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Date of Birth	26 DECEMBER 1993
Gender	MALE
Education	<p>Ph.D. in Astronomy & Astrophysics, Max-Planck-Institut für Radioastronomie (MPIfR), Bonn, Germany, 2019–expected 2023 Supervisors: Dr. Christian Henkel, Prof. Dr. Karl M. Menten Thesis: "The influence of stellar objects onto the interstellar medium: isotopic compositions and maser lines"</p> <p>M.S. in Astronomy, Center for Astronomy, Guangzhou University, China, 2016–2019 Supervisor: Prof. Dr. Jiangshui Zhang Thesis: "A Systematic TMRT Observational Study of Galactic $^{12}\text{C}/^{13}\text{C}$ Ratios from Formaldehyde"</p> <p>B.S. in Optical Information Science and Technology, School of Physics and Electronic Engineering, Guangzhou University, China, 2012–2016</p>
Honors & Awards	<p>2022.09-2023.03 Ph.D. scholarship from the MPIfR 2019.09-2022.09 Ph.D. scholarship from the China Scholarship Council (CSC) 2019 Excellent Graduate Student 2018 Annual College scholarship 2017 Annual College scholarship 2016 Annual Graduate Student Entrance scholarship 2015 The 13th Challenge Cup of Guangdong Undergraduate Students Extracurricular Academic Science and Technology Competition Second Prize 2014 The 14th Guangzhou University Challenge Cup Competition First Prize 2014 Annual College scholarship 2014 Outstanding Student Leader 2013 Annual College scholarship 2013 Outstanding Student Leader</p>

PUBLICATIONS

**In total: 15 refereed papers and 1 non-refereed paper.
(first-author: four refereed papers)**

2023

16. [Origins of the shocks in high-mass starless clump candidates](#)
Zhu, Feng-Yao; Wang, Junzhi; [Yan, Yaoting](#); Zhu, Qing-Feng; Li, Juan; 2023, accepted for publication in MNRAS

15. **A Multitransition Methanol Survey toward a Large Sample of High-mass Star-forming Regions**
Zhao, J. Y.; Zhang, J. S.; Wang, Y. X.; Qiu, J. J.; **Yan, Y. T.**; Yu, H. Z.; Chen, J. L.; Zou, Y. P.; 2023, ApJS, 266, 29

14. **Spatial distributions and kinematics of shocked and ionized gas in M17**
Zhu, Feng-Yao; Wang, Junzhi; **Yan, Yaoting**; Zhu, Qing-Feng; Li, Juan; 2023, MNRAS, 522, 503Z

13. **Direct measurements of carbon and sulfur isotope ratios in the Milky Way**
Yan, Y. T.; Henkel, C.; Kobayashi, C.; Menten, K. M.; Gong, Y.; Zhang, J. S.; Yu, H. Z.; Yang, K.; Xie, J. J.; Wang, Y. X.; 2023, A&A, 670, A98

12. **A Possible Chemical Clock in High-mass Star-forming Regions: $N(\text{HC}_3\text{N})/N(\text{N}_2\text{H}^+)$?**
Wang, Y. X.; Zhang, J. S.; Yu, H. Z.; Wang, Y.; **Yan, Y. T.**; Chen, J. L.; Zhao, J. Y.; Zou, Y. P.; 2023, ApJS, 264, 48

11. **Molecules in the peculiar age-defying source IRAS 19312+1950**
Qiu, Jian-Jie; Zhang, Yong; Nakashima, Jun-ichi; Zhang, Jiang-Shui; Koning, Nico; Tang, Xin-Di; **Yan, Yao-Ting**; Feng, Huan-Xue; 2023, A&A, 669, A121

2022

10. **Discovery of non-metastable ammonia masers in Sagittarius B2**
Yan, Y. T.; Henkel, C.; Menten, K. M.; Gong, Y.; Nguyen, H.; Ott, J.; Ginsburg A.; Wilson, T. L.; Brunthaler, A.; Belloche, A.; Zhang, J. S.; Budaiev, N.; Jeff, D.; 2022, A&A, 666, L15

9. **Cyanopolyynes line survey towards high-mass star-forming regions with TMRT**
Wang, Y. X.; Zhang, J. S.; **Yan, Y. T.**; Qiu, J. J.; Chen, J. L.; Zhao, J. Y.; Zou, Y. P.; Wu, X. C.; He, X. L.; Gong, Y. B.; Cai, J. H.; 2022, A&A, 663, A177

8. **Discovery of ammonia (9,6) masers in two high-mass star-forming regions**
Yan, Y. T.; Henkel, C.; Menten, K. M.; Gong, Y.; Ott, J.; Wilson, T. L.; Wootten, A.; Brunthaler, A.; Zhang, J. S.; Chen, J. L.; Yang, K.; 2022, A&A, 659, A5

