

## PRESELECTION FOR RESEARCH CONTRACT ON LCA AND BIOREFINERIES

### Characteristics of the position

The Group of Environmental Biotechnology (Biogroup) of the University of Santiago de Compostela is offering a research contract of 6-12 months to conduct research in areas that combine chemical process modeling with Life Cycle Assessment (LCA) to improve time-to-market, sustainability performance, and to identify synergies and gaps between circularity assessment and LCA. The contract start date is flexible and is expected to be January 2025. It is possible and desirable to extend this contract to 3 years for the completion of a PhD thesis.

### Context description

The research activities will be carried out in Biogroup in the framework of the EU Horizon Project Biological Resources Certifications Schemes (BIORECER), which aims to ensure the environmental performance and traceability of biological raw materials used by the bio-based industry, by implementing guidelines to strengthen current certification schemes.

Biogroup is one of the most important environmental engineering research groups in Europe. Biogroup staff is composed by 14 full/assoc. professors, 3 technicians, 2 administrative support staff, 7 postdocs and ~20 PhD students providing a stimulating and multidisciplinary work environment to conduct the research. The candidate will have the opportunity to participate in other research activities and EU Horizon Europe/National projects related to circular bioeconomy.

Key responsibilities may include:

- Develop rigorous modeling of pilot and large-scale strategies through process simulation
- Evaluate and efficiently optimize supply chains for bioproducts derived from organic solid waste and biomass.
- Develop mathematical models to optimize and predict innovative biomass-based strategies through biochemical simulations.
- Perform dynamic LCA to predict the long-term future of proposed technologies
- Develop sustainability transition assessment rules for sustainable product regulation

### Requirements

- Candidates must have a master level degree in Chemical Engineering, Environmental Engineering, Biotechnology or similar.
- Experience in engineering modelling and the use of scientific software (e.g. Python, Superpro Designer, Aspen HYSYS etc.) will be appreciated.
- Experience in Life-Cycle based methods and the use of related software (such as SimaPro, GaBi, Umberto, OpenLCA) will be appreciated.

- Good level of English and ability to travel abroad to attend project meetings or conferences
- Interest in developing a research career leading to a doctoral thesis will be an asset.

## **Preselection process**

Applications and information requests must be sent to [maite.moreira@usc.es](mailto:maite.moreira@usc.es) before 30<sup>th</sup> October 2024. The position will be filled as soon as a suitable candidate is found, therefore interested candidates are advised not to delay their application. Applications must contain the following documents in a single pdf file:

- Motivation letter (not more than 1 page), indicating the contact details of the candidate and a brief description of the reasons why they should be selected.
- Curriculum Vitae

The preselection process involves the following steps:

- 1) Evaluation of applications (motivation letter and CV)

The goal of this evaluation is to assess the adequacy of applicant's profile to the requirements of the call.

- 2) Personal interview

Top three candidates after CV screening will be invited for a formal application to the research position, including a personal interview.