

Yichen Sun (孙逸辰)

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Personal Profile

I am a Ph.D. student at the School of Astronomy & Space Science, Nanjing University, under the guidance of Prof. Zhi-Yu Zhang. I am currently working on the Galactic Carbon, Oxygen, and Nitrogen isotopic abundance ratios and their determination with non-LTE effects, and also working on the astrochemistry under different carbon-to-oxygen abundance ratios and dust-to-gas ratios.

Education

Bachelor's degree in Astronomy

June 2021

School of Astronomy & Space Science, Nanjing University 2017.9.1-2021.6.30

Ph.D. student in Astrophysics

School of Astronomy & Space Science, Nanjing University 2021.9.1-present

Research Publications

As the first-author (1):

- ◆ Sun, Y.-C., Zhang, Z.-Y., Wang, J., et al. "An improved method to measure $^{12}\text{C}/^{13}\text{C}$ and $^{14}\text{N}/^{15}\text{N}$ abundance ratios: revisiting CN isotopologues in the Galactic outer disc" 2024, MNRAS, 527, 8151. doi:10.1093/mnras/stad3643

As the co-author (4):

- ◆ Bisbas, T. G., Zhang, Z.-Y., Gjerger, E., et al. " α -enhanced astrochemistry: the carbon cycle in extreme galactic conditions", 2024, MNRAS, 527, 8886. doi:10.1093/mnras/stad3782
- ◆ Lin, L.-R., Zhang, Z.-Y., Wang, J., et al. "Inadequate turbulent support in low-metallicity molecular clouds", 2025, Nature Astronomy, 9, 406, doi:10.1038/s41550-024-02440-3
- ◆ Li, F., Zhang, Z.-Y., Wang, J., et al. "Properties of Dense Molecular Gas along the Major Axis of M82" 2022, ApJ, 933, 139. doi:10.3847/1538-4357/ac7526
- ◆ Luo, G., Colzi, L., Liu, T. et al. "A new measurement of the Galactic $^{12}\text{C}/^{13}\text{C}$ gradient from sensitive HCO^+ absorption observations", 2024, A&A, 690, A372, doi:10.1051/0004-6361/202451412

Proposals

- ◆ ALMA Cycle-8 ACA supplement, grade C (P.I.)
- ◆ SMT call for proposal 2022A (P.I.)
- ◆ ARO 12-m and SMT call for proposal 2024A (P.I.)
- ◆ NOEMA call for proposal 2022 (Co-I)
- ◆ ALMA cycle-9, grade C (Co-I)

- ◆ ALMA cycle-10, grade C (Co-I)
- ◆ ALMA cycle-11, grade B (Co-I)
- ◆ ALMA cycle-12, grade C (Co-I)

Conference Presentations

- ◆ The 21st CAS Guo Shoujing Symposium on Galaxies and Cosmology, Xiamen, China, May 2019 (**poster**),
- ◆ The 23rd CAS Guo Shoujing Symposium on Galaxies and Cosmology, Hangzhou, China, May 2021 (**poster and lightning talk**)
- ◆ The 16th International Symposium on Nuclei in the Cosmos-School of Nuclear Astrophysics, Chengdu, China, September 2021 (**poster and oral talk, outstanding poster award**)
- ◆ The 8th Symposium on Interstellar Physics and Chemistry, Zhuhai, China, August 2021 (**oral talk**)
- ◆ KIAA-DoA Seminar 2021, The Kavli Institute for Astronomy and Astrophysics at Peking University, Beijing, China, December 6th, 2021 (**Invited oral talk**)
- ◆ Molecular Astrochemistry Academic Symposium, Urumqi, China, August 2023 (**oral talk**)
- ◆ Academic Symposium on Molecular Clouds and Star Formation, October 2023 Chongqing, China (**poster, outstanding poster award**)
- ◆ Origin of Elements and Cosmic Evolution: From Big-Bang to Supernovae and Mergers, Beijing, China, November 2023 (**oral talk**)
- ◆ The 2nd International Workshop on Astrochemistry, Chongqing, China, July, 2024 (**oral talk, outstanding presentation award**)
- ◆ Exploring the Evolution of CNOPS Elements from Earth and Space, Sesto, Italy, February, 2026 (**Oral Talk**)

Honors

- Third prize of People's Scholarship (2018)
- Innovation prize of the elite program scholarship (2018)
- Yang Yongman Scholarship (2019)
- First prize of People's Scholarship (2019)
- Outstanding graduates of Nanjing University (2021)
- President's Special Award for Ph.D. Students of Nanjing University (2021)

Languages

- ◆ CET4: 592; CET6:526; TOFEL: 94

Supervisors

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 Thomas. G. Bisbas, Principal Investigator, Zhejiang Lab, +86 (0)571-56390515, tbisbas@zhejianglab.com
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