2021

7. **Interstellar Nitrogen Isotope Ratios: New NH_3 Data from the Galactic Center out to the Perseus Arm**
Chen, J. L.; Zhang, J. S.; Henkel, C.; **Yan, Y. T.**; Yu, H. Z.; Qiu, J. J.; Tang, X. D.; Wang, J.; Liu, W.; Wang, Y. X.; Zheng, Y. H.; Zhao, J.; 2021, ApJS, 257, 39

6. **ALCHEMI: an ALMA Comprehensive High-resolution Extragalactic Molecular Inventory. Survey presentation and first results from the ACA array**
Martín, S.; Mangum, J. G.; Harada, N.; Costagliola, F.; Sakamoto, K.; Muller, S.; Aladro, R.; Tanaka, K.; Yoshimura, Y.; Nakanishi, K.; Herrero-Illana, R.; Mühle, S.; Aalto, S.; Behrens, E.; Colzi, L.; Emig, K. L.; Fuller, G. A.; García-Burillo, S.; Greve, T. R.; Henkel, C.; Holdship, J.; Humire, P.; Hunt, L.; Izumi, T.; Kohno, K.; König, S.; Meier, D. S.; Nakajima, T.; Nishimura, Y.; Padovani, M.; Rivilla, V. M.; Takano, S.; van der Werf, P. P.; Viti, S.; **Yan, Y. T.**; 2021, A&A, 656, A46

5. **Studying infall in infrared dark clouds with multiple HCO^+ transitions**
Xie, Jin-Jin; Wu, Jing-Wen; Fuller, Gary A.; Peretto, Nicolas; Ren, Zhi-Yuan; Chen,

Long-Fei; **Yan, Yao-Ting**; Li, Guo-Dong; Duan, Yan; Xia, Ji-Feng; Wang, Yong-Xiong; Li, Di.; 2021, RAA, 21, 208

2020

4. Galactic Interstellar Sulfur Isotopes: A Radial $^{32}\text{S}/^{34}\text{S}$ Gradient?

Yu, H. Z.; Zhang, J. S.; Henkel, C.; **Yan, Y. T.**; Liu, W.; Tang, X. D.; Langer, N.; Luan, T. C.; Chen, J. L.; Wang, Y. X.; Deng, G. G.; Zou, Y. P.; 2020, ApJ, 899, 145

3. A Systematic Observational Study on Galactic Interstellar Ratio $^{18}\text{O}/^{17}\text{O}$. I. C^{18}O and C^{17}O $J = 1-0$ Data Analysis

Zhang, J. S.; Liu, W.; **Yan, Y. T.**; Yu, H. Z.; Liu, J. T.; Zheng, Y. H.; Romano, D.; Zhang, Z. -Y.; Wang, J. Z.; Chen, J. L.; Wang, Y. X.; Zhang, W. J.; Lu, H. H.; Chen, L. S.; Zou, Y. P.; Yang, H. Q.; Wen, T.; Lu, F. S.; 2020, ApJS, 249, 6

2. Systematic observations on Galactic Interstellar isotope ratios

Zhang, J. S.; **Yan, Y. T.**; Liu, W.; Yu, H. Z.; Chen, J. L.; Henkel, C.; 2020, IAUGA, 30, 278

2019

1. A Systematic TMRT Observational Study of Galactic $^{12}\text{C}/^{13}\text{C}$ Ratios from Formaldehyde

Yan, Y. T.; Zhang, J. S.; Henkel, C.; Mufakharov, T.; Jia, L. W.; Tang, X. D.; Wu, Y. J.; Li, J.; Zeng, Z. A.; Wang, Y. X.; Li, Y. Q.; Huang, J.; Jian, J. M.; 2019, ApJ, 877, 154

Accepted
Observation
Proposals as PI

(1690.0 hours)

The 100-m Effelsberg Radio Telescope

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|--|------|
| 1. <i>Probing Kinetic Temperatures towards a sample of Nearby IRDCs</i> | |
| 10.3 Hours (ID: 68-22) | 2022 |
| 2. <i>Monitoring ammonia maser emissions in the Milky Way</i> | |
| 35.0 Hours (ID: 30-22) | 2022 |
| 3. <i>A global survey on K-band in high-mass star-forming regions</i> | |
| 70.0 Hours (ID: 34-22) | 2022 |
| 4. <i>Silicon isotope ratios in the Milky Way</i> | |
| 38.0 Hours (ID: 91-20) | 2020 |
| 5. <i>Confirmation of new ammonia masers in three star-forming regions</i> | |
| 5.0 Hours (ID: 13-20) | 2020 |

