



Direct synthesis and properties of monomeric and dimeric Mn^{III} -salen complexes tuned by tetrahalocadmate anions.

Autorzy

E. M. Chygorin
Valeriya G. Makhankova
M. V. Ischenko
Vladimir N. Kokozay
R. I. Zubatyuk
Oleg V. Shishkin
Julia Jezierska

Rok wydania

2012

Czasopismo

Inorganic Chemistry
Communications

Numer woluminu

20

Strony

282-285

DOI

10.1016/j.inoche.2012.03.029

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Two novel compounds [Mn(salen)(dmf)₂]₃[Mn(salen)(dmf)(H₂O)][CdCl₄]₂·H₂O(1) and {[Mn(salen)(CH₃OH)]₂}[Mn(salen)(CH₃OH)₂]₂[CdI₄]₂(2) have been synthesised via interaction of manganese metal and cadmium halide within situ generated salen ligand (salen=N,N'-ethylene-bis-salicylideneaminato) in non-aqueous (dmf, CH₃OH) solutions. X-ray structure analysis reveals that in solid state 1 contains mononuclear Mn^{III}-salen species, whilst in 2 both monomeric and out-of-plane dimeric Mn^{III}-salen complexes are present. Moreover, in 2 the monomeric units are linked by H-bonds, forming other dimers. Equilibrium between monomeric and dimeric units in solutions of 1 and 2 was found by ESI mass-spectrometry. The magnetic measurements of 2 demonstrated antiferromagnetic interactions between Mn^{III} centres.

Słowa kluczowe

Schiff base ligand, Cadmium, manganese, X-ray crystallography, Antiferromagnetic interactions

Adres publiczny

<http://dx.doi.org/10.1016/j.inoche.2012.03.029>

Strona internetowa wydawcy

<http://www.elsevier.com>

Plik został wygenerowany dnia 2026-08-27 15:39:06

Adres w repozytorium <https://old.chem.uni.wroc.pl/pl/repozytorium/eZVO-eW>.