Crystal structure and magnetic properties of copper(II) macrocyclic compounds.

Autorzy

Alina Bieńko

Jerzy Mroziński

B. Korybut-Daszkiewicz

Rafał Kruszyński

Rok wydania

2008

Czasopismo

Polish Journal of Chemistry

Numer woluminu

82

Strony

1383-1392

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The two higly unsaturated copper(II) macrocyclic complexes [CuL1](ClO4)2 (1) (L1 = N-dl-5,12-dimethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene) and [CuL2](ClO4)2 (2) (L2 = N-dl-5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene) were synthesized and the crystal structures of both compounds were determined at 173(2) K. Complex 1 crystallizes monoclinic, space group P21/c, with a = 9.0929(5) Capital A, ring, b = 13.4683(5) Capital A, ring , c = 8.2886(4) ,Capital A, ring beta = 109.469(6)°, Z = 2, whereas 2 crystallizes at the same space group with a = 10.4891(2) Capital A, ring, b = 16.9924(4) Capital A, ring , c = 13.8780(3) Capital A, ring , beta = 105.150(2)° and Z = 4. Their magnetic measurements have been carried out over the temperature range 1.8–300 K using a Quantum Design SQUID magnetometer (MPMSXL - 5 type). The results indicate that both compounds be have as weakly interacting copper centers in the crystal lattice.

Słowa kluczowe

copper(II) complexes, macrocyclic ligands, magnetic behavior