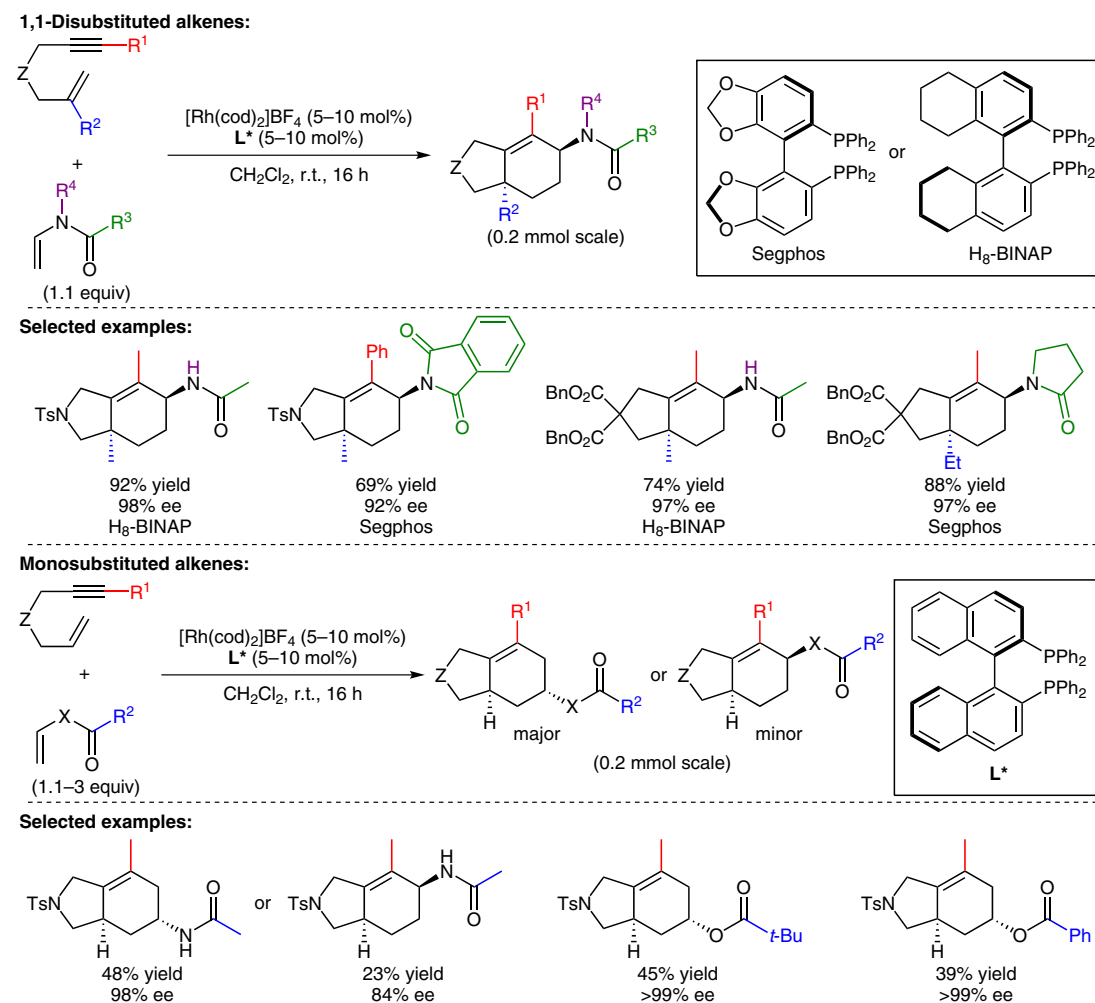


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Asymmetric Synthesis of Protected Cyclohexenylamines and Cyclohexenols by Rhodium-Catalyzed [2+2+2] Cycloaddition

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Cyclohexenylamines and Cyclohexenols by Rhodium-Catalyzed Cycloaddition



Significance: Transition-metal-catalyzed [2+2+2] cycloadditions of diynes or enynes with unsaturated moieties have become an attractive method for the stereoselective construction of carbocycles. Herein, Tanaka and co-workers report a regio-divergent asymmetric rhodium-catalyzed [2+2+2] cycloaddition generating cyclohexenylamines and cyclohexenols.

Comment: The rhodium-catalyzed [2+2+2] cycloaddition of enynes bearing 1,1-disubstituted olefins provided the desired products in moderate to excellent yields and with excellent enantioselectivities. Interestingly, by employing enynes with monosubstituted olefins, a different regioisomer is reported to be formed in moderate yields and with excellent enantioselectivities.

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