# Dr. CLAIRE MARIE GUIMOND

claire.guimond@physics.ox.ac.uk

## Appointments

**Postdoctoral Research Associate in Planetary Atmospheres**
University of Oxford, Department of Physics, Oxford, UK (2023–)

**Brownlee Junior Research Fellow**
Linacre College, Oxford, UK (2023–)

**Research Assistant**
- Freie Universität Berlin, Department of Geochemistry, Berlin, DE (2019)

**Undergraduate Research Assistant**
McGill University, Department of Natural Resource Sciences, Montréal, CA (2015 field season)

## Qualifications

**Doctor of Philosophy in Earth Sciences**
University of Cambridge, Cambridge, UK (2019–2023)
- *supervisors:* Dr. Oliver Shorttle & Dr. John Rudge
- *thesis title:* Inside-out diversity of rocky planets

**Master of Science in Earth & Planetary Science**
McGill University, Montréal, CA (2016–2018)
- *supervisor:* Dr. Nicolas Cowan
- *thesis title:* The direct imaging search for Earth 2.0

**Bachelor of Science, Honours in Earth System Science**
with Minor Concentration English Literature
McGill University, Montréal, CA (2011–2015)
- *supervisor:* Dr. Boswell Wing
- *thesis title:* Controls on sulfur isotope fractionation in deep sea pore water

## Research grants (PI)

- "Oxoplanets: Interdisciplinary planetary research at Oxford", John Fell Fund, Oxford University Press (2024–2026)

## Selected awards

- Harding Distinguished Postgraduate Research Scholarship, Cambridge Trust
- Alexander Graham Bell Canada Graduate Scholarship - Doctoral, Natural Sciences and Engineering Research Council of Canada (NSERC), *declined*
- Postgraduate Scholarship - Doctoral, NSERC
- Canada Graduate Scholarship - Master's, NSERC

## Publications

<u>Invited review articles</u>

**Guimond, C. M.**, Wang, H., Seidler, F., Sossi, P., Mahajan, A., Shorttle, O. (2024). From stars to diverse mantles, melts, crusts, and atmospheres of rocky planets. *Reviews in Mineralogy and Geochemistry*, 90, 1.

<u>Peer-reviewed</u>

**Guimond, C. M.,** Shorttle, O, Rudge, John F. (2023). A mineralogical reason why all exoplanets cannot be equally oxidising. *Monthly Notices of the Royal Astronomical Society*, 525, 3.

**Guimond, C. M.**, Shorttle, O, Rudge, John F. (2023). Mantle mineralogical limits to rocky planet water inventories. *Monthly Notices of the Royal Astronomical Society*, 521, 2.

**Guimond, C. M.**, Rudge, John F., Shorttle, O. (2022). Blue marble, stagnant lid: Could dynamic topography avert a waterworld? *The Planetary Science Journal*, 3, 66.

**Guimond, C. M.,** Noack, L., Ortenzi, G., Sohl, F. (2021). Low volcanic outgassing rates for a stagnant lid Archean earth with graphite-saturated magmas. *Physics of the Earth and Planetary Interiors*, 320.

Ortenzi, G., Noack, L., Sohl, F., **Guimond, C. M.**, Grenfell, J. L., Dorn, C., Schmidt, J. S., Vulpius, S., Katyal, N., Kitzmann, D., Rauer, H. (2020). Mantle redox state drives outgassing chemistry and atmospheric composition of rocky planets. *Scientific Reports*, 10.

**Guimond, C. M.** & Cowan, N. B. (2019). Three direct imaging epochs could constrain the orbit of Earth 2.0 inside the habitable zone. *The Astronomical Journal*, 157, 5.

**Guimond, C. M.** & Cowan, N. B. (2018). The direct imaging search for Earth 2.0: Quantifying biases and planetary false positives. *The Astronomical Journal*, 155, 230.

## Invited talks & seminars

- Geophysical Fluid Dynamics seminar, **ETH Zurich**, CH (2024)
- Astrophysics seminar, **University of Exeter**, UK (2024)
- Geophysics colloquiuum, **University College London**, UK (2024)
- Geoscience of Exoplanets meeting, **International Space Science Institute**, CH (2024)
- Planetary exploration seminar, **Birkbeck University of London**, UK (2023)
- Invited talk, **American Geophysical Union Fall Meeting**, USA (2022)
- CLEVER Planets Seminar Series, **Rice University**, USA (2022)

## Teaching experience

- **Supervisor** in Quantitative Environmental Science (2nd-year undergraduates), University of Cambridge, UK (2022–2023)
- **Demonstrator** in Earth Sciences, University of Cambridge, UK (2019–2023)
- **Teaching Assistant** in Earth & Planetary Sciences, McGill University (2016–2018)

## Outreach

Public talks

- "Bare rocks are also good", **Oxford Space Night**, Oxford, UK (2024)
- "How to image Earth 2.0," **Astronomy on Tap**, Montréal, CA (2018)

Volunteer positions

- **Outreach volunteer,** Sedgwick Museum and Fitzwilliam Museum, Cambridge, UK (2019–2023)

## Selected service

**Peer reviewer:** Earth & Planetary Science Letters, Icarus

**Social Officer,** Harding Postgraduate Scholarship Programme (2022–2023)

- Responsible for organising large (100-person) social events, including formal College dinners and a residential trip.