



Anionic poly(pyrazolyl)borate ligands obtained from 3,5-dimethylpyrazole and 3,5-diphenylpyrazole and their cobalt(II) complexes - X-ray crystallographic and ^1H NMR studies.

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Rok wydania

2002

Czasopismo

European Journal of
Inorganic Chemistry

Strony

754-760

DOI

10.1002/1099-
0682(200203)2002:3<754::AID-
EJIC754>3.0.CO;2-N

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Synthesis of poly(pyrazolyl)borate anionic ligands composed of 3,5-dimethyl- and 3,5-diphenylpyrazoles and their bis(ligand) high-spin cobalt(II) complexes are described. The molecular structures of [dihydrobis(3,5-diphenylpyrazolyl)borato] [hydrobis(3,5-dimethylpyrazolyl)(3,5-diphenylpyrazolyl)borato]cobalt(II) and bis[dihydro(3,5-dimethylpyrazolyl)(3,5-diphenylpyrazolyl)borato]cobalt(II) complexes were established by X-ray crystallography. The cobalt center is hexacoordinate in the former with five Co-N₂(pyrazolyl) bonds and short Co-H [attached to the boron atom of bis(pyrazolyl)borate] bond (2.03 Å), whereas a distorted tetrahedral geometry was found for the latter due to four Co-N₂(pyrazolyl) bonds. Additionally, the pentacoordinate homoscorpionate [tris(3,5-diphenylpyrazolyl)borato]cobalt(II) nitrate side product was obtained from the reaction and characterized structurally. It contains a κ^3 -coordinated Tp' ligand and a κ^2 -bound nitrate anion.

Adres publiczny

[https://doi.org/10.1002/1099-0682\(200203\)2002:3<754::AID-EJIC754>3.0.CO;2-N](https://doi.org/10.1002/1099-0682(200203)2002:3<754::AID-EJIC754>3.0.CO;2-N)

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