

## Synthesis and structure of palladium complex [Ph<sub>4</sub>Sb(DMSO)][PdBr<sub>3</sub>(DMSO)]

© Vladimir V. Sharutin,<sup>\*†</sup> Vladislav S. Senchurin, Olga K. Sharutina, and Aleksey V. Guschin

Faculty of Chemistry. South-Ural State University. Lenin St., 76. Chelyabinsk, 454080. Russia.

Phone: +7 (351) 267-95-70. E-mail: [vvsharutin@rambler.ru](mailto:vvsharutin@rambler.ru)

<sup>\*</sup>Supervising author, <sup>†</sup>Corresponding author

**Keywords:** synthesis, structure, tribromo(dimethylsulfoxide)palladate, (dimethylsulfoxide)tetraphenylantimony.

### Abstract

The reaction of equimolar amounts of bromide tetraphenylantimony with bromide palladium in water followed by recrystallization from dimethylsulfoxide was conducted to synthesize a complex [Ph<sub>4</sub>Sb(DMSO)]<sup>+</sup>[PdBr<sub>3</sub>(DMSO)]<sup>-</sup>. According to the X-ray data, the antimony atoms of cations have trigonal-bipyramidal environment with the oxygen atom of dimethylsulfoxide in axial position (Sb...O 2.640(3) Å). In the square anion dimethylsulfoxide ligand is coordinated with the palladium atom through the sulfur atom (Pd-S 2.257 (1) Å).