



PhD position available in organic synthesis and catalysis

*Development of versatile (bio-sourced) **electron-donors**
for challenging reductive transformations in organic chemistry.*

Laboratory: Department of Molecular Chemistry (DCM) at the University Grenoble Alpes (France)

Supervisor : Dr Martin David (CIRe group)

Contact : david.martin@univ-grenoble-alpes.fr

APPLICATION DEADLINE: April 9th at 23.59.

Project Description:

Our team intends to discover novel organic functions in order to offer original opportunities to interact with electrons and photons at the molecular level. Our targets are often “impossible” molecules: elusive compounds that are commonly considered as too reactive to be isolated, or even to be observed. We stabilize these them through rational modifications of steric and electronic effects of substituents. Spectroscopies, X-ray crystallography and DFT calculations provide key guidance for our experimental synthetic work.

The project aims at the photo-generation of super reducing stoichiometric reagents or catalytic intermediates, in order to open exciting novel venues for the sustainable synthesis of valuable organic synthons with cheap bio-sourced strong reducing agents. It will be conducted in collaboration with Dr J. Fortage and will benefit from his expertise in electro/photo chemistry (EMPRE group at DCM , localized in the same research building).

Recent related publications :

- V. Theyry, E. Tomás-Mendivil, D. Martin, *et al. Chemical Science* **2022**, *13*, 9755 – 9760.
- L. Delfau, E. Tomás-Mendivil, D. Martin, *et al. Angew. Chem. Int. Ed.* **2021**, *60*, 26783–26789.
- E. Tomás-Mendivil, D. Martin, *et al. Angew. Chem. Int. Ed.* **2020**, *59*, 11516-11520.

Methods and Materials: Organic synthesis, Schlenk techniques, spectroscopical, electrochemical and photoelectrochemical characterization, catalytic reaction screening and optimization.

Skills/Qualifications : Master's degree in chemistry or a related field, background in molecular synthesis and/or coordination chemistry, including characterization techniques (background/interest in electrochemistry, catalysis, DFT or physical chemistry are welcome), strong motivation and creativity, good written and oral communication skills in English.

Eligible candidates must have a good track record in organic chemistry and must be able to attend an on-site interview at UGA in april-june 2023.

Selection process

Interested candidates should submit their CV, motivation letter outlining research interests and relevant experience in the domain, copies of academic transcripts and degrees (M1 and M2), and names and contact information of two references to the project leader, David Martin (david.martin@univ-grenoble-alpes.fr).