



PhD student position in Industrial Ecology, KTH

The school of Industrial Engineering and Management, KTH, invites applications for a PhD student position at the division of Industrial Ecology. Industrial Ecology is an expanding division, with an international atmosphere where you will have strong development opportunities. Education as well as research is focused on technology and sustainable development. You will participate in the research project “Äspö model for radionuclide sorption”, which is directed towards improving the quantitative understanding of radionuclide retention in geological media, through experimental and theoretical methods. The project is financed by SKB (Swedish Nuclear and Fuel Waste Management CO), and is intended to support their safety assessment regarding underground repositories for radioactive wastes.

The project focuses on metal ion sorption onto natural surfaces, with investigation methods ranging from wet chemistry experiments, over spectroscopic/microscopic analyses to theoretical modelling. Appropriate analytical/theoretical methods are available but you will adopt and further develop them within the scope of the project. You will work with modern experimental methods (such as e.g., autoradiography) as well as advanced modelling approaches. You will present research results at national and international conferences as well as in the scientific literature.

The project is a co-operation between Industrial Ecology, KTH, and Nuclear Chemistry, Chalmers University of Technology (CTH) in Gothenburg, and you will spend about a third of your time at CTH. The department of Nuclear Chemistry at CTH has since the 1970's been active in the research field regarding a final disposal of nuclear waste. The experimental methods employed have been sorption- and diffusion studies, surface titrations, dissolution studies and liquid extraction. The department has access to an extensive equipment park, by example for work in glove boxes and for chemical and radiometric analyses.

Qualifications

Appropriate qualification is for example a Master of Science or Technology with major in chemistry, chemical engineering or geology or the equivalent. You should have solid knowledge of general/inorganic chemistry, preferably with focus on aquatic chemistry, surface chemistry, nuclear chemistry, analytical chemistry, physical chemistry or inorganic chemistry, and in mathematics. You should have experience of own laboratory work, preferably in an analytical direction, and a genuine interest in the research area of mineral surface chemistry. You should also be strongly motivated for pursuing research studies.

More Information

Please, see <http://www.ima.kth.se/aspomodel/> for additional information.

The position is announced at www.kth.se and applications are welcomed until April 11th 2008.