

## RESEARCH SUPPORT TECHNICIAN (SMARTER) - NANOSTRUCTURED FUNCTIONAL MATERIALS GROUP

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 Centre 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: RESEARCH SUPPORT TECHNICIAN

**Research area or group:** Nanostructured Functional Materials group

### Description of Group

Nanostructured Functional Materials (**Nanosfun**) Group ([www.nanosfun.com](http://www.nanosfun.com)) is a group of ICN2 and focuses its research on molecular materials at the nanoscale. The nanostructuring confers properties not possible otherwise. The group works in two main research lines: nanomaterials for biomedical applications (e.g. Parkinson treatment) and **chromogenic and emissive materials for energy efficient devices**. The group is also strongly active in technology transfer and R&D projects with private companies.

### Description of research project

**Project:** Transición Ecológica y Digital (TED)

The project belongs to the project call Transición Ecológica y Digital (TED), TED2021-131709B-I00, funded by MINISTERIO DE CIENCIA E INNOVACIÓN, EU Next Generation Plan de recuperación, transformación y resiliencia, AEI. It is about the development of new chromogenic transparent materials responsive to NIR light, to promote light transmittance modulation in the NIR and visible region. These materials, in the form of films will be applied to windows to improve comfort and energy efficiency in buildings.

This contract is part of the project TED2021-131709B-I00, funded by MCIN/AEI /10.13039/501100011033 and the European Union NextGenerationEU/ PRTR.



### **Main Tasks and responsibilities:**

The candidate will be fully involved in the SMARTER project, which involves these main areas of activity:

- Design and chemical synthesis of new compounds,
- Preparation of photothermal nanoparticles,
- Synthesis and optimization of nanocápsules and solid lipid nanoparticles,
- Preparation of films through casting methods or Dr. Blade,
- Characterization of chemical, morphological and optical properties of the materials synthesized.

The hired person will be mainly focused on lab work to develop the project. It will be also asked the preparation of reports and presentations to show the latest results.

### **Requirements:**

- **Education:**
  - Degree in Chemistry (preferred), Nanoscience and Nanotechnology, Chemical Engineering, and similar.
- **Professional Experience:**
  - Experience in lab work and research, especially in the design and synthesis of organic molecules, their purification (through extraction, column chromatography, etc.) and characterization through NMR, IR, mass spectrometry.
  - Expertise in the synthesis of polymeric nanomaterials through oil-in-water emulsions.
- **Competences required:**
  - Experience with pH-responsive and/or solvatochromic molecules/nanomaterials are highly enforcing the selection.
  - Good spoken English would be appreciated as well.
  - Good attitude in working in a team,
  - Motivation and ability to overcome scientific challenges.

### **Summary of conditions:**

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

**Estimated Incorporation date:** December 2022

### **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: 25 November 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.