

Three postdoctoral scholarships in Organic Photonics and Nanooptics (Reference number: Dnr ITN-2020-00202)

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

Research environment

Linköping University (LiU) conducts world-leading, cross-disciplinary research in fields including materials science, IT, and life-science. 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>

The Laboratory of Organic Electronics (LOE) 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, with application areas including sensors, displays, printed electronics, bioelectronics, and energy conversion. Currently, there are about 140 researchers at LOE (professors, senior and junior scientists, and PhD students), see <http://liu.se/loe> for details.

The Organic Photonics and Nanooptics group is an international and vibrant team led by Dr. Magnus Jonsson. The group focuses on the development and studies of novel nanooptical materials and concepts. Recent highlights and on-going topics include [switchable organic plasmonics](#), [cellulose metamaterials](#), and [sensors for artificial skin](#). More information can be found at www.mpjonsson.com and at liu.se/en/research/organic-photonics-and-nano-optics.

Available postdoctoral research projects:

The Organic Photonics and Nanooptics group now has openings for several postdoc scholars to join the team, specifically in the areas of:

- (A) Dynamic organic nanooptics
 - Studies of novel tuneable nanophotonics based on conducting polymers and other organic materials. See [recent paper in Nature Nanotechnology](#)
- (B) Cellulose optics and solar fuels
 - Optical properties of forest-based materials, focusing on photoelectrocatalysis and solar-production of hydrogen peroxide
- (C) Cellulose nanooptics and metamaterials
 - Studies of cellulose-based metamaterials for applications such as radiative cooling and optical diffusers. See [recent paper in Journal of Mat. Chem. C](#)

The projects will involve (nano) fabrication and processing of materials and devices in a cleanroom environment; optical and (photo) electrochemical measurements; fundamental studies and optical simulations as well as device demonstrations.

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 PhD in a subject relevant to the research project (e.g. physics or materials science) and needs to be passionate about research. Problem solving ability and creativity are essential, as well as good oral and written communication skills in English.
- Relevant expertise areas include: nanooptics, metamaterials, conducting polymers, cellulose and composite materials, electrochemistry, organic electronics, photocatalysis.
- Relevant background skills include: fabrication in cleanroom environment, polymerization and materials development; optical characterization (ellipsometry, optical spectroscopy, etc.), electrical and (photo) electrochemical characterization; general materials characterization (AFM, SEM, etc.), device fabrication, optical simulations (FEM, FDTD).

Appointment and Conditions:

- The scholarship amounts to SEK25000:-/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.
- Appointment is initially for one year with possibility of extension for a second year upon a mutual agreement. The total time for receiving a scholarship from Linköping University can never exceed two years.
- Essential information about healthcare, insurances etc. can be found [here](#). Questions are welcome to HR@itn.liu.se
- Starting date will be autumn 2020 or by agreement

Application procedure:

The following documents should be submitted as one combined pdf-document:

- 1. Cover letter: max 2 pages, describing your background and research interests and what makes you interested in the position/s. Please indicate which of the topics [A, B and C] that interest you most.
- 2. CV: max 4 pages, including contact details to three references persons
- 3. Full publication list
- 4. Copy of passport and of PhD diploma

The application should be submitted by email as one combined pdf document to Dr. Magnus Jonsson at magnus.jonsson@liu.se, with copy to registrator@itn.liu.se. Mark your application with *reference number ITN-2019-00202* in the subject field.

Deadline to apply for these postdoc scholarships is **31st of July 2020**.

Contacts:

Dr. Magnus Jonsson, research group leader, magnus.jonsson@liu.se
Annelie Westerberg, HR representative, HR@itn.liu.se