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

PRE-DOCTORAL RESEARCHER

to obtain the

DYNAMO PhD fellowship - Dynamic control in hybrid plasmonic nanopores: road to next generation multiplexed single molecule detection

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 Nanomagnetism Group, under the supervision of Prof. Paolo Vavassori. The Nanomagnetism group has acquired a wide expertise in the nanoscale control of magnetism and light fields in plasmonic nanostructures and its application to biology. For our next project within the DYNAMO consortium, our task is focused on the design, fabrication, and characterization of hybrid ferromagnet/noble metal nanopores membranes for single protein detection. The objective is to achieve a precise magnetically controlled single protein translocation through the nanopore and for its subsequent plasmonic detection.

DYNAMO is designed as an innovative and pioneering training network, with the unique vision of developing the next-generation hybrid nanopore technology exploiting DNA nanostructures integrated with multifunctional solid-state platforms, by:

- Bringing together a unique team of 6 world-leading academic groups, at the forefront of nanoscience and single molecule sensing and manipulation, and 1 high tech company, to translate the innovations into real-world applications.
- Training 10 Junior Researchers (JR) on a unique mix of experimental and computational skills at the physics/chemistry/biotechnology interface.
- Enabling technological advances through the combination of enhanced optical spectroscopies, plasmonics and DNA nanotechnology via the development of a novel nanopore technology.
- Reaching single molecule capturing and tweezing functionality in solid-state nanopore in a way that has not been possible before. This will pave the way to fascinating new discoveries into the fundamental structures of biomolecules and the interaction forces among them.

Opportunities for JRs when joining DYNAMO:

- Participate in a highly committed network of academic and industrial leaders in the field of nanopore technology, single molecule spectroscopies and advanced nanostructures design and fabrication.
- Participate in a worldwide unique training programme, comprising individual research projects, interactive and hands-on courses, workshops, and secondments covering the entire route to application of material sciences.
- Development of personal and transferable skills (leadership, analytical, communication, interpersonal, free thinker mindset, creativity).
- Initiate network-wide events, such as workshops and symposia.
- Prepare for excellent performance in academia, industrial R&D, project management, consultancy and beyond.

The successful **candidate** to obtain the DYNAMO PhD fellowship will have an internationally recognized Master-equivalent degree in physics, nanoscience, or engineering, and will meet the following requirements:

- Mobility rule: the researcher must not have resided or carried out their main activity (work, studies, etc.) in the country of the beneficiary for more than 12 months in the last 36 months. Other than this, researchers of any nationality can be recruited.
- Proficiency in spoken and written English.
- Self-motivated and a team player willing to boost their research career in the areas of nanosciences, biosensing, and biotechnologies.

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 early next year and in 01/03/2023 as the latest, for a total length of up to 36 months (01/03/2023 - 28/02/2026) in the Nanomagnetism Group. The contract will be funded by the Marie Sklodowska-Curie Doctoral Networks HORIZON-MSCA-DN-2021 project called DYNAMO (Project Id. 101072818 https://cordis.europa.eu/project/id/101072818).

A PhD degree from local University (UPV/EHU) will be granted after successful completion of the PhD research.

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

- A complete CV, including 1/2 potential references contact email.
- A presentation letter with declaration of interests and a description of your past achievements (max. 1 page).
- A scanned copy of:
    - Your university academic transcripts in English.
    - Master degree, if available at the time of application.
    - Standardized English test results if available.

The **deadline** for applications is **30/11/2022**.

Received applications will be also shared with the other partners, to maximize hiring opportunities.

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 is 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.