

Ph.D. Position – University of Bordeaux FRANCE

Biosourced polyhydroxyurethanes as encapsulation materials for photovoltaic cells - BioFlexPV

Position

The BioFlexPV project is part of a Priority Research Program (PEPR) from the The French National Research Agency (ANR) called [Tase](#) (*Advanced Energy Systems Technologies*) whose aim is to generate innovations in the fields of solar photovoltaic energy, offshore wind energy and the emergence of flexible and resilient energy networks.

The recruited Ph.D. candidate will work within a consortium of 6 laboratories (*see below*) in collaboration with other Ph.D. students and Post-doc researchers. His/her specific role will be to develop new biosourced polyhydroxyurethane (PHU) materials for the encapsulation of photovoltaic cells. Different biosourced cyclocarbonate and amine precursors will be prepared and tested for the development of crosslinked PHU films. The transparency and barrier properties of the films obtained will be two characteristics to be particularly controlled. These new encapsulation materials will be integrated into different types of flexible photovoltaic modules and their lifespan will be studied and analyzed.

The Ph.D. candidate will be located within the *Laboratoire de Chimie des Polymères Organiques (LCPO)*, one of the top-tier center of polymer science in France, located on the campus of the University of Bordeaux. The research activities of the laboratory span the whole range of modern polymer science. It aims at the design of functional high value-added polymers and the study of their macroscopic properties for target applications, in particular in the domains of life sciences, energy and chemical engineering. The LCPO offers a stimulating workplace for anyone who wants to gain a top-level training in polymer chemistry.

The work will be conducted in collaboration with the laboratory of *Intégration du Matériau au Système (IMS, Bordeaux)*, the *Institut des Sciences Moléculaires (ISM, Bordeaux)*, the *Institut Charles Gerhardt de Montpellier (ICGM)*, the *Institut Photovoltaïque d'Île-de-France (IPVF, Paris)* and the *Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA, Gif-sur-Yvette & Marcoule)*

Candidate's profile

We are looking for a highly motivated student holding a Master degree in organic and/or polymer chemistry. Teamwork abilities and good skills in English are required.

Application

Candidates are invited to apply by clicking [here](#)

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