Chentao YANG (杨辰涛)*

Department of Space, Earth and Environment Chalmers University of Technology Maskingränd 2, 412 58 Göteborg Sweden

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Current

2011-2013

ORCID: 0000-0002-8117-9991

1 +46 72-872 8542

Personal Information Current status: Postdoctoral Researcher

Gender: Male Year of birth: 1988 Citizenship: P.R. China

Languages: Chinese (native), English (full professional proficiency),

French (elementary proficiency)

Employment

Postdoc, Chalmers University of Technology, Göteborg, Sweden 2021.11 - present European Southern Observatory (ESO) Fellow, Santiago, Chile 2017.11 - 2021.10

(50% independent research + 50% ALMA duty)

Education

Institut d'Astrophysique Spatiale, Université Paris-Saclay, France 2014.11 - 2017.10

(Co-tutelle) PhD degree in Astrophysics, Diploma awarded in January, 2018

Supervisor: Alain Omont, Alexandre Beelen

Purple Mountain Observatory, Chinese Academy of Sciences, P.R. China 2013.09 - 2017.10

(Co-tutelle) PhD degree in Astrophysics, Diploma awarded in January, 2018

Astronomy Department, Beijing Normal University, P.R. China 2010.09 - 2013.06

Master's degree in Astrophysics, Diploma awarded in July, 2013

Supervisor: Yu Gao, Biwei Jiang

Astronomy Department, Beijing Normal University, P.R. China 2006.09 - 2010.07

Bachelor's degree in Astronomy, Diploma awarded in July, 2010

Computer Skills

IDL, FORTRAN, Matlab, MTx, Python, Julia Languages:

Operating systems: GNU/Linux (CentOS, openSUSE, etc.), MacOS, Windows

> GILDAS, Starlink, DS9, CASA, HIPE, TOPCAT Software:

Research interests

• Obscured galaxy nuclei near and far

• Submillimeter water maser in high-redshift galaxies Current

• Observations of the interstellar medium in submillimeter galaxies Current • Millimeter and submillimeter spectral line surveys at high redshift Current

• SUNRISE - Submillimeter molecUlar liNe suRveys in distant duSty galaxiEs

• Submillimeter H₂O lines as the ISM tracers in dusty galaxies near and far

Current

Ph.D. Thesis • Physical conditions of the interstellar medium in high-redshift submillimetre

bright galaxies (ADS record) 2013-2017

Master Thesis • Water vapor in galaxies near and far

Bachelor Thesis • Cold dust in nearby galaxies 2009-2010

References (alphabetical order) • Aalto, Susanne: Professor, Chalmers University of Technology, Sweden

• Beelen, Alexandre: Associate Astronomer, Laboratoire d'Astrophysique de Marseille, France

• Cox, Pierre: Senior Scientist, Institut d'Astrophysique de Paris, France

• Gao, Yu: Professor, Xiamen University, China

• González-Alfonso, Eduardo: Professor, University of Alcalá, Spain

• Impellizzeri, Violette: Program manager, Allegro ARC, Leiden Observatory, Netherlands

• Omont, Alain: Emeritus Senior Scientist, Institut d'Astrophysique de Paris, France

^{*}In Chinese, 辰 - 涛 (chen-tao) can mean star-waves, in which 辰 (chen) means stars and 涛 (tao) means waves.

Accepted PI **Proposals** 477 h in total (A/B: A/B-rated)

- The Atacama Large Mm/submm Array (ALMA), 7 proposals, 62 h^{12m} + 50 h^{7m}. since 2017
 - 2017.A.00053.S (ACA observatory filler program, 50 h);
 - 2018.1.00861.S^B(EU, **10.4 h**), 2018.1.00797.S^B(EU, **6.6 h**), 2018.1.01710.S(EU, **9.1 h**);
 - 2019.1.00205.S^B(EU, **23.2 h**), 2019.1.00533.S^B(EU, **4.8 h**), 2019.1.00310.S(EU, **8.0 h**);
- The NOrthern Extended Millimeter Array (NOEMA), 12 proposals, 138 h. since 2013
 - W0B3^B, S14CT^B, S15CT^B, W15EQ^B, S16CG^B, S16CF^B, S16BT^B, W16DQ^B, W16DO^B, S18DC^A, S18CT^A, W18EB^A;
- The IRAM-30m telescope (IRAM-30m), 3 proposals, 76 h.

since 2015

- 079-15^A, 196-15^B, 076-16^A;
- The Karl G. Jansky Very Large Array (JVLA/NRAO), 3 proposals, 47 h.

