



Laboratory of  
Nanostructured &  
Nanocomposite  
Materials



## **Postdoctoral position funded by AGAUR agency (Catalan Government)**

**TOPIC: Using magnetic nanomaterials to enhance H<sub>2</sub> production in water splitting reaction.**

A postdoctoral position is available at the 'Laboratory of Nanostructured and Nanocomposite Materials - LM2N' (<https://www.lm2n-ub.com/>) of the University of Barcelona (UB). The position is in the framework of the project "Nanoscaled hybrid magnetic materials: new key actors unleashing solar overall water splitting (SOLMAG-H<sub>2</sub>)". This is a very multidisciplinary project which will be developed in close collaboration with a theoretical group at UB (CMSL group of IQTC) and outstanding researchers from Autonomous University of Barcelona (UAB), IMB-CNM-CSIC and Catalan Institute of Nanoscience and Nanotechnology (ICN2).

The project mainly tackles the effect of magnetic nanomaterials on the H<sub>2</sub> production in the water splitting reaction. Magneto/Optical measurements and the photocatalytic performance of the hybrid nanomaterials synthesized will be investigated.

### **Main Tasks and Responsibilities of the candidate:**

- Synthesis of the magnetic-based nanocatalysts.
- Structural and physico-chemical characterization.
- Evaluation of the photocatalytic performance.

### **Requirements for a stronger application:**

- Previous experience in electrochemistry techniques.
- Knowledge in photo/electrocatalysis for energy production will be highly valued.
- Good level in English, in particular for scientific writing (publications and projects).

### **Conditions**

- Full time contract.
- Duration: 1 year (extendable 1 more year).
- Latest starting date: July 2024.

### **About LM2N group**

The LM2N of the Department of Inorganic and Organic Chemistry of UB, focuses on the fabrication of novel nanomaterials for clean energy, biomedicine and data storage applications. The team is a young research group that emerges from complementary expertise within the field of materials science and nanostructuration. The group is built on the basis of a long-lasting experience on the colloidal synthesis of both semiconductor and magnetic nanocrystals, with special emphasis on the rational design of hybrid and other compositionally complex systems. LM2N was conceived with the aim of consolidating this unique research line at UB, providing independency to the already ongoing research activities and offering an appropriate scenario to develop new incoming ideas.

Interested applicants should send a **full CV**, a **Letter of Interest** and the **Contact Details of two senior researchers** which could support their application before 15/04/2024 to [martaestrader@ub.edu](mailto:martaestrader@ub.edu).