Pooneh **Nazari**

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EDUCATION

Leiden University Leiden, Netherlands Ph.D. in Astrophysics 2019 - 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 St Andrews, UK 2013-2017 B.Sc. in Astrophysics

Research Interests

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

Professional experience

Harvard University	Cambridge, US
Extended research visit	Oct 2022–Nov 2022

Supervisor: Prof. Karin Oberg

Leiden University Leiden, Netherlands Oct 2019-Present Graduate research assistant

Supervisor: Prof. Ewine van Dishoeck

University of Cambridge Cambridge, UK Graduate research assistant Oct 2018-Aug 2019 Summer research assistant June 2016-Aug 2016

Supervisor: Prof. Cathie Clarke

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

Supervisor: Prof. Karin Öberg

University of St Andrews St Andrews, UK Undergraduate research assistant $\mathrm{Jan}\ 2017\mathrm{-May}\ 2017$

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

Presentations

 $'Observational\ consequences\ of\ planet\ migration'$

• Origins seminar series [expected]	University of Arizona, 2022
'Complex organic molecules around low- and high-mass protostars'	
• Lunch talk [expected] University Complex organic molecules around low- and high-mass protostars'	ersity of Virginia/NRAO, 2022
• Star and planet formation meeting [expected] '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 some	Leiden University, 2021 urces?'
• 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 some	Online, 2021 urces?'
• 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	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
- 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&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
- 4. 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 (Jasmine Cheung)

Leiden Observatory

Summer 2021

• Daily supervisor of three MSc students (Jurrian Meijerhof, Jeroen Jaspers and Casper Spijker)

Leiden Observatory

2020-2022

• 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, 2300 RA Leiden, the Netherlands 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 Oberg

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• Dr. Giovanni Rosotti

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