

The mission of the Catalan Institute of Nanoscience and Nanotechnology (ICN2) is to achieve the highest level of scientific and technological excellence in Nanoscience and Nanotechnology. Its research lines focus on the newly-discovered physical and chemical properties that arise from the behavior of matter at the nanoscale. ICN2 has been awarded with the Severo Ochoa Center of Excellence distinction for two consecutive periods (2014-2018 and 2018-2022). ICN2 comprises 19 Research Groups, 7 Technical Development and Support Units and Facilities, and 2 Research Platforms, covering different areas of nanoscience and nanotechnology.

Job Title: Postdoctoral Researcher (SUSNANO)

Research area or group: Nanobioelectronics and Biosensors Group

Description of Group/Project:

The Nanobioelectronics and Biosensors Nanobioelectronics and Biosensors Group at ICN2 is focused on the discovery and technological development of cutting-edge nanotechnology towards diagnostics, food and safety and environmental applications. The group exploits phenomena that occur at the nanoscale in order to generate simple and novel biosensing platforms. They hold a wide expertise in cells, pathogens, DNA, proteins and small molecules detection using both optical and electrochemical approaches.

The main objective of Merkoçi group is to design nanotech devices that can be used even by non-professional people for fast diagnostic at home or doctor's office, control of food quality, safety and security applications where either an emergency exists or an alternative method toward the sophisticated and expensive laboratory instrumentation is being required.

Main Tasks and responsibilities:

The researcher will work in the framework of the european project "Twinning to boost the scientific and innovation capacity of the Universiteti i Tiranës to develop sustainable nanosensors for water pollution detection (SUSNANO) and will be responsible for carrying out the tasks of the research project, as well as tasks related to the exchange of knowledge between researchers in the consortium. Specifically, the research part of the project will focus on the detection of pollutants in water (e.g., heavy metals, antibiotics, pesticides) developing new sensors and electrochemical devices that allow their use at the point of interest. These sensors will be fabricated with graphene-related nanomaterials using inkjet, stamping and screen-printing techniques. Additionally, the researcher is expected to be in constant communication with the other partners in the consortium, write annual reports and organize meetings to show and discuss the results obtained.

Requeriments:

- **Education**

PhD on Materials Science, Chemistry, Biotechnology, or related disciplines

- **Knowledge and professional experience**

Demonstrable previous experience in electrochemical sensing/biosensing (CV, DPV, SWV, EIS, etc.), electrodes functionalization, synthesis, post-treatment, optimization and characterization of carbon-based nanomaterials (e.g., graphene derivatives, graphene oxide, reduced graphene oxide).

Basic electronic engineering and programming capabilities are highly desired.

High level in English

- **Competences**

Ability to work with deadlines, Ability to be creative, proactive in research ideas and activities, excellent communication skills and ability to work within a research group including collaboration with other international teams.

Summary of conditions:

- Full time work (37,5h/week)
- Contract Length: Permanent, contract linked to scientific and technical activities (Contrato indefinido de actividades científico-técnicas)
- Salary will depend on qualifications and demonstrated experience.
- Support to the relocation issues.
- Life Insurance.

Estimated Incorporation date: October 2022

Postdoctoral researcher to be hired in the framework of the project "Twinning to boost the scientific and innovation capacity of the Universiteti i Tiranës to develop sustainable nanosensors for water pollution detection (SUSNANO)" (EC contract number 101059266).

How to apply:

All applications must be made via the ICN2 website and include the following:

1. A cover letter.
2. A full CV including contact details.
3. 2 Reference letters or referee contacts.

Deadline for applications: 28th September 2022

Applications will be continuously reviewed. Shortlisted candidates will be invited for interview.

Equal opportunities:

ICN2 is an equal opportunity employer committed to diversity and inclusion of people with disabilities.

ICN2 is following the procedure for contract of people with disabilities according with article 59 of the Royal Decree 1/2015, of 30 of October.