

## **PhD position – summary**

For the EU- funded ERC CoG 2023 project entitled “Thermal Modulators based on novel 2D MXene materials for nearly isothermal battery operation” (project acronym “THERMO2DEAL”), the National Research Council of Spain (CSIC), the 2D Foundry group offers 1 position as Early Stage Researcher/PHD student starting indicatively on 1st September 2024 for 48 months, with earlier or later start negotiable.

The project is funded by the ERC council within the Horizon ERC Grants of the European Commission. The work will be carried out in the research group of Dr. Muñoz Rojo at the Materials Science Institute of Madrid (ICMM) at CSIC. All applications must be sent to [m.m.rojo@csic.es](mailto:m.m.rojo@csic.es)

The work will be carried out in the research group of Dr. Muñoz Rojo at the Materials Science Institute of Madrid (ICMM) at CSIC. The Early Stage Researcher will be enrolled in the PhD doctoral programme at the Universidad Autónoma de Madrid (UAM).

### **Project title:**

Thermal and electrical characterization of 2D materials and devices based on them

### **Objectives:**

The candidate will use advanced thermometry techniques, like Time Domain Thermo-Reflectance, Scanning Thermal Microscopy and thermal Bridge method to characterize 2D materials and thin films made of them. Additionally, the candidate will explore the thermal properties of electrochemical devices based on these materials during in operando conditions.

### **Job requirements, profile of the candidate:**

We look for a talented PhD student with a strong interest and established experience in thermal characterization, especially related with 2D materials:

- An MSc degree in Physics or Thermal/Electrical engineering
- Excellent knowledge on thermal transport, ideally at nano-and micro-scale
- Experience with experimental laboratory, especially in thermal characterization techniques

Other skills needed:

- Critical and creative approach to the research, as well as sharp analytical skills
- Pro-active and result-oriented team worker in an academic environment
- Capability to solve problems independently, but also be able to work with interdisciplinary teams
- Good communication and interpersonal skills to organize research with both academics and professionals
- Good communication (verbal and writing) skills in English.
- Interested in getting involved in educational tasks

**Documents for application:**

All applications must be sent to [m.m.rojo@csic.es](mailto:m.m.rojo@csic.es) before July, 20, 2024