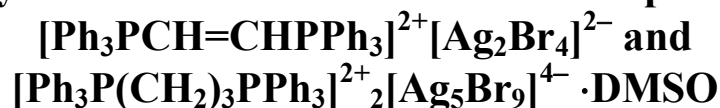


Synthesis and structure of silver complexes



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Abstract

By reacting 1,2-dibromide vinylbis(triphenylphosphonium) dibromide and trimethylenbis (triphenylphosphonium) with silver bromide we synthesized silver complexes $[\text{Ph}_3\text{PCH}=\text{CHPh}_3]^{2+}[\text{Ag}_2\text{Br}_4]^{2-}$ (**I**), $[\text{Ph}_3\text{PCH}_2\text{CH}_2\text{CH}_2\text{PPh}_3]_2^{2+}[\text{Ag}_5\text{Br}_9]^{4-} \cdot \text{DMSO}$ (**II**), whose structure was established by X-ray analysis. Crystals **I** and **II** consists of binuclear cations of tetraorganylphosphonium in which phosphorus atoms are tetrahedrally coordinated (P-C 1.787(3)-1.907(12) Å; CPC 104.1(6)-112.1(9)° (**I**), P-C 1.758(8)-1.815(8) Å; CPC 107.1(4)-112.1(4)° (**II**)). In crystals of the complexes, there are present centrosymmetric anions $[\text{Ag}_2\text{Br}_4]^{2-}$ (**I**) (Ag-Br 2.4855(5)-2.6633(6) Å, BrAgBr 79.30(2)-132.76(2)°) and $[\text{Ag}_5\text{Br}_9]^{4-}$ (**II**) (Ag-Br 2.6603(13)-2.9355(12) Å, BrAgBr 71.63(3)-126.79(5)°).