

# Séminaire



**Mardi 16 mai 2023 à 10h30**

**Amphithéâtre Henri Benoît**

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# **Photoactive transition metal complexes : *from synthesis to applications***

Photoactive transition metal complexes (TMC) play a key role in a wide range of applications such as lighting, energy conversion, photocatalysis or sensing, just to name a few. These materials typically comprise platinum group (4d and 5d) metals due to their very rich photophysical and electrochemical properties. More recently, prompted by environmental and geopolitical reasons, huge efforts are directed towards the development of their first-row (3d) counterparts. However, in spite of their remarkably higher abundance, attaining photoactive excited states from these 3d complexes is particularly challenging due to their inherent weaker ligand field in comparison to that of the 4d or 5d species.

In this seminar, I will present some general guidelines for the design of photoactive TMC through some examples of my research work. In particular, I will start describing the preparation of phosphorescent materials based on Pt(II), some of which allowed us to fabricate high-performance solution-processed OLED. Then I will focus on Fe(II) compounds and our efforts to increase their excited state lifetimes towards solar energy conversion applications.

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*Les personnes souhaitant rencontrer Cristina sont priées de prendre contact avec elle.*