



Synthesis, structural characterization and electrochemical studies of an ionic cobalt complex derived from a tridentate hydrazone Schiff base and azide ligands.

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Streszczenie

The first Co(III)/Co(III) ionic complex with hydrazone and azide ligands, $[\text{Co}(\text{L})_2]^+[\text{Co}(\text{L})(\text{N}_3)_3]^- \cdot \text{CH}_3\text{OH}$, was structurally and electrochemically characterized, where $\text{HL} = N'-[(1E)-1\text{-pyridin-2-ylethylidene}]-2\text{-furohydrazone}$. In the cation $[\text{Co}(\text{L})_2]^+$ two furanhydrazone, each of them with the three donor atoms, constitute a meridional arrangement around the cobalt atom. The coordination polyhedra are a CoO_2N_4 distorted octahedron for cation and a CoON_5 distorted octahedron for anion. Cyclic voltammetric experiments of the $[\text{Co}(\text{L})_2]^+[\text{Co}(\text{L})(\text{N}_3)_3]^-$ in DMSO reveal reduction of the L ligand at -1.56 V and two reduction potentials at -0.81 and -1.28 V for two different Co(III).

Słowa kluczowe

cobalt ionic complex, hydrazone Schiff base, azide, crystal structure, Cyclic voltammetry

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