

Post-Doc POSITION (18 months) starting from Oct. to Dec. 2022

Combination of radical and coordination-insertion polymerization controlled by organometallics

Description

This project takes place in the team "Polymerization, Catalysis and Materials" of the CP2M laboratory in Villeurbanne (CP2M: Catalysis Polymerization Processes and Materials- UMR 5128 - CNRS - CPE Lyon – University Claude Bernard) under the supervision of Dr Vincent MONTEIL.

The project's framework is the ANR collaborative project RADICCOORD (<https://anr.fr/Projet-ANR-20-CE06-0016>) funded in 2020 between CP2M and ICR (Institut de Chimie Radicalaire; Marseille) laboratories.

The multidisciplinary project aims at using metal complexes in order to combine the high efficiency of coordination-insertion polymerization (CIP) of olefins (in particular ethylene) with the high efficiency of Organometallic Mediated Radical Polymerization (OMRP) of vinyl polar monomers (such as (meth)acrylates or vinyl esters) to produce well-defined olefin/polar vinyl monomer block and statistical copolymers. The project will include the evaluation of organometallics based hybrid catalytic/radical polymerization systems for the copolymerization of ethylene and polar vinyl comonomers and the advanced characterizations of so obtained copolymer properties (microstructure from NMR, MWD from SEC, thermal properties from DSC...).

Qualifications

Applicants should have a PhD Degree in Chemistry. Strong knowledge of organic chemistry, organometallic chemistry, catalysis, polymer synthesis and/or characterization of polymer would be considered an asset.

HOW TO APPLY

CVs should be sent to: Dr. MONTEIL Vincent (vincent.monteil@univ-lyon1.fr)