



Two PhD positions in Atmospheric Sciences 100%

Possible date of entry: July 2024

The Atmospheric Science group at the Department of Environmental Sciences, University of Basel, Switzerland, is looking for two PhD student candidates. Our research focuses on chemical processes in the atmosphere to elucidate the formation and toxicity of atmospheric aerosol particles. The development of new analytical-chemical methods and instruments to characterize organic aerosols is a main focus of our work.

Atmospheric aerosol particles are the most important health-relevant air pollution components. Clear correlations between exposure to increased levels of aerosols and severe health effects have been observed. However, particle components and properties causing these health effects are not well understood but oxidising particle components are likely to play an important role, inducing oxidative stress in the lung and ultimately inflammation and disease.

Your position

Two PhD studentships are available to characterize health-relevant properties of aerosol particles. Our group develops novel instruments to measure continuously oxidising properties of aerosol particles in the ambient atmosphere and in laboratory experiments (e.g., Utinger et al., Atmospheric Measurement Techniques, 2023, 2641–2654) and we characterise these aerosols in detail with a range of analytical techniques such as HPLC-MS. The two PhD student projects will focus on expanding the measurement capability of the instrument developed by Utinger et al., 2023, and characterise in detail oxidising, i.e. toxic, particle properties in field and lab experiments. This work includes also further instrument improvements to expand the measurement capabilities of our novel technique.

Your profile

- An academic qualification (good master degree) in chemistry, environmental sciences, physics or a related field is mandatory.
- Experience in analytical chemistry and/or atmospheric sciences is highly favourable.
- A very good level of English (spoken and written).
- Excellent communication skills and a willingness to collaborate with other team members are essential.
- Strong self-motivation, perseverance, and a creative way of problem solving.
- Ability to work independently

We offer you

- A fully funded PhD positions (4 years) in the atmospheric sciences research group (<https://duw.unibas.ch/en/research-groups/atmospheric-sciences/>) at the Department of Environmental Sciences at the University of Basel, Switzerland.
- A motivated, interdisciplinary team that will support your ideas, research and career in a stimulating, welcoming and multicultural environment.
- A well-equipped, modern lab at a top research university. University of Basel has an international reputation of outstanding achievements in research and teaching. It offers excellent support to PhD students in the early stage of their career and for their career advancement.
- Salary and social benefits are provided according to Swiss standards and University of Basel rules (<https://www.unibas.ch/en/Working-at-the-University-of-Basel/Salary-Insurance.html>).

Application / Contact

- Please submit your complete application documents, including a letter stating your motivation, experience and skills, a CV, and contact details of two references via our online recruiting platform.
- For further information please contact Prof. Markus Kalberer (markus.kalberer@unibas.ch).
- Applications will be reviewed from 24th June 2024, but the advert will remain open until the positions are filled. Starting date is subject to agreement.
- You can find out more about us at <https://duw.unibas.ch/en/research-groups/atmospheric-sciences/>

APPLY