Doctoral student in Method Development/Artificial Plant Cells

KTH Royal Institute of Technology, School of CBH

KTH Royal Institute of Technology in Stockholm has grown to become one of Europe’s leading technical and engineering universities, as well as a key centre of intellectual talent and innovation. We are Sweden’s largest technical research and learning institution and home to students, researchers and faculty from around the world. Our research and education covers a wide area including natural sciences and all branches of engineering, as well as architecture, industrial management, urban planning, history and philosophy.

Project description

Third-cycle subject: Fibre and Polymer Science

The entire plant body presents a high degree of complexity and an important step towards a detailed functional understanding is to decouple the plant body into several individual parts that can be addressed independently. In this project the aim is to build simple artificial plant cells using a bottom-up approach with the final purpose to gain a deeper understanding of the molecular architecture as well as the interactions between different components.

The project involves both fabrication development and characterization development (confocal laser microscopy and neutron scattering techniques) in order to provide a plant cell model that can be used for deeper understanding of the inherent properties of the cell wall and lipid membranes in natural plant cells. The project will be in close collaboration with Malmö University and is funded by the SwedNess graduation school.
Supervision: The doctoral student will be supervised by Asst. Prof. A.J. Svagan (Hanner) and Prof. M Cardenas.

What we offer

- The possibility to study in a dynamic and international research environment in collaboration with industries and prominent universities from all over the world. [Read more]
- A workplace with many employee benefits and monthly salary according to KTH's Doctoral student salary agreement.
- A postgraduate education at an institution that is active and supportive in matters pertaining to working conditions, gender equality and diversity as well as study environment.
- Work and study in Stockholm, close to nature and the water.
- Help to relocate and be settled in Sweden and at KTH.

Eligibility

To be admitted to postgraduate education (Chapter 7, 39 § Swedish Higher Education Ordinance), the applicant must have basic eligibility in accordance with either of the following:

- passed a degree at advanced level (M.Sc.) in chemistry, plant science, material science, physics, biotechnology, nanotechnology or similar,
- completed course requirements of at least 240 higher education credits, of which at least 60 higher education credits at advanced level, or
- in any other way acquired within or outside the country acquired essentially equivalent knowledge.
- Requirements for English equivalent to English B/6, [read more here].

Selection

In order to succeed as a doctoral student at KTH you need to be goal oriented and persevering in your work. During the selection process, candidates will be assessed upon their ability to:

- independently pursue his or her work
- collaborate with others,
- have a professional approach and
- analyse and work with complex issues.

Merits

- knowledge of plant biology, colloidal chemistry and microfluidics,
- previous working experience with microcapsules synthesis and characterization thereof,
- previous working experience with scattering methods.

After the qualification requirements, great emphasis will be placed on personal qualities and personal suitability.
**Target degree:** Doctoral degree

**Information regarding admission and employment**

Only those admitted to postgraduate education may be employed as a doctoral student. The total length of employment may not be longer than what corresponds to full-time doctoral education in four years' time. An employed doctoral student can, to a limited extent (maximum 20%), perform certain tasks within their role, e.g. training and administration. A new position as a doctoral student is for a maximum of one year, and then the employment may be renewed for a maximum of two years at a time.

**Union representatives**

You will find contact information for union representatives on [KTH's website](#).

**Doctoral section (Students’ union on KTH Royal Institute of Technology)**

You will find contact information for doctoral section on the [section's website](#).

**Application**

Apply for the position and admission through KTH's recruitment system. It is the applicant’s responsibility to ensure that the application is complete in accordance with the instructions in the advertisement.

Applications must be received at the last closing date at midnight, CET/CEST (Central European Time/central European Summer Time).

Applications must include the following elements:

- CV including your relevant professional experience and knowledge.
- Application letter with a brief description of why you want to pursue research studies, about what your academic interests are and how they relate to your previous studies and future goals. (Maximum 2 pages long)
- Copies of diplomas and grades from previous university studies and certificates of fulfilled [language requirements](#). Translations into English or Swedish if the original document is not issued in one of these languages.
- Representative publications or technical reports. For longer documents, please provide a summary (abstract) and a web link to the full text.

**Other information**

Striving towards gender equality, diversity and equal conditions is both a question of quality for KTH and a given part of our values.

For information about processing of personal data in the recruitment process please read here.

We firmly decline all contact with staffing and recruitment agencies and job ad salespersons.
Type of employment | Temporary position longer than 6 months
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Contract type | Full time
First day of employment | According to agreement
Salary | Monthly salary according to KTH's doctoral student salary scale
Number of positions | 1
Working hours | 100%
City | Stockholm
County | Stockholms län
Country | Sweden
Reference number | C-2020-1892
Contact | • Anna Svagan (Hanner), 08-7906449, svagan@i
• Marité Cárdenas, 040-6657421, marite.carden
Published | 12.Nov.2020
Last application date | 08.Jan.2021 11:59 PM CET

Login and apply