

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 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: PhD student: Ultrafast heat transport in 2D materials

Research area or group: “Ultrafast Dynamics in Nanoscale Systems”

Description of Group/Project:

We are looking for a highly motivated PhD student for an experimental project that aims at understanding and controlling thermal transport properties in 2D materials. In particular, you will explore novel sample geometries based on layered materials, and will build innovative experimental techniques based on ultrashort laser pulses, aimed at studying heat transport. The results will have relevance for applications such as thermoelectrics and thermal management. This work is part of ERC Starting Grant project “CUHL”.

Main Tasks and responsibilities:

- Prepare samples based on layered materials, mainly using dry transfer techniques
- Use state-of-the-art ultrafast optical and optoelectronic setups to study heat transport
- Build novel and unique ultrafast setups
- Perform measurements and analysis of thermal transport

Education, Experience, Knowledge and Competences required:

- Education
 - MSc in physics or related discipline
- Professional Experience
 - Experience with optical techniques
 - Experience with nanofabrication
 - Experience with layered materials and/or thermal transport is a bonus
- Competences
 - Intrinsic motivation, responsibility, independence, strong commitment, excellent communication skills, ability to work with highly qualified professionals with international backgrounds.

Summary of conditions:

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

Estimated Incorporation date: September 1st 2021

How to apply:

All applications must be made via the ICN2 website <https://jobs.icn2.cat/job-openings/294/phd-student-ultrafast-heat-transport-in-2d-materials-ultrafast-dynamics-in-nanoscale-systems> 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: July 15th 2021.

Equal opportunities:

ICN2 is an equal opportunity employer committed to diversity and inclusion of people with disabilities.