Postdoctoral scholarship in organic bioelectronics
(Reference number: Dnr ITN-2019-00197)

at the Laboratory of Organic Electronics, Department of Science and Technology,
Linköping University (Campus Norrköping)

Linköping University (LiU) conducts world-leading, cross-disciplinary research in fields that include materials science, IT, and life-science technology. LiU is one of the largest universities in Sweden and today has 27,000 students and 4,000 employees. The students are among the most desirable in the labour market and international rankings consistently place LiU as a leading global university. Read more at http://www.liu.se

At the Laboratory of Organic Electronics (LOE) we explore electronic and optical properties of organic semiconductors, biomaterials from the forest and hybrid organic materials. We share a common interest in exploiting the combination of electronic and ionic charge for use in energy, internet-of-things, health care and biology applications. Our research topics include synthesis, material science, theory and modeling, device physics, nanotechnology, biotechnology and system design. Our activities span the range from basic research to commercialization, the latter carried out in close collaboration with RISE Acreo. LOE currently has ~100 researchers and research students divided into eleven units, each led by a principal investigator. Read more at www.liu.se/loe

Background and duties

LOE’s Bioelectronics group (liu.se/en/research/organic-bioelectronics) focuses on coupling ionic and biochemical signals with electronic signals using organic materials. Other groups at LOE have made significant advances in utilizing forest-based materials – in particular cellulose scaffolds – for example in power electronics and energy storage. We are now investigating using such forest-based materials as the foundation for ionic-bioelectronic systems. In particular, this postdoc scholarship centers around research into the use of cellulose-based materials in iontronic technologies (dx.doi.org/10.1002/admt.201700360) and organic electrochemical transistors (and subsequent biosensors).

The postdoc scholar will develop bioelectronic and iontronic components utilizing forest-based materials as well as (semi)conducting polymers and polyelectrolyte “ion conductors”. Activities will further include processing of components in a cleanroom environment, characterization of materials and electrical/ionic properties, fundamental studies of mechanisms for transport of charge and bioactive compounds, and investigation of routes to optimize the integration and utilization of forest-based materials. Ultimately, bioelectronic components may be utilized in biological experiments at LOE’s labs or at one of our collaborators’ labs.
Qualifications and requirements to applicants:
- Scholarship may be granted only to non-Swedish citizens with a PhD or equivalent acquired in another country than Sweden. The applicant must not have been employed by Linköping University previously.
- The applicant must have or be about to receive a doctoral degree in a subject relevant to the research project (e.g. physics, chemistry, electrical engineering, materials science, or biotechnology) and needs to be passionate about research. Problem solving ability and creativity are essential.
- Previous experience in multidisciplinary activities is valuable.
- Research at the Laboratory of Organic Electronics is carried out predominantly in English, so relative fluency is favorable.

Starting date
Fall 2019 or by agreement.

Appointment and Conditions
- Appointment is initially for one year with a possibility of an extension for a second year depending on a mutual agreement. The total time for receiving a scholarship from Linköping University can never exceed two years.
- The scholarship amounts to SEK 25 000/month (tax-free) (~€2500/month). Economy class travel to/from Sweden for a scholarship holder will be covered. Funding can be available to participate in conferences.
- Essential information about healthcare, insurances etc. can be found here. Questions are welcome to hr@itn.liu.se

Application procedure
The following documents (in pdf-format) must be submitted when applying for a scholarship:
- Cover letter (1-2 pages describing your background and your interest in this position)
- Curriculum vitae, max 2 pages, including at least two references that we can contact
- List of publications (only upload files if they are not available on journal sites)
- Statement of Research Interests, max 2 pages
- Copy of passport
- Copy of PhD diploma

The application should be sent electronically to Assoc. Prof. Daniel Simon daniel.simon@liu.se and a copy to registrar@itn.liu.se. Mark your application with reference number Dnr ITN-2019-00197 in the e-mail subject field.

Deadline for application is 16 August 2019.

Contact:
Assoc. Prof. Daniel Simon, daniel.simon@liu.se
Department HR-partners, hr@itn.liu.se