since 2014

since 2016

- 14B-259^B, 15B-177, 18B-190;
- The Atacama Pathfinder Experiment (APEX/ESO) telescope, 2 proposal, 55 h.
 - 097.B-0914^B (SEPIA-5), 103.B-0471^A (SEPIA-9);
- The Green Bank Telescope (GBT/GBO) telescope, 1 proposal, 49 h. since 2020
- 21A-093^A (W-band);

Accepted proposals as a co-I: 88 approved proposals including:

ALMA (25 proposals, 5 A + 7 B + 13 C), NOEMA (42, including 1 large program, z-GAL), JVLA (4), GTC(1), Spitzer (1), VLT (2, KMOS), IRAM-30m (6), APEX (2), JCMT (7, including 4 large programs, JINGLE, MALATANG, AWESOME and RAGERS) and GMRT (1 proposal).

Observing Experience

- The IRAM 30m telescope (IRAM30/IRAM), 2013–2016: > 100 h;
- The James Clerk Maxwell Telescope (JCMT/EAO), 2016: > 100 h;
- The ALMA Observatory (ALMA/JAO), 2018-present: (AoD) > 1000 h.

Professional Service

- Referee for scientific journals: *ApJ*, *A&A*;
- HST Expert external proposal reviewer;
- Individual reviewer for the Astronomy Grants Panel of STFC;
- Member of the ESO (Chile) Fellowship Selection Committee (2019–2020);
- Member of the ALMA (JAO) Post-Doctoral Fellow Selection Committee (2019);
- Technical Secretary of the ALMA Proposal Review meeting, 2018 (Cycle 6) 2021 (Cycle 8);
- Co-organiser of the ALMA proposal workshop at ESO (2018, 2021);

Teaching Mentorship

- Malte Brinch (PhD student), Cosmic Dawn Center (DAWN) DTU-space (Denmark), The excitation of [C I] lines in high-redshift dusty galaxies: 2021/2022
- Daysi Quinatoa (PhD student), Universidad de Valparaiso (Chile), APEX observation of the submillimeter H₂O emission in nearby galaxies; 2021/2022
- Nina Grant (Undergraduate student), Princeton International Internship program, Complete the rotation curve of NGC 7528 with neutral carbon emission; June-August 2019
- Lecture, Advance topics of astrophysics and astrobiology, Universidad Andrés Bello, Chile; 2nd Semester 2019 The ISM in high-redshift dusty star-forming galaxies.

Refereed **Publications**

NASA/ADS

Library link

8 publications as the first/second author; 593 citations in total, including 182 citations of the first-author papers; Metrics: (NASA/ADS) h-index = 14, h-index/(years since PhD defence) = 3.3, m-index (since 2017) = 2.2

(†: 1st/2nd author) 33. Massive molecular gas reservoir in a luminous sub-millimeter galaxy during cosmic

Bin Liu, N. Chartab, H. Nayyeri, A. Cooray, C. Yang, D. A. Riechers, M. Gurwell, Zong-hong Zhu,... and P. van der Werf 2022, ApJ accepted, arXiv:2108.13016;

- 32. Bright Extragalactic ALMA Redshift Survey (BEARS) I: redshifts of bright gravitationally-lensed galaxies from the Herschel ATLAS
 - S. A. Urquhart, G. J. Bendo, S. Serjeant, T. Bakx, M. Hagimoto, P. Cox, R. Neri, M. Lehnert, ..., C. Yang, A.J. Young 2022, MNRAS 551, 3017;
- 31. The ramp-up of interstellar medium enrichment at z > 4; (ESO Press Release, ALMA Press Release, Phys.org News, Daily Mail news, CNN news) M. Franco, K. E. K. Coppin, J. E. Geach, C. Kobayashi, S. C. Chapman, C. Yang, E. González-

- Alfonso, J. S. Spilker, A. Cooray, M. J. Michałowski 2021, Nature Astronomy;
- **30.** An ACA 1mm survey of HzRGs in the ELAIS-S1: survey description and first results; Hugo G. Messias, Evanthia Hatziminaoglou, Pascale Hibon, Israel Matute, Tony Mroczkowski, José M. Afonso, Edward Fomalont, ..., Chentao Yang 2021, MNRAS 508, 5259;
- 29. Close-up view of a luminous star-forming galaxy at z = 2.95; S. Berta, A. J. Young, P. Cox, R. Neri, B. M. Jones, A. J. Baker, A. Omont, ..., C. Yang, D. A. Riechers, H. Dannerbauer, I. Perez-Fournon, P. van der Werf et al. 2021, A&A, 646, A122;
- 28. A proto-pseudobulge in ESO 320-G030 fed by a massive molecular inflow driven by a nuclear bar; (Harvard CfA Press Release, Phys.org News)

