R. P. SONAWANE, V. JHEENGUT, C. RABALAKOS, R. LAROUCHE-GAUTHIER, H. K. SCOTT, V. K. AGGARWAL* (UNIVERSITY OF BRISTOL, UK)

Enantioselective Construction of Quaternary Stereogenic Centers from Tertiary Boronic Esters: Methodology and Applications

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Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

Key words

borates

chirality

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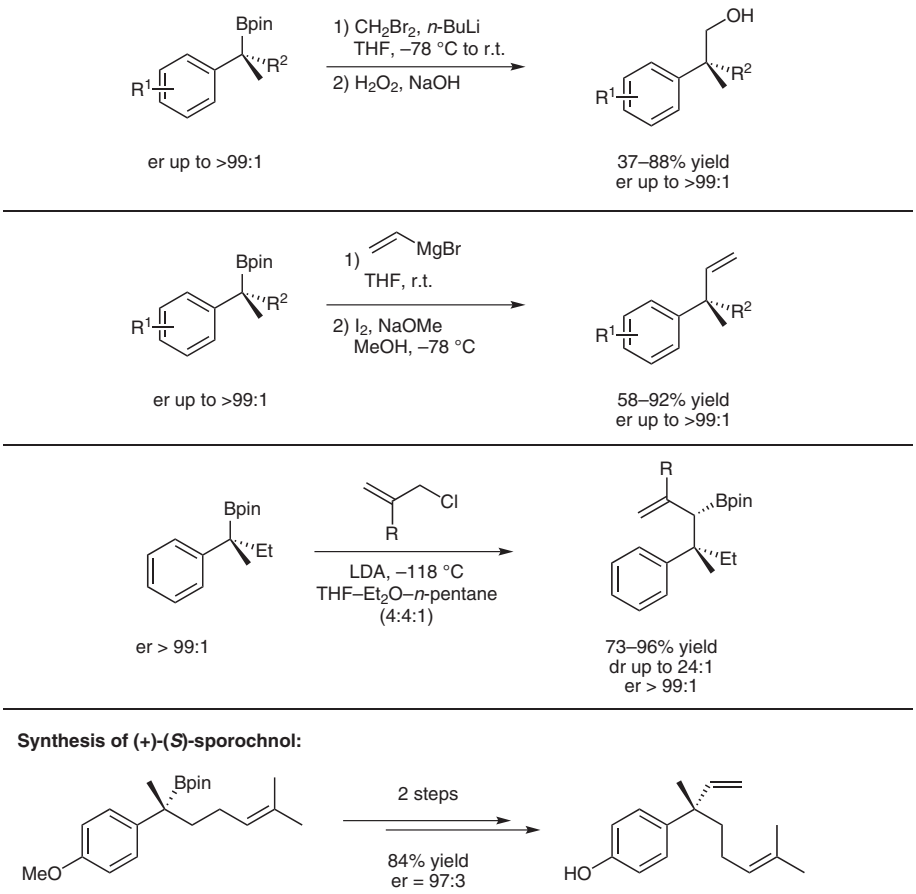
olefination

stereogenic centers

Construction of Quaternary Stereogenic Centers from Tertiary Boronic Esters



Significance: The authors report on a lithiation–borylation reaction with subsequent one-carbon homologation or vinylation. The ready availability of the starting materials, broad range of substrates, bearing versatile functional groups with quaternary stereogenic centers, and very high enantioselectivities are noteworthy.

Comment: This methodology allows the formation of quaternary stereogenic centers with high enantioselectivity. It should be mentioned that products can be obtained exhibiting contiguous quaternary and tertiary stereogenic centers with high diastereoselectivities.

SYNFACTS Contributors: Mark Lautens, Patrick T. Franke
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