

# MSCA Postdoctoral Fellowships

HORIZON MSCA 2024 PF



Expression of interest



**5th of July 2024**

Deadline for submission  
of documents



## Contact Person/ Scientist in charge

Patricia Pizarro [patricia.pizarro@imdea.org](mailto:patricia.pizarro@imdea.org)

## Brief description of the Research Group

The main research activity of Thermochemical Processes Unit (TCPU) is the development of catalysts and processes to produce sustainable fuels and chemicals from various waste-derived sources (biomass residues, plastic waste, biogas and CO<sub>2</sub>), thus contributing to the circular economy and energy transition objectives. Concisely, the TCPU has the following capacities:

- Synthesis of heterogeneous catalysts (zeolite-based materials, oxides, etc.) with tailored textural properties and bi or multifunctionality.
- Characterization of catalysts by basic and advanced techniques (gas physisorption, FTIR-pyridine, XRD, TEM, SEM, TPD/TPR, XPS, etc.).
- Activity evaluation of catalysts in different reaction systems (stirred tank, fixed-bed, batch or continuous feeding mode).



## Project description

The fellow will participate in the development of processes for the chemo-catalytic valorisation of substrates from different stages of the organic waste transformation cascade. The project may involve the synthesis of catalysts with tailored textural and physico-chemical properties and their comprehensive characterization, as well as the catalytic evaluation in any of the available reaction systems. The goal will be to surpass the results of the state of the art and/or develop new conversion pathways, including one-pot reaction systems (intensification of processes).

## Applications

Deadline for submission of documents 5th of July 2024.

Documents to be submitted:

- Complete curriculum vitae stating background, skills and a brief description emphasizing the relationship between the applicant CV and the research topic proposed.
- Letter of motivation including research interests.
- Two recommendation letters.

## Research Area

- Chemistry (CHE)
- Information Science and Engineering (ENG)