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Area: Advanced Materials for Energy Applications

Head of the Area: Prof. Joan Ramon Morante

Group: Energy Storage

Head of Group: Prof. Joan Ramon Morante

Title: Researcher in Energy Storage and Energy Harvesting Laboratory

Profile: Electrochemical energy storage: materials components and systems

Description:

The Energy Storage and Energy Harvesting group (ESEH) is focused on the development of i) electrochemical energy storage: materials components and systems; ii) chemical energy storage: materials, components and systems and iii) energy harvesting: materials, components and systems.

We are looking for a researcher able to cover our activity in electrochemical energy storage: materials components and systems Therefore, the candidate will be involved in:

- i) Developing materials, components and systems for Flow Redox Batteries. Expertise and skills on vanadium, non-aqueous, organic based FRB will be appreciated.
- ii) Developing materials, components and systems for lithium ion batteries. Expertise and skills on lithium or sodium ion will be appreciated. Special interest will be on the previous skills on Lithium Sulphur systems as well as solid electrolyte.
- iii) Developing materials, components and systems for metal air batteries. Expertise and skills on zinc or aluminum air will be welcome.
- iv) Developing materials, components and systems for Supercapacitors. Expertise and skills on supercapacitors fabrication will be very welcome.
- v) Expertise and skills in structural and morphological characterization methods as well as in electrochemical techniques. Integration/fabrication devices

Requirements:

- PhD in Science and Technology field and fluent English are mandatory
- Strong and complementary scientific and technological record of actions (to be evaluated according to the career stage of the candidate):
 - o Original research articles
 - o Patents
 - o Conferences, proceedings and books
 - o Outreach actions
 - o Participation in national and international research projects
 - o PI/coordination of national and international research projects/WPs
 - o Expertise and skills in industrial projects
- Proved experience in the following aspects is mandatory:

- Material synthesis and characterization
- Electrodes preparation and fabrication
- Electrochemical characterization of electrodes and devices
- In situ and ex situ techniques
- Battery test
- Proved experience in the following aspects will be positively evaluated:
 - Mentoring and team leading (PhD thesis, Master/Bachelor thesis, etc)
 - Leading technology transfer and innovation actions
 - Funding searching
 - Research in international teams (research visiting, pre-doctoral and post-doctoral research stays, international partnerships, etc)

Proposed Jury:

Presidència	Titular	Prof. J.R.Morante (IREC)
Vocal 1	Titular	P.L Cabot (UB)
Vocal 2	Titular	Dr. A. Pérez-Rodríguez