



Master thesis on ultra-trace analysis

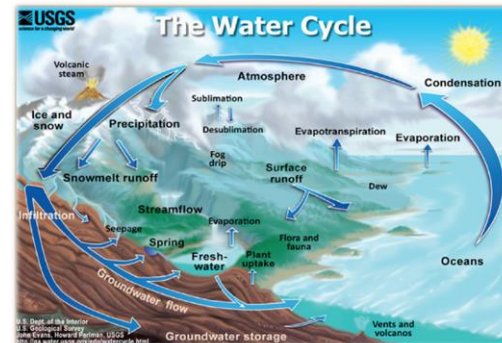
Separation science and elemental mass spectrometry based ultra-trace analysis of ground- and surface water.

The **Division of Analytical Chemistry** offers a master thesis position within the project “Elemental analysis of higher mineralized groundwater”, which is performed in cooperation with the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) and the Geological Survey (GBA).

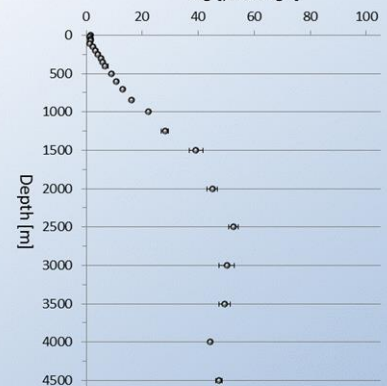
The project focusses on platinum group elements and precious metals, which are present in natural waters in fg - pg L⁻¹ concentration ranges. Distribution and cycling as well as the impact of a greater release into the aquatic environment due to their increased use in technology-related processes are not well studied yet, above all the fact that advanced and robust methodologies capable of selectively and quantitatively analysing these elements are scarce.

The work includes high-end instrumental analytical research aiming at the development of a matrix-separation and pre-concentration method for the accurate quantification these metals via solid phase extraction and FI-ICP-SFMS under clean room conditions.

The expected results will significantly contribute to our understanding with respect to the environmental fate and ecotoxicological potential. They will further be embedded into the current “GeoHint-Update 2015”, aiming at the actualization of background values of Austrian ground water bodies in accordance to the EU Water Framework Directive and Austrian legislations.



Depth profile of Ag in the Atlantic Ocean
Ag [pmol kg⁻²]



Start: February 2018

Duration: 10 - 12 months including writing the theses book

Salary 425,70 Euro (Geringfügigkeitsgrenze) per month

If you are interested please contact lisa.fischer@boku.ac.at

The University of Natural Resources and Life Sciences Vienna is seeking to increase the proportion of women in its employment and therefore particularly encourages relevantly qualified female scientists to apply. In the case of equal qualification for the position and in the absence of any other outweighing factors, the female candidate will be given preference.

