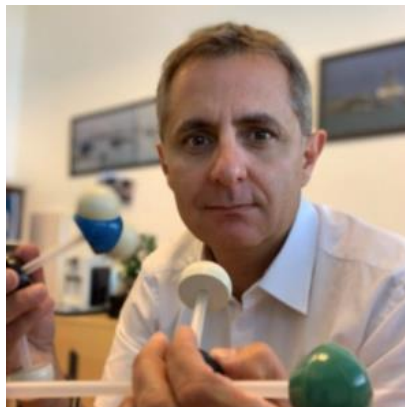


Department of Chemistry
Departmental Seminar:
Inorganic Chemistry

You are cordially invited to a lecture presented by



Prof. Raphael Tripier

Department of Chemistry and CNRS Research Center
Université de Bretagne Occidentale, (UBO), Brest, France

Date: Thursday, 02 June 2022
Time: 11:30 – 12:20
Venue: Orbital
Enquiries: madelien.wooding@gmail.com

**“Search and Destroy with Azamacrocycles:
How catching lanthanides and transition metals can yield relevant diagnostic
and therapeutic agents”**

The importance of azamacrocycles in diagnosis (MRI, SPECT, PET, optical probes, CyTOF) and therapy (radiotherapy, photodynamic therapy) is now well established. They are indeed recognized to form highly stable and inert chelates that allow for safe *in vivo* application eg: the famous DOTA chelator is now a clear standard used as a complexing unit in several clinical cases: DOTAREM (Gd-MRI agent), ⁶⁸Ga-DOTATE (PET-imaging), LUTATHERA (¹⁷⁷Lu-radiotherapy). However, the current challenge to find good chelators, able to be used in both diagnostic and therapeutic applications, persists since there is still no “ideal” ligand capable of coordinating a range of metallic cations of interest and that provides, only by changing the cationic core, imaging and therapeutic functions. Our new, specially designed azaligands that are able to take on this challenge will be presented - from their synthesis to their *in vitro* or *in vivo* application after metal complexation.

Keywords: Organic synthesis. Coordination chemistry. Transition metals. Lanthanides. Optical imaging. MRI. PDT. Nuclear medicine.