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Code:

Project: Energy harvesting via wetting/drying cycles with nanoporous electrodes

Area: Advanced Materials for Energy

Area leader: Prof. Joan Ramon Morante

Group: Functional Nanomaterials

Group leader: Dr. Andreu Cabot

R1 Researcher Position Ehawedry Project

The Functional Nanomaterials Group in the Advanced Materials for Energy Area of IREC announces a 6-month research position available for a highly motivated candidate to work in the EHAWEDRY Project: Energy harvesting via wetting/drying cycles with nanoporous electrodes.

The EHAWEDRY project proposes a radically new concept to harvest energy from waste heat, including very low-grade waste heat, and convert it into electricity. EHAWEDRY technology is based on the coupling of charging/discharging cycles of a capacitor with the drying/wetting of its nanoporous electrodes. The concept exploits the proportionality of the capacity of electrochemical super-capacitors to the area of contact between the electrode and the electrolyte solution. While the proposed technology can be applied to a plethora of scenarios, within the EHAWEDRY project we will focus on identifying scenarios for medium-scale waste recovery in the industry.

The candidate will carry out a multidisciplinary activity in line with the project's main goal, including the synthesis of porous materials, and their application to supercapacitors.

Candidate must have bachelor's and master's degrees in Chemistry, Physics, Material Science or equivalent. Previous experience in nanomaterial synthesis and the fabrication and test of supercapacitors will very valuable for the position.

Additional information:

- CV, personal references, and a motivation letter have to be sent to Dr. Andreu Cabot (acabot@irec.cat).
- Deadline for applications: December 1st 2022, 12:00 PM (Spanish local time)



- Incorporation: December 15th 2022
- Duration of the contract: 6 months

The recruitment process will follow the guidelines of the European Charter of Researchers. Further information can be directly obtained from: Andreu Cabot (acabot@irec.cat).