

## PhD grant EUR XLChem, Financial Support : Région Normandie/ Université de Montréal

This co-supervised thesis work will take place on the one hand within the fluorinated biomolecules team (UMR 6014 COBRA, 1 rue Tesnière 76821 Mont-Saint-Aignan) directed by Pr. Philippe JUBAULT and on the other part in the research team of Pr. André B. Charette of the University of Montreal. The supervision of this research work will be carried out by Pr. Philippe Jubault and Pr. André B. Charette. The stay at each site will be 18 months (Rouen) and 24 months (Montréal).

This thesis work will be carried out within the framework of the collaboration established between our two research teams for several years.

The main axes of research that will be developed within the framework of this doctorate are the following:

- The stereoselective synthesis of small functionalized cycles via enantioselective catalytic approaches, in particular for their incorporation into structures of interest.
- The development of original continuous flow synthesis processes, in particular to allow the use of some reagents and/or some reactions in a safer way and will allow their transfer to industrial applications. For this aspect of the project, the University of Montreal and the COBRA laboratory have installed within their research institutes continuous flow synthesis platforms.

Previous common publications : *Chem. Eur. J.*, **2017**, 23, 4950. *Angew. Chem. Int. Ed.* **2017**, 56, 13319. *Chem. Eur. J.* **2018**, 24, 10339. *Org. Biomol. Chem.* **2019**, 19, 472. *ACS Catal.* **2019**, 9, 2594. *Org. Lett.* **2019**, 21, 7509. *Chem. Eur. J.* **2021**, 27, 2935. *ACS Omega* **2021**, doi.org/10.1021/acsomega.1c05337. *Acc. Chem. Res.* **2021**, 54, 2969.

Required qualifications: master in organic chemistry. Interests for continuous flow chemistry.

### Required documents:

- CV, motivation letter and M1/M2 grades and/or rank at the end of the 2<sup>nd</sup> and 3<sup>rd</sup> years of engineering school must be sent to the following to the two supervisors by email.
- Two letters of recommendation.

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André B. Charette, [andre.charette@umontreal.ca](mailto:andre.charette@umontreal.ca).