

The department of Forest- and Soil Sciences invites applications for a

**PhD Position  
(project employment)**  
(Reference code: 95)

Extent of employment: 30 Hours per Week  
Duration of employment: 01.11.2011 – 31.10.2014

Classification under the collective agreement of the university: B1 (€ 1.843,80 pre-tax, 14 times per year)

Place of work: Campus of BOKU University in Tulln a.d. Donau  
(Konrad-Lorenz-Str. 24, 3430 Tulln)

**Job description**

We offer a three-year PhD position within a topical research project on two-dimensional chemical imaging of phosphorus dynamics in the rhizosphere of plant roots. The project aims at developing novel techniques for the chemical imaging of phosphate and metal cations ( $\text{Ca}^{2+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Al}^{3+}$ ) in close vicinity to plant roots and the application of these techniques for studying the phosphorus dynamics in the rhizosphere at sub-mm spatial resolution. The results of this project will enhance the understanding of the biogeochemistry of plant phosphate acquisition with focus on the spatial localisation of the relevant processes.

Chemical imaging will be achieved through the hyphenation of diffusive gradients in thin films (DGT), laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) and planar optodes. The PhD student will work in close cooperation with a postdoctoral researcher who is employed in the same project.

Research tasks include the development of the analytical techniques for chemical imaging, conducting the chemical imaging experiments and the publication of the results in peer-reviewed scientific journals. A research stay of the PhD student with one of our international collaborators (Dr. Hao Zhang, Lancaster University, UK; Prof. Ronnie Glud, University of Southern Denmark, DK) is scheduled within the project.

The PhD student will be supervised by Dr. Walter Wenzel, Professor of Soil Science, and co-supervised by Dr. Thomas Prohaska, Professor of Analytical Chemistry.

**Desired Qualifications**

- MSc in Soil Science, Plant Sciences, Environmental Sciences, Ecology, Chemistry or related fields
- Sound knowledge of Chemistry
- Excellent command of English
- Experience in scientific writing
- Stress resilience, reliability
- Social skills and teamwork abilities
- Knowledge of the applied techniques is an asset

Date of publication: 28.07.2011  
Closing date for applications: 15.09.2011

University of Natural Resources and Life Sciences Vienna intends to increase the proportion of its female personnel. Qualified women are therefore explicitly invited to submit applications. In the case of equal qualifications, women will be given preferential consideration for employment unless reasons specific to an individual male candidate tilt the balance in his favour.

Please send your job application (CV, letter of motivation, one letter of recommendation) to the department of human resources at the University of Natural Resources and Life Sciences, 1190 Vienna, Peter-Jordan-Straße 70; E-Mail: [kerstin.buchmueller@boku.ac.at](mailto:kerstin.buchmueller@boku.ac.at). (**reference code: 95**)

We don't refund travel costs to the job candidates.

**[www.boku.ac.at](http://www.boku.ac.at)**

**Vice rector of strategic development:**  
Univ.Doz. DI Dr. Georg Haberhauer, MBA