

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 (FLAG-ERA MINERVA project and ERC Advanced LEIT)

Research area or group: Phononic and Photonic Nanostructures Group

Description of Group/Project:

A Postdoctoral Researcher position is available in the Phononic and Photonic Nanostructures (P2N) group (<http://www.icn.cat/~p2n/>) laboratory led by Prof. Clivia M. Sotomayor-Torres, at the Catalan Institute of Nanoscience and Nanotechnology (www.ICN2.cat). The P2N Group carries out research in nanoscale heat transport in semiconductor, organic and oxide nanostructures, phonon confinement, opto-mechanics, nanofabrication and nanometrology. The position is directly related to the FLAG-ERA MINERVA project and ERC Advanced LEIT on the cutting-edge research on phonons in 2D materials.

Main Tasks and responsibilities:

The candidate will join the new team of the project MINERVA which is a new FLAG-ERA project on MAKING NEW ELECTRONIC DEVICES FROM AMORPHOUS MATERIALS (<https://lmi.cnrs.fr/projects/minerva/>) and ERC Advanced grant LEIT (<https://www.leit-erc.eu>).

The candidate will join a dynamic team working on phonons and phonon engineering in 2D materials .

The candidate will work on synthesis, transfer and nanofabrication of TMDCs in order to create phonon waveguides with periodicity below 50nm. The candidate will contribute to design and development of structural and thermal characterization tools for 2D materials, analysis and interpretation of data, preparation manuscripts and dissemination of results at national and international meetings. The candidate will take an active part in the project, participate in the meetings and preparation of deliverables.

Requirements:

• **Education**

A PhD degree title in Physics

• **Knowledge and professional experience**

Strong background in solid state physics, optics and mathematics. Hands-on experience in optical characterisation (Raman spectroscopy, FDTR/TDTR, Brillouin spectroscopy), electrical characterization and nanofabrication (EBL, RIE, FIB, etc)

Candidates must be able to possess good command of both written and spoken English.

• **Competences**

Applicants should have good organisational skills and be able to work independently.

Summary of conditions:

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

Estimated Incorporation date: September 2022

This contract is part of the project PCI2021-122092-2A funded by MCIN/AEI/10.13039/501100011033 and by European Union "NextGenerationEU/PRTR".



This contract is part of the project that has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme GA 885689



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: 21st August 2022

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.