

**COORDINATION PECULIARITIES OF THE SALICYLALDEHYDE
S-METHYLISOTHIOSEMICARBAZONE IN
THE PALLADIUM COMPLEXES**

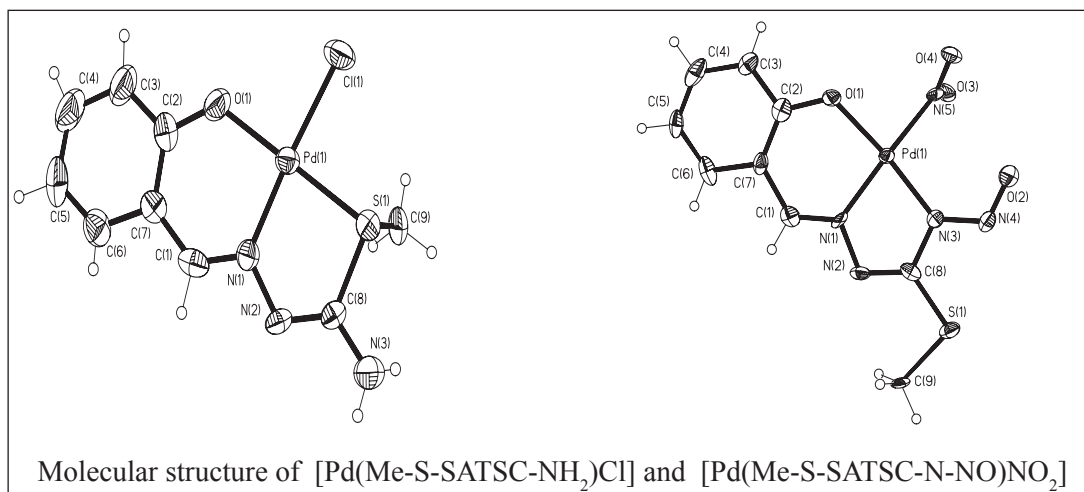
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Two coordination modes of salicylaldehyde S-methylthiosemicarbazone (Me-S-HSATSC-NH₂) have been observed in the palladium complexes with this ligand. The interaction between Me-S-HSATSC-NH₂ and tetrachloropalladate gives rise to the formation of a compound of the composition Pd(Me-S-SATSC-NH₂)Cl which one has a planar structure. The organic ligand behaves as a monodeprotonated acid coordinated by O,N,S donor atoms set. This is the only case when the thioalkylated thiosemicarbazone uses the sulfur atom for coordination. The fourth position in the coordination polyhedron of the complex is occupied by the chloride ion.



When the solution of K₂[Pd(NO₂)₄] was treated with Me-S-HSATSC-NH₂, the organic reagent undergoes a more dramatic chemical transformation carrying out to the formation of a new derivative of thiosemicarbazide – nitrosothioamide Me-S-SATSC-N-NO. The newly synthesized organic reagent is a monodeprotonated acid bound via O,N,N donor set, while the alkylated sulfur atom is uncoordinated. The fourth site is occupied by NO₂-ion coordinated by nitrogen atom (see fig.).

The possible causes, driving the system to the formation of nitrosothioamide, and the impact of the anion on the coordination mode of the organic ligand will be discussed.