

PhD student position in **Organic chemistry - Lewis Acid under Constraint**

Location : Institut de Chimie Analytique et Réactivité Moléculaire en Normandie – **CARMEN**, UMR CNRS 6064, Université de Caen Normandie, 6, bd du Maréchal Juin, 14050 Caen Cedex (France)

Supervisor: Dr. Robin Weiss

The **CARMEN Institute** (UMR CNRS 6507) is looking for a highly motivated and enthusiastic candidate willing to pursue a fully funded three-year PhD program within the framework of the **ANR project MechaAct** (ANR-25-CE07-2800), dedicated to the development of Lewis acid mechano-responsive molecular systems in a polymer matrix.

Our group: Our research group, located at the Laboratoire CARMEN at Université Caen Normandie, develops innovative molecular systems based on *p*-block elements as versatile platforms for organic synthesis, supramolecular chemistry and homogeneous catalysis. In particular, the group explores σ -hole-based interactions and metalloid metal-like behaviour to develop complementary tools for molecular reactivity and catalysis. The MechaAct project aims to investigate how controlled mechanical constraints applied at the molecular level can modulate the structural, electronic and reactive properties of well-defined chemical systems. This research program lies at the frontier between organic chemistry, mechanochemistry, supramolecular chemistry, polymers, and catalytic reactivity.

Requirements: Only candidates with a MSc in **organic / organometallic** chemistry (or soon completed) are eligible. Skills and interests in **organic chemistry** and **organometallic chemistry** are demanded. In addition, solid experience in reaction optimization and development, inert atmosphere techniques and chemical characterization (XRD, NMR, FT-IR, MS) would be highly appreciated. Experience in polymer chemistry would be a plus. Dynamism, rigour, independence and good communicating skills are required.

Position description:

The selected candidate will conduct research in a well-equipped academic environment. The PhD student will develop experimental work in a synthetic laboratory focused on the design and synthesis of original molecular systems based on main group elements, their structural and spectroscopic characterization, and the investigation of their reactivity and properties under mechanical stress. Although the project is **primarily focused on organic synthesis**, the candidate must have an affinity for the cross-disciplinary aspects since the project involves the synthesis and characterization of materials.

The position will remain open until 05 May 2026 or until a suitable candidate is identified, with a starting date from **October 2026**. To apply, please send an email to robin.weiss@unicaen.fr with "PhD_MechaAct_2026" as the subject line and attach a single PDF file including: i) a detailed CV, ii) academic transcripts, iii) a brief research summary, iv) a short motivation letter, and v) contact details of one or two referees.