Pooneh **Nazari**

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EDUCATION

Leiden University

Ph.D. in Astrophysics

Leiden, Netherlands
2019–expected 2023

Supervisor: Prof. Ewine van Dishoeck

- Thesis: "Complex organic molecules around low- and high-mass protostars"

University of Cambridge Cambridge, UK

MPhil in Astrophysics 2018–2019

Supervisor: Prof. Cathie Clarke

- Thesis: "Observational consequences of planet migration"

MASt (Part III) in Astrophysics 2017–2018

University of St Andrews, UK B.Sc. in Astrophysics St Andrews, UK

Research Interests

Harvard University

Interstellar molecules, Planet formation, Submillimetre and infrared astronomy, Astrochemistry

Professional experience

Extended research visit	Oct 2022–Nov 2022
Supervisor: Prof. Karin Öberg	
Leiden University	Leiden, Netherlands
Graduate research assistant	Oct 2019–Present
Supervisor: Prof. Ewine van Dishoeck	
University of Cambridge	Cambridge, UK
Graduate research assistant	Oct 2018–Aug 2019
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Graduate research assistant

Summer research assistant

Supervisor: Prof. Cathie Clarke

Oct 2018–Aug 2019

June 2016-Aug 2016

Harvard University
Summer research assistant
Cambridge, US
July 2017–Aug 2017

Supervisor: Prof. Karin Öberg

University of St Andrews St Andrews, UK
Undergraduate research assistant Jan 2017–May 2017

Supervisor: Dr Claudia Cyganowski

AWARDS

•	Awarded funding from Leids Kerkhoven-Bosscha Fonds (LKBF)	2022
•	Sheepshanks Scholarship and Studentship in Astronomy (Trinity College, University of Cambridge)	2017 – 2018
•	Harvard Origins of Life Initiative Undergraduate Research Award	2017

Cambridge, US

•	The Astrophysics Project Prize (University of St Andrews)	2017
•	Royal Astronomical Society Undergraduate Research Bursary (University of St Andrews)	2015

Presentations

I have given 19 talks, including 6 *invited* talks.

• Origins seminar series 'Complex organic molecules around low- and high-mass protostars'	University of Arizona, 2022
	versity of Virginia/NRAO, 2022
• Star and planet formation meeting 'Complex organic molecules around low- and high-mass protostars'	University of Michigan, 2022
• Star formation journal club 'Complex organic molecules around low- and high-mass protostars'	Harvard University, 2022
• Disk and Astrochemistry meeting 'Complex organic molecules around low- and high-mass protostars'	Harvard University, 2022
• Invited talk at Niels Bohr Legacy Symposium in Astrochemistry 'Complex organic molecules toward low- and high-mass protostars'	Copenhagen University, 2022
• Invited talk at Astrochemistry Seminar 'Can disks explain lack of COM emission from low-mass protostars?'	Leiden University, 2022
• Invited talk at Iranian National Observatory workshop 'Astrochemistry in the embedded phase of star formation'	Online, 2022
• Invited talk at InterCat Centre meeting 'N-bearing complex organic molecules: From low- to high-mass protostars'	Online, 2021
• Star formation meeting 'Methanol emission from protostars: Can disks explain lack of emission from some so	Leiden University, 2021 purces?'
• Informal seminar at Centre for Star and Planet Formation 'Complex organic molecules: From low- to high-mass protostars'	Copenhagen University, 2021
• Contributed talk at Chemical processes in Solar-type star forming regions 'Complex organic molecules: From low- to high-mass protostars'	Torino, 2021
• Contributed talk at Astrochemical Frontiers 'Methanol emission from protostars: Can disks explain lack of emission from some so	Online, 2021
• Invited talk at Astrochemistry Seminar 'Complex organic molecules in low-mass protostars'	Leiden University, 2021
• Contributed talk at ALMA day 'Complex organic molecules in low-mass protostars'	Leiden University, 2021
• Contributed talk at Five Years After HL Tau 'Observational consequences of planet migration'	Online, 2020
• Seminar at Institute of Astronomy 'N-bearing complex organic molecules in low-mass protostars'	University of Cambridge, 2020
• Contributed talk at Trinity forum, Trinity college 'Observational consequences of planet migration'	University of Cambridge, 2019
• Invited talk at Kavli Institute 'Observational consequences of planet migration'	University of Cambridge, 2019

FIRST AUTHOR AND SIGNIFICANT CONTRIBUTOR (REFEREED)

