

SYNTHESIS AND CHARACTERIZATION OF NEW AZAMACROCYCLIC BINUCLEAR CU(II) COMPLEX

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Abstract

The new mixed ligand complex of Cu(II) with octaazamacrocyclic ligand N,N',N'',N'''- tetrakis(2-pyridylmethyl)-1,4,8,11-tetraazacyclotetradecane (tpmc) and amino acid L-norleucine was synthesized and characterized by elemental analysis, conductivity data, infrared and electronic spectra. New complex is binuclear with the formula [Cu₂(norleu) tpmc] (ClO₄)₄. In this complex, the octaazamacrocyclic ligand tpmc acts as a polydentate ligand coordinated through four N atoms for each Cu(II), whereas the amino acid coordinated through the carboxylate group. Both of the Cu(II) are coordinated with two pyridyl and two cyclam nitrogens and bridged with –N–(CH₂)₃–N–portions of the cyclam ring and oxygen atoms of L-norleucine.

Keywords: Cu(II) complexes, octaazamacrocyclic, L-aminoacids, L-norleucine