OC21
Well defined [Silver(I)(Pyridine-Containing Ligand)] Complexes

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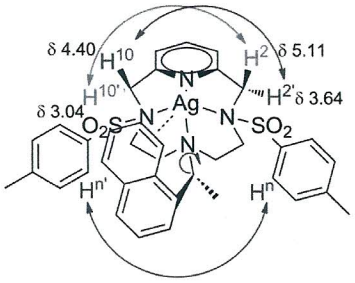
Nitrogen containing macrocyclic molecules are naturally occurring species that play a vital role in biological system, such as porphrins, corrins and chlorins. In past years, our attention turned to the development of synthetic pathways that allow to obtain a new class of tetraaza macrocyclic ligands containing pyridine in few synthetic steps, in good yield, and starting from economic and commercially available starting materials.[1] The copper(I) complexes of these Pc-L* ligands have been successfully employed as catalyst in the Henry reaction[2] and in the enantioselective cyclopropanation of alkenes.[3] More recently, the silver(I) complexes have demonstrated to be active catalysts for some domino[4] and multicomponent reactions.[5] Here we report on new chiral [Ag(I)(**Pc-L***)] complexes that were synthesized and fully characterized, including structures of some species determined by X-ray diffraction on single crystals. They show a rich coordination chemistry, demonstrating both the σ-philic (alcohol and nitrile coordination) and the π-philic (alkyne coordination) nature of silver. The η^2 coordination mode of the naphthyl pendant arm of the ligands on silver has been observed in solution by NMR experiments. 2D-NMR spectroscopy revealed the presence of positive cross peaks due to rotational processes and the rate of rotation was measured by using 2D Exchange Spectroscopy (EXSY).



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