- 7. **P. Nazari**, B. Tabone, and G. P. Rosotti, "Importance of source structure on complex organics emission III. Effect of disks around massive protostars", accepted by A&A, 2022
- 6. P. Nazari, J. D. Meijerhof, M. L. van Gelder, A. Ahmadi, E. F. van Dishoeck, B. Tabone, D. Langeroodi, N. F. W. Ligterink, J. Jaspers, M. T. Beltrán, G. A. Fuller, Á. Sánchez-Monge, and P. Schilke, "N-bearing complex organics toward high-mass protostars: Constant ratios pointing to formation in similar pre-stellar conditions across a large mass range", accepted by A&A, 2022
- 5. M. L. van Gelder, J. Jaspers, **P. Nazari**, A. Ahmadi, E. F. van Dishoeck, M. T. Beltrán, G. A. Fuller, Á. Sánchez-Monge, and P. Schilke, "Methanol deuteration in high-mass protostars", accepted by A&A, 2022
- 4. **P. Nazari**, B. Tabone, G. P. Rosotti, M. L. van Gelder, R. Meshaka, and E. F. van Dishoeck, "Importance of source structure on complex organics emission. II. Do disks explain lack of methanol emission from low-mass protostars?", $A \mathcal{E} A$, vol. 663, A58, 2022
- 3. M. L. van Gelder, **P. Nazari**, B. Tabone, A. Ahmadi, E. F. van Dishoeck, M. T. Beltrán, G. A. Fuller, N. Sakai, Á. Sánchez-Monge, P. Schilke, Y.-L. Yang, and Y. Zhang, "Importance of source structure on complex organics emission. I. Observations of CH₃OH from low-mass to high-mass protostars", $A \mathcal{E} A$, vol. 662, A67, 2022
- 2. P. Nazari, M. L. van Gelder, E. F. van Dishoeck, B. Tabone, M. L. R. van't Hoff, N. F. W. Ligterink, H. Beuther, A. C. A. Boogert, A. Caratti o Garatti, P. D. Klaassen, H. Linnartz, V. Taquet, and Ł. Tychoniec, "Complex organic molecules in low-mass protostars on Solar System scales. II. Nitrogen-bearing species", $A \mathcal{C} A$, vol. 650, A150, A150, 2021
- P. Nazari, R. A. Booth, C. J. Clarke, G. P. Rosotti, M. Tazzari, A. Juhasz, and F. Meru, "Revealing signatures of planets migrating in protoplanetary discs with ALMA multiwavelength observations", MNRAS, vol. 485, pp. 5914–5923, 2019

OTHER CO-AUTHOR PUBLICATIONS (REFEREED)

- 5. N. G. C. Brunken, A. S. Booth, M. Leemker, **P. Nazari**, N. van der Marel, and E. F. van Dishoeck, "A major asymmetric ice trap in a planet-forming disk. III. First detection of dimethyl ether", $A \mathcal{E} A$, vol. 659, A29, 2022, See press release
- G. M. Williams, C. J. Cyganowski, C. L. Brogan, T. R. Hunter, J. D. Ilee, P. Nazari,
 J. M. D. Kruijssen, R. J. Smith, and I. A. Bonnell, "ALMA observations of the Extended Green Object G19.01-0.03 I. A Keplerian disc in a massive protostellar system", MNRAS, vol. 509, no. 1, pp. 748-762, 2022
- 3. A. J. Cridland, G. P. Rosotti, B. Tabone, Ł. Tychoniec, M. McClure, **P. Nazari**, and E. F. van Dishoeck, "Early planet formation in embedded protostellar disks. Setting the stage for the first generation of planetesimals", $A \mathcal{E} A$, vol. 662, A90, 2022
- 2. F. Meru, G. P. Rosotti, R. A. Booth, **P. Nazari**, and C. J. Clarke, "Is the ring inside or outside the planet?: the effect of planet migration on dust rings", *MNRAS*, vol. 482, pp. 3678–3695, 2019, See press release
- 1. J. D. Ilee, C. J. Cyganowski, **P. Nazari**, T. R. Hunter, C. L. Brogan, D. H. Forgan, and Q. Zhang, "G11.92-0.61 MM1: a Keplerian disc around a massive young proto-O star", *MNRAS*, vol. 462, pp. 4386–4401, 2016, See press release

TEACHING AND MENTORING

• **Teaching Assistant** of 'Astrochemistry' course taught by Prof. Ewine van Dishoeck *Leiden Observatory*

2022

• Daily supervisor of a LEAPS student Leiden Observatory Summer 2021

• Daily supervisor of three MSc students

2020-2022

Leiden Observatory

• **Teaching Assistant** of 'Star and Planet Formation' course taught by Prof. Ewine van Dishoeck and Dr. Melissa McClure 2020, 2021, 2022

Leiden Observatory

SELECTED OUTREACH AND SERVICE ACTIVITIES

- Organiser of the NOVA Network II seminars in the Netherlands, 2019-2022
- Main author of a CASSIS manual, 2022
- ALMA proposal reviewer, 2021-2022
- Invited talk at Astronomy on Tap, 2021
- Author at She Speaks Science, 2018

REFERENCES

• Prof. Ewine van Dishoeck

Leiden Observatory, Leiden University, P.O. Box 9513, Leiden, Netherlands 2300 RA ewine@strw.leidenuniv.nl

• Prof. Cathie Clarke

Institute of Astronomy, University of Cambridge, Madingley Road, Cambridge, England CB3 0HA cclarke@ast.cam.ac.uk

• Prof. Karin Öberg

Harvard-Smithsonian Centre for Astrophysics, 60 Garden Street, MS 16, Cambridge, USA MA 02138 koberg@cfa.harvard.edu

• Dr. Giovanni Rosotti

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