Ewen Bodio seminar (January 12, 2026)

Where Aza-BODIPY Meets Metals: Unlocking Multimodal Imaging and Theranostics

In recent years, aza-boron-dipyrromethenes (aza-BODIPYs) have gone from being a scientific curiosity to a class of molecular fluorophores of major interest just like rhodamines or cyanines. These nitrogenous analogues of BODIPYs have built their reputation thanks to their ease and speed of synthesis, their high chemical and photochemical stability, their good quantum yields, and especially thanks to the fact that they absorb and emit light in the NIR-I (700-900 nm). This corresponds to wavelengths sought after for *ex vivo* and *in vivo* optical fluorescence imaging or even for surgical assistance.

They can be transformed into easily functionalizable fluorescent platforms. In particular, the lecture will show how they can be coupled with a biological vector and/or a metal complex to develop contrast agents for surgical assistance, bimodal probes and trackable therapeutic agents. In a second part, more exploratory results will show how smart integrated bimodal probes can be formed by replacing the boron atom of the aza-BODIPY core with a metal ion.

SHORT CV Ewen Bodio

Ewen Bodio is Professor at the CEISAM chemistry lab, Nantes Université (FRANCE). He is 42 years old and began his career as a PhD at the University of Nantes on the synthesis of chelating agents for radioisotopic imaging (2006-2009), he pursued by a postdoctoral fellowship at the Trinity College of Dublin (IRELAND) on organocatalysis and the synthesis of artificial enzymes (2009-2010) and was recruited in 2010 by the ICMUB molecular chemistry lab (Dijon, FRANCE), first as a lecturer and then promoted as full professor in 2019. Since 2024, he moved back in Nantes and was jointly appointed to the IUF (Institut Universitaire de France) as a junior member ("innovation chair"). His research focuses mainly on using molecular and coordination chemistry for medical imaging, theranostics, bioinorganics, and photocatalysis.