

## **Internal Seminar**

# **Synthetic strategy for the isolation of bent acyclic allenes**

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N-heterocyclic olefin (NHO) represents a special class of organic ligands with strong donor properties than NHC's (N-heterocyclic carbene). The NHO's were first reported by Kuhn and co-workers in 1990s, who synthesized stable adducts between diamino olefin  $[(\text{MeCNMe})_2\text{C}=\text{CH}_2]$  and  $\text{BH}_3$ ,  $\text{M}(\text{CO})_5$  ( $\text{M} = \text{Mo}, \text{W}$ ).<sup>1</sup> The exo cyclic carbon atoms of NHO bear an extensive amount of electron density, which supports its highly nucleophilic property. NHO also possess strong Lewis basic property. Despite the unusual properties of NHO it has not been widely studied. Herein, we have reported the reactivity of NHO for the formation of bent acyclic allene (carbodicarbene)<sup>2</sup> from NHO-CAAC dimer as the starting precursor. Apart from this we utilized this NHO for C-F bond activation in fluoroarenes and hetero fluoroarenes.

### **Reference:**

1. Kuhn, N.; Bohnen, H.; Kreuzberg, J.; Bläser, D.; Boese, R. J. Chem. Soc., Chem. Commun. 1993, 1136–1137.
2. 2. Dyker, A. C.; Lavallo, V.; Donnadieu, B.; Bertrand, G. Angew. Chem. Int. Ed. 2008, 47, 3206-3209.

***Thursday, Apr 18<sup>th</sup> 2019***

***11:30 AM (Tea/Coffee at 11:00 AM)***

***Class Room-4, TIFR-H***