K. LEE, D. L. SILVERIO, S. TORKER, D. W. ROBBINS, F. HAEFFNER, F. W. VAN DER MEI, A. H. HOVEYDA* (BOSTON COLLEGE, CHESTNUT HILL, USA)

Catalytic Enantioselective Addition of Organoboron Reagents to Fluoroketones Controlled by Electrostatic Interactions

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Enantioselective Addition of Organoboron Reagents to Fluoroketones

Category

Metal-Mediated
Synthesis

Key words

organoboron
reagents

fluoroketones

enantioselectivity

Synfact
of the month

G = CF₃, C₂F₅, C₃F₅
R¹ = various substituents
R² = H, Me, Cl

Selected examples:

Method 1

Method 2

Significance: Hoveyda and co-workers have developed an efficient catalytic method for the addition of allyl and allenyl organoboron reagents to fluoroketones, leading to trifluoromethyl-substituted tertiary alcohols in up to 98% yield.

Comment: The versatility of the presented method is illustrated in an enantioselective route to the antiparasitic drug fluralaner (Bravecto, Merck).

SYNFACTS Contributors: Paul Knochel, Dorothée Ziegler
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