

Postdoc scholarship in synthesis of functionalized conjugated polymers for stable doping of organic semiconductors

Do you love organic/polymer synthesis, physical crosslinking and colors?
Join us in our research to harness the power of chaos through chemistry!

We are seeking a motivated postdoctoral scholar to join [the KAW-funded project aimed at developing stable doping for organic semiconductors](#). The goal is to develop stable conducting plastics that can find their way into many different electronic applications, such as solar cells, thermoelectrics or electrochemical transistors.

What You'll Do:

- **Design and synthesize:** Synthesize new conjugated polymers enhanced with functional groups and alter material properties by design.
- **Process and analyze:** Study the ability of your developed conjugated polymers to become electrically conducting and inhibit molecular movement during processing and redox doping through physical crosslinking.
- **Collaborate and Learn:** Work closely with experts in synthesis, material science, device physics and advanced imaging, and engage in interdisciplinary research that will study structure-property relationships of the functionalized conjugated polymers that you will develop.

Why Join Us?

- **Impactful Research:** Contribute to synthetic solutions that address critical issues in organic electronics.
- **Collaborative Environment:** Be part of a dynamic team of researchers dedicated to conjugated polymer chemistry, and that will be happy to teach you.
- **State-of-the-Art Facilities:** Utilize our advanced synthesis and characterization facilities to support your research.

Your qualifications

We are looking for a candidate who is / has:

- **Academically Strong:** Holds a relevant PhD degree with a solid academic record.
- **Research Experience:** Demonstrated experience in conducting research, preferably in a related field.
- **Self-Motivated:** Strongly self-driven with excellent problem-solving skills, ready to tackle complex challenges.
- **Driven and Creative:** Passionate about innovation and able to think outside the box.
- **Detail-Oriented:** Strong attention to detail and commitment to producing high-quality work.
- **Collaborative:** Capable of working effectively both independently and as part of a multidisciplinary team.
- **Organized:** Excellent organizational skills, capable of managing multiple tasks and projects effectively.
- **Excellent Communicator:** Possesses strong verbal and written communication skills in English.

- **Technical Proficiency:** Experience in conjugated polymer synthesis is highly desirable, familiarity with microstructural characterization is a plus.

Great emphasis will be placed on personal qualities and suitability

Your workplace

Join us at the Laboratory of Organic Electronics (LOE) at Linköping University, a world-renowned centre for research in bioelectronics, energy devices, printed electronics, and nanooptics using organic materials. At LOE, you'll be part of a vibrant community of over 150 researchers, including professors, senior and junior scientists, and fellow PhD students. Our collaborative environment is multidisciplinary, fostering creativity and innovation. (<http://liu.se/loe>)

You will work within the Organic Chemistry group, led by Associate Professor Renee Kroon. Our interdisciplinary team is driven by an interest in utilizing conjugated polymer-based in hybrid materials, stimuli-responsive conjugated polymers and developing green chemistry for their synthesis.

Our main research directions include:

- investigate how the incorporation of functional groups into conjugated polymers can be used to tailor their interactions with external stimuli, foreign materials and biological systems, as well as the properties of such hybrid materials and concomitant electronic devices.
- develop green synthesis of conjugated polymers by using bio-based building blocks and enzyme catalyzed functional group transformations and polymerizations.

Read more at: <https://liu.se/en/research/organic-chemistry>

Information about the scholarship/terms of employment

- The 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 (polymer chemistry or organic chemistry)
- Scholarship may not consist solely of research collaboration with a mutual exchange of methodological and technical expertise but must also contain a well-defined training element.
- 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 SEK25000:-/month (tax-free) (~€2250/month). Travel costs to/from Sweden for a scholarship holder will be covered up to a maximum amount. 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

Starting date

Fall term 2024, or by agreement

Union representatives

Information about union representatives, see [Help for applicants](#).

Application procedure

The following documents (in pdf-format) must be submitted when applying for a scholarship

1. Cover letter, max 1 page, describing your background, research interests and what makes you interested in the position.
2. CV, max 4 pages, including contact details to three reference persons.
3. Full publication list.
4. Copy of passport, PhD diploma, and MSc transcripts with grades.

The application should be sent electronically to renee.kroon@liu.se with cc to registrator@itn.liu.se. Mark your application with reference number **Dnr ITN-2024-00360** in the e-mail subject field.

Applications deadline: **October 15th, 2024**

Contact

Renee Kroon, associate professor, renee.kroon@liu.se

HR partner, hr@itn.liu.se

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

We welcome applicants with different backgrounds, experiences and perspectives - diversity enriches our work and helps us grow. Preserving everybody's equal value, rights and opportunities is a natural part of who we are. Read more about our work with: Equal opportunities.

We look forward to receiving your application!