

Students' Annual Seminar

N-Heterocyclic Carbene (NHC) Stabilized Heavier Analogue of Aldimine

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Aldimines are $[RC(H)=NR]$ well known in organic chemistry due to their versatile application and they can easily be synthesized by simple condensation reaction of corresponding aldehyde and amine under the elimination of water. Our group is very much interested in the chemistry of low-valent low-coordinated heavier Group 13-15 elements. In particular, synthesis of heteroleptic multiple bond, especially between group 14 and 15 are getting much attention owing to their unique physical and chemicals properties. However, the synthesis of H-substituted phosphasilene $[Si=P]$ and silaimine $[Si=N]$ are not known so much in literature. Here we will discuss straightforward route for the syntheses of NHC stabilized 2-hydro-phosphasilene, **1** and 1-hydrosilaimine, **2** (Figure 1) as well as their structure, bonding, and reactivity.

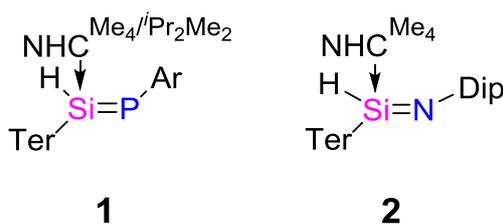


Figure 1: Structure of 2-hydro-phosphasilene, **1** and 1-hydrosilaimine **2** (Ter = 2,6-Tip₂C₆H₃, Tip = 2,4,6-ⁱPr₃C₆H₂, Dip = 2,6-ⁱPr₂C₆H₃, Ar = 1,3,5-Me₃C₆H₂, 2,4,6-ⁱPr₃C₆H₂, NHC^{Pr₂Me₂} = 1,3-diisopropyl-4,5-dimethylimidazol-2-ylidene, NHC^{Me₄} = 1,3,4,5-tetramethylimidazol-2-ylidene).

Tuesday, Apr 25th 2017

4:30 PM (Tea/Coffee at 3:45 PM)

Seminar Hall, TCIS