Metal-directed Self-organization of Multifunctional Pyridyl Ligands: Structural Diversity of 3d Metal Complexes

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The coordination chemistry of multifunctional pyridyl ligands has been the focus of a several investigations. One of the main areas of research relates to the self-assembly of their metal complexes, and gaining an understanding of the factors that affect such processes remains a challenge.

We have employed aryl-linked diimine ligand derivatives with 2-pyridyl or 3-pyridyl substituents for the construction of a wide range of supramolecular structures [1-3]. Discrete, macrocyclic and polymeric complexes of Mn(II), Fe(II), Co(II), Ni(II), Cu(II), Ag(I) and Hg(II) have been isolated. The architectures obtained and the different factors influencing the self-assembly processes will be discussed in detail.



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