

**Über die Reaktion von Bis(*t*-butylamino)dimethylsilan mit
Titanetetrachlorid. Kristallstrukturen des Imido-Komplexes
[TiCl₂(N-CMe₃)(H₂N-CMe₃)(CH₃CN)]₂ und des
Ketimido-Komplexes [TiCl₃{NC(Me)N(H)CMe₃}(CH₃CN)₂]**

On the Reaction of Bis(*t*-butylamino)dimethylsilane with Titanium Tetrachloride.
Crystal Structures of the Imido Complex [TiCl₂(N-CMe₃)(H₂N-CMe₃)(CH₃CN)]₂
and of the Ketimido Complex [TiCl₃{NC(Me)N(H)CMe₃}(CH₃CN)₂]

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Titanium, Imido Complex, Ketimido Complex, Crystal Structure

The reaction of bis(*t*-butylamino)dimethylsilane with titanium tetrachloride in dichloromethane solution leads to a mixture of compounds from which the imido complex (H₃N-CMe₃)₂[TiCl₃(N-CMe₃)]₂ (**1**) and by extraction of the residue with acetonitrile the imido complex [TiCl₂(N-CMe₃)(H₂N-CMe₃)(CH₃CN)]₂ (**2**) can be isolated. **1** reacts with acetonitrile to give the ketimido complex [TiCl₃{NC(Me)N(H)CMe₃}(CH₃CN)₂] (**3**). According to crystal structure determinations **2** consists of centrosymmetric dimeric molecules containing TiCl₂Ti bridges, the N-CMe₃²⁻ ligands being in equatorial positions with TiN bond lengths of 168.8(4) pm which corresponds to double bonds. In the monomeric complex **3** the chloro ligands are in meridional positions of the distorted octahedrally coordinated titanium atom with a TiN bond length of 175.7(2) pm of the ketimido ligand.

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