

STUDY OF OPTICAL PROPERTIES OF ARIL GOLD AND THALLIUM DERIVATIVES WITH HETEROCYCLIC LIGANDS

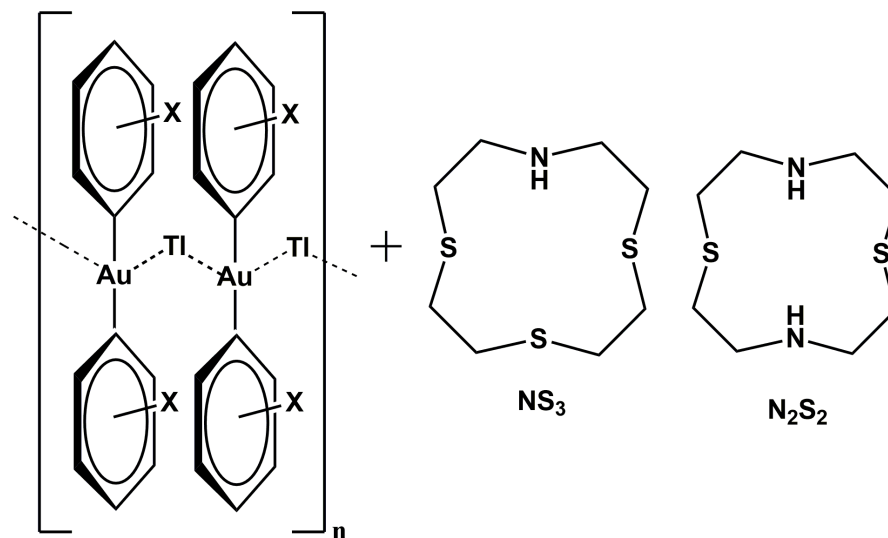
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Recently, compounds containing metallophilic interactions between gold (I) atoms and various metal ions having a "closed shell" electron configuration, [M = Cu (I), Ag (I), Tl (I), Pb (II), Hg (II), Bi (III), Sn (II)] have aroused considerable interest both in terms of theoretical aspects and their physicochemical properties and potential applications. In particular, the luminescence of these solid state compounds appears to be closely related to the presence of M-M 'interactions, to the disposition of the metal ions interacting in the crystal structure and to the nature of the ligands present. [1]

In this case, the reactivity of the polymer compound [$\{\text{Au}(\text{C}_6\text{X}_5)_2\}\text{Tl}$] is studied against N, S-donor heterocyclic ligands with different numbers of heteroatoms in the macrocycle. In this way it is possible to evaluate how different ligands with similar coordinating ability can affect not only the crystalline structure but also the luminescent properties of the heterometallic derivatives obtained.



[1] J.M. López-de-Luzuriaga, in *Modern Supramolecular Gold Chemistry*, ed. A. Laguna. Wiley-VCH, Weinheim, 2008, p.347.

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