

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 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

Research area or group: NanoBiosensors and Bioanalytical Applications Group

Description of Group/Project:

The NanoB2A group focuses on the development of novel nanobiosensor devices based on plasmonics, nanoplasmonics, and silicon-based photonics principles, including surface biofunctionalization, microfluidics for automatic fluid delivery and complete lab-on-a-chip integration for point-of-care devices. The application of the nanobiosensor devices in real clinical diagnostics and environmental control is one of the Group's main objectives. The PostDoctoral position is framed within the PRIME PID2023 Project titled "Photonic nanoresonators for cancer immunotherapy evaluation" funded by AEI / MCIN, and led by Dr. Maria Soler. The candidate will participate in the different processes towards the development of a new photonic nanoresonator systems, focused on the fabrication and integration of the sensors and for their application in the evaluation of cell immunotherapies. If you are interested in joining to a young, dynamic and highly multidisciplinary team, with a highly innovative research project, this could be your opportunity.

Main Tasks and responsibilities:

The candidate will be involved in the design and development of optical label-free biosensors based on novel all-dielectric nanostructures. The main experimental tasks include: the fabrication and characterization of dielectric nanostructures; the optimization of the nanoarray geometry for application in photonic sensor systems, integration into user-friendly devices for real-time measurements; and full evaluation of the sensor prototype for refractometric biosensing measurements. The candidate will work under supervision and have the opportunity of independently developing the research. Related tasks will also include: data analysis and processing; preparation of regular reports and presentations; writing scientific publications.

Requirements:

- **Education:** PhD in Material Sciences, Photonics, or related areas. Master's degree in similar field, including optics/photonics, nanoscience and nanotechnology.
- **Knowledge and Professional Experience:**
Background in photonics, preferably with demonstrated experience in optical sensing.
Demonstrated experience on nanofabrication and biosensor development will be highly valued.
Knowledge of optical setup design and implementation will be positively considered.
Microfluidics design and fabrication experience will be a plus
Excellent level of English (Fluent in writing and speaking) is required.
- **Personal Competences:**
Highly motivated, enthusiastic, proactive and responsible. Good communication and organization skills.

Summary of conditions:

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

Estimated Incorporation date: 01/12/2024

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: 20/11/2024

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.