B. W. H. TURNBULL, P. A. EVANS* (QUEEN'S UNIVERSITY, KINGSTON, CANADA)
Enantioselective Rhodium-Catalyzed Allylic Substitution with a Nitrile Anion: Construction of Acyclic Quaternary Carbon Stereogenic Centers
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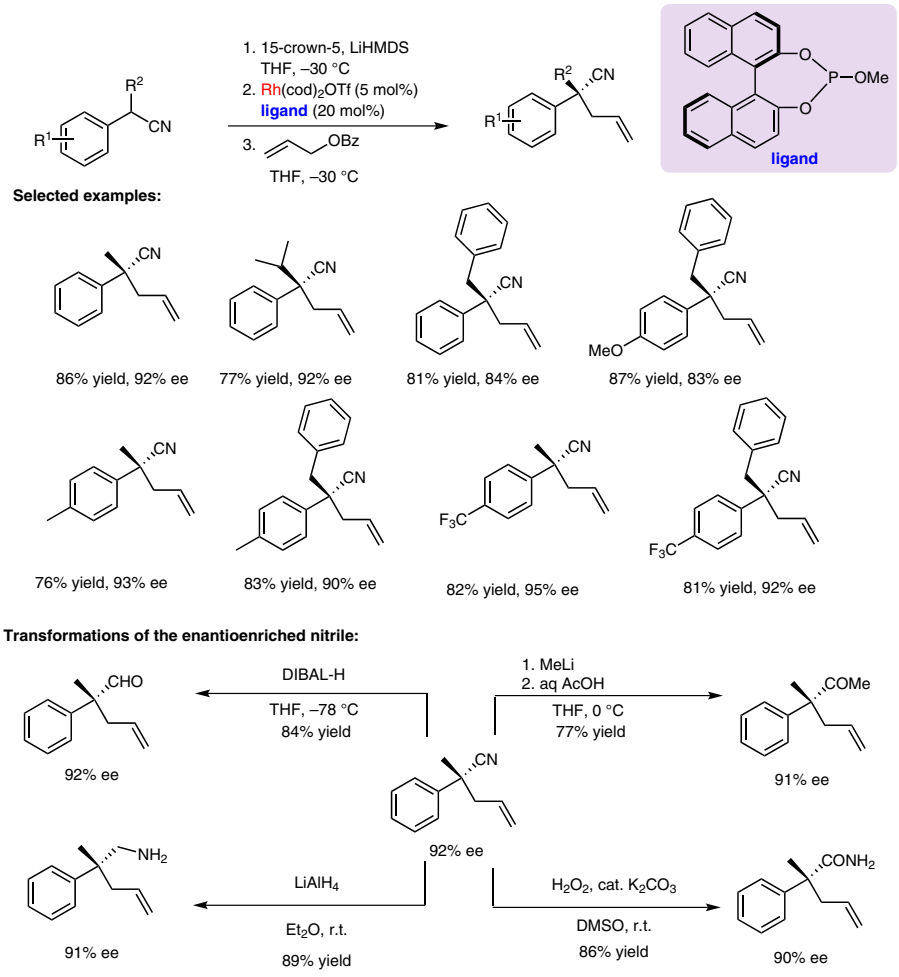
Construction of Quaternary Carbon Stereogenic Centers



Significance: The enantioselective construction of quaternary carbon stereogenic centers in acyclic systems remains one of the great challenges. A highly enantioselective rhodium-catalyzed allylic alkylation of allyl benzoate by α-substituted benzyl nitrile anions provides access to acyclic quaternary carbon stereogenic centers in good yields with excellent enantioselectivities.

Comment: Interestingly, 15-crown-5 was used as additive to provide a significant improvement in the enantioselectivity. The protocol provides a new approach for the construction of acyclic quaternary carbon stereogenic centers. Furthermore, the nitrile products can be easily transformed into a number of important derivatives.

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