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Catalyst-Free Formal Thioboration to Synthesize Borylated Benzothiophenes and Dihydrothiophenes

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Ring-Forming Thioboration of C–C π -Bonds

Category

Metal-Mediated
Synthesis

Key words

thioboration

benzothiophenes

C–C bond activation

Synfact
of the month

Proposed reaction mechanism:

Selected examples:

Significance: Blum and co-workers developed a catalyst-free formal thioboration to produce borylated benzothiophenes and dihydrothiophenes in good to high yields.

Comment: The authors propose a reaction mechanism in which a boron-induced activation of the alkyne is followed by electrophilic cyclization to generate the borylated benzothiophene after demethylation of the sulfonium intermediate. Boron acts here as a carbophilic Lewis acid.

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