Radical Chemistry of Gem-Diboronates

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Organoboranes, commercially available or easily prepared via hydroboration of olefins, represent a very attractive source of alkyl radicals. Dihydroboration of terminal alkynes by borane was discovered by Brown. We report here, that gem-dicatecholboranes, obtained by hydroboration of terminal alkynes, are suitable precursors for the generation of radicals. Depending on the nature of the trap, mono- or bis-reactions are observed.

$$R = \begin{array}{c} CatB \\ R \\ \hline \end{array}$$

$$R = \begin{array}{c} CatB \\ BCat \\ \hline \end{array}$$

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[1] V. Darmency, P. Renaud, Top. Curr. Chem. 2006, 263, 71-106.

[2] C. Brown, G. Zweifel, J. Am. Chem. Soc. 1961, 83, 3834-3840.