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Title: “Developments of new accesses to chiral cyclopropanes using modern approaches (C-H activation, electrosynthesis, photochemistry)”.

Position: Full Doctorate

Keywords: cyclopropane, catalysis, asymmetric synthesis, electrosynthesis, C-H activation, photochemistry.

The cyclopropane motif fascinates organic chemists, in fact this intriguing and smallest cycloalkane is present in a phalanx of natural and non-natural bioactive molecules. This important constrained unit has been applied to alter both the metabolic stability and bioavailability of pharmacologically active molecules.

Due to this, there has been interested in developing new approaches to synthesize this key structural motif. Moreover, the enantioselective and more particularly the catalytic enantioselective synthesis have received much attention. Quite surprisingly, C-H activation, electrosynthesis and photochemistry have been less reported in the literature for the synthesis of functionalized cyclopropanes despite the recent implements of these techniques.

As part of our ongoing research program focusing on the development of straightforward access to Fluorinated, trifluoromethyl and difluoromethyl cyclopropanes we envisioned the development of a catalytic asymmetric route to cyclopropanes using C-H activation and/or electrosynthesis and/or photochemistry.

To support this important research program, we are looking for an outstanding and highly motivated candidate to pursue his PhD within our group.

Requirement for the position: a Master degree in chemistry

URL: <http://www.lab-cobra.fr/?equipe=synthese-de-bilomolecules-fluorees>

Laboratory: UMR 6064 Institut CARMEN INSA de Rouen,

Ecole Doctorale Normande de Chimie N° 508

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