

1. Interested institution:

University Jaume I Universitat Jaume I de Castellón (UJI)
Department of [Inorganic and Organic Chemistry](#).
Avenida Vicent SosBaynat s/n – 12006 Castellón de la Plana – Spain
<http://ujiapps.uji.es>

2. Brief Description of the Institution

The Universitat Jaume I (UJI) is the public university in the north of the Valencian Community, a region on the European Mediterranean coast located between the cities of Valencia and Barcelona. Established in 1991, the UJI has positioned itself as a university of proximity characterised by its personal attention, smooth running management procedures and the high levels of participation of its members in university life, due, among other things, to its convenient size, with about 15,000 students, and its integrated, modern, functional and sustainable campus. UJI was granted the European Gold Seal of Excellence 500+ in 2008. UJI is organized into four [faculties](#) (Faculty of Humanities and Social Sciences, Faculty of Law and Economic Sciences, Faculty of Health Sciences, School of Technology and Experimental Sciences), within which there are 24 departments, 12 institutes and research centers. Since 2010 the Universitat Jaume I developed a science-technology park designed to accommodate its principal technological business partners, new institutes and research centers, and the increasing number of spin-off firms that are developing as a result of the scientific advances made by its researchers.

For more information on UJI please visit our [website](#).

The research of our group in [Sustainable and Supramolecular Chemistry](#) is focused on two main lines of action: Supramolecular Chemistry and Green Chemistry. The concept of sustainability of chemical processes, using a biomimetic approach or other methodologies, is a fundamental topic of our research.

In this regard, our group has been pioneer in the development of sustainable chemical processes based on key enabling techniques (KETs) including the intensive use of biotransformations, the design of advanced multifunctional materials and systems, in particular those based on the properties of Ionic Liquids (ILs), for their application in new chemical processes, and, finally, on the innovative design of the reactions and processes, using approaches like flow chemistry, the use of environmentally benign solvents, microwave heating or the full integration of reaction and separation steps.

Overall, the group has an established reputation in the training of researchers at the highest level and has been involved for many years in cooperative education at the Master and PhD levels. For the last decade we have coordinated two key initiatives in this regard in Spain:

- Spanish Interuniversity Master Program in Sustainable Chemistry

“EXPRESSION OF INTEREST” FOR HOSTING MARIE S. CURIE FELLOWS IN SPANISH INSTITUTIONS (CALL MSCA IF 2015)

- Spanish Interuniversity PhD Program in Sustainable Chemistry

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and cooperated with education in Sustainable Chemistry with other countries.

3. Please tick the areas of research (as established in Marie Skłodowska Curie Actions)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Chemistry (CHE) | <input type="checkbox"/> Environmental Sciences and Geology (ENV) |
| <input type="checkbox"/> Social Sciences and Humanities (SOC) | <input type="checkbox"/> Life Sciences (LIF) |
| <input type="checkbox"/> Economic Sciences (ECO) | <input type="checkbox"/> Mathematics (MAT) |
| <input type="checkbox"/> Information Science and Engineering (ENG) | <input type="checkbox"/> Physics (PHY) |

4. Research / Project Description

UJI is searching for a top-class post-doctoral researcher of any nationality interested in developing collaborative Marie Skłodowska Curie individual fellowship application in the field of supramolecular chemistry or sustainable chemistry.

The proposed project will consider the implementation of those integrated technologies for the preparation of a series of chemical products (based on reactions of general interest previously selected) through multi-step chemical processes. The selected chemical targets are of direct industrial application for three key industrial sectors as are the cosmetics industry, the pharmaceutical industry (APIs) and industries related to biodiesel production (incorporating the concept of biorefinery).

In the Supramolecular Chemistry field, our group has been involved in the design of pseudopeptidic compounds derived from aminoacids with different biologically inspired applications.

In this regard, the project will focus on the preparation and study of some novel and challenging families of pseudopeptidic compounds specifically designed to provide structural features being able to achieve the expected functionalities. A central element of this design will be the capacity of those pseudopeptides to express their functionalities in aqueous environments.

Different designs will be considered: amphiphilic pseudopeptides, compounds with an increased water solubility, pseudopeptidic cages, interlocked pseudopeptides and pseudopeptides containing specific functionalities (i.e. to act as sensors or to interact with Quantum Dots (QDs) or Nanoparticles (NPs)). Finally, the project intends to focus on the development of specific applications using the potential of the compounds prepared as transporters of different species through membranes, the analysis of their use for drug delivery based on SA systems such as gels or micelles, development of sensing devices based on specifically functionalized pseudopeptides or in systems based on their interaction with QDs and NPs, use of SA systems for tissue engineering, or the interaction of pseudopeptides with SA systems based on nucleic acids.

Research group: [Sustainable and Supramolecular Chemistry](#)

5. Who can apply?

At the deadline for the submission of proposals (10/09/2015), researchers (*):

- shall be in possession of a doctoral degree or have at least four years of full-time equivalent research experience.
- must not have resided or carried out their main activities in the country of Spain for more than 12 months in the 3 years immediately prior to the abovementioned deadline.
- PhD in Organic Chemistry or related areas

6. Contact person

Santiago V. Luis
E-mail: luiss@uji.es

7. Applications: documents to be submitted and deadlines

Send us your Expression of Interest letter including your curriculum vitae and a brief description of your work and previous achievements and research areas.

To ensure an efficient and successful preparation of your proposal please contact us as soon as possible but not later than **June, 30th 2015**.

Please note that:

- Deadline of the next call for proposals for Marie Skłodowska – Curie Individual Fellowships is **September, 10th 2015**.
- Oficina Europea is only responsible for the display of the expressions of interests received by the institutions; further contact and information requests will take place directly between the host institutions and the interested researchers.

(*) Further details on the Call and additional eligibility criteria can be found at the [Participants' Portal](#)