 E. González-Alfonso, M. Pereira-Santaella, J. Fischer, S. García-Burillo, C. Yang, A. Alonso-Herrero, L. Colina, M. L. N. Ashby, H. A. Smith et al. 2021, A&A, 645, A49;
- 27. Planck's Dusty GEMS. VIII. Dense gas reservoirs in the most active dusty starbursts at $z\sim 3$; R. Cañameras , N. P. H. Nesvadba, R. Kneissl, S. König, C. Yang, A. Beelen, R. Hill, E. Le Floc'h
- and D. Scott 2021, A&A, 645, A45;
 26. ALMA [N II] 205 μm imaging spectroscopy of the lensed submillimeter galaxy ID 141 at redshift 4.24;
 - Cheng Cheng, Xiaoyue Cao, Nanyao Lu, Chentao Yang, Dimitra Rigopoulou, Vassilis Charmandaris et al. 2020, ApJ, 898, 33;
- †25. Etching glass in the early Universe: Luminous HF and H₂O emission in a QSO-SMG pair at z = 4.7; M. D. Lehnert, C. Yang, B.H.C. Emonts, A. Omont, E. Falgarone, P. Cox, and P. Guillard 2020, A&A, 641, A124;
- 24. The MALATANG Survey: Dense Gas and Star Formation from High Transition HCN and HCO⁺ maps of NGC 253;
 Xuejian Jiang, Thomas R. Greve, Yu Gao, Zhi-Yu Zhang, ..., Chentao Yang, Qian Jiao, Aeree Chung et al. 2020, MNRAS, 494, 1276;
- [†]23. The first detection of the 448 GHz ortho- H_2O line at high redshift: probing the structure of a starburst nucleus at $z \sim 3.63$ C. Yang, E. González-Alfonso, A. Omont, M. Pereira-Santaella, J. Fisher, A. Beelen, R. Gavazzi 2020, A&A, 634, L3;
- 22. A declining starburst at z = 4.72 lensed by a merging pair of massive galaxies at z = 1.48; L. Ciesla, M. Béthermin, E. Daddi, J. Richard, T. Diaz-Santos, M. Sargent, D. Elbaz, M. Boquien, T. Wang, C. Schreiber, C. Yang, J. Zabl et al. 2020, A&A, 635, A27;
- 21. NOEMA Redshift Measurements of Bright Herschel Galaxies; R. Neri, P. Cox, A. Omont, A. Beelen, S. Berta, T. Bakx, M. Lehnert, ..., C. Yang and A.J. Young 2020, A&A, 635, A7;
- **20.** A SCUBA-2 Selected Herschel-SPIRE Dropout and the Nature of this Population; J. Greenslade, E. Aguilar, D. L. Clements, H. Dannerbauer, T. Cheng, G. Petitpas, C. Yang, H. Messias et al. 2019, MNRAS, 490, 5317;
- 19. JINGLE V: Dust properties of nearby galaxies derived from hierarchical Bayesian SED fitting;
 Isabella Lamperti, Amélie Saintonge, Ilse De Looze, Gioacchino Accurso, Christopher J. R.
- Clark, Matthew W. L. Smith, Christine D. Wilson, ..., Chentao Yang 2019, MNRAS, 489, 4389; 18. JINGLE, a JCMT legacy survey of dust and gas for galaxy evolution studies: II.
- SCUBA-2 850 μ m data reduction and dust flux density catalogues; Matthew W. L. Smith, Christopher J. R. Clark, Ilse De Looze, Isabella Lamperti, Amélie Saintonge, Christine D. Wilson, ..., Chentao Yang and Ming Zhu 2019, MNRAS, 486, 4166;
- 17. The molecular-gas properties in the gravitationally lensed merger HATLAS J142935.3-002836;
 - Hugo Messias, Neil Nagar, Zhi-Yu Zhang, Iván Oteo, Simon Dye, Nicholas Timmons, Eduardo Ibar, ..., and Chentao Yang 2019, MNRAS, 486, 2366;
- [†]16. CO, H₂O, H₂O⁺ line and dust emission in a z = 3.63 strongly lensed starburst merger at sub-kiloparsec scales;
 - C. Yang, R. Gavazzi, A. Beelen, P. Cox, A. Omont, M. Lehnert, Y. Gao, R. J. Ivison, A. M. Swin-

