

PhD Research Contract

Bioinspired Supramolecular Receptor Networks for Molecular Recognition and Catalysis

We are looking for motivated scientists to work in the interdisciplinary **Nanostructured Molecular Systems and Materials** group (**MSMn**) at the **Institute for Advanced Research in Chemical Sciences (IAdChem)** in the **Universidad Autónoma de Madrid**.

	PhD Position
Application Deadline	15/12/2026
Expected Starting Date	> 01/01/2027 (relatively flexible)
Duration	2 + 2 years
Main background	- Organic Chemistry
Additional experience (not required, but positively considered)	- Supramolecular Chemistry - Molecular Materials
Requisites	- Master studies finished or in course - Excellent Grades in Bachelor (and Master) studies - Good English level - Motivation!
Research Focus	<i>How can we recreate the remarkable efficiency of natural enzymes and photosynthetic systems using tailor-made molecules?</i> This project will explore the design and synthesis of biomimetic molecular containers built from cofacially arranged porphyrins, creating confined nanoscale environments inspired by nature. By engineering these artificial cavities, we aim to control how molecules are recognized, organized, and transformed, unlocking new opportunities for selective catalysis and light-driven chemical reactions. Combining synthetic chemistry, supramolecular chemistry, and photochemistry, this research will bridge molecular design and function, paving the way towards artificial catalytic systems that emulate and potentially surpass natural systems.
Funding Project	<i>Bioinspired Supramolecular Receptor Networks for Molecular Recognition and Catalysis (PEJ-2026-AI/ECO-39384)</i>
WebPage (additional info)	https://msmnlab.wixsite.com/dqrlab 

Applications should be submitted to: alberto.dejuan@uam.es including:

- **CV** with Bachelor/Master Grades, publications list and contact details
- **Optional:** motivation letter, research summary, recommendation letters, etc.