As a flagship research center in nanoscience and nanotechnology, our mission is to open and explore new frontiers of knowledge at the nanoscale, and bring value to society in the form of new understanding, capabilities and innovation, while inspiring and providing broad training to the next generations of researchers. Our values are Commitment, Collaboration and Transformation.
Our 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 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 for the development of nanoporous graphene field-effect transistor sensors

Research area or group: Atomic Manipulation and Spectroscopy

Description of Group/Project:
The AMS group focus on the atomic-scale engineering of the quantum properties of novel nanomaterials. Our aim is to understand and control quantum phenomena with atomic precision by chemical and structural manipulation, nanostructuring and interfacing materials that are identified as strategic in the roadmap for new technologies (hybrid metal-organic heterostructures, graphene-based nanostructures, 2D materials, topological insulators...). This position is related to MOLESENSE (PID2022-140845OB-C63), a project within the program of the Spanish Research Agency PROYECTOS DE GENERACIÓN DE CONOCIMIENTO, dedicated to the development of novel graphene-based nanoarchitectures and their application in field-effect transistor chemisensors [Moreno et al., Science. 360, 199–203 (2018)].

Main Tasks and responsibilities:
The candidate will optimize the transfer of nanoporous graphene synthesized on metallic susbtrates to dielectric substrates where the FETs will be fabricated. The quality of transferred layers will be characterized by Raman. In a second step, the candidate will participate in the optimization of the device parameters (electrode material, geometry, dielectric...)

Requirements:
- **Education**:
  PhD level background in physics, chemistry, nanoscience or engineering
- **Knowledge and Professional Experience:**
  Background in condensed matter, physics, chemistry and materials science at the nanoscale.
  Experience as experimental nanoscientist, transfer of 2D materials, fabrication of nanodevices, graphene-based technologies.
- **Personal competences:**
  Skills in experimental physics and nanoengineering, and in data analysis.
  Proficiency in English and demonstrated skills in oral and written communication.

Summary of conditions:
- Full time work (37,5h/week)
- Contract Length: Temporary (15 months)
- Location: Bellaterra (Barcelona)
- Salary will depend on qualifications and demonstrated experience.
- Support to the relocation issues.
- Life Insurance.

Estimated Incorporation date: June 2025

Este contrato es parte del proyecto de I+D+i PID2022-140845OB-C63, financiado por MICIU/AEI/10.13039/501100011033/ y por FEDER, UE, con una dedicación del 100%.

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: 23/04/2025

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.