The Nanoscience Cooperative Research Center, CIC nanoGUNE, located in Donostia-San Sebastian, Basque Country (Spain), is currently looking for

PREDOCTORAL RESEARCHERS

to work within the

NANOOPTICS GROUP

NanoGUNE is a research center devoted to conducting world-class nanoscience research for a competitive growth of the Basque Country. NanoGUNE is a member of the Basque Research and Technology Alliance (BRTA) and is recognized by the Spanish Research Agency as a María de Maeztu Unit of Excellence.

The **Nanooptics Group** at CIC nanoGUNE has pioneered the development of scattering-type scanning near-field optical microscopy (s-SNOM) and Fourier transform infrared nanospectroscopy (nano-FTIR) [Nature Mater. 10, 352 (2011); Nano Lett. 12, 3973 (2012); Nature. Rev. Mater. 10, 285 (2025)]. These advanced techniques enable imaging and spectroscopy at visible, infrared, and terahertz frequencies with spatial resolution improved by a factor of 100 to 1000 compared to conventional optical methods. Our research has not only laid the foundation for s-SNOM and nano-FTIR technologies but also demonstrated their immense potential across a wide range of applications, including nanoscale conductivity mapping, chemical identification of materials, and the exploration of exotic optical phenomena in 2D and quantum materials.

About the PhD Positions

We are seeking highly motivated candidates for fully funded 3-year PhD positions. As a PhD researcher in our group, you will contribute to one or more of the following exciting research directions:

- Development of next-generation s-SNOM and nano-FTIR instrumentation and nanoscale spectroscopy techniques
- Applications in materials science, including 2D materials and polymers, as well as quantum systems

Candidate Profile

We are looking for motivated, curious, and committed PhD candidates with the following qualifications:

- A Bachelor's and Master's degree (or equivalent) in Physics, Materials Science, Engineering, or a related field
- Knowledge in general optics, nanooptics, and solid state optics.

- Experience with sacanning probe microscopy, infrared spectroscopy, optical instrumentation, or related techniques is a plus
- Proficiency in data processing using Python.
- Strong motivation for hands-on experimental research
- Proficiency in written and spoken English is essential

What We Offer

- A fully funded PhD program with dedicated supervision and access to state-of-the-art research facilities
- A vibrant, international, and interdisciplinary research environment
- Opportunities to publish in top journals and present your research at international conferences
- The chance to live and work in San Sebastián, a beautiful coastal city in the Basque Country, at one of Europe's leading nanoscience institutes.

Learn more about our **PhD program:** [PhD Program at nanoGUNE]

The position is expected to start on January 2026.

Candidates should **apply** by completing the **form below** and attaching the following documents:

- CV
- Motivation letter
- 1 reference letter

The **deadline** for applications is 31/12/2025.

NOTES:

(i) All applicants will receive an answer after the end of the selection process; but please note that due to the large number of submissions that are expected, we cannot provide individual feedback.

(ii) Additional information about nanoGUNE's commitment towards HR excellence in Research and Gender Equality are available on our website.

(iii) We encourage you to subscribe to our HR mailing list to receive information related to nanoGUNE's open positions and open calls for different training and talent attraction programs.

CIC nanoGUNE
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE