

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: Postdoctoral Researcher on photocurrent microscopy of quantum materials

Research area or group: Ultrafast Dynamics in Nanoscale systems

Description of Group/Project: The “Ultrafast Dynamics in Nanoscale Systems” group at ICN2 studies ultrafast phenomena in materials with small dimensions. We use home-built, state-of-the art optical and optoelectronic setups with high temporal and spatial resolution and broad wavelength tunability. Our aim is to gain an increased understanding of the ultrafast microscopic processes related to heat and charge, and exploit this towards photonic and optoelectronic applications. In this project, you will be working on photocurrent microscopy of quantum materials for both fundamental understanding as well as technology development.

Main Tasks and responsibilities:

The candidate will be performing photocurrent microscopy measurements in the time domain and frequency domain with different wavelengths of light using unique setups with ultrahigh temporal and spatial resolution. You will develop novel understanding of quantum materials and how they can be exploited towards optoelectronic applications. This position is linked to the Flag-ERA project ENPHOCAL, which is a collaboration between IMEC (Belgium), Ghent University (Belgium), Max Planck Institute for Polymer Research (Germany) and ICN2 (Spain), where the UDNS group is the coordinator of this project.

Requirements:

- **Education:** PhD in Physics or related degree.
- **Knowledge:** Photocurrent microscopy, ultrafast dynamics, quantum materials
- **Professional Experience:** PhD with proven track record
- **Personal Competences:** Team work, Independence, Initiative

Summary of conditions:

- Full time work (37,5h/week)
- Contract Length: Temporary (Until 12/2024)
- Location: Bellaterra (Barcelona)
- Salary will depend on qualifications and demonstrated experience.
- Support to the relocation issues.

- Life Insurance.

Estimated Incorporation date: March 2023

How to apply:

All applications must be made via the ICN2 website <https://jobs.icn2.cat/job-openings/500/postdoctoral-researcher-on-photocurrent-microscopy-of-quantum-materials> 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 January 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.