



## Maëlys E. E. Privat

**Work Address:** Curtin University  
(Perth, Western Australia)

School of Earth and Planetary Sciences  
Applied Geology Building 312, Room 304

**Email:** [m.privat@postgrad.curtin.edu.au](mailto:m.privat@postgrad.curtin.edu.au)



### Brief Summary

My research currently focuses on the Pacific Mantle Domain evolution and its link with the dynamic processes of the last supercontinent cycle. Although some regions of the Pacific have been widely studied, such as the Hawaii volcanic chain, our understanding of that region relies on scattered data, and an overall picture linking key findings from multidisciplinary studies is now essential. I propose to study the distribution of geochemical heterogeneities in the mantle by conducting an exhaustive review of the existing data to identify and complete critical knowledge gaps and carry out detailed multi-isotopic analyses of oceanic rocks and their melt inclusions. The aim is to reconstruct a 4D evolution model of the Pacific Mantle domain to help us better understand the Earth's mantle composition and dynamics through deep time.

**Education:** Engineering degree in Geology, speciality Mineral Resources (UniLaSalle Beauvais, France)

**Research interests:** Geochemistry, melt inclusions, mantle plume, superplume, geodynamics

**Thesis title:** 4D evolution of the Pacific Mantle Domain since the early Cretaceous: Geochemical records from oceanic rocks and their melt inclusions

**Supervisors:** Prof Zheng-Xiang Li and Dr Luc Doucet – Earth Dynamics Research Group (EDRG)

### Conferences:

Privat, M., Forsoni, M., Flament M., Monnier, E., Ottavi-pupier, E., Duquennoy, J., Uesugi M., and Nakamura M., 2018. 3D reconstruction of synthetic basalt crystals by using modelling software. Réunion des Sciences de la Terre. October 2018, Lille, France.

Privat, M., Forsoni, M., Ottavi-pupier, E., Duquennoy, J., Uesugi M., and Nakamura M., 2018. 3D modelling of a synthetic basalt: Olivine crystals designed by using the 3DEXPERIENCE and BLOB3D software. European Geosciences Union. April 2018, Vienna, Austria.

Harvey, J., Graham, D., Privat, M., Shaw, R., 2016. Helium isotopes as a tracer of petrogenetic processes in the mantle: a reconnaissance study of peridotite xenoliths from Kilbourne Hole, NM, USA. Geochemistry Group of the Geological Society of London / Mineralogical Society of Great Britain and Ireland Research in Progress meeting. April 2016, University of Bristol, UK.

**Links:** [LinkedIn](#) - [Research Gate](#)