

Freie Universität Berlin - Fachbereich Geowissenschaften - Institut für Geologische Wissenschaften Planetary Sciences, SFB 1759



The SFB 1759 "Habitability as a fundamental planetary process: Towards a paradigm shift away from our perception of the uniqueness of Earth" is a newly established Collaborative Research Center studying habitability for life as we know it based on fundamental physio-geo-chemical processes set by the planet's evolution. The study of planetary habitability in this SFB is therefore oriented along the planetary boundary conditions set by astronomy, physics, chemistry and geology, rather than Earth-specific biological evolution. By focusing on the environments in which life may (or may not) evolve, the SFB will be able to define which signatures (such as trace elements in an atmosphere) can be explained by abiotic processes, and which would indeed need some form of extraterrestrial life, leading to a new database of potential biosignatures as well as traces of habitability. As finding potential biosignatures or traces of habitability may also impact society, the SFB takes a holistic approach and investigates also ethical considerations, how scientists communicate scientific results to the public and how these are discussed in social media, as well as the general perception of the public and factors influencing this. In the SFB, different views on one of the most important questions of humanity — are we alone in the universe? — will therefore be examined hand in hand with different perspectives in natural sciences, social sciences, and humanities. More information: <https://www.geo.fu-berlin.de/en/geol/fachrichtungen/planet/projects/SFB1759> The planned position is offered at the Freie Universität Berlin, Institute of Geological Sciences, in Berlin, Germany. Review of applications will start on the day after the application deadline until the position is filled. The earliest starting date of the position is the 1 October 2026. The starting dates are flexible but funding is limited to 30 June 2030. Applications should be written in English and include a cover letter, the names and email addresses two referees, CV, copies of degree certificates and transcripts, all combined into a single pdf (max. 10 MB). It is possible to apply for multiple positions offered within the SFB at the same time, please indicate the reference code(s) for the position(s) that you are applying for and email your application to coord@sfb1759-planetary-habitability.de.

Research assistant (praedoc) (f/m/d)

75% part-time job limited till 30.06.2030 salary grade (Entgeltgruppe) 13 TV-L FU
reference code: SFB1759-C01-NK

City: Berlin; Starting date (earliest): At the earliest possible; Duration: befristet bis 30.06.2030; Remuneration: Entgeltgruppe 13 TV-L FU; Reference number: SFB1759-C01-NK; Closing date: 10/08/26

Tasks

We are seeking applicants at prae-doc level for a position in the newly established collaborative research center SFB 1759. There is an opportunity to pursue a doctoral degree.

The science objective is to experimentally and theoretically simulate the alteration and transformation of materials transported from Enceladus' deep interior out to space, where the materials have been detected and quantitatively analysed. The relevant physicochemical processes will be studied from the depths of Enceladus' rocky core, through the subsurface oceans and the flow of material through the cracks within the

moon's south polar ice crust. For the experimental part the prime technical objective is to design and develop two experimental facilities: i) A flow-type hydrothermal reactor and ii) an aerosol-producing plume simulator, the design of which is compatible with suggested geophysical conditions and geochemical processes inside Enceladus. The PhD researcher will work with the hydrothermal simulator, prepare samples of organics, and explore the effects of geophysical gradient conditions on the synthesis, degradation, transformation and polymerisation of organics in different zones within Enceladus' core. Samples will be collected before, during, and after these simulations for measurements using different analytical techniques including, ATR-FTIR, Raman and mass spectrometry (e.g. LILBID and ICP-MS) to trace any change in the composition of hydrothermal fluid. For more information, please contact Nozair Khawaja (nozair.khawaja@fu-berlin.de) and Frank Postberg (F.Postberg@fu-berlin.de).

Requirements

Requirements:

Completed MSc in Planetary Sciences, Geology, Analytical Chemistry or a related field by the time of employment.

Desirable:

- Experience in a chemical and high-pressure laboratory is an advantage
- Experience with operating analytical instruments and chemical analysis is an advantage
- Experience with experiments at cold temperatures is an advantage
- Experience with calibrating laboratory instruments and knowledge in chemistry in an advantage
- Good analytical and problem-solving skills, good communication skills, and the ability to work independently and as part of a team
- Very good written and spoken English (B2/C1)

Application

Applications should be sent by e-mail, together with significant documents (complete CV incl. all certificates, letter of motivation, references), indicating the **reference code, no later than August 10th, 2026** in PDF format (preferably as *one* document) to Dr. Nozair Khawaja: coord@sfb1759-planetary-habitability.de or postal to

Freie Universität Berlin
Fachbereich Geowissenschaften
Institut für Geologische Wissenschaften
Planetologie, SFB 1759 / Planetary Sciences, SFB 1759
Herrn Dr. Nozair Khawaja
Malteserstr. 74-100
Haus D, 12249 Berlin (Lankwitz)

With an electronic application, you acknowledge that FU Berlin saves and processes your data. FU Berlin cannot guarantee the security of your personal data if you send your application over an unencrypted connection.

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More information at <https://stellenticket.de/206041/BUA/>
Offer visible until 10/08/26

