Complexes of heteroscorpionate trispyrazolylborate ligands. Part IX. X-ray crystallographic studies on cobalt(II) complexes of hydrobis(3-phenyl,5-methylpyrazolyl)(3,5-diethylpyrazolyl)borate.

Autorzy

Tomasz Ruman

Zbigniew Ciunik

Stanisław Wołowiec

Rok wydania

2003

Czasopismo

Polyhedron

Numer woluminu

22

Strony

581-586

DOI

10.1016/S0277-5387(03)00002-0

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The synthesis of the sodium salt of a new anionic heteroscorpionate trispyrazolylborate ligand as of sodium hydrobis(3-phenyl,5-methylpyrazolyl)(3,5-diethylpyrazolyl)borate (NaTp″) was described. Two cobalt(II) complexes: Tp″Co(NCS)(THF) and Tp″CoTp were synthesized and characterized crystallographically. Trispyrazolylborate ligands (Tp″ and Tp) are coordinated in a κ^3 fashion in both complexes. The dependence of the Co–N bond length from the steric hindrance of the Tp″ ligand was discussed. The steric hindrance imposed by the Tp″ ligand was also probed by in situ conversions of Tp″Co(NCS)(CD_3OD) into Tp″Co(lactate) and Tp″CoTp with ^{1}H NMR spectral monitoring and compared with other similar systems. Novel heteroscorpionate hydrobis(3-phenyl,5-methylpyrazolyl)(3,5-diethylpyrazolyl)borate (Tp″) forms mono-ligand Tp″Co(NCS)(THF) and heteroleptic Tp″CoTp complexes (Tp=trispyrazolylborate), which were characterized in solid state by X-ray crystallography and in solution by ^{1}H NMR spectroscopy.

Adres publiczny

https://doi.org/10.1016/S0277-5387(03)00002-0

Strona internetowa wydawcy

http://www.elsevier.com