Unprecedented Coordination Environment in Poly-{µ-bis(methylthienyltellane)(chlorido)(thienyl)platinum(II)}

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The reaction of methylthienyltellane TeMeTh (Th = thienyl, C₄H₃S) and [PtCl₂(NCPh)₂] affords in addition to the main product [PtCl₂(TeMeTh)₂], also small amounts of yellow crystalline [PtCl(Th)(TeMeTh)₂]_n that exhibits unprecedented quasi-octahedral coordination environment around platinum(II). There are four weak Pt-Te bonds of 2.898(1) and 3.419(1) Å forming an approximate square-plane the quasi-octahedral coordination being completed by a Pt-Cl bond of 2.400(2) Å and a Pt-C bond of 1.998(8) Å of a discrete thienyl ring. The TeMeTh acts as a bridging ligand. Tellurium shows a distorted tetrahedral coordination and the weak Pt-Te bonds can be rationalized in terms of sharing one tellurium electron lone-pair by two adjacent platinum centers. The closest contacts between the polymer chains involve thienyl rings.

Key words: Poly{μ-bis(methylthienyltellane)(chlorido)-(thienyl)platinum(II)}, Crystal Structure, Quasi-Octahedral Coordination