

Our research deals with the design and the synthesis of metal complexes and coordination compounds [Ir(III), Pt(II)] for optics and opto-electronics. We are investigating the functionalization of photo-active ligands and metal-based systems, for their photochemical and photophysical properties: luminescence and second order nonlinear optics. We are also developing organometallic photochromes as metallo-switches for the modulation of linear and non linear optical properties. The final aim of this research is the achievement of multifunctional organometallic materials. A second aspect of our research, developed in collaboration with Pr. H. Doucet and Dr J.-F. Soulé (Rennes), focuses on metal-catalysed C-H bond activation of (hetero)aromatics directed towards new atom-economic reactions. We have pioneered the use of Pd-catalysed C-H bond activation reactions for the access to luminescent molecules and complexes by designing simple and direct synthetic routes