

## **JOB OFFER**

### **PhD POSITION ON PEPTIDE-PEROVSKITE HYBRID MATERIALS**

**at INAM -UJI funded by Q-Solutions Prometeo Grant**

#### **Job Description**

**Place: Universitat Jaume I, Institute of Advanced Materials (INAM), [www.inam.uji.es](http://www.inam.uji.es)**

**Location: Castelló, Spain**

**Duration: up to 3 years (possible 4<sup>th</sup> year depending on funding availability)**

**Working hours: 37,5/ week**

**Closing Date: 31<sup>st</sup> October 2022**

**Expected starting date: January 2023**

**Hours of work: Full time position**

**Interview: Date to be confirmed**

#### **The Project**

The aim of the PhD project is to prepare peptide-perovskite hybrid materials by a combination of organic as well as inorganic synthetic strategies. The final goal will be to obtain perovskite materials stable in polar organic as well as aqueous solutions.

The specific activities will consist on:

- Synthesis of benchmark Pb-containing perovskite nanoparticles and Pb-free PNPs with high PLQY with emission in a broad range of the UV-visible-NIR spectra and high stability.
- Increase of the stability and performance of the prepared PNPs by peptide-based coatings. Molecular and supramolecular capping engineering for passivation and protection.

The successful completion of the project should lead to the defense of a highly interdisciplinary PhD Thesis under the direct supervision of Prof. Beatriu Escuder (Bioinspired Supramolecular Chemistry and Materials Group) and Dr. Beatriz Julián (Multifunctional Materials Group).

#### **Elegibility criteria**

- BSc in Chemistry or Chemical Engineering.
- Master degree or equivalent that grants access to doctoral studies (Chemistry, Chemical Engineering, or similar).

**Technical Requirements (preferably):**

- Basic background in Organic Chemistry, Supramolecular Chemistry, Nanocrystal synthesis and surface functionalization.
- Hands on characterization techniques (NMR, FTIR, UV-vis absorption, fluorescence)

**General skills:**

- Strongly motivated to develop a scientific research career.
- Excellent academic results.
- Excellent interpersonal and communication skills.
- Good commandment of English language, written and spoken.

**Application procedure:**

Candidates should send the following documents to [escuder@uji.es](mailto:escuder@uji.es) and [julian@uji.es](mailto:julian@uji.es) , as soon as possible and not later than October 31st 2022.

- Motivation letter.
- Brief CV (including academic record summary)
- Name and email of one/two references.