- bank, L. Barcos-Műnoz, R. Neri, A Cooray, S. Dye, S. Eales et al. 2019, A&A, 624, A138;
- 15. Planck's Dusty GEMS. VII. Atomic carbon and molecular gas in dusty starburst galaxies at z = 2 to 4;
 - N. P. H. Nesvadba, R. Cañameras, R. Kneissl, S. Koenig, C. Yang, E. Le Floc'h, A. Omont and D. Scott 2019, A&A, 624, A23;
- 14. VALES V: A kinematic analysis of the molecular gas content in H-ATLAS galaxies at $z \sim 0.03$ -0.35 using ALMA;
 - J. Molina, E. Ibar, V. Villanueva, A. Escala, C. Cheng, M. Baes, H. Messias, C. Yang, F.E. Bauer, P. P. Van der Werf, R. Leiton, M. Aravena, ..., S. Eales & L. Dunne 2019, MNRAS, 482, 1499;
- †13. Planck's Dusty GEMS. VI. Multi-J CO excitation and interstellar medium conditions in dusty starburst galaxies at z = 2-4; (IRAM Press Release, CEA Press Release)
 R. Cañameras, C. Yang, N. P. H. Nesvadba, A. Beelen, R. Kneissl, S. Koenig, E. Le Floc'h, M. Limousin, S. Malhotra, A. Omont, D. Scott 2018, A&A, 620, A61;
- 12. JINGLE, a JCMT legacy survey of dust and gas for galaxy evolution studies: I. Survey overview and first results;

Amélie Saintonge, Christine D. Wilson, Ting Xiao, Lihwai Lin, Ho Seong Hwang, Tomoka Tosaki, ..., Chentao Yang, Ming Zhu et al. 2018, MNRAS, 481, 3497;

- 11. Far-infrared *Herschel* SPIRE spectroscopy of lensed starbursts reveals physical conditions of ionised gas;
 - Zhi-Yu Zhang, R. J. Ivison, R. D. George, Yinghe Zhao, L. Dunne, ..., Chentao Yang, Stephen Eales, Ros Hopwood, Steve Maddox, Alain Omont et al. 2018, MNRAS, 481, 59;
- 10. Extreme conditions in the molecular gas of lensed star-forming galaxies at $z \sim 3$; Paola Andreani, Edwin Retana-Montenegro, Zhi-Yu Zhang, Padelis Papadopoulos, Chentao Yang, Simona Vegetti 2018, A&A, 615, A142;
- 9. The MALATANG Survey: the $L_{\rm gas}-L_{\rm IR}$ correlation on sub-kiloparsec scale in six nearby star-forming galaxies as traced by HCN J=4-3 and HCO⁺ J=4-3; Qing-Hua Tan, Yu Gao, Zhi-Yu Zhang, Thomas Greve, Xue-Jian Jiang, Christine Wilson, Chen-Tao Yang, Ashley Bemis, Aeree Chung et al. 2018, ApJ, 860, 165;
- 8. VALES: IV. Exploring the transition of star formation efficiencies between normal and starburst galaxies using APEX/SEPIA and ALMA at low redshift; C. Cheng, E. Ibar, T. M. Hughes, V. Villanueva, R. Leiton, G. Orellana, A. Munoz-Arancibia, N. Lu, C. K. Xu, C. N. A. Willmer, J. Huang, T. Cao, C. Yang et al. 2018, MNRAS, 475, 248;
- 7. The Herschel Bright Sources (HerBS): Sample definition and SCUBA-2 observations; Tom J. L. C. Bakx, S. A. Eales, M. Negrello, M. W. L. Smith, E. Valiante, W. S. Holland, M. Baes, N. Bourne, D. L. Clements, ..., P. van der Werf, C. Yang, 2018, MNRAS, 273, 1751;
- High dense gas fraction in intensely star forming dusty galaxies;
 Oteo, Z-Y. Zhang, C. Yang, R. J. Ivison, A. Omont, M. Bremer, S. Bussmann, A. Cooray, P. Cox, H. Dannerbauer, L. Dunne, S. Eales, ..., and P. Van der Werf 2017, ApJ, 850, 170;
- [†]5. Molecular gas in the *Herschel*-selected strongly lensed submillimeter galaxies at z ~ 2-4 as probed by multi-*J* CO lines; (Code on Github: radex_emcee)
 C. Yang, A. Omont, A. Beelen, Y. Gao, P. van der Werf, R. Gavazzi, Z.-Y. Zhang, R. Ivison, M. Lehnert, D. Liu, I. Oteo, E. González-Alfonso et al. 2017, A&A, 608, A144;
- †4. Submillimeter H_2O and H_2O^+ emission in lensed ultra- and hyper-luminous infrared galaxies at $z \sim 2-4$;
 - C. Yang, A. Omont, A. Beelen, E. González-Alfonso, R. Neri, Y. Gao, P. van der Werf, A. Weiß, R. Gavazzi, N. Falstad, A. J. Baker, R. S. Bussmann, A. Cooray et al. 2016, A&A, 595, A80;
- 3. High-J CO Versus far-infrared relations in normal and starburst galaxies;
 Daizhong Liu, Yu Gao, Kate Isaak, Emanuele Daddi, Chentao Yang, Nanyao Lu and Paul van der Werf 2015, ApJ, 810, L14;
- [†]2. Water vapor in nearby infrared galaxies as probed by *Herschel*; Chentao Yang, Yu Gao, A. Omont, Daizhong Liu, K. G. Isaak, D. Downes, P. P. van der Werf and Nanyao Lu 2013, ApJ, 771, L24;
- [†] 1. H₂O emission in high-z ultra-luminous infrared galaxies; (A&A Highlight) A. Omont, C. Yang, P. Cox, R. Neri, A. Beelen, R. S. Bussmann, R. Gavazzi, P. van der Werf, D. Riechers, D. Downes and 40 other authors 2013, A&A, 551, A115;

