# Tuning of photophysical and chiroptical properties by encapsulation inside a hydrogen-bonded cavity

Iris Sanchez,[1] Benjamin Doistau,[1] Benoît Colasson[1]
*[1]LCBPT (UMR 8601), Université Paris Cité, Paris, France*
contact: iris.sanchez1@etu.u-paris.fr

The properties of coordination metal complexes traditionally depend on the nature of the metal cation and the complexed ligands. An original strategy to tune these properties is to play with the environment around the complex by a **supramolecular** approach[1].

This work reports on the encapsulation of **Cu(I) bisdiimine complexes** inside a **self-assembled hexameric resorcin[4]arene-based capsule**[2]. The confinement leads to the modification of their photophysical and chiroptical properties, namely: (1) an **Encapsulation-Induced Emission Enhancement** (*Figure 1*), (2) an **enantiomeric excess induction** on the encapsulated complex from an enantiopure chiral capsule, (3) an enantiomeric excess induction on both the capsule and the encapsulated complex using an enantiopure counter anion, (4) the generation of **Circularly Polarized Luminescence** emission[3]. This supramolecular chirality induction could be harvested subsequently to achieve enantioselective reactions.

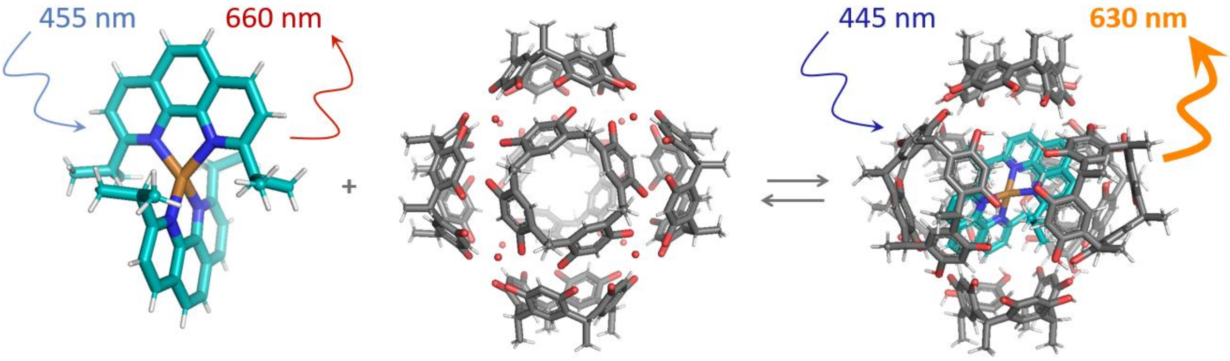

**Figure 1**. Tuning of photophysical properties in a copper(I) complex by its encapsulation.

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[3] Leherte, L.; Pellegrin, Y.; Sliwa, M.; Jiménez Gallego, J. R.; Višnjevac, A.; Doistau, B.; Colasson, B. *Manuscript in preparation.*