

MS21-P01 | STRUCTURAL INVESTIGATIONS ON BRIDGING STIBINIDENE COMPLEXES WITH CU-K β -RADIATION: A COMPARISON

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The bridging pentelidene complexes [Cp*E{W(CO)₅}₂] (Cp* = pentamethylcyclopentadienyl, E = P, As) have been a subject of interest in our group for almost 20 years and thus their reaction behavior towards nucleophiles such as phosphines [1-2] and nitriles [3] has been investigated thoroughly. In contrast, since their discovery in 1978 [4], trigonal-planar stibinidene complexes have not been investigated much [5]. Therefore, the stibinidene complex [ClSb{Cr(CO)₅}₂(thf)] has been used as starting material in the reaction with several nucleophiles. The structural investigations on the products have been carried out by single crystal X-ray diffraction using Mo-K α -, Cu-K α - as well as Cu-K β -radiation. Additionally, we are about to use values from theoretical calculations of these complexes to see if structure factors can be obtained. The results are compared and discussed.

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