Tetraallylsilane π-complexation: synthesis and structure of $[Cu_5Cl_5(CH_2\text{-}CH{=}CH_2)_4Si]$.

Autorzy

Tomasz Dużak

Vasyl V. Kinzhybalo

Katarzyna Ślepokura

Volodymyr Olijnyk

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Streszczenie

By alternating-current electrochemical technique, starting from $CuCl_2{\cdot}2H_2O$ and tetraallylsilane (TAS), crystals of the π complex $[Cu_5Cl_5(CH_2{-}CH{=}CH_2)_4Si]$ (**I**) were obtained, FTIR characterized and structurally investigated. The structure of **I** is monoclinic, space group $P2_1/n$, a = 12.292(3), b = 12.083(3), c = 13.356(3) Å, β = 90.19(3)°, V = 1983.7(9) Å^3 [at 100(2) K], Z = 4; R_1 = 0.0379, wR_2 = 0.1040 for 3583 reflections. The TAS molecule behaves as a tetradentate cross-bridged ligand linking four $(Cu_5Cl_5)_\infty$ fragments through the C=C bonds. The influence of the inorganic part and ligand symmetries combined with their conformational abilities on the overall crystal symmetry is discussed.

Adres publiczny

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