Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad - 500107

Students' Annual Seminar

Reversible NHC Coordination with Si(IV) Compounds and Exchange of Donor in Donor Acceptor Stabilized Si(II) and Ge(II) Compounds

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In main group organometallics chemistry N-heterocyclic carbenes (NHCs) plays an important role and stabilize several compounds involving low-valent low-coordinated main group elements.[1] It has been observed that coordination of Lewis base with CO_2 and disilene is reversible.[2] Herein we are interested in the synthesis of NHC stabilized pentacoordinated Si(IV) compounds and study their thermodynamic reversibility using ^1H NMR spectroscopy. Depending on the coordination behavior we are also showing the exchange of donor at Si(II) and Ge(II) centre. In this talk I will also discuss about the reactivity of NHC towards low valent alkaline earth metal compound[3] and NHC-stabilized phosphinidene[4] along with the future research plan.

References:

[1] Robinson et al. Inorg. Chem. 2011, 50, 12326–12337.
[2] Scheschkewitz et al. Angew. Chem. Int. Ed. 2012, 51, 6785 –6788.
[3] Jones et al J. Am. Chem. Soc. 2017, 139, 18190−18193.
[4] Roesky et al. Chem. Eur. J. 2017, 23, 12153 – 12157.

Friday, Feb 23rd 2018

04:00 PM (Tea/Coffee at 03:30 PM)

Seminar Hall, TIFR-H