Postdoctoral scholarship in Organic Electronics  
(Reference number: Dnr ITN-2018-00345)  
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](http://www.liu.se)

The Laboratory of Organic Electronics is part of LiU’s Department of Science and Technology and is renowned for its world-leading research on electronic and optical devices based on organic materials. Its primary theme involves the coupling of ions and electrons as signal carriers for applications in organic bioelectronics, printed electronics, organic energy and electrochemical devices, and nanooptics. Currently, the research staff of the Laboratory includes about 100 researchers (professors, senior and junior scientists and PhD students), see [http://liu.se/loe](http://liu.se/loe) for details.

**Background and duties:**
The project is associated with the Wallenberg Wood Science Center (WWSC), which is a joint research center including groups from KTH Royal Institute of Technology, Chalmers University of Technology, and Linköping University with base funding from the Knut and Alice Wallenberg Foundation. The mission of WWSC is to create knowledge and develop technology based on biopolymers from trees. At Linköping University (LiU), the WWSC research is conducted at the Laboratory of Organic Electronics in Norrköping.

The main existing pathways for inclusion of electronic conductivity into cellulose-based materials are the various forms of carbon materials, e.g. graphene and nanotubes, and various conducting polymers. In the WWSC-project **Conductor patterns in wood and paper**, we will investigate methods to spatially constrain such modifications to well-defined regions, including but not limited to photolithography, 3D-printing, and electrochemical methods. Advanced characterization methods for spatial imaging and characterization of conductivity will be developed. The resulting technology aims at deriving 3D patterning and manufacturing techniques for future energy, electrical and electronics technology.

The postdoctoral scholar will work mainly on the development of a method for 3D patterning of electrical conductivity in cellulose-based materials. Scientifically, this includes e.g. investigation of diffusion properties of conducting polymers in (nano)cellulose paper, measurement of electrical properties including conductivity and impedance, modelling of diffusion and transport using measured data, and development of
characterization methods for cross-section measurements of conductivity and chemical properties.

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. organic electronics, materials science, physics or chemistry) and needs to be passionate about research. Problem solving ability and creativity are essential.
- Research at the Laboratory of Organic Electronics is carried out predominantly in English, so relative fluency is favorable.

Starting date
Early 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 25000:-/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 interest in this project)
- CV, max 2 pages, including at least two references that we can contact
- List of publications
- Statement of Research Interests, max 2 pages
- Copy of passport
- Copy of PhD diploma

The application should be sent electronically to Isak Engquist, isak.engquist@liu.se and a copy to registrator@itn.liu.se. Mark your application with reference number Dnr ITN-2018-00345 in the e-mail subject field.

Deadline for application is 16th of December.

Contact:
Isak Engquist, isak.engquist@liu.se
Annelie Westerberg, HR@itn.liu.se