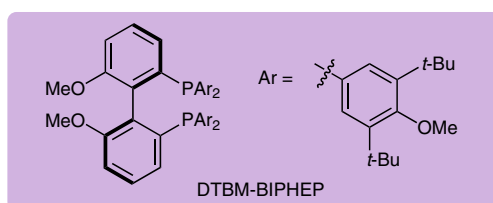
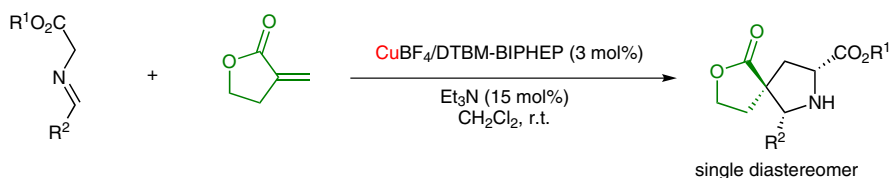
