

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 behaviour of matter at the nanoscale. ICN2 has been awarded with the Severo Ochoa Center of Excellence distinction for three consecutive periods (2014-2018 and 2018-2022 and 2023-2026). ICN2 comprises 20 Research Groups, 7 Technical Development and Support Units and Facilities, and 2 Research Platforms, covering different areas of nanoscience and nanotechnology.

Job Title: Research Assistant

Research area or group: Advanced Electronic Materials and Devices Group

Description of Group/Project:

Advanced Electronic Materials and Devices 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. 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 2D materials by CVD, surface functionalisation, advanced characterisation), through to devices (fabrication technology, nanofabrication) and applications (biosensors, neural implants and biomedical technologies, energy storage and conversion).

Main Tasks and responsibilities:

The researcher's main role will be the development of large scale bidimensional materials by CVD techniques and their flexible technology. The researcher will be in charge of growing the materials and characterize them additionally to the development of novel protection strategies to keep the materials quality along the fabrication process. Apart from the structural characterization, the researcher will investigate the performance of graphene-based materials and technology operating in different working conditions. Specifically, the researcher will focus on (1) graphene growth on rigid substrates, transfer and technology development, (2) graphene surface modification, (3) molybdenum disulphide growth and transfer.

The research activity of the candidate will be framed within the Neuro2Dtech project, entitled "Neural technologies based on 2D materials" (PID2020-113663RB-I00) funded by MCIN/ AEI /10.13039/501100011033.



Requirements:

- **Education:** Master in Materials Science, Nanotechnology, or equivalent degrees.
- **Knowledge and Professional Experience:**
 - Experience in 2D materials synthesis by CVD methods
 - Experience with micro/nanofabrication
 - Experience with characterization tools (Raman, CQMB, AFM, etc.)
 - Experience in programming (LabView, Python, C++, Matlab)
- **Personal Competences:** Teamwork skills, Fluent English (both spoken and written)

Summary of conditions:

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

Estimated Incorporation date: September 2023

How to apply:

All applications must be made via the ICN2 website <https://jobs.icn2.cat/job-openings/534/research-assistant-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.

Deadline for applications: 31/07/2023

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.