$[Co_4(\mu_3\text{-}NPEt_3)_2(HNPEt_3)_2(O_2C\text{-}CH_3)_2\text{-}(\mu\text{-}OSiMe_2OSiMe_2O)_2]$ – ein vierkerniger Cobalt(II)-Komplex mit Leiterstruktur

$[Co_4(\mu_3\text{-}NPEt_3)_2(HNPEt_3)_2(O_2C\text{-}CH_3)_2\text{-}(\mu\text{-}OSiMe_2OSiMe_2O)_2]$ – a Tetranuclear Cobalt(II) Complex with Ladder Structure

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Cobalt, Phosphoraneiminato Complex

The title compound has been prepared from cobalt(II) acetate and $Me_3SiNPEt_3$ in boiling toluene in the presence of silicon grease and traces of water as blue single crystals which were characterized by IR spectroscopy and by a crystal structure determination. Space group Pbca, Z = 8, lattice dimensions at −50 °C: a = 1449.3(1), b = 1724.9(1), c = 2356.6(2) pm, R = 0.0548. $[Co_4(\mu_3\text{-}NPEt_3)_2(HNPEt_3)_2(O_2C\text{-}CH_3)_2\text{-}(\mu\text{-}OSiMe_2OSiMe_2O)_2]$ has a centrosymmetric structure. The four cobalt atoms which are coordinated tetrahedrally are μ_3-bridged *via* the N atoms of the two ($NPEt_3^-$) groups and μ_2-bridged by the O atoms of the chelating ($OSiMe_2OSiMe_2O^{2-}$) units. The core atoms are arranged in three four-membered rings which are connected in a stair-like way.