

Marks
5

- Alfred Werner, one of the founders of the field of coordination chemistry, prepared a series of platinum complexes that contained ammonia and chloride ions. One of these had the empirical formula $\text{PtCl}_4 \cdot 4\text{NH}_3$ and when reacted with silver nitrate released two chloride ions per formula unit. Write the structural formula of this compound and write the name of this compound.

Draw the possible structures of the metal complex.

What types of isomers can be formed by a compound with this empirical formula?

What is the *d* electron configuration of the Pt in this complex?