

Mardi 30 octobre 2018 à 16h00
Salle Maroni du MHT

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**Piling up photons for upconversion at the
molecular scale**

Piling up photons with upconversion at the molecular scale

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ABSTRACT

Upconversion is the process by which the energy of two or more photons in the red or NIR region can be accumulated and restored as a photon of higher energy, typically in the visible or NIR range. If the process is known for more than half a century for solids and more recently for nanoparticles, it is still in its infancy for discrete molecular systems in solution. We will here describe how the combination of molecular design and supramolecular chemistry can help building (hetero)polynuclear lanthanide based supramolecular assemblies which allow the observation of molecular upconversion in water. [1]

[1] (a) *Nature Communications*, 2016, 7:11978; (b) *J. Am. Chem. Soc.* 2017, 139, 1456.