

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

Post Doctoral Researcher
to work on

Biocatalytic upgrading of natural biopolymers for reassembly as multipurpose materials

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 Nanobiotechnology Group, led by R. Perez-Jimenez, (r.perezjimenez@nanogune.eu). The Nanobiotechnology group is focused on atomic-force microscopy to study the mechanical features of proteins. The group is led by Dr. Perez-Jimenez and uses advanced molecular-biology techniques and cutting-edge force spectrometers to investigate the role of mechanical forces in biology. More information can be found at <https://www.nanogune.eu/nanobiotechnology>. Our current climate emergency demands the transition to a biobased and circular economy, where multiple end products can be derived from renewable biomass resources. We are seeking for candidates to fill a postdoctoral position in experimental biochemistry, with a focus on protein design, engineering, and application in material sciences. The successful candidate will form part of a consortium with other institutions and companies, Aalto University (Finland), KTH University (Sweden) and the company UPM-KYMMENE (Finland), to work in the design of novel materials using the principles of enzyme catalysis and protein design. The successful candidate is expected to be an active part of the consortium participating in all activities programmed by the coordinators of the project including research, meetings, dissemination, organization, student guidance, amongst others..

The ideal **candidate** will have a PhD in Chemistry, Biochemistry, Biotechnology or related fields. Additionally, the candidate should demonstrate experience in the following skills:

- Background and interest in protein and DNA biochemistry, protein characterization, gene editing, nanobiothechnology.
- Proficiency in English and communication skills.
- Good hands on experimental work, and a cooperative attitude.

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.

Other members of the consortium are:

Aalto University (Finland): Our aim is to produce and optimize biocatalysts with potential to functionalize bio-fiber surface chemistry and/or control bio-fiber assembly. Our approach will include establishing micro-scale functional screens that rapidly evaluate biocatalysts for ability to control the surface charge, porosity, and targeted introduction of new functional groups within structural polysaccharides. For more information about BioUPGRADE positions at Aalto University, please contact Professor Emma Master at emma.master@aalto.fi

KTH (Sweden): Our aim is to implement surface functionalization of biofibres using biocatalysts developed by the BioUPGRADE partners towards applications in health

and personal care. We will investigate the effect of the biocatalytic modifications on the assembly of the biofibres. Our approach will include multiscale structural analysis of the functionalized biofibres together with characterization of the macroscopic properties of the derived materials. For more information about BioUPGRADE positions at KTH, please contact Associate Professor Francisco Vilaplana at franvila@kth.se

UPM (Finland): Our aim is to apply different chemical and biocatalytic tools to functionalize bio-fibers for high-value applications. Our approach will include developing relevant test protocols, and assessing upscaling and piloting feasibility to transform functionalized fibers for targeted applications. For more information about BioUPGRADE positions at UPM, Please contact Dr. Janak Sapkota at janak.sapkota@upm.com

The position is expected to start in 01/09/2021 and for a total length of up to 12 months (01/09/2021 - 31/08/2022) in the Nanobiotechnology Group, with the possibility of renewing after evaluation of performance. The BioUPGRADE project contract, Biocatalytic upgrading of natural biopolymers for reassembly as multipurpose materials, under the program Future Emerging Technologies (FET Open), will be funded by the European Commission.

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

- a. A complete updated CV
- b. A 1-2 pages research statement, including contact information to two reference scientists

By submitting this application, the candidate accepts that his/her candidacy maybe evaluated by all members of the consortium.

The position will be kept open until filled, but candidates review will start on July 15, 2021.

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.