

# 1,1- and 1,2-Allylboration of Alkyn-1-ylsilanes Bearing Si-H Functions. Electron-Deficient Si-H-B Bridges, and Intramolecular Hydrosilylation

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The reactions of *n*-hexyn-1-ylsilanes or arylethyn-1-ylsilanes, bearing methyl groups and one (**2**), two (**3**) or three hydride functions (**4**) at the silicon atom, with triallylborane **1** lead primarily to products of 1,1- or 1,2-allylboration. In the alkenes (**5**, **9**, **13**) formed by stereoselective 1,1-allylboration, with the silyl and the diallylboryl groups in *cis*-positions at the C=C bond an electron-deficient Si-H-B bridge is present. The activation of the Si-H bond in these alkenes induces intramolecular hydrosilylation under very mild reaction conditions to give 1,4-silabora-cyclohept-2-enes (**7** and **11**). The products of 1,2-allylboration (**6**, **10**, **14**) are further transformed into 1-boracyclohex-2-enes (**8**, **12**, **15**) and 7-borabicyclo[3.3.1]non-2-enes (**16**, **17**) by intramolecular 1,2-allylboration reactions. The proposed structures are based on consistent sets of  $^1\text{H}$ ,  $^{11}\text{B}$ ,  $^{13}\text{C}$  and  $^{29}\text{Si}$  NMR data.

*Key words:* Silanes, Alkynes, Triallylborane, Organoboration, Heterocycles, NMR