



Martí Franquès Research Fellowship Programme 2025

Ref. 2025PMF-PIPF-28



General Information

Research Group: Innovation in Catalysis (InnCat), URV

Supervisors: Prof. Montserrat Diéguez, Prof. Oscar Pàmies and Dr. Maria Biosca

Contract Duration: 4 years (full-time)

For more information see [2025PMF-PIPF-28](#)



Research Topic

From Batch to Continuous Flow Production of High-value Chemicals Assisted by Machine Learning

The production of enantiomerically pure compounds is a key process of the chemical industry. It is especially relevant in the pharmaceutical industry, for example, as many drugs are enantiomers. Asymmetric catalysis provides the means to obtain these compounds in higher yields, in fewer reaction steps and less energy than other processes. It is thus a key facilitator of sustainable growth. There are many asymmetric synthetic processes whose catalytic version is not ready yet. In this regard, the goals of this project are to increase the stability and selectivity of chiral catalysts for existing processes, develop chiral catalysts based on earth abundant metals for processes for which they are not widely available, improve the catalytic process to make it more transferable to industry (with the development of continuous flow versions) and use of machine learning and other computational chemistry tools to facilitate these advances.

For any inquiries, please feel free to contact:



Prof. Oscar Pàmies
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Candidate Profile

Graduate in Chemistry or related fields, previous experience in organic and/or organometallic synthesis at the Master's level and a good level of English will be valued. Knowledge in organic chemistry, catalysis, NMR, and experimental design is required. We are looking for an autonomous, rigorous person with the ability to work in a team, meet deadlines, and establish collaborations, as well as someone with an innovative and creative mindset.

In case of interest

Submit your application online via:

<https://appsrecerca.urv.cat/cgi-bin/programes/application/inici.cgi?conv=2025PMF-PIPF-idioma=ENG>



DEADLINE

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