

Preparing Mn(III) salen-type Schiff base complexes using 1,3-oxazines obtained by Mannich condensation : towards removing *ortho*-hydroxyaldehydes.

Autorzy

Rahman Bikas

Marzieh Emami

Katarzyna Ślepokura

Nader Noshiranzadeh

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Streszczenie

In this research a new method for preparing Mn(III)-salen complexes from 1,3-oxazine compounds has been investigated. The ligands were synthesized from the Mannich condensation of 1,2-diamines (1,2-ethylenediamine or 1,2-cyclohexanediamine) with phenolic compounds (2-naphthol or 4-fluorophenol) and formaldehyde solution under reflux conditions. The reaction of the ligands with $\text{Mn}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ in methanol gave Mn(III) Schiff base complexes. The obtained compounds were characterized by elemental analysis and spectroscopic methods. The crystal structures of the ligand and complexes were characterized by single crystal X-ray diffraction studies. These analyses show that Mn(III)-salen type Schiff base complexes can be synthesized from the Mannich condensation of diamines, formaldehyde and phenols. This method eliminates the restrictions on the use of *ortho*-hydroxyaldehydes in preparing Mn(III)-Schiff base complexes.

Adres publiczny

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