

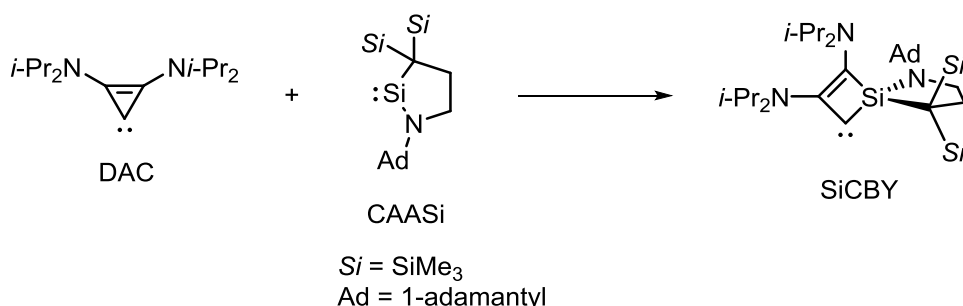


An Isolable 3-Silacyclobutenylidene

Taichi Koike and Takeaki Iwamoto,^[a]

^[a] Department of Chemistry, Graduate School of Science, Tohoku University, Sendai 980-8578, Japan

Stable carbenes such as N-heterocyclic carbenes (NHCs) and cyclic (alkyl)(amino)carbenes (CAACs) have been widely used as efficient organic Lewis bases and ligands for transition metal catalysts and low-coordinate main group element compounds. Stable cycloalkenylidenes, which are cyclic carbenes with two carbonaceous substituents, have remained elusive except for diaminocyclopropenylidenes (DAC) which are stabilized due to the partial 2π aromaticity of the three-membered ring.^[1] Although the generation of a homolog of cyclopropenylidene, a cyclobutenylidene (CBY) as a short-lived species have been reported,^[2] stable CBYs have not been reported. Recently we have successfully synthesized an isolable CBY, 3-silacyclobutenylidene (SiCBY) **1** via a formal skeletal editing of a DAC using a cyclic (alkyl)(amino)silylene (CAASi) which have been extensively studied in our group.^[3] In this presentation, we would like to talk about the synthesis, structural characteristics, and some reactivity of SiCBY **1**.^[4]



References

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