Luminescent supramolecular Pt(II) complexes with coumarin chromophores

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Coumarins are a class of phenolic compounds representing a 2H-1-benzopyran-2-one derivatives and are considered a highly promising group of bioactive heterocyclic compounds that can be further classified into simple coumarins and furanocoumarins, among others.[1,2]

Leaving aside their biological applications, coumarin derivatives have shown to have interesting photophysical properties that can be tuned with the substituents and position in the coumarin ring.[3] In this context, the possibility of coordinating a N^C^N ligand containing Pt(II) to the coumarin derivatives could favour aggregation and luminescence since the presence of this heavy atom induces strong spin-orbit coupling. [4,5]

In this work several Pt(II) compounds containing a N^C^N ligand and a propynyloxycoumarin ligand have been synthesized, characterized and a photophysical study of the compounds has been carried out. Their photophysical properties are compared with some analogous Au(I) complexes previously described in our group.

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