

Felix D. Priestley

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RESEARCH INTERESTS	<ul style="list-style-type: none">• Chemical evolution in star-forming environments• The formation and destruction of interstellar dust	
EMPLOYMENT	Cardiff University, UK Post-doctoral research associate	Jul 2019 -
	University College London, UK Post-doctoral research associate	Oct 2018 - Jun 2019
EDUCATION	University College London, UK <i>PhD Astrophysics (awarded Dec 2018)</i> Thesis Title: Molecule and dust emission at the beginnings and ends of stellar evolution Supervisor: Prof. Michael Barlow	Oct 2015 - Sep 2018
	University College London, UK <i>MSci Astrophysics (First class honours)</i> Dissertation Title: The effects of gravitational collapse on the chemical evolution of prestellar cores Supervisor: Prof. Serena Viti	Sep 2011 - Jun 2015
PUBLICATION SUMMARY	Refereed papers: 25 first-author, 58 in total Total citations: 895, of which 326 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)	Stellar Origins 2025 <i>Molecular line tracers of dense gas, ‘dense’ gas, and the star formation rate</i>	Sep 2025
	*EAS Annual Meeting 2025 <i>The impact of dynamics on the chemistry of star formation</i>	Jun 2025
	Gas in Galaxies workshop <i>Dense gas and the star formation rate on molecular cloud scales</i>	Jun 2025
	*Oxford University <i>Connecting molecular line emission with the star formation rate</i>	Oct 2024
	EAS Annual Meeting 2024 <i>Understanding complex organic molecules in the earliest phases of star formation</i>	Jul 2024
	Early Phases of Star Formation 2024 <i>Molecular tracers of the threshold density for star formation</i>	May 2024

Centre for Astrochemical Studies, MPE <i>Modelling chemical evolution in molecular clouds self-consistently</i>	Jan 2024
*ECOGAL collaboration seminar series <i>Chemical evolution in molecular clouds</i>	Nov 2023
Leiden Observatory <i>Modelling chemical evolution in molecular clouds self-consistently</i>	Nov 2023
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
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	Jon Darius Memorial Prize <i>For outstanding postgraduate research in astrophysics at University College London</i>	2019
SUPERVISION	Jimitbhai Panchal MSc research project supervisor	2025
	Lillian Cai Undergraduate research internship	2025
	Rees Barnes Undergraduate research internship; published in OJAp	2024
	Charles Yin MSc research project supervisor; published in MNRAS	2019 - 2020
TEACHING	Cardiff Astrophysical Summer School Lecture on Linux systems and introduction to command-line programming	2025
	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 -
	Seminar organiser, Cardiff Astronomy group	2019 - 2022, 2025 -
	Cardiff Physics & Astronomy research committee member	2025 -
	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
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

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CONTACT
INFORMATION

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