

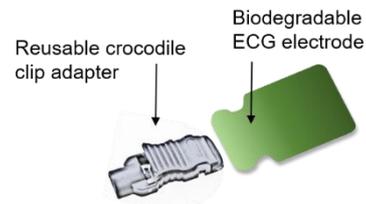
Open paid position

## Comfortable ECG skin electrodes

### Description of Group/Project

The Biomedical Applications Group (GAB) at the Institute of Microelectronics of Barcelona (IMB-CNM, CSIC) located at the UAB Campus is looking for a candidate to work in the field of skin wearable sensors development under the project **GreenELECTRO**. Tatto4Sleep will explore a novel technology for building a next generation of green electrodes for a more sustainable electrophysiology. Our focus lies in the development of novel biodegradable electrodes for electrocardiogram recording using conductive nanocellulose. The creation of this sustainable technological solution, which will have a minimal environmental impact and carbon footprint, will significate a reduction on the generation of medical waste and will be attained thanks to the use of the disposable biodegradable ECG electrodes.

### GreenELECTRO Proposal



The candidate will join a highly dynamic group in the area of sensors and microelectronic technologies. The GAB group is multidisciplinary and formed by engineers, chemists, physicists, biochemists, etc

### Main tasks and responsibilities

GreenELECTRO is a highly multidisciplinary project. Depending on your background you can participate in several tasks of the project:

- Setup a fabrication process for skin electronics technology by means of rapid prototyping techniques and printing technologies.
- Performance characterization of the manufactured prototypes: mechanical tests, electrical and/or electrochemical characterizations.
- Conduct breathability and biocompatibility evaluation of the prototypes
- Integration of the devices with the electronic system for signal processing
- Validate the devices and participate in the electrophysiological measurements (ECG recordings) in collaboration with experts in the field for the validation of ECG features for health monitoring and cardiovascular diseases.

## Requirements/Background and skills

We are looking for enthusiastic candidates, ready to enjoy multidisciplinary research. Possibility to undergo a PhD. We are looking for candidates from Bachelor's or Master Degree in Nanoscience and Nanotechnology, Biomedical Engineering and Materials Science.

## How to apply

All applications must be sent to [gemma.gabriel@csic.es](mailto:gemma.gabriel@csic.es) , with the subject ECG. Applications must include: CV and motivation letter. Reference letters will be appreciated.

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**Expected start date**      1/03/2024

- This offer can be found on: <https://www.imb-cnm.csic.es/en/about-center/careers/open-positions>
- More information on IMB-CNM: <https://www.imb-cnm.csic.es/en/>

