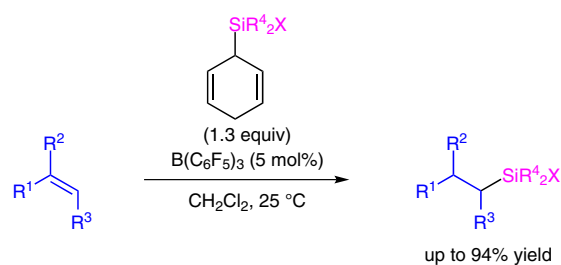


A. SIMONNEAU, M. OESTREICH* (TECHNISCHE UNIVERSITÄT BERLIN, GERMANY)
3-Silylated Cyclohexa-1,4-dienes as Precursors for Gaseous Hydrosilanes: The $B(C_6F_5)_3$ -Catalyzed Transfer Hydrosilylation of Alkenes
Angew. Chem. Int. Ed. **2013**, 52, 11905–11907.

$B(C_6F_5)_3$ -Catalyzed Transfer Hydrosilylation of Alkenes



R^1 = H, Hex, Ph, Hept

R^2 = H, Me, Ph

R^3 = H, Me

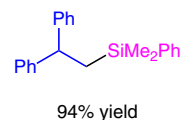
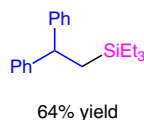
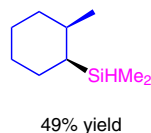
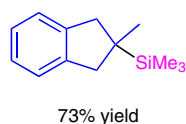
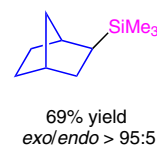
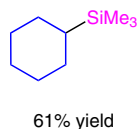
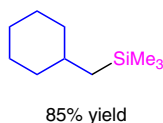
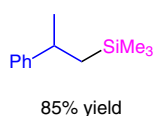
R^1, R^2 = Cy

R^1, R^3 = indenyl derivatives, dihydronaphthalenyl, cyclohexenyl, cycloheptenyl, norbornenyl

R^4 = Me, Et

X = H, Me, Ph (if R^4 = Me)

Selected examples:



Significance: Herein, the easy-to-handle $B(C_6F_5)_3$ -catalyzed ionic transfer hydrosilylation of various alkenes using 3-silylated cyclohexa-1,4-dienes is described. The corresponding hydrosilylated alkenes are obtained in high yields.

Comment: Often, work in the laboratory with Me_3SiH and Me_2SiH_2 is prohibited because of safety considerations. Since the silylated cyclohexadienes are precursors for the analogous gaseous hydrosilanes, which are generated in situ by a $B(C_6F_5)_3$ -catalyzed release of these hydrosilanes, this protocol is a safe alternative for the hydrosilylation of alkenes.