



LUND
UNIVERSITY

VACANCY

2010-02-26

Dnr N 2010/129

Faculty of Science

Lund University announces the following vacancy:

POSTGRADUATE SCHOLARSHIP in chemistry, within the discipline of chemical physics, with placement at the Department of Chemistry, Division of Chemical Physics, Faculty of Science.

Reference Number: N 2010/129

Starting Date: 2010-04-15 at the earliest.

Information: Researcher Ivan Scheblykin, Ph: + 46 46 222 48 48

E-mail: ivan.scheblykin@chemphys.lu.se

Worker's unions at Lund University: OFR, SACO and SEKO

Project Description:

The project is devoted to study energy flow in molecular light-harvesting antennas using single molecule spectroscopy (SMS) and fluorescence microscopy techniques. Particularly interesting antennas are J-aggregates – organized ensembles of hundreds of molecules with coherently coupled excited states. SMS makes visible phenomena like fluorescence blinking and fluctuations of other optical property that are not observable in bulk materials due to ensemble-averaging. These phenomena gives us “inside” information on energy redistribution between chromophores and on excited state quenching by generating of “dark” states. With new techniques developed in our group it will be possible to measure geometrical parameters (size, shape etc) of individual nano-antennas and correlate them with energy transport properties.

Qualifications:

Expertise/qualification required from the candidate: master degree in chemistry or physics; strong basic education in general physics, physical chemistry, optics, laser physics, mathematics and quantum mechanics; experience in programming; experience in operation with general electronic equipment (generators, oscilloscopes etc).

Additional expertise: Experience/education in optical/fluorescence microscopy; courses on solid-state physics; computational mathematics and programming; working experience in a laser lab. Regulations concerning appointment as a full PhD student can be found in HF 5 Chap 1-7§§ and SFS 1998:80. Also consult the admission regulations found at:

<http://www.science.lu.se/o.o.i.s/4964>

An educational stipend is awarded for the first 18 months of full-time study, following which time the student is appointed as a full doctoral student. Regulations concerning educational stipends for doctoral students can be found in SFS 1995:938 and 1998:81. Regulations concerning appointment as a full PhD student can be found in HF 5 Chap 1-7§§ and SFS 1998:80.

Those who hold an educational stipend or a doctoral student appointment must first be accepted for postgraduate study. To be accepted, a student must be judged to have the competence necessary to complete a course of postgraduate study.

In addition to pursuing postgraduate studies, the doctoral student may also perform other duties - including research, teaching and administration – according to the specific regulations.

The university strives for a more even gender representation within postgraduate education.

Applications are made on a specific application form found on the web site:
<http://www.science.lu.se/o.o.i.s/13456>

The application must reach the Registrar, Kansli N, Lund University, Box 118, SE-221 00 Lund, Sweden, **not later than Friday, March 19th 2010**. All submitted documents must be attested as to their authenticity.

Thomas Björkman
Administrative Officer