PhD in Applied Physics (Organic Bioelectronics)
Norrköping

Ref: LiU-2017-00194

At Linköping University we embrace innovative thinking. Constantly challenging ourselves has been our strongest motivator ever since we opened our doors in 1975. We are driven by seeking answers beyond the traditional and across subject boundaries. If you are too, we would like to see you at our university. Together we can find solutions to the challenges of the day.

At the Department of Science and Technology, at the university's Norrköping Campus, we provide education and conduct research in physics and electronics, communications/logistics and media- and information technology. The department is recognised for its work in fields including logistics, visualisation and organic electronics. We combine academic excellence with fruitful collaboration with the Community.

Read more at www.itn.liu.se

LINKÖPING UNIVERSITY
Hereby advertises two positions as

PhD student in Applied Physics (focus area: Organic Electronics)
formally based at Laboratory of Organic Electronics, Department of Science and Technology (ITN), Campus Norrköping

Research area
At the Laboratory of Organic Electronics (LOE), we focus on the study and application of electronically and ionically conducting organic materials in an array of areas spanning energy harvesting, printed electronics, photonics, and bioelectronics.

Read more at www.orgel.itn.liu.se

Together with other partners at Linköping University, and the research institute Swedish ICT AB, LOE is developing a smart system platform consisting of an intra-body network of sensors and bio-electronic actuators, all connected by body-coupled communication (see essay in Advanced Materials, http://dx.doi.org/10.1002/adma.201504301). Together with big data analysis, a treatment regimen will be derived that provide high-speed feedback between diagnosis and auto-regulated treatment, with the aim of developing a radically novel health care system. The intra-body network will be supported by the ubiquitous mobile network and the resources of the “cloud”. LOE's main contribution to this effort (and the primary focus of this PhD position) will be in the organic bioelectronic sensor and actuator components that will make up the physiological “input and output” of the intra-body network. The goal with this technology is to revolutionize future healthcare, and develop new therapies for today's most difficult-to-treat diseases.

Duties
As a PhD student you will primarily devote yourself to your research. As a PhD student you are limited to work with education and administration up to 20 percent of full time.

The PhD student will develop organic bioelectronic components such as biosensors and electronically-controlled drug delivery devices. The research will include materials and devices based on (semi)conducting polymers as well as polyelectrolyte “ion conductors” with the aim of translating biological and electronic signals, as well as integration with the larger intra-body network system. The PhD studies will further include processing of components in a cleanroom environment, characterization of materials and electrical/ionic properties, and fundamental studies of mechanisms for transport of electrical charge and bio-active compounds.

Qualifications
Qualified to PhD studentships are only those who are or have been admitted to graduate studies.
A suitable background for this position is a master’s or engineering degree in physics, materials science, electronics, or biotechnology. Research at the Laboratory of Organic Electronics is carried out predominantly in English, so relative fluency is favorable.

**Appointment time**
The appointment will be until further notice for a maximum of one year at a time. A doctoral student may not be employed during a period exceeding eight years. The total time of appointment must not exceed the equivalent of four years’ full time research training.

**Starting date**
Spring 2017, or by agreement.

**Salary**
The salary for PhD students is based on the department’s salary scale.

**Union representatives**
For contact with union representatives see [www.liu.se/jobba/lediga-jobb/fackliga-kontaktpersoner?l=en&sc=true](http://www.liu.se/jobba/lediga-jobb/fackliga-kontaktpersoner?l=en&sc=true)

**Application procedure**
Apply for the position by clicking the “Apply” button below. Your application must be received at latest **February 15**.

Applications and documents received after the date above will not be considered.

**Equal opportunities**
A majority of our PhD students within ITN are men, which is why precedence will be given to women in cases where qualifications are deemed otherwise equivalent.

Linköping University will continue to develop as an attractive and creative place of work, characterized by equal terms and actively works for equality and diversity.

We look forward to receiving your application!

Linköping university has framework agreements and wishes to decline direct contacts from staffing-and recruitment companies as well as from vendors of job advertisements.

**Contact person**
Daniel Simon  
Universitetslektor  
+46 11 363476  
daniel.simon@liu.se

Magnus Glänneskog  
Administrativ chef  
+46 11 363081  
magnus.glanneskog@liu.se

[URL to this page](http://www.liu.se/jobba/lediga-jobb?l=en&&rmpage=job&rmjob=4640&rmlang=UK)  

[Apply](http://www.liu.se/jobba/lediga-jobb?l=en&&rmpage=job&rmjob=4640&rmlang=UK)