

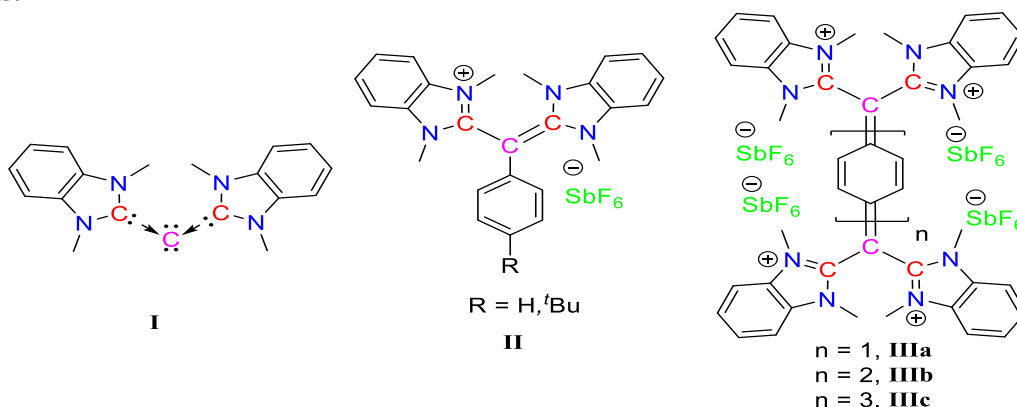
Internal Seminar

Arylation at Carbonic Carbon of Carbodicarbene: Access to the Air-Stable Carbon Centre-Based Tetracationic Diradicaloids

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Unlike carbenes which are divalent, carbodicarbenes (I) are zerovalent carbon compounds that possess two non-bonding electron pairs at the central carbon atom.¹ Here we are reporting the cross-coupling reactions involving carbon(0) with aryl halides as a coupling partner to obtain the coupled products (II). Subsequently, we were interested to prepare carbodicarbene-based diradicaloids (III). In this talk the detailed synthetic strategy and characterization of the tetracationic diradicaloids (III) will be presented.



Scheme 1. Chemical Structures of **I**, **II** and **III**.

References:

- (a) Ramirez, F.; Desai, N. B.; Hansen, B.; McKelvie, N. Hexaphenyl Carbodicarbene, $(\text{C}_6\text{H}_5)_3\text{PCP}(\text{C}_6\text{H}_5)_3$. *J. Am. Chem. Soc.* **1961**, 83, 3539–3540.
 (b) Dyker, C. A.; Lavallo, V.; Donnadiou, B.; Bertrand, G. Synthesis of an Extremely Bent Acyclic Allene (A “Carbodicarbene”): A Strong Donor Ligand. *Angew. Chem.* **2008**, 120, 3250–3253; *Angew. Chem. Int. Ed.* **2008**, 47, 3206–3209.

Friday, Jan 27th 2023

9:30 AM

Seminar Hall, TIFR - H