

PhD student position in Computational Atomic, Molecular and Cluster Physics

**Electron Spectroscopy Group
Department of Physical Sciences, University of Oulu, Finland**

The Electron Spectroscopy Group in Oulu has a long-time experience in high-resolution spectroscopy of atoms and molecules using synchrotron radiation. The interpretation of the atomic experimental resonant Auger, photoelectron and ion yield spectra has been done by using theoretical ab initio methods, such as the relativistic multi-configuration Dirac-Fock approach. For more information on the group and research visit the web page <http://physics.oulu.fi/elsp.php?lang=en>.

Starting from the year 2009 the group is funded by the FiDiPro (Finland distinguished professor) project for five years. In addition to the FiDiPro professor position of Stephan Fritzsche the funding includes positions for a post doctoral researcher and two PhD students.

Experimental research in the group focuses on atoms together with small atomic and molecular clusters in gas phase. A detailed modeling of the electronic structure and transitions is thus essential in order to understand the electron spectra and to reveal the basic excitation and decay processes, including time dependent phenomena.

Applications are invited for a PhD student to participate in development of computational methods in

- Photoexcitation and ionization in small molecules and clusters
- Decay of core excited states in small molecules and clusters
- Atomic photoionization and Auger decay processes

The candidate should have a university degree in physics or related discipline. A background in quantum mechanics and numerical methods is appreciated. The candidate is expected to have good knowledge of spoken and written English.

The position is available from January 2009 with a maximum duration of four years. For further information contact Helena Aksela (helena.aksela@oulu.fi), Stephan Fritzsche (s.fritzsche@gsi.de), or Sami Heinäsmäki (sami.heinasmaki@oulu.fi).

The applications including a curriculum vitae can be sent to the persons mentioned above via e-mail or via regular mail to

Department of Physical Sciences
P.O. Box 3000
90014 University of Oulu
Finland