

# PhD Position in Noble Gas Isotope-Cosmochemistry

## **100%, Zurich, fixed-term**

The Noble Gas Cosmochemistry Group (Prof. Henner Busemann) studies the most volatile elements in all types of extraterrestrial materials. It is part of the Institute of Geochemistry and Petrology of ETH Zurich's Department of Earth Science.

We seek a highly motivated, flexible, and team-oriented doctoral candidate with a strong interest in the laboratory-based analysis of extraterrestrial samples. The position is expected to start in June 2024 (negotiable) and is fully funded for a maximum of 4 years.

## Project background

Pristine meteorites and samples returned from asteroids are the best material available to study the formation of the early solar system and subsequent processes in the nebula and on small planetary bodies. A main goal of this project is to search for evidence in the noble gas record for the early solar system dichotomy that has been suggested based on various other isotope observations in meteorites. Furthermore, we aim to better characterize potential carrier materials of elusive but now well-established noble gas components and to improve our understanding of the chronology of the events that formed the solar system.

## Job description

The project, mainly funded by the Swiss NSF, will utilize noble gas mass spectrometry. It may also include various methods to resolve and identify carriers of the various noble gas components spatially, physically, and chemically, using an in-vacuum etching device unique to ETH Zurich. The development of new instrumental methods as well as the efficient usage of world-class equipment will be an important part of the laboratory tasks. Research results should be presented regularly at international conferences and published in high-profile journals.

## Your profile

- MSc or a comparable degree in Earth or Environmental Sciences, Chemistry,

Physics, or related fields

- A background in a field such as mass spectrometry, analytical instrumentation, isotope geochemistry, or planetary sciences is desirable
- Motivation, creativity, flexibility, patience, independence, strong experimental or instrumental interests, and ability to work closely together in a small team
- Good English writing and communication skills

## Your workplace



## We offer

We are a small, open-minded, and strongly interactive research group, which is considered among the world-leading research teams in the field. We are well-connected with the international meteoritical research community and offer the opportunity to perform cutting-edge research, including further collaborative projects featuring newly recovered samples. We offer training on state-of-the-art research instrumentation, in-depth exchange with researchers around the world, the chance to benefit from various teaching experiences, and the possibility to prepare for your academic career.

[> Working, teaching and research at ETH Zurich](#)

## We value diversity

In line with [our values](#), ETH Zurich encourages an inclusive culture. We promote equality of opportunity, value diversity and nurture a working and learning

environment in which the rights and dignity of all our staff and students are respected. Visit our [Equal Opportunities and Diversity website](#) to find out how we ensure a fair and open environment that allows everyone to grow and flourish.

## Curious? So are we.

We look forward to receiving your online application with the following documents:

- a brief (1-2 pages) cover letter illustrating your background and your interest and motivation to apply for our position
- your CV
- your transcripts
- the name of 2-3 possible references to be contacted possibly later, during the shortlisting process

The application deadline for this position is February 25, 2024.

Please note that we exclusively accept applications submitted through our online application portal. Applications via email or postal services will not be considered.

Further information can be found here: [the Department of Earth Sciences](#), [the Institute of Geochemistry and Petrology](#), and [Noble Gas Cosmochemistry](#).

For more information about the position, contact [Prof. Henner Busemann](#), [bhenner@ethz.ch](mailto:bhenner@ethz.ch) (no applications).

## About ETH Zürich

ETH Zurich is one of the world's leading universities specialising in science and technology. We are renowned for our excellent education, cutting-edge fundamental research and direct transfer of new knowledge into society. Over 30,000 people from more than 120 countries find our university to be a place that promotes independent thinking and an environment that inspires excellence. Located in the heart of Europe, yet forging connections all over the world, we work together to develop solutions for the global challenges of today and tomorrow.