

## PhD Position in Experimental Chemical Physics

Water is the key compound for our existence on this planet and it is involved in many physical, biological, geological and chemical processes. Although water is the most common molecular substance it is also the most unusual with many peculiar properties, such as an increased density upon melting, increased viscosity under pressure, density maximum at 4°C, high surface tension and many more. Another of the remarkable and invaluable properties of water is its ability to act as strong polar solvent, which makes it possible for ionic salts to be completely dissolved in it. The understanding of the hydrogen bonding (H-bonding) network in water that gives rise to all these unique properties is one of the most intriguing problems in condensed matter and chemical physics.

A PhD student position is open for experimental research in Chemical Physics related to fundamental studies of the structure and dynamics of water. The research will focus on the usage of x-rays from synchrotron radiation and free electron laser facilities. Part of the thesis work will be carried out at Stanford University where two of the most intense x-ray sources in the world are located within the Stanford Linear Accelerator Center (SLAC). The candidate should be prepared to spend some part of the year for experiments in the San Francisco area. The work will be carried out in close collaboration with the quantum chemistry group at AlbaNova where the candidate can also participate in some theoretical work.

The funding is 4 years, or 5 years if 20 % departmental duties are included. An appropriate undergraduate degree in physics or chemistry (or equivalent) is required before admission, but does not have to be completed by the application deadline.

The application should be marked Dnr SU 617- 2191-08 and specify the position sought (experimental chemical physics). The application should include a letter of intent describing your motivation for applying, a curriculum vitae, extracts of undergraduate studies including grades, copy of undergraduate thesis (or a detailed description of ongoing work on the thesis), two letters of recommendation and other relevant material for our selection process. The application should be received no later than September 28, 2008 at the address:

Stockholms universitet  
Registrator/PA  
SE-106 91 Stockholm

or [registrator@su.se](mailto:registrator@su.se)

More information on the research activity can be obtained from Professor Anders Nilsson, +1 650 926 2233, e-mail: [nilsson@slac.stanford.edu](mailto:nilsson@slac.stanford.edu) or Professor Lars GM Pettersson, 08-55378712, email: [lgm@physto.se](mailto:lgm@physto.se). For general information on the graduate study program and formal admission requirements, see [www.physto.se/utbildning/forskarutbildning-eng.html](http://www.physto.se/utbildning/forskarutbildning-eng.html), or contact Director of Graduate Studies Kjell Fransson +46-(0)8-5537 8605, e-mail: [kjell.fransson@physto.se](mailto:kjell.fransson@physto.se).