



## PhD positions on the geochemical study of fossil micrometeorites at the AMGC research group of the Vrije Universiteit Brussel

The ERC Consolidator Grant FLUX (Tracing the FLUX of cosmic dust arriving to Earth during the Phanerozoic) focuses on characterizing the extraterrestrial dust arriving to Earth through time. For the last 4.5 billion years, extraterrestrial materials have continuously bombarded the Earth. Today, the Solar System debris that reaches the Earth's surface is dominated by particles less than 2 mm in size, termed micrometeorites. The FLUX project aims to extract fossil micrometeorites from selected stratigraphic intervals across the Phanerozoic to document their characteristics and origin, to use them as a novel high-resolution proxy to better advance our understanding of the causes of and mechanisms behind cosmic dust-producing events in the Solar System and their effects on the Earth's environmental and climatic systems. As such, fossil micrometeorites may serve as an alternative source of information on Solar System processes, complementary to classic meteorites. Geochemistry, petrology, stratigraphy, and mineralogy feature at the centre of this project, and analytical developments relying on optical microscopy, SEM, XRF, Raman, EMPA and SIMS may be required to advance the study of recovered cosmic dust particles.

The FLUX project is based within the Archaeology, Environmental Changes & Geo-Chemistry (AMGC) Large Research Group of the Vrije Universiteit Brussel (VUB) where a considerable analytical arsenal is available (3 IRMS, 2 ICP-MS, 1 MC-ICP-MS, 1 laser ablation unit, 1 FTIR, 2  $\mu$ XRF, 2 CT and more), soon to be complemented with a brand new state-of-the-art clean lab facility dedicated to this project. We propose a great working environment, friendly colleagues, access to a large variety of analytical techniques, and a broad international collaboration network. Funding is for a duration of maximum 4 years. Starting dates are flexible, preferentially September or October 2024. Applications will remain open until positions are filled. Enthusiastic and motivated scientists are encouraged to apply. The salary makes it possible to live in Brussels comfortably and includes benefits (cost of commute, medical etc.).

### We are looking for profiles with the following skills:

- Master degree in Geology, Earth Sciences, Planetary Sciences, Chemistry or a related field,
- Smart, motivated, and eager to be part of an international team,
- Enthusiastic to travel and work in the lab,
- Team spirit and excellent communication skills, both written and oral (min. B2 English level),
- Experience in geochemistry, sedimentology, palaeontology, mineralogy and/or with analytical techniques is considered a plus.

### How to apply?

Send your CV, a description of your research interests (cover letter, 1 page in English), and the e-mail addresses of three references (in PDF) before June 7, 2024 to Prof. Steven Goderis ([Steven.Goderis@vub.be](mailto:Steven.Goderis@vub.be)). If you would like to receive more details about the project or research environment, do not hesitate to contact Prof. Steven Goderis ([Steven.Goderis@vub.be](mailto:Steven.Goderis@vub.be)) or visit <https://amgc.research.vub.be/>.