

3 years PhD position in organic chemistry

Title: Fluorine and Sulfur in Emerging Chemical Motifs: Implications in Asymmetric Synthesis

Supervisor: Dr Dominique CAHARD (DR1 CNRS, Normandy university, France)

Objectives: Asymmetric synthesis is one of the most vibrant areas of modern research in fluoro-organic chemistry. Albeit, the research activity in the field has always been very dynamic, there are still numerous synthetic challenges particularly for the construction of stereodefined carbon centers featuring emerging fluorinated motifs (CF_2H , SCF_3 , SCF_2R , OCF_3 , SF_5 , SF_4CF_3 ...). Therefore, the goal of this project is to develop powerful and efficient strategies that would answer these challenging questions. We are particularly interested in motifs that combine fluorine and sulfur atoms. Specifically, we will either explore asymmetric approaches to directly introduce these fluorinated motifs (SCF_3 and SF_5) or harness thiofluorinated building-blocks.

Laboratory: This project will be carried out in the organofluorine team of the UMR 6014 CNRS COBRA, Université de Rouen, 76821 Mont Saint Aignan, France. The COBRA laboratory is member of the Labex Synorg and of the Carnot Institute Innovation Chimie Carnot. COBRA is a major player in the field of molecular chemistry.

Candidate profile: To support this research program from October 2021, we are looking for an outstanding and highly motivated candidate to pursue his/her PhD within the group. The candidate must have a strong background in organic synthesis with excellent theoretical and experimental skills. We are looking for dedicated, curious, hard-working and autonomous candidates, who also should have good communication skills, a good team spirit and will take benefit from an international research environment. Should the COVID situation improves, the PhD work will include a short stay abroad in the frame of an international collaboration.

Funding: The MESRI funding is secured for three years starting October 2021. Gross salary range starts at 1750 € monthly. The student will be registered at Normandy University. Travel expenses will be covered during internship abroad.

How to candidate: Applications should be sent by e-mail to Dominique Cahard (dominique.cahard@univ-rouen.fr). It should include a detailed CV, a recommendation letter, and a cover letter with motivations.