

## The three new groups Mn(III) and Fe(III) dipicolinate complexes

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Dipicolinic acid (pyridine-2,6-dicarboxylic acid = H<sub>2</sub>dipic) is known to be a major component of bacterial spores. The metal dipicolinate complexes are also used in environmentally friendly “green” catalysis. The most common include heterogeneous catalysis, oxidation reactions and degradation reactions of waste water. The chemistry of manganese and iron complexes has been investigated recently since these metals are present in a various biological redox systems including peroxidases, catalases, superoxide dismutases, dioxygenases and lipoxidases. In this lecture we report the structural characterization of a three new groups manganese(III) and iron(III) dipicolinate ionic complexes with three types of cations. The general formula of anions in these complexes is [M(dipic)<sub>2</sub>]<sup>-1</sup> (M = Mn(III) and Fe(III)). Each of the dipic anions are coordinate to one central atom in a terdentate fashion manner, via two O atoms and the N atom (dipic = pyridine-2,6-dicarboxylate anion). The cations in these groups of complexes are 2-, 3- or 4-hydroxymethylpyridinium, 2- or 4-carbamoylpyridinium, 1,10-phenantrolin-1-ium, or 2-(pyridin-2-yl)pyridinium and theirs derivatives. Observed structural data are discussed and correlated with those of known Mn(II/III) and Fe(II/III) complexes found in Cambridge Crystallographic Data Base.

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