1. Details of the IMDEA Supervisor

<table>
<thead>
<tr>
<th>Name of Supervisors:</th>
<th>Teresa Gonzalez</th>
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<tbody>
<tr>
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<td>Website:</td>
<td><a href="https://www.nanociencia.imdea.org/home-en/people/item/teresa-gonzalez-perez">https://www.nanociencia.imdea.org/home-en/people/item/teresa-gonzalez-perez</a></td>
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<td><a href="http://www.byaxon-project.eu/consortium/imdea-nanociencia">http://www.byaxon-project.eu/consortium/imdea-nanociencia</a></td>
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2. Research themes proposed

Our research groups welcomes postdoctoral candidates to work on Nanostructured Neural Interfaces. Within this theme, nanostructured neural interfaces will be developed using advanced nanofabrication processes aiming at creating neural electrode implants with improved performance in terms of surface stiffness and compliance as well as in signal transmission and sensitivity.

3. Brief description of the Research Group

This work will be performed across the Neural Interfaces Laboratory (NIL) and the Nano Functional Surfaces group (NFS) at IMDEA Nanoscience.

In the NIL, we develop and characterize electrodes and magnetic sensors to be used as neural interfaces for the stimulation and detection of neural activity. We use nanotechnology to obtain a new generation of stimulation electrodes. We study the potential of these to improve a variety of applications from implantable neural interfaces to electrophysiology electrodes or stem cell instructive surfaces. We also target the neural-activity detection with ultrahigh sensitive spintronics-based magnetic sensors.

NFS group leverages on nanofabrication technologies particularly on soft materials. Presently the program is active on: a) Nano-engineering functional surfaces and lab on chip devices for medical applications, and b) Multifunctional bio inspired surfaces particularly antireflective, self-cleaning and bactericidal surfaces.

Scientific publications examples are: https://doi.org/10.1002/adbi.202000117, https://doi.org/10.1002/admi.202002121

4. MSCA Research Area Panels

☐ Chemistry (CHE)  ☐ Environmental Sciences and Geology (ENV)
☐ Social Sciences and Humanities (SOC)  ☐ Life Sciences (LIF)
☐ Economic Sciences (ECO)  ☐ Mathematics (MAT)
☒ Information Science and Engineering (ENG)  ☒ Physics (PHY)