



Supervisor : Samuel Couve-Bonnaire, PhD.
Associate Professor, UMR 6014 CNRS- C.O.B.R.A.,
INSA Rouen Normandie, IRCOF, 1 rue Tesnière, 76130
Mont Saint Aignan, FRANCE
samuel.couve-bonnaire@insa-rouen.fr

Title: “Development of new access to fluorinated alkenes by catalysis and/or photochemistry”.

Position: Full Doctorate

Keywords: fluorinated alkenes, catalysis, asymmetric synthesis, photocatalysis, C-H activation.

Organofluorine chemistry is an area in tremendous expansion and the market of organofluorine fine chemicals still keeps growing up every year. Fluorinated molecules have applications in almost all areas of science (medicinal chemistry, agrochemistry...).

Of particular relevance is the emergence of fluorinated alkenes, versatile compounds that have found many applications as, for examples, peptidomimetics, drugs and materials. Despite interesting application in biological/structural study or in medicine, the synthesis of these fluorinated alkenes is however still very challenging and classical methods for their preparation suffer from major limitations, which clearly disallow their full development. There is therefore a strong need for new processes that would tackle this major challenge in chemical synthesis.

In that context our laboratory published numerous relevant works related to the synthesis of various relevant products bearing a fluorinated alkene moieties.

In this proposal, we aim at developing new relevant catalytic pathways towards fluorinated alkenes via modern C-H activation process, metathesis, cross-coupling reaction... These novel methodologies will allow the development of new fine fluoroalkene chemicals which could have many applications such as fluoroanalogues of biorelevant molecules.

To support this 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 organic chemistry

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

Laboratory: UMR 6014 CNRS- C.O.B.R.A, Université et INSA Rouen Normandie

Ecole Doctorale Normande de Chimie N° 508

Contact: Associate Professor Samuel Couve-Bonnaire (samuel.couve-bonnaire@insa-rouen.fr)

*Tél. +33 2 35 52 24 25 or + 33 2 32 95 66 18–
Mail : samuel.couve-bonnaire@insa-rouen.fr*