

Felix D. Priestley

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RESEARCH INTERESTS

- Chemical evolution in star-forming environments
- The formation and destruction of interstellar dust

EMPLOYMENT

Cardiff University, UK **Jul 2019 -**
Post-doctoral research associate

University College London, UK **Oct 2018 - Jun 2019**
Post-doctoral research associate

EDUCATION

University College London, UK **Oct 2015 - Sep 2018**
PhD Astrophysics (awarded Dec 2018)
Thesis Title: Molecule and dust emission at the beginnings and ends of stellar evolution
Supervisor: Prof. Michael Barlow

University College London, UK **Sep 2011 - Jun 2015**
MSci Astrophysics (First class honours)
Dissertation Title: The effects of gravitational collapse on the chemical evolution of prestellar cores
Supervisor: Prof. Serena Viti

PUBLICATION SUMMARY

Refereed papers: 25 first-author, 57 in total
Total citations: 809, of which 306 from first-author papers

TECHNICAL SKILLS

Programming: Fortran 77/90/Modern (experienced), Python, Linux shell, C/C++
Software: MHD (PHANTOM, AREPO), chemistry (UCLCHEM, UCLPDR), radiative transfer (LIME, RADMC3D), dust emission (DINAMO)

TALKS & SEMINARS (* - INVITED)

***Oxford University** **Oct 2024**
Connecting molecular line emission with the star formation rate

EAS Annual Meeting 2024 **Jul 2024**
Understanding complex organic molecules in the earliest phases of star formation

Early Phases of Star Formation 2024 **May 2024**
Molecular tracers of the threshold density for star formation

Centre for Astrochemical Studies, MPE **Jan 2024**
Modelling chemical evolution in molecular clouds self-consistently

***ECOGAL collaboration seminar series** **Nov 2023**
Chemical evolution in molecular clouds

Leiden Observatory **Nov 2023**
Modelling chemical evolution in molecular clouds self-consistently

	Origin and Fate of Dust in Our Universe <i>Empirical constraints on dust destruction in supernova remnants</i>	Sep 2023
	*AREPO ISM development workshop <i>Post-processing chemical evolution in hydrodynamical simulations</i>	Sep 2023
	National Astronomy Meeting 2023 <i>Unveiling the origins of prestellar cores with molecular line emission</i>	Jul 2023
	The Physics of Star Formation <i>Can prestellar cores be modelled as isolated objects?</i>	Jun 2023
	*Universidad Complutense Madrid <i>Testing theories of star formation with molecular line data</i>	Mar 2023
	University College London <i>Probing the importance of magnetic fields in star-forming regions using molecular line emission</i>	Mar 2022
	*St. Andrews University <i>What can molecular lines tell us about star formation?</i>	Jan 2022
	National Astronomy Meeting 2021 <i>The properties of shocked dust in supernova remnants</i>	Jul 2021
	Magnetic fields and the structure of the filamentary ISM <i>The characteristic widths of magnetised filaments</i>	Jun 2021
	ISM Scales 2021 <i>Filament widths in molecular clouds: are they universal, and if so, why?</i>	May 2021
	*Supernovae and Interstellar Dust workshop <i>Observational constraints on dust destruction in shocks</i>	Apr 2021
	The Rise of Metals and Dust in Galaxies through Cosmic Time <i>Cold dust emission from the shocked material around supernova remnants</i>	Oct 2020
	European Week of Astronomy and Space Science 2019 <i>The survival of dust grains in the ejecta of core-collapse supernovae</i>	Jun 2019
	*Cardiff University <i>Molecular tracers of star formation mechanisms</i>	Apr 2019
	The Supernova-Supernova Remnant Connection <i>The pre- and post-shock dust mass in Cassiopeia A</i>	Jan 2019
AWARDS	STFC Astronomy Grants Panel small award <i>Named PDRA on ~£500k grant; contributed majority of research case to proposal</i>	2025
	Jon Darius Memorial Prize <i>For outstanding postgraduate research in astrophysics at University College London</i>	2019
SUPERVISION	Rees Barnes Princeton International Internship Program placement; published in OJAp	2024

	Charles Yin Supervised MSc research project; published in MNRAS	2019 - 2020
TEACHING	Deputy module organiser, Cardiff University Administrative and teaching duties for undergraduate maths course (~100 students)	2022 - 2024
	Demonstrator, Cardiff University Senior lab demonstrator for undergraduate observational astronomy course	2021 - 2024
	Demonstrator, University of London Observatory Lab demonstrator for undergraduate practical astronomy courses	2013 - 2017
COMMUNITY	External reviewer for STFC Astronomy Grants Panel	2023 -
	Referee for ApJ, MNRAS, A&A, Nature Astronomy	2020 -
	AREPO code development team	2023 -
	BISTRO collaboration member	2020 -
	Co-developer of UCLCHEM and UCLPDR codes	2017 -
	Focus group organiser, EPoS 2024	2024
	SOC for Cosmic Star Formation session, NAM 2021	2021
	Seminar organiser, Cardiff Astronomy group	2019 - 2022
OUTREACH	Barry Astronomical Society Public talk: Molecules in space: the occasional relevance of astrochemistry	Apr 2025
	Astronomy on Tap, Cardiff Public talk: A brief history of star formation	Jun 2024
	Howell's School, Cardiff Public talk: Where do stars come from?	Mar 2023
	Barry Astronomical Society Public talk: Cores, clouds and filaments: where do stars form, and why?	Feb 2022
	Royal Society Summer Science Exhibition JWST exhibit demonstrator	Jul 2018
	Cafe Scientifique Public talk: Cosmic Dust from Exploding Stars	May 2017

REFeree
CONTACT
INFORMATION

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Prof. Ralf Klessen

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Prof. Simon Glover

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Prof. Ilse De Looze

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