiv.org/abs/2211.03066> .
8. **Understanding the evolutionary sequence of low-mass star-forming regions with complex organic molecules**, Bratati Bhat, Rumela Kar, Rana Ghosh, Suman Kumar Mondal, Prasanta Gorai, & Ankan Das communicated in ApJ.