



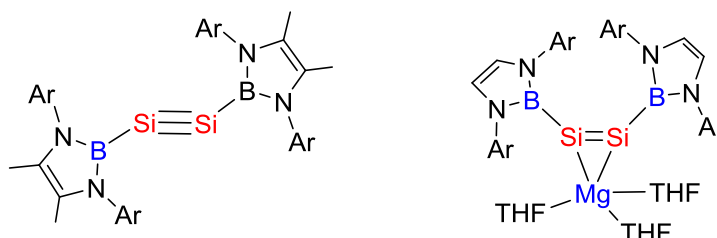
# Synthesis and Reactivity of Boryl-Substituted Disilyne and Related Species

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There is great interest in the synthesis and characterization of silicon multiple bonding species because of their interesting and unique structure and reactivity. While most of the substituents employed for their preparation are largely based on alkyl, aryl and silyl groups, the boryl substituted silicon species are relatively rare. It has been demonstrated that the nature of substituents on the silicon atoms have great effects on the bonding. In order to investigate the effects of boryl substituents on the structures of silicon multiple bonding species, several boryl-substituted silicon halides were synthesized and their reduction chemistry has been investigated.

The synthesis of boryl-substituted halosilanes was based on the reaction of N-heterocyclic silylene with boron halides.<sup>[1]</sup> These halides could be reduced with alkali metals to given low valent silicon species. By the reduction of the boryl-substituted silicon halides, disilynes and related anionic species could be isolated in good yield (Scheme 1).<sup>[2]</sup> In this presentation, the reaction of these highly reactive species with various reagents, in particular with small molecules, will be discussed.



Scheme 1. Boryl-Substituted Disilyne and Related Anion

## References

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