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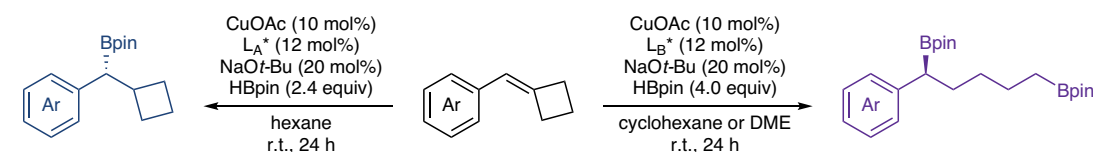
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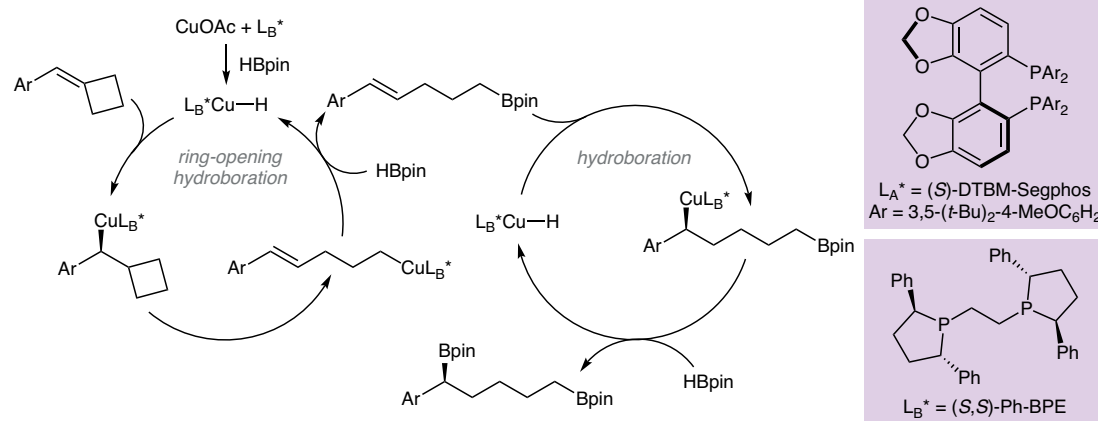
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W. ZHENG, Y. CAO, B. B. TAN, Y. WANG, S. GE*, Y. LU* (NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE AND JOINT SCHOOL OF NATIONAL UNIVERSITY OF SINGAPORE AND TIANJIN UNIVERSITY, FUZHOU, P. R. CHINA)
Ligand-Controlled Enantioselective Copper-Catalyzed Hydroboration and Ring-Opening Dihydroboration of Arylidencyclobutanes
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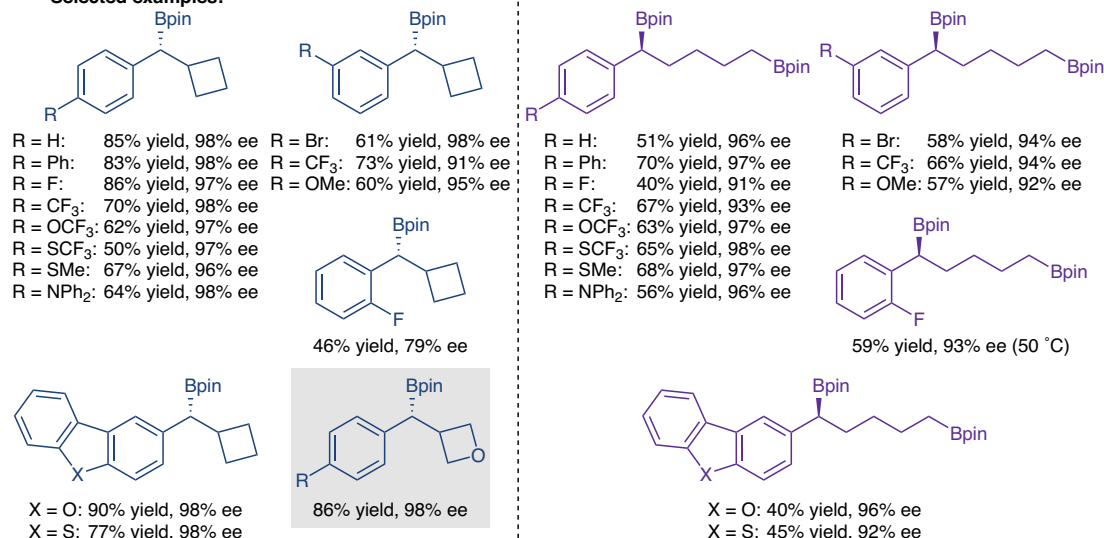
Copper-Catalyzed Asymmetric Hydroboration and Ring-Opening Dihydroboration of Arylidencyclobutanes



Proposed mechanism:



Selected examples:



Significance: A copper-catalyzed protocol for the enantioselective hydroboration of arylidenecyclobutanes is reported. The choice of the ligand determines between a simple hydroboration or a ring-opening dihydroboration.

Comment: Mechanistic experiments revealed that the ring-opening dihydroboration is the result of a two-step process proceeding through an alkenylboronate intermediate.