

Laboratoire de Chimie de coordination



The "Laboratoire de Chimie de Coordination" offers an expertise in the molecular chemistry of transition-metal and main group elements with specific research interests in fine chemicals and catalysis, bio-inorganic chemistry, nano-sciences and new materials.

The Laboratoire de Chimie de Coordination (LCC) in Toulouse was created in 1974 as a dedicated CNRS laboratory. It operates as an Institute of fourteen research groups, supported by a high level of scientific and technical services. The organization of the lab and its management can count with the expertise of internal consulting groups composed of researchers and technical employees.

The core focus of the Institute, on which its scientific policy is based, is Synthesis and reactivity in coordination chemistry and in inorganic chemistry of the main group elements. This central theme gives rise to three main lines of research each leading to interactions with other disciplines :Catalysis and fine chemicals with chemical engineering Molecular materials with physical properties Bio-inorganic chemistry and the role of metals in biology, interacting with life sciences, etc.

Research groups

- * Switchable Molecular Materials
- * Biomimetic Oxidations
- * Chiral Ligands, Complexes and Catalysis
- * Carbo-meric Molecules and Chiral Catalysts
- * Early Transition Metals : From Molecules to Extended Solids
- * Transition Metals in Neurobiological Systems
- * Adaptive Ligands Engineering
- * Catalysis and fine chemicals
- * Molecular, Macromolecular and Supramolecular Main Group Chemistry
- * Molecular design of transition metal pre-catalysts
- * Nanostructures and Organometallic Chemistry
- * Architecture Organométallique et Catalyse
- * Group of Synthesis of Porphyrinic Systems (G2SP)
- * Molecular, Supramolecular and Biomimetic Materials
- * Molecules and Materials



Some perspectives and fields of application

* Chemistry and Catalysis

NEW CONCEPTS
GREEN CHEMISTRY
ENANTIOSELECTIVE CATALYSIS

* Chemistry and Health

MALARIA
TUBERCULOSIS
NEURODEGENERATIVE ILLNESSES
CANCERS

* Chemistry and Materials

MOLECULAR MEMORIES
CHEMICAL SENSORS

MAGNETIC MATERIALS
MICRO- ET NANO-ELECTRONIC



Catalysis and fine chemicals

Our research interests are mainly focused on the elaboration of active and selective catalysts, exhibiting high performance in Fine Chemistry, including in the field of asymmetric synthesis to prepare biologically active molecules.

The team joined the LCC in January 2007; it is located at the "ENSIACET".

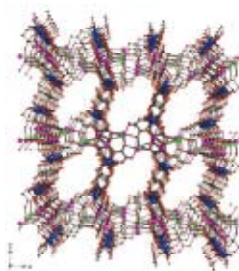
Head: Pr Philippe Kalck,
philippe.kalck@ensiacet.fr

Chiral Ligands, Complexes and Catalysis

The group works on a wide variety of topics centered around:

- * The development of new concepts in organometallic chemistry.
- * New chemistry in non-conventional media.
- * The design and synthesis of new ligands and their complexes.
- * New molecular materials.
- The search for new processes for challenging catalytic reactions

Head: Pr Rinaldo Poli
rinaldo.poli@ensiacet.fr



Nanoporous materials for hydrogen storage

Key figures :

Total permanent staff: 123

Post-docs : 20

PhDs : 64

Publications (peer reviewed) 528

Budget:

Contact :

Head Bruno Chaudret,
Assistant head D. Neibecker

Address

Laboratoire de Chimie de Coordination

205, route de Narbonne

31077 - Toulouse cedex 04

Phone: + 33(0) 5 61 33 31 00

Web: <http://www.lcc-toulouse.fr/>

direction@lcc-toulouse.fr