

Rana Ghosh



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

Curriculum vitae

Personal and contact details:

Name - Rana Ghosh

Permanent address: Vill+P.O- Rasa, Dist-Birbhum, P.S- Kankartala,
Pin-731125

Date of Birth-05/04/1993

Blood Group - B⁺

Citizenship-India

Gender-Male

Gmail: ghoshrana311@gmail.com

Contact No.(Mob.) +91 9547804100

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

Research Interest

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

Education and Qualifications

1. **Madhyamik (M.P)**- From Rasa Rajlakshmi High School (Board-WBBSE) -completed in 2008 – First division.
2. **Higher Secondary (H.S)**- From Nakraconda High School (Board-WBCHSE) -completed in 2010 - First division.
3. **Bachelor of Science (B.Sc)** - From Krishna Chandra College (Burdwan University)- PHYSICS HONOURS -completed in 2013 - Second class.
4. **Master of Science (M.Sc)**-From Guru Ghasidas Vishwavidyalaya -completed in 2016 -First class.

5. **Bachelor of Education (B.Ed)**-From Rabindra Nazrul Smriti B.Ed Educational Institute (Burdwan University) -completed in 2018 -Letter Grade S.
6. At present (from 1st September 2018) continuing a **Project Work** 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 2019.
2. Joint Entrance Screening Test(**JEST**) qualified in 2018.
3. Graduate Aptitude Test in Engineering(**GATE**) qualified in 2018.
4. **Merit-cum-Means Scholarship** during 2010-2013.
5. **Swami Vivekananda Merit-cum-Means Scholarship** during 2020-2024.
6. Worked as a **Assistant Researcher** within the period of 18/01/2021 to 31/07/2021 at **National Synchrotron Radiation Research Center(NSRRC)**, affiliated by Department of Medical Research, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, **Taiwan**.

Computer Skill:

Linux, Windows

Language known- Fortran

Plotting tools: Xmgrace, gnu plot

Software known- GAUSSIAN 09, CASSIS, CASA (Basics) ORIGIN.

Seminar and workshop attended:

1. Attended an international conference "Exploring the Universe: Near Earth Space Science to Extra-Galactic Astronomy" 14th - 17th November, 2018, at S N Bose National Centre for Basic Sciences, **India**.

Publications in peer reviewed journals:

1. **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), p.86. **Impact Factor: 5.745**) .
2. **Detectable Interstellar Anions: Examining the Key Factors**, Emmanuel Etim, Prasanta Gorai, **Rana Ghosh**, Ankan Das, (**Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**, 230, p.118011. **Impact Factor: 3.232**)
3. **Effect of Binding Energies on The Encounter Desorption**, Ankan Das, Milan Sil, **Rana Ghosh**, Prasanta Gorai, Soutan Adak, Subhankar Samanta, Sandip K. Chakrabarti, (**Frontiers in Astronomy and Space Sciences**, 2021, 8,78 **Impact Factor: 4.055**) .
4. **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**, **Impact Factor: 6.263**).

5. **Vacuum-Ultraviolet Absorption Spectra of Icy C₂H₄ at 13–60 K**, Jen-lu Lo, **Rana Ghosh**, Hsiao-Chi Lu, Wei-Hsiu Hung, and Bing-Ming Cheng, (**Frontiers in Astronomy and Space Sciences**, 2021, **8:700641 Impact Factor: 4.055**).
6. **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 Shimonishi, Naoki Nakatani, Kenji Furuya, Jonathan C. Tan, Ankan Das, (**The Astrophysical Journal**, **Impact Factor: 5.874**).
7. **Phenol in High-mass Star-forming Regions**, **Rana Ghosh**, Milan Sil, Suman Kumar Mondal, Prasanta Gorai, Dipen Sahu, Rahul Kumar Kushwaha, Bhalamurugan Sivaraman, and Ankan Das, (**Research in Astronomy and Astrophysics**, 2022, **22:065021 Impact Factor: 1.889**).
8. **Sulfur Fractionation in Low-Mass Star-Forming Regions: Prestellar Core to Protostars**, **Rana Ghosh**, Prasanta Gorai, Suman Kumar Mondal, and Ankan Das (**In Preparation**).