

## Expression of Interest



### Contact Person/Scientist in Charge

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### Universitat Politècnica de València (UPV)

#### Department / Institute / Centre

- **Name:** Institute of Technology of Materials - Universitat Politècnica de València
- **Address:** Campus de Vera; Camino de Vera, s/n; Valencia (46022)
- **Province:** Valencia

#### Research Area

- Chemistry (CHE)

### Brief description of the institution:

Universitat Politècnica de València (UPV) is the single Spanish Technical University that features in the main University world rankings. It is within the top 5 Spanish Universities with the highest revenue from both public research and knowledge transfer activities, and a national leader in patent license income and start up creation. Constituted in 1971, it comprises nearly 30.000 students, over 2500 academics, and 17 university research centres of excellence.

UPV has a relevant experience in the participation in international research programmes, with over 100 FP7 projects and 40 H2020 projects in the period 2014-2015. UPV researchers are also actively involved all H2020 life program stages, from workprogramme drafting discussions, to project coordination. It is also taking part in several major partnering initiatives (JTIs, PPPs, KICs...).

### Brief description of the Centre/Research Group (including URL if applicable):

The R&D Group in functionalization, degradation and recycling of polymeric materials (DREMAP) of the Institute of Technology of Materials (ITM) of the Polytechnic University of València (UPV) is composed by a

multidisciplinary association of several senior and junior researchers in the fields of materials science and technology, material processes, chemistry, physics, chemical engineering, environmental technology, electronic and electrical engineering, automatics and maths.

In the field of polymer science and technology, we work with synthetic and renewable-based materials and their blends and composites for applications in energetic - production of electrolytes for low-T fuel cells - , environment – control of valorization properties for the mechanical, energetic and biological recycling of polymeric waste and biomass – , biomedicine – study of in vitro simulation of human body conditions for membranes and scaffolds – or high-tech applications.

### **Project description:**

#### Development of bio-based added-value polymer / polymer-based composites

In this research line, the development of bio-based materials is pursued. The group has experience in bio-based materials such as PLA, PLGA, PHAs (PHB, PHBV) or starch-based materials, among others, for several applications (biomedicine, packaging, environment, households, automotion, etc...), as themselves, in blends, co-polymers or composites (with particles or fibers, such as sisal, nettle, cotton... as well as common glass or carbon fibers). Moreover, we offer our background and facilities in the evaluation of the performance, in terms of durability, at simulated service conditions. In connection, we have expertise in the simulation of valorisation routes (mechanical, energetic, biological) of wastes from these materials, to close the C cycle. In summary, the research comprises the preparation, characterisation, validation of performance and evaluation of valorisation routes.

### **Applications**

Curriculum vitae

Letter of intent

Deadline: 15th of July