

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

**Pre Doctoral Researcher**  
to work on  
**Inorganic-organic hybrid formulations for cultural heritage preservation**

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 **position** is offered in the Nanomaterials Group, led by Mato Knez ([m.knez@nanogune.eu](mailto:m.knez@nanogune.eu)), under the supervision of Aranzazu Sierra Fernandez ([a.sierra@nanogune.eu](mailto:a.sierra@nanogune.eu)). The activity of the Nanomaterials group is focused on the synthesis and functionalization of materials. Its research programme has been divided into thin-film coating, hybrid inorganic-organic materials, and bio-organic nanomaterials.

The candidate will join a newly established research line focusing on preservation of cultural heritage. The aim of the project is to develop new strategies for the preservation of cultural goods and the prospective PhD student will design, synthesize, and optimize inorganic-organic hybrid formulations for this purpose. We seek a candidate who is both motivated and innovative, boasting a solid background in materials science/engineering, chemical, physical, or related background and skills in materials fabrication and characterization. The project's primary focus will be on developing protective coatings for cultural heritage sites, emphasizing strength, toughness, durability, and compatibility with building materials. Prior experience with the prospective candidate in vapor phase processing, thin film coating, and physicochemical characterization are considered beneficial.

Responsibilities will include:

- process design and materials development
- process optimization and materials characterization
- contribution to testing of the efficiency of the materials
- reporting of results in project meetings and development of strategies for further optimization of materials and processes

Requirements for this position include:

- Educational qualifications: suitable scientific education, a master's degree (or equivalent university degree) in materials science/engineering, chemistry, physics, or similar.
- Technical experience: hands-on experience in one or more of the following techniques is beneficial for the position: ALD, CVD, FTIR, SEM-EDX, powder processing, XRD, XRR.

- Personal attributes: We look for a talented, motivated, and enthusiastic researcher. Analytical skills, initiatives, and creativity are highly desirable.
- Passion for Research: Naturally curious who is eager to learn more and has a strong interest in research.
- Communication skills: excellent English communication skills for work in a dynamic and international environment.
- Research interests: Passionate about research in cultural heritage, specifically in its conservation and restoration.

Additionally, the candidate should be a teamplayer in an international research group as we promote teamwork in a diverse and inclusive environment and welcome all kinds of applicants regardless of age, disability, gender, nationality, race, religion, or sexual orientation.

The position is expected to start in 01/12/2023 and for a total length of up to 36 months (01/12/2023 - 30/11/2026) in the Nanomaterials Group. The contract will be funded by the "La Caixa" Foundation.

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

1. A complete CV
2. A cover letter and at least two reference letters grouped in a single PDF file

The **deadline** for applications is **17/11/2023**.

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.