OFICINA DE PROYECTOS EUROPEOS

MSCA Postdoctoral Fellowships 2026

EXPRESSION OF INTEREST - SUPERVISOR

Supervisor Profile:

Name and Surname: Paula Sanz Camacho
Position: Senior researcher
Department/Unit/Centre: Electrical department, CIIAE

a) Describe your qualifications and experience. Provide information regarding your level of experience on the research topic proposed and your track record of work (e.g., papers, projects, main international collaborations, patent etc.), highlighting which scientific, technical and soft skills you will transfer to the candidate during the implementation of the research project.

Dra **P. Sanz Camacho** did her PhD thesis in the **prestigious University of St Andrews** in Scotland, UK. Her thesis were multidisciplinary, she synthesis new organo-materials of Selenium/ tellurium and phosphor for charge transfer complexes and she characterize them by XRD, NMR liquid and solid and DFT in order to understand the local structure and the interaction present in the material. Dra. Sanz Camacho started his postdoctoral research in 2017 in the Institute of Condensed Matter (ICMCB), Bordeaux, France under the supervision of Laurence Croguennec and Dany Carlier. She changes of topic and start working with cathode materials for Na-ion batteries. Her first Postdoctoral research focussed in the characterization of materials type NaVPO4FO (NVPF) by solid-state NMR to help in the understanding of the local structure and the mechanism of insertion/disinsertion of Na+ ions. She participates in several project in this thematic that its reflected into 6 publications as co-author in High impact journals (*Chem. Mater, Inorg. Chem*, *Chem. Commun*), Moreover, during this period she participate in an European Project NAIADES (horizon 2020) by doing the analysis post-Morten of positive electrodes after a long cycling by solid-state NMR and XRD (J. Power Sources).
Her second postdoctoral research was financed by CNRS-RS2E network (K-NIBAT (2018-2019): UPR9048) under a topic she proposed and developed herself opening a new line of research in the department that it is nowadays in continue development.
She works on Prussian Blue Analogues (PBA) as positive electrodes materials for Na and K batteries. It was a collaborating work between the ICMCB and the ICGM in Montpellier under the supervision of Laure Monconduit and Romain Berthelot. Her work on Prussian Blue Analogues (PBA) allows to discover a new rich phase of composition $Na_2Fe_2(CN)_6$ and to understand the relationship between synthesis conditions, composition, structure, morphology and electrochemical properties in Na-ion batteries (ACS Appl. Mater. Interfaces).
After that, she win a permanent position as engineer in the service of Spectroscopy from the University of Bordeaux/France, which combine three techniques: Nuclear Magnetic Resonance (NMR), Electron paramagnetic resonance (EPR) and Mössbauer Spectroscopy. During these years she increase her knowledge in two more techniques and she collaborates in different research projects in different areas which translate in 10 more publications as co-author (Cem. Concr. Res, J. Supercrit. Fluids, Chem. Mater)

Since the beginning of 2024, she a senior researcher working on Na-ion and K-ion batteries in the department of electrical storage in the Iberian centre of research in energy storage, CIIAE.
Dra P. Sanz Camacho lines cover: i) synthesis and development of new materials for Na-ion and K-ion batteries, ii) Characterization of the materials by local techniques iii) operando techniques to study the mechanism intercalation in Na and K-ion batteries and IV) study of degradation and interphases in Na and K-ion batteries. She is PI of **LEOPARD** a regional project that explored the used of supercritical fluids for the synthesis and recycle of PBA as cathode materials for Na-ion batteries and Supervisor of a Marie-Curie fellowship (**PrussblueKion**) investigating Prussian blue for K-ion batteries

She has **established collaborations** with Prof. Lorenzo Stievano in ICGM (Montpellier, France), Lauren Marbella (Columbia university, USA), Prof. Federico Bella (Politecnico di Torino, Italy), Pedro Salomé

(INL, Portugal) and with the company Biotonia and Exvert.
Her work has led to >25 publications in High impact journals such as **JACS**, **Chem. Mater**, **ACS Appl. Mater. Interfaces** or **J. Power Sources** (h index of 18) and >778 citations according to google Scholar, including Advanced Energy Materials (2), Nano Energy, J. Mater. Chem A.
She has participated in more than 20 international conferences and give more than 10 oral presentations.

b) Show your level of experience in supervising/training students and researchers, especially at advanced levels (i.e., PhD and postdoctoral researchers).

She has taught in the laboratory in university of st Andrews and She has also participated in workshop giving lectures as specialist in Solid-state NMR-DESTINY Workshop "Spectroscopies for battery materials" (Bordeaux, ICMCB). She has participated in the supervision of 2 final project bachelor degree and 2 master students in UK and CIIAE, she is currently supervising one PhD student in CIIAE and one Marie Curie Postdoc Fellow.

What we offer (Research support):

Research facilities:

Networking possibilities & external relations:

Project idea/position (scientific requirements, topic, discipline):

The Idea is not yet defined as I need to discuss with the candidate, but it will be in followed topics:

- Na ion batteries, New cathode or anodes materials, with improved performance using no critical raw materials
- Improved safety of the technology, toward solid state Na-ion battery
- Same aspect but for K-ion batteries