

Synthesis and Reactivity of Silicon Ring Compounds

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Low valent silicon compounds^[1] and siliconoid clusters^[2] can be considered as model compounds for depositing elemental silicon from the gas phase^[3], and for processes that could occur on silicon surfaces.^[4]

In this talk the synthesis and comprehensive characterization of the bicyclo[1.1.0]tetrasilatetraamid $[\text{Si}_4\{\text{N}(\text{SiMe}_3)\text{Dipp}\}_4]$ **1** will be presented^[5]. **1** was characterized by NMR spectroscopy in solution, ²⁹Si CP MAS NMR spectroscopy, EPR spectroscopy, measurement of the magnetic susceptibility and quantum chemical methods. First results on the investigation of the reactivity of **1** with group 16 elements, group 16 element compounds and carbenes will be demonstrated.

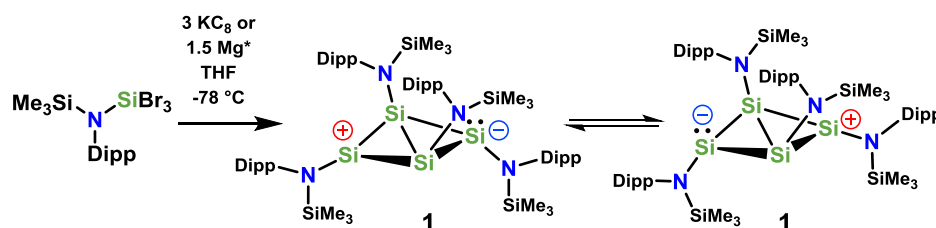


Figure 1. Synthesis of $[\text{Si}_4\{\text{N}(\text{SiMe}_3)\text{Dipp}\}_4]$ **1** (Dipp = 2,6-Diisopropylphenyl).

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