

## **Expression of Interest – UPM Supervisor**

## Marie Skłodowska Curie Action –Postdoctoral Fellowship 2025 (MSCA-PF-2025)

Contact Person/Scientist in charge Name	JOSÉ ANTONIO
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Department /Institute /Centre Name	Departamento de Ingeniería Mecánica, Química y Diseño Industrial / E.T.S. Ingeniería y Diseño Industrial
Address	Ronda de Valencia, 3, 28012 Madrid
Province	Comunidad de Madrid
Research Area	Environment and Geoscience (ENV) Chemistry (CHE)
Brief description of the Centre/Research Group	The selected candidate will join the Analysis and Optical Characterisation of Materials Research Group (ACOM), a consolidated group within the UPM official research structures. This group, created in 2013, is made up of 13 researchers, 1 laboratory technician and 8 PhD students, covering two research areas: solid state/inorganic chemistry and environmental/chemical engineering. In this research area, there are currently several projects related to waste valorisation, hydrogen production and chemical process intensification.
	The members of ACOM have participated in 10 patents, more than 50 research projects and contracts, more than 100 indexed scientific publications and more than 200 communications to national and international conferences, as well as in other extensive dissemination activities.
	URL: <a href="https://portalcientifico.upm.es/es/ipublic/entity/16283">https://portalcientifico.upm.es/es/ipublic/entity/16283</a>
Project description	The selected candidate will participate in the Regional funded project HIBI: Green hydrogen production through water electrolysis coupled with a biomass energy recovery unit. The purpose of the project is to analyse the technical, environmental and economic feasibility of an integrated process of green hydrogen production and biomass energy transformation, thus overcoming the issues related to the current production of green hydrogen.
	The tasks of the project include Python programming of PV-EL system configuration, developing Machine Learning models of biomass energy transformation, plant simulation using the software ASPEN Plus and Life Cycle Assessment using the software SimaPro.
Applications: documents to be submitted and deadlines	Applicants should submit a brief CV and a letter of motivation in which previous experience related to the project should be included. The deadline for application is April 30 <sup>th</sup> , 2025.