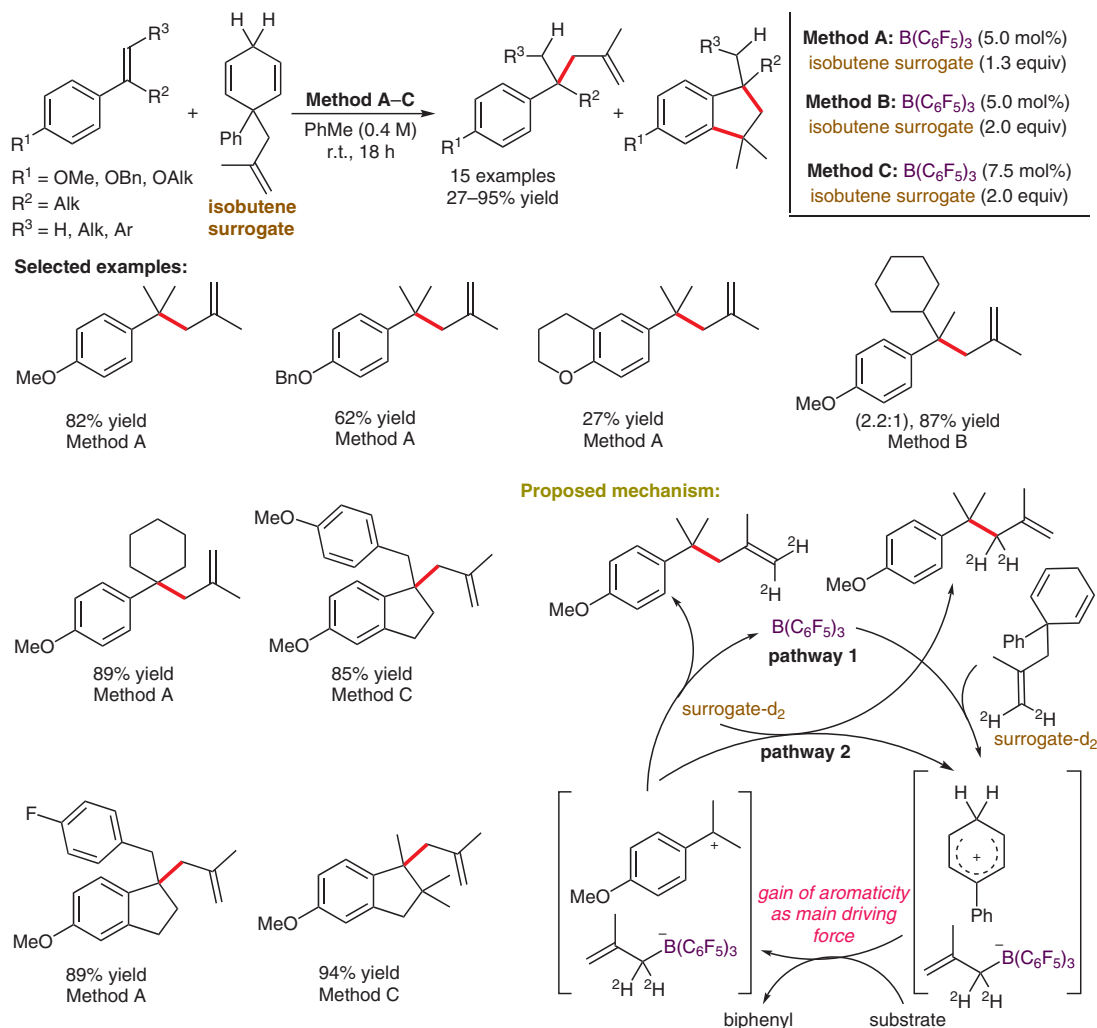


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Lewis Acid-Catalyzed Transfer Hydromethallylation for the Construction of Quaternary Carbon Centers
Angew. Chem. Int. Ed. **2019**, *58*, 15386–15389.

Construction of Quaternary Carbon Centers by Lewis Acid Catalyzed Transfer Hydromethallylation



Significance: Walker and Oestreich report a cyclohexa-1,4-diene-based surrogate of isobutene gas for hydromethallylation of electron-rich styrene derivatives to provide quaternary carbon centers by using a highly electron-deficient Lewis acid as a catalyst. Even though boron in a substrate or catalyst is not usually considered an organocatalyst, this transformation is of potential use.

Comment: Whereas there is significant current interest in metal-mediated $\text{C}(\text{sp}^2)\text{--}\text{C}(\text{sp}^3)$ couplings with quaternary carbon center generation, approaches that proceed through the more traditional acid-catalyzed protonation of olefins are currently less explored. The presented method enables the catalytic formation of sterically congested quaternary carbon centers by the formation of carbenium ions that have been formed by protonation of alkenes.