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

Research area or group: Advanced Electronic Materials and Devices Group

Description of Group/Project:

The Advanced Electronic Materials and Devices (AEMD) group focuses on the material sciences and technology aspects of novel electronic materials, with a strong emphasis on graphene as well as other 2D materials (MoS2). The group also works towards the development of technological applications based on these materials such as electronics, bioelectronics and biosensing, neural interfaces, etc.
The activities cut across different scientific aspects, from the fundamentals (the physics of devices and semiconductors) to materials (growth of graphene and MoS2 materials by CVD and MOCVD, surface functionalisation, advanced characterisation), through to devices (fabrication technology, nanofabrication) and applications (neural implants and biomedical technologies, biosensors, flexible electronics).

Main Tasks and responsibilities:

The research activity of the candidate will be part of the i-VISION project (funded by La Caixa Foundation) and the Graphene Flagship project (funded by the European Commission); these projects are developing graphene-based neural technologies to interface with the brain and the retina. The postdoc candidate will be involved in activities related to the design, fabrication, and assessment of several components of neural interface technologies.
The candidate will be working in a very multidisciplinary project that covers topics such as materials science of graphene and other 2D materials, thin film technologies for neural interfaces, as well as in-vivo device validation of the neural technologies.
The candidate will work in close collaboration with international teams; the candidate is expected to participate and lead these collaborations.

Requirements:

- **Education**

  - PhD in Biomedical Engineering, Materials Science, Nanotechnology, Engineering, Chemistry, Physics, or equivalent degrees.

- **Knowledge**

  - Fluent English (both spoken and written)

- Neuroscience, electrophysiology
- Electrochemistry

- **Professional Experience**

- Science and technology of neural interfaces and implantable devices
- Thin-film technology and device fabrication, flexible electronics
- 2D materials and technology
- Experience in microscopic and spectroscopic characterization techniques (Raman, PL, AFM, SEM, TEM and XPS)

- **Competencies**
- Teamwork skills

Summary of conditions:

- Full time work (37,5h/week)
- Contract Length: Temporary (2 year contract with extension possibility)
- Location: Bellaterra (Barcelona)
- Salary will depend on qualifications and demonstrated experience.
- Support to the relocation issues.
- Life Insurance.

Estimated Incorporation date: As soon as possible

How to apply:
All applications must be made via the ICN2 website https://jobs.icn2.cat/job-openings/285/senior-postdoctoral-researcher-advanced-electronic-materials-and-devices-group and include the following:

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

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.