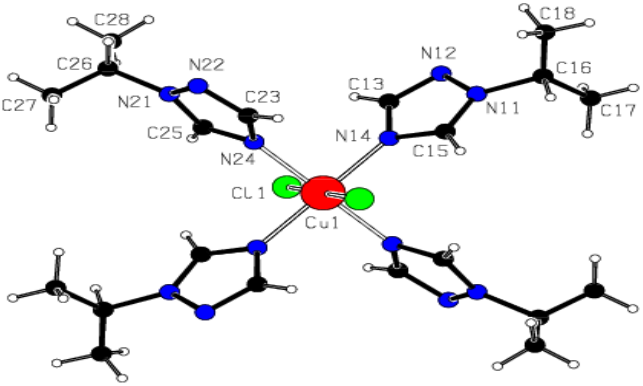

Fig. 2. Complex molecule of **II**, with the atom numbering for the asymmetric unit

References

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Dihydroxybenzoic acids as polydentate ligands in the organoantimony(V) complexes

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The determining factor of the product of the reaction between pentaphenylantimony (PPA) and dihydroxybenzoic acids is the location of functional groups in respect to each other in the benzene ring.

During the interaction of PPA with 2,5- and 2,6-dihydroxybenzoic acids the hydrogen atom is substituted only in the carboxyl group by the Ph_4Sb fragment with obtaining compounds **I** and **II,** respectively (Fig.). The carboxyl group and *para*-hydroxyl group take part in the interaction between PPA and 2,4-dihydroxybenzoic acid. It leads to formation of the binuclear product **III** (Fig.). 2,3-Dihydroxybenzoic acid interacts with PPA like a diol without involving the carboxyl group with formation of the ionic complex **IV** (Fig.). The five-membered metallocycle is present in the complex's anion.

According to X-ray analysis, the coordination of antimony atoms in **I–IV** varies from tetrahedral to octahedral. The nature of bonding with a ligand and intramolecular interactions depends on the acid's structure.

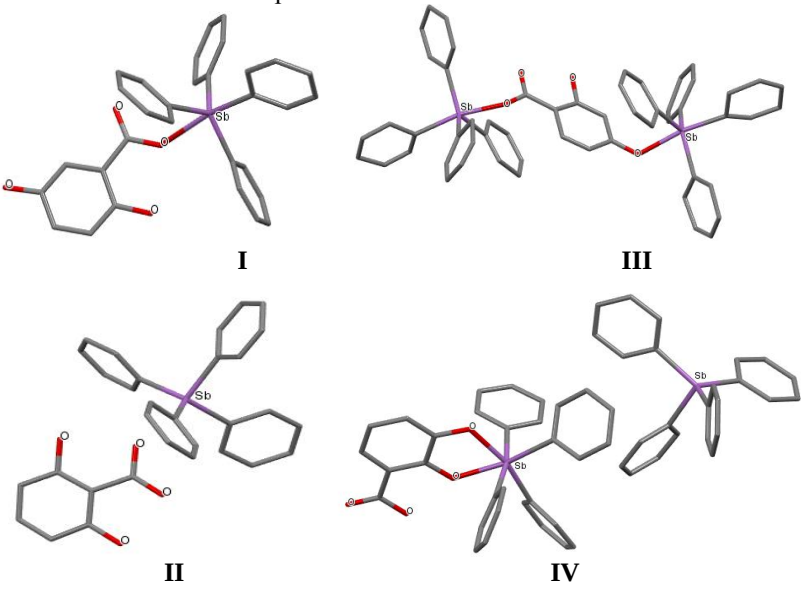

Fig. Molecular structures of compounds **I–IV**

Theoretical study of platinum(II) chloride complexes with 2-alkyl-tetrazol-5-ylacetic acids and process of their hydrolysis

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Platinum(II) chloride complexes with 2-alkyl-tetrazol-5-ylacetic acids are of great importance because of their possible biological activity, which was manifested by similar structures against human cancer cells *in vitro* [1]. The investigation of geometry, electronic structure and ^{1}H NMR-spectra of platinum(II) chloride complexes with 2-alkyl-tetrazol-5-ylacetic acids as well as process of their hydrolysis has been carried out using density functional theory approach.

The geometry of all structures were optimized in gas phase using CAM-B3LYP functional and 6-311+G(d) basis set for all atoms except Pt, for which Def2-TZVPPD basis set were applied. NMR-spectra were calculated in aqueous