Spectrochemical properties of noncubical transition metal complexes in solutions. XV. Solution properties of *bis*(salicylideneaniline)copper(II).

Autorzy

I. Kuźniarska-Biernacka

K. Kurzak

Barbara Kurzak

Julia Jezierska

Rok wydania

2003

Czasopismo

Journal of Solution Chemistry

Numer woluminu

32

Strony

719-741

DOI

10.1023/B:JOSL.0000002991.55538.17

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The complex obtained by condensation of salicylideneaniline with copper(II) acetate was studied in a variety of solvents. This deep-brown crystalline compound is soluble in common solvents, such as, chloroform, toluene, dioxane, methanol, ethanol, dimethyl formamide, dimethyl sulfoxide, and acetonitrile—a necessary condition for observing solvatochromism. The complex has been characterized by elemental analysis, molar conductivity, EPR, and ultraviolet (UV) and visible (VIS) spectroscopy. The available X-ray data shows planar coordination geometry for the copper center. Combined multi-technique experiments have been applied to confirm the structure of the complex in solution. The molar conductivities indicate nonelectrolytic properties. EPR measurements preclude the possibility of solvent coordination at the axial positions of the complex. Spectroscopic measurements were used to study the coordination properties of donor atoms and their bonding ability, as well as trichromaticity coordinate calculations. The results obtained show that the interactions of metal with donors depend on donor strength and polarity of solvent.

Adres publiczny

https://doi.org/10.1023/B:JOSL.0000002991.55538.17

Strona internetowa wydawcy

http://link.springer.com