Publications & Reviews	Serendipitous Discovery of an Optically-Dark Hyper-Luminous Infrared Galaxy at $z=3.4$ Natsuki H. Hayatsu, Zhi-Yu Zhang, R.J. Ivison, Chao-wei Tsai,, Chentao Yang, and Junfeng Wang, submitted to MNRAS Dense Gas and Star Formation in Nearby Infrared Bright Galaxies: APEX survey of HCN and HCO ⁺ $J=2 \rightarrow 1$ Jing Zhou, Zhi-Yu Zhang, Yu Gao, Junzhi Wang, Yong Shi, Qiusheng Gu, Fei Li, Chentao Yang, Tao Wang and Qing-hua Tan, submitted to ApJ Extragalactic water new and far Chentao Yang, Eduardo González-Alfonso & Alain Omont, to be submitted to Royal Society Open Science (RSOS)		
Invited Review ●			
Presentations	2015-2022, ordered by category: 2 invited conference talks, 6 contributed talks, and 12 (incl. invited) semina	ar/colloquium talks	
Invited review talk •	"Water in the Universe" Symposium, ACS Fall 2019 National Meeting & E California, USA Water vapor in galaxies at high redshift	Exposition, San Diego, August 25-29, 2019	
Invited talk •	The ALMA Quest for Our Cosmic Origins, Joint ALMA Observatory (JAC Chile Physical conditions of the ISM in high-redshift lensed submillim	March 27, 2018	
Contributed talk •	Multi-line Diagnostics of the Interstellar Medium, Nice, France The rich molecular inventory of two dusty galaxies twelve billion	April 4–6, 2022 n years ago	
Contributed talk •	KIAA forum on gas in galaxies: Multiple-phase Interstellar medium – Probing the Activities and Power Engines from Local to Distant Universe, Beijing, China September 9–13, 2019 The interstellar medium in high-redshift strongly gravitational lensed galaxies		
Contributed talk •	Views on the Interstellar Medium in galaxies in the ALMA era, Bologna, Emilia-Romagna, Italy September 2-6, 2019 Studying the ISM in high-redshift strongly lensed galaxies in the ALMA era		
Contributed talk •	The Laws of Star Formation: From the Cosmic Dawn to the Present University, UK Molecular gas in high-redshift strongly lensed dusty starbursts a CO lines	Universe, Cambridge July 2-6, 2018	
	The Eighth Sino-French "LIA-origins" Workshop: Probing Baryons in the Universe, Sèvres, Hauts-de-Seine, France November 14–18, 2016 H_2O and H_2O^+ emission in lensed hyper/ultra-luminous infrared galaxies at $z\sim 2$ –4		
Contributed talk •	Water in the Universe: From Clouds to Oceans, European Space Agen ordwijk, Netherland H ₂ O Emission in Ultra-luminous Infrared Galaxies at High-z	•	
Colloquium talk •	(invited) University of Massachusetts Amherst and the Five College Astronomy Department, Massachusetts, USA February 25, 2021 Physical conditions of the ISM in dusty star-forming galaxies in the early universe		
Colloquium talk •	European Southern Observatory (ESO Santiago), Chile Water vapor in galaxies near and far	November 21, 2019	
Seminar talk •	(<i>invited</i>) The Dominion Radio Astrophysical Observatory (DRAO), Victoria, BC, Canada October 7, 2020 Extragalactic water across cosmic time		
	(invited) CAS South America Center for Astronomy, Santiago, Chile Water vapor in galaxies near and far	January 8, 2020	
Comingr tall	(invited) Astronomy Donortmont Rolling Normal University China	Cantambar 0 2010	

