

Miwa Goto

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Nationality: Japan, Permanent residency in Germany
Language: English (fluent), German (good), Japanese (mother tongue)



Education

- 1991-1995 Undergraduate, University of Kyoto, Japan
- 1995-1997 Master course, University of Kyoto, Japan
- 1997-2000 Doctorate, University of Kyoto, Japan
"Effect of Thermal Annealing of Quenched Carbonaceous Composite in Connection with Evolution and Formation of Carbon Dust"

Work History

- 2000-2004 JSPS Fellow (Japan Society for Promotion of Science),
National Astronomical Observatory of Japan ; Exchange Scientist to University of Hawaii in Hilo
- 2004-2006 JSPS Fellow for Studying Abroad Max Planck Institute for Astronomy in Heidelberg, Germany
- 2006-2011 Postdoctoral Researcher, Max-Planck-Institute for Astronomy in Heidelberg, Germany
- 2012-2015 Research Associate, University Observatory Munich
- 2015-2017 Postdoctoral Researcher, Max Planck Institute for Extraterrestrial Physics in Garching, Germany
- 2017- Research Associate, University Observatory Munich

Teaching

- "Essentials of Advanced Astrophysics" for astrophysics or physics major master course, Teaching assistant, 2012-13, 2017-18
- "Astronomical Observing Methods" for physics major master course, Teaching assistant, 2012, 2013
- "Interstellar Matter and Star Formation" for physics major master course, Teaching assistant, 2014, 2018
- "Infrared Spectroscopy for Astronomy"; IMPRS advanced course, May 2019
- "Infrared Spectroscopy for Astronomy"; LMU Physics Master course, winter, semester 2019/2020

Professional Service

- Publication Referee: ApJ, PASJ
- Observation Proposal Referee: Subaru Telescope / ESO
- Grant Proposal Reviewer: NASA ORIGIN Program
- External Reviewer of an instrument for ELT

Grant

- JSPS Fellowship (Japanese Society for the Promotion of Science) for Graduate Student, 1998-2000, for Postdoc 2000- 2003
- JSPS Fellowship for Science Research Abroad, 2004-2006
- DFG Schwerpunkt Programme 1573, GO 1927/3-1 "Absorption line Survey of H₃⁺ in the Galactic Center", 2012-2015
- DFG Grant Temporary Position for Principal Investigators GO 1927/6-1 "Vermessung von H₂ Spin-Temperatur in Gaswolken durch Absorptions-Spektroskopie im Infraroten, 2017-

Outreach

- Girls Day at MPE 2016 Apr / Die Sendung mit der Maus Türöffner-Tag 2012
- Airborne Astronomy Ambassador Flight Weeks Begin on NASA's SOFIA, lecturer 2017, 2018

Recent Invited Talks

- ESO Calibration Workshop: the second generation VLT instruments and friends, Santiago, Chile (2017)
- IceAge - The Era of the James Webb Space Telescope, Leiden, Netherlands (2016)
- Science and Technology with E-ELT, International PhD School, Erice, Sicily (2015)
- ESO Lunch Talk , ESO, Garching, "Astrochemistry, cosmic rays, and H₃⁺" (2014)

Publication List

1. **Goto, M.**, Geballe, T. R., Harju, J., Caselli, P., Sipilä, O., Menten, K. M., Usuda, T., "Search for H₃⁺ isotopologues toward CRL 2136 IRS 1", *A&A*, accepted (2019)
2. Oka, T., Geballe, T. R., **Goto, M.**, Usuda, T., McCall, B. J., Indriolo, N. "The Central 300 pc of the Galaxy probed by infrared spectra of H₃⁺ and CO: part I. Predominance of warm and diffuse gas and high H₂ ionization rate", *ApJ* in press (2019)
3. **Goto, M.**, Bailey, J. D., Hocuk, S., Caselli, P., Esplugues, G. B., Cazaux, S., Spaans, M. "The first frost in the Pipe Nebula", *A&A*, **610**, A9 (2018)
4. **Goto, M.**, Geballe, T. R., Usuda, T. "Infrared absorption toward NGC 7538 IRS 1, H₂, H₃⁺, and CO", *ApJ*, **806**, 57(2015)
5. **Goto, M.**, Geballe, T. R., Indriolo, N., Yusef-Zadeh, F., Usuda, T., Henning, Th., Oka, T. "Infrared H₃⁺ and CO "Studies of the Galactic Core: GCIRS 3 and GCIRS 1W", *ApJ*, **786**, 96 (2014)
6. **Goto, M.**, Indriolo, N., Geballe, T. R., Usuda, T. "H₃⁺ Spectroscopy and the Ionization Rate of Molecular Hydrogen in the Central Few Parsecs of the Galaxy", *Journal of Physical Chemistry, A*, **117**, 9919 (2013)
7. **Goto, M.**, Usuda, T., Nagata, T., Geballe, T. R., McCall, B. J., Indriolo, N., Suto, H., Henning, Th., Morong, C. P., Oka, T. "Absorption Line Survey of H₃⁺ toward the Galactic Center Sources II. Eight Infrared Sources within 30 pc of the Galactic Center" *ApJ*, **688**, 306 (2008)
8. **Goto, M.**, Usuda, T., Dullemond, C. P., Henning, Th., Linz, H., Stecklum, B., Suto, H. "Inner Rim of a Molecular Disk Spatially Resolved in Infrared CO Emission Lines", *ApJ*, **652**, 758 (2006)
9. **Goto, M.**, Gaessler, W., Hayano, Y., Iye, M., Kamata, Y., Kanzawa, T., Kobayashi, N., Minowa, Y., Saint-Jacques, D. J.; Takami, H., Takato, N., Terada, H. "Spatially Resolved 3 Micron Spectroscopy of IRAS 22272+5435: Formation and Evolution of Aliphatic Hydrocarbon Dust in Proto-Planetary Nebulae", *ApJ*, **589**, 419, (2003)
10. **Goto, M.** Dissertation "Effect of thermal annealing on quenched carbonaceous composite in connection with evolution and formation of carbon dust", Kyoto University, Department of Physics, Jan. 1, 2000