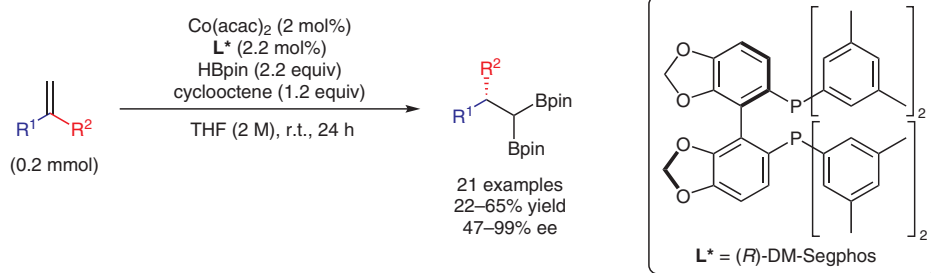


W. J. TEO, S. GE* (NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE)

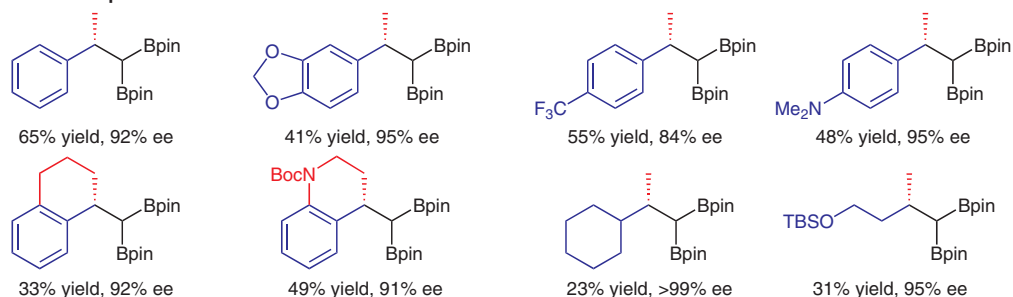
Cobalt-Catalyzed Enantioselective Synthesis of Chiral gem-Bis(boryl)alkanes

Angew. Chem. Int. Ed. 2018, 57, 12935–12939.

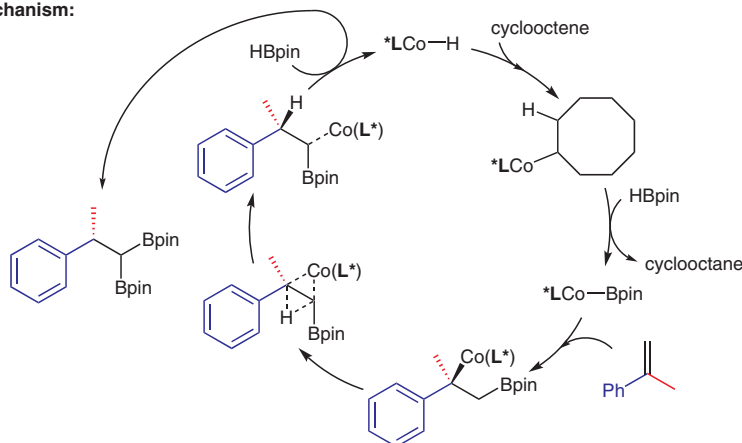
Cobalt Enantioselective Geminal Diborylation of Alkenes



Selected examples:



Proposed mechanism:



Significance: Cobalt catalysis has emerged as an inexpensive and effective alternative to late-transition-metal-catalyzed reactions. Teo and Ge report an enantioselective diborylation of styrenes, which undergoes a tautomerization to produce geminal diboronates.

Comment: The reaction was successful with a variety of substituents on the backbone of methylstyrene. The reaction was also successful with exocyclic styrenes, and did not require the aromatic group to obtain high enantioselectivity.

SYNFACTS Contributors: Mark Lautens, Andrew Whyte
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