The Karl G. Jansky Very Large Array

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|---|------|
| 1. <i>Widespread Ammonia Masers in Sgr B2</i> | |
| 1.5 Hours (ID: VLA/22A-106) | 2022 |
| 2. <i>Imaging the Newly Discovered Ammonia (9,6) Masers</i> | |
| 1.0 Hours (ID: VLA/21A-157) | 2020 |

The IRAM 30m Telescope

1. *Mapping Gas Assembly in Nearby IRDCs*
8.2 Hours (ID: 063-22) 2022
2. *Silicon isotope ratios in the Milky Way*
56.0 Hours (ID: 031-21) 2021
3. *Sulfur chemistry and isotopic ratios in the Milky Way*
48.0 Hours (ID: 033-21) 2021
4. *Measurements of the gradients of isotope ratios $^{12}\text{C}/^{13}\text{C}$ and $^{14}\text{N}/^{15}\text{N}$ in our Galaxy from CN*
74.0 Hours (ID: 004-20, 125-20) 2020
5. *3mm spectroscopic mapping toward W49A*
66.0 Hours (ID: 117-20, 047-21) 2020, 2021

NASA/JPL Deep Space Network DSS-43 70-m Telescope

1. *A global survey on K-band in high-mass star-forming regions*
45.0 Hours 2022

The ARO 12 Meter Telescope

1. *Isotope ratio $^{12}\text{C}/^{13}\text{C}$ in Galactic molecular clouds*
298.0 Hours 2018B, 2019A
2. *Isotope ratio $^{18}\text{O}/^{17}\text{O}$ in Galactic molecular clouds*
172.0 Hours 2016B, 2017B

The James Clerk Maxwell Telescope

1. *Isotope ratio $^{18}\text{O}/^{17}\text{O}$ in Galactic molecular clouds*
165.0 Hours (ID: M16BP037, M16XP019, M19AP021) 2016B, 2016X, 2019A

The Shanghai Tianma 65m Radio Telescope

1. *Isotope ratio $^{12}\text{C}/^{13}\text{C}$ in Galactic molecular clouds*
400 Hours. 2016-2019
Yan et al. ApJ, 2019, 877(2): 154.

The Sub-Millimeter Radio Telescope

1. *Oxygen isotope ratio of $^{18}\text{O}/^{17}\text{O}$ in molecular clouds with different Galactocentric distance*
197.0 Hours 2016A, 2017B

Presentations	<i>Carbon isotope ratios in the Milky Way.</i> -TMRT 10th anniversary, Shanghai, China (invited , online)	November 2022
	<i>Ammonia masers in the Milky Way.</i> -MPIfR group meeting, Bonn, Germany	September 2022
	<i>Discovery of ammonia (9,6) masers in Cep A and G34.26+0.15.</i> -12th IMPRS conference, Bonn, Germany	May 2022
	<i>Discovery of ammonia (9,6) masers in two high-mass star-forming regions.</i> -PoSTER 2022 (poster)	May 2022
	<i>Direct measurements of carbon and sulfur isotope ratios in the Milky Way.</i> -50th YERAC (poster)	August 2021
	<i>C, N, O, S isotope ratios in the Milky Way.</i> -8th IMPRS conference, Bonn, Germany	July 2021
	<i>Carbon and Sulfur isotope ratios in our Galaxy and NGC 253.</i> -MPIfR group meeting, Bonn, Germany	July 2020
	<i>A Systematic TMRT Observational Study of Galactic $^{12}\text{C}/^{13}\text{C}$ Ratios from Formaldehyde.</i> -2019 Symposium on Molecular Cloud and Star Formation, Xinjiang, China	July 2019
	<i>Formaldehyde observations with TMRT.</i> -11th Jing-Guang-Xia Astrophysics Meeting, Guangzhou, China	November 2017
	Observation experience > 2000.0 hours (on-site + remote) with the Effelsberg 100-m, IRAM-30m, TMRT-65m, Arecibo-305m, ARO-12m, and SMT-10m.	2016 - 2023
Experience	Teaching data reduction in Radio Astronomy Summer School at Shanghai Astronomical Observatory	July 9-July 14, 2017
	10th IRAM 30-meter School on Millimeter Astronomy –	November 15-19, 22 and 23 2021
	Two weeks IRAM EMIR Pool observations (volunteer) –	April 06 - April 13, May 25 - June 01 2021
	The scientific writing workshop (online), Bonn, Germany	June 8-June 11, 2020
	2018 FAST Radio Astronomy Summer School	July 8-July 13, 2018
	2016 Annual Meeting of the Chinese Astronomical Society	Nov. 1-Nov. 3 2016
	James Clerk Maxwell Telescope (JCMT) Data Reductions and Analysis Workshop at Shanghai Astronomical Observatory	Oct. 16, 2016
	2015 Radio Astronomy Summer School at Shanghai Astronomical Observatory	July 19-July 25, 2015