

DC7 Position

Project Title: Six-membered CO₂-based lactones/lactams towards polyesters and polyamides

Host Institutions:

- Main Host Institution - [CNRS](#) - France (21 months)
- Secondary Host Institution - [ULIEGE](#) - Belgium (15 months)

Project Description: The main objective of this project is to prepare novel lactones or lactams by chemical transformations of CO₂ with appropriate bio-based compounds. These CO₂-based cyclic compounds will then be exploited to develop unique CO₂-based polyols of the polyester or polyamide-type by ideally utilising sustainable pathways. In addition, at ULIEGE the work will focus on the design of novel CO₂-sourced poly(ester-co-carbonate)s and poly(amide-co-carbonate)s by co-polymerization of the polyols from the CNRS with the new CO₂-sourced cyclic carbonates from ULIEGE.

Secondment: the project involves a three-months research stay at [TOTAL Energies](#) facilities (Belgium) under the supervision of Dr. Martine Slawinski (designing polyester formulations based on the polymerized CO₂-based monomers with a focus on packaging applications)

Enrolment in Doctoral degree: DC7 will be enrolled in URennes (University of Rennes) and ULIEGE, obtaining two PhD titles, according to a specific agreement between the two universities.

Candidate Profile:

- Candidates should have an excellent academic record, strong commitment to scientific research and a solid working knowledge of English
- Expertise in organic, organometallic chemistry and polymer chemistry
- Candidates must have a Master's or an equivalent degree in the area of Chemistry or related disciplines that must be completed by the time of admission in the PhD programmes (around September 2023).

Eligibility criteria:

- Researchers must be doctoral candidates (not already in possession of a doctoral degree at the date of recruitment)
- Recruited researchers can be of any nationality and must comply with the following mobility rule: must not have resided or carried out his/her main activity (work, studies, et.) in the country of the **main** host institution for more than 12 months in the 36 months immediately before the recruitment date (October 2023)

Local eligibility criteria:

- For CNRS: You must have a master's degree in Chemistry
- For ULIEGE: You must have a master's degree



This project has received funding from the European Union (Marie Skłodowska-Curie Grant Agreement No 101073223)

Employment conditions:

- Host institution (s)
 - Centre National de la Recherche Scientifique (CNRS) – Institut des Sciences Chimiques de Rennes (ISCR) – UMR CNRS 6226 - France
 - University of Liège (ULIEGE) – Belgium
- Supervisor (s): Prof. Sophie Guillaume & Prof. Christophe Detrembleur
- Starting date: October 2023 (estimated)
- Duration: 36 months, full-time employment
- Gross salary:
 - CNRS: 36.560€/year (including mobility allowance)
 - ULIEGE: 31.200€/year (gross salary) + 7.200€ net/year (mobility allowance)

How to apply:

Complete applications are written in English and include:

- A complete application [form](#)
- A letter of motivation (maximum 2 pages)
- Diploma and academic record* of both the bachelor's and the master's degree. If not originally in English, an official translation could be requested.
- Contact details of two referees (Note that referees will be only contacted for short-listed candidates)
- Proof of English language proficiency

* The academic record must include the range of marks used in the corresponding countries and the minimum mark to pass, as well as the hours or ECTS and marks for each subject.

Application deadline: 05/07/2023

Selection process: The interviews will take place online

For more information: <https://dcarbonizeproject.eu/dc-positions/>

Contact person: Anna Banet (info@dcarbonizeproject.eu)



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