

Spin-canted ferromagnetic behaviour and unusual thermal decomposition of [Co{MeO(O)CC₆H₄NHC(S)NP(S)(OiPr)₂}₂].

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Streszczenie

Reaction of the deprotonated N-thiophosphorylated thiourea o-MeO(O)CC₆H₄NHC(S)NHP(S)(OiPr)₂ (HL) with Co II leads to the [CoL₂] complex, the structure of which was studied by IR, UV-Vis, diffuse reflectance and NMR spectroscopy, ESI +/- mass spectrometry and microanalysis. The thermal properties of [CoL₂] in an air atmosphere were studied by means of simultaneous TG/DTA analyses with the observed unprecedented final residue corresponding to CoPS₃. Investigation of the thermal dependence of the magnetic susceptibility has shown that [CoL₂] behaves as a spin-canted ferromagnet. The molecular structures of [CoL₂] at 100 and 173 K were elucidated by a single crystal X-ray diffraction analysis. The metal was found to be in a tetrahedral 1,5-S₂S'₂ environment formed by the C=S and P=S sulfur atoms.

Adres publiczny

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<https://www.rsc.org/>

Adres w repozytorium <https://old.chem.uni.wroc.pl/pl/repozytorium/uU6kSrX>.