

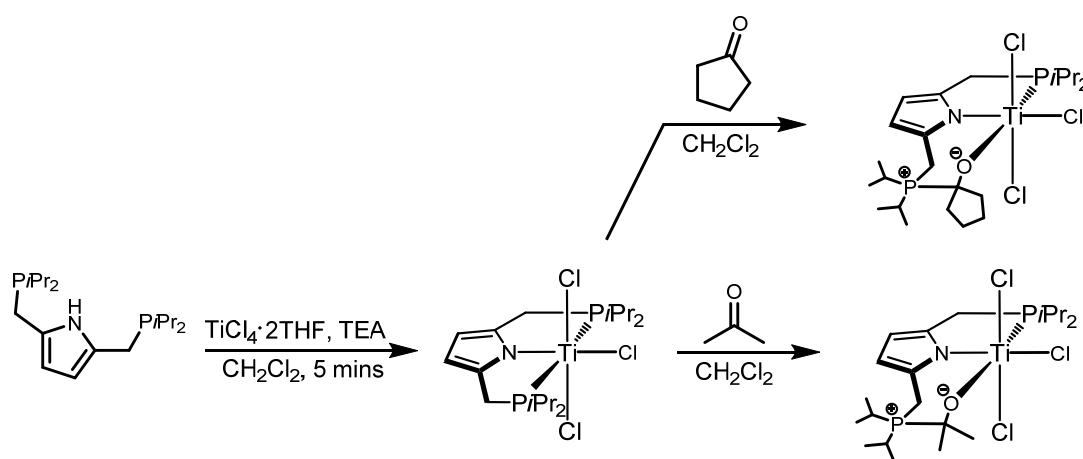
Synthesis of New Anionic-PNP-Ti(IV)-Pincer Complexes

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In the literature only few examples of titanium pincer complexes are described. Mindiola and co-workers reported the synthesis of some interesting titanium-alkylidene pincer complexes which are interesting for metathesis type reactions as well as for their redox properties.



In this study we report the synthesis of the new PNP Ti(IV) pincer complex [Ti(PNP)(Cl)₃] based on a pyrrole scaffold. This complex can be synthesized directly by treatment of TiCl₄·2THF with the deprotonated PNP ligand. The new complex is highly moisture sensitive and very oxophilic. Ketones with α -hydrogen atoms readily insert into the Ti-P bond of [Ti(PNP)(Cl)₃] forming new asymmetric PNO Ti(IV) pincer complexes. With alcohols, aldehydes, esters, nitriles or amines no reactions took place.

[1] Smith, K. T.; Berrit, S.; Gónzales-Moreiras, M.; Ahn, S.; Smith, M. R.; Baik, M.; Mindiola, D. J.; *Science*, **2016**, *351*, 1424-1427.

[2] Kurogi, T.; Miehlisch, M.; Halter, D.; Mindiola, D. J.; *Organometallics*, **2018**, *37*, 165-167