Seminar talk • (invited) Astronomy Department, Beijing Normal University, China

September 9, 2019

Seminar talk •	Water vapor in galaxies near and far (invited) The Cosmic Dawn Center, DTU-Space division, Denmark Physical conditions of the ISM in strongly lensed dusty star-formine early universe	December 12, 2018 ng galaxies in the
Seminar talk •	Centre for Extragalactic Astronomy, Durham University, UK Physical conditions of the interstellar medium in strongly lensed sub- ies at high-redshift	June 29, 2018 omillimeter galax
Seminar talk •	Department of Physics, Oxford University, UK Physical conditions of the ISM in high-redshift strongly lensed dugalaxies	June 28, 2018 usty star-forming
Seminar talk •	stituto de Física y Astronomía, Universidad de Valparaíso, Chile January 18, 20 ⁻ nysical conditions of the ISM in high-redshift lensed submillimeter galaxies	
Seminar talk •	Institute of Astrophysics, PUC de Chile, Santiago, Chile Physical conditions of the interstellar medium in high-redshift lens galaxies	December 20, 2017 ed submillimeter
Seminar talk •	CAS South America Center for Astronomy, Santiago, Chile Tracing the physical conditions of the interstellar medium in high-redshift lensed submillimeter galaxies	
Seminar talk •	Astronomy Department, Beijing Normal University, China December 23, 2016 Physical conditions of the ISM in high-redshift submillimeter galaxies	
Poster •	IAU Symposium 352: Uncovering early galaxy evolution in the ALMA and JWST era, Viana do Castelo, Portugal June 3–7, 2019 CO, H_2O , H_2O^+ line and dust emission in a z = 3.63 strongly lensed starburst mergerat sub-kiloparsec scales	
Poster •	Journées Nationales PNCG 2015, Nice, France December 15–16, 2015 Submillimeter H_2O line emission in the lensed ultra-luminous infrared galaxies at $z\sim 2$ –4	
Poster •	XXIX IAU-GA IAUS315: From interstellar clouds to star-forming galaxies: universal processe Honolulu, Hawaii, USA August 03–07, 20 Submillimeter H ₂ O emission in infrared bright galaxies near and far	
Poster ●	XXIX IAU-GA FM15: Search for Water and Life's Building Blocks in the U	Jniverse, Honolulu August 03–05, 2015
Grants & • Awards	ESO Science Support Discretionary Fund (SSDF) - 9,000 EUR Student mentoring project (on extragalactic [CI]) at European Southern (2020-2021 Observatory
•		ay, 2019; July, 2018
•	ESO Fellowship European Southern Observatory, Chile	2017-2021
•	International Astronomical Union (IAU) Travel Grant - 1,100 USD XXIX IAU General Assembly, Honolulu, Hawaii, USA	August 3–14, 2015
•	The LIA-Origins Short Visit Program Grant - 3,000 EUR Institut d'Astrophysique de Paris & Institut d'Astrophysique Spatiale, Fran	2012, 2013 nce
	Graduate with distinguished honour All the universities in Beijing	2010
	Graduate with distinguished honour Beijing Normal University	2010
•	National Astronomical Observatories Scholarship National Astronomical Observatory of China	2009
•	National Undergraduate Innovative Test Program Grant - 10,000 CN	

Outreach Experiences

 Core member of the Astronomy Club Beijing Normal University 2007-2009

• Authors of outreach articles (6 in total)
The "Amateur Astronomer" magazine

2014-2017

(sponsored by Chinese Astronomical Society & Beijing Planetarium)

• ALMA virtual tour guider

November 5, 2020

Virtual guided tour of the ESO sites (for ESO Studentship candidates)

(Last update: February, 2022. Contents in green and purple are clickable links.)