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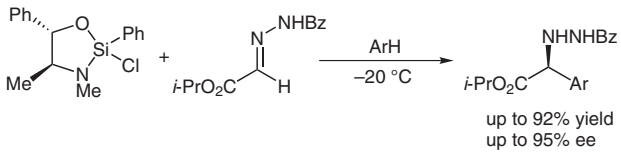
Enantioselective Friedel-Crafts Alkylations with Benzoylhydrazones Promoted by a Simple Strained Silacycle Reagent
J. Am. Chem. Soc. **2005**, *127*, 2858-2859.

Enantioselective Friedel–Crafts Alkylations by Strained Chiral Silacycle



Significance: A chiral silicon Lewis acid has been utilized for the enantioselective Friedel–Crafts alkylation. The strained silacyle is effective at promoting the reaction for electron-rich aromatic systems under mild conditions.

Comment: This is a nice use of a chiral silicon Lewis acid for the important synthesis of heteroarylglycines. This paper provides another example of the proposed 'strain-release Lewis acidity' of silicon to promote reactions. The method uses a strain-induced effect of the five-member silacycle to give a significant increase in the acidity of the silicon center. This is proposed as the origin of the observed high reactivity and selectivity for the reaction. The method is not a truly catalytic reaction; however, the chiral amino alcohol is completely recoverable and reusable.

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Synfacts 2005, 0, 0048-0048
DOI: 10.1055/s-2005-869914; **Reg-No.:** H00605SF