

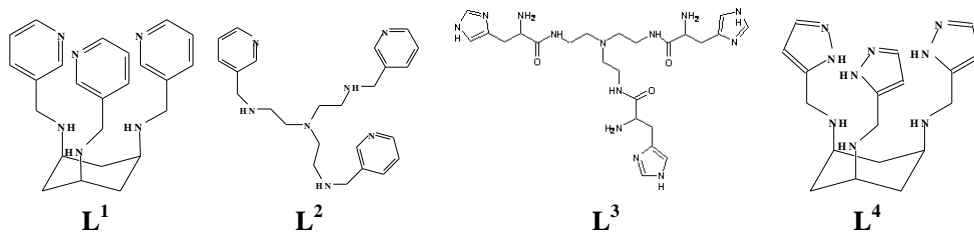
METAL ION BINDING OF SOME MULTIDENTATE TRIPODAL LIGANDS

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ABSTRACT

The coordination chemistry of simple tripodal ligands (e.g. tris(2-pyridyl)amine, *cis,cis*-1,3,5-triaminocyclohexane) is now well established. By derivatization of these trigonal platforms it is possible to alter and optimize the steric properties for controlled reactivity at the metal centres, i.e. to create metal complexes for small molecule activation used in biomimetic chemistry. The fine tuning of the properties and reactivity of the metal centres can be obtained in different levels, even with relatively simple multidentate tripodal ligands:



L¹ and L² provide 3N and 4N metal binding sites, with different coordination geometry, with different number and acidity of coordinated water molecules, but with similar binding pockets created by the pyridine rings. L³ may provide the formation of oligonuclear complexes, while the allosteric 6N metal binding in L⁴ may create a further 3N catalytic site. The lecture will discuss the coordination properties of these ligands.