Synthesis and characterization of cobalt complexes with pentafluorophenylhydrazine: nucleophilic attack of phenolic oxygen to pentafluorophenyl ring during condensation of two Schiff base ligands.

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Streszczenie

A new dinuclear complex of Co(III), $[Co(L^{1'})(\mu\text{-}N_3)(N_3)]_2$ (**1**) and a mononuclear complex of Co(II) $[Co(L^2)_2(N_3)_2]$ (**2**) were synthesized and characterized by elemental analyses, spectroscopic methods and X-ray diffraction analyses [L^2 is (*E*)-2-(1-(2-(perfluorophenyl)hydrazono)ethyl)pyridine and $HL^{1'}$ is a ligand which formed by condensation of two molecules of the other Schiff base ligand HL^1 = (*E*)-2-((2-(perfluorophenyl)hydrazono)methyl)phenol]. In complex **1** the final ligand $HL^{1'}$ was formed via nucleophilic attack of the NH group in one hydrazone to the azomethine moiety in another hydrazone and the subsequent SNAr reaction of the phenolic oxygen to pentafluorophenyl nucleus giving rise to PhOPh structure.

Słowa kluczowe

Fluorine remove, Pentafluorophenylhydrazine, Dinuclear complex, Crystal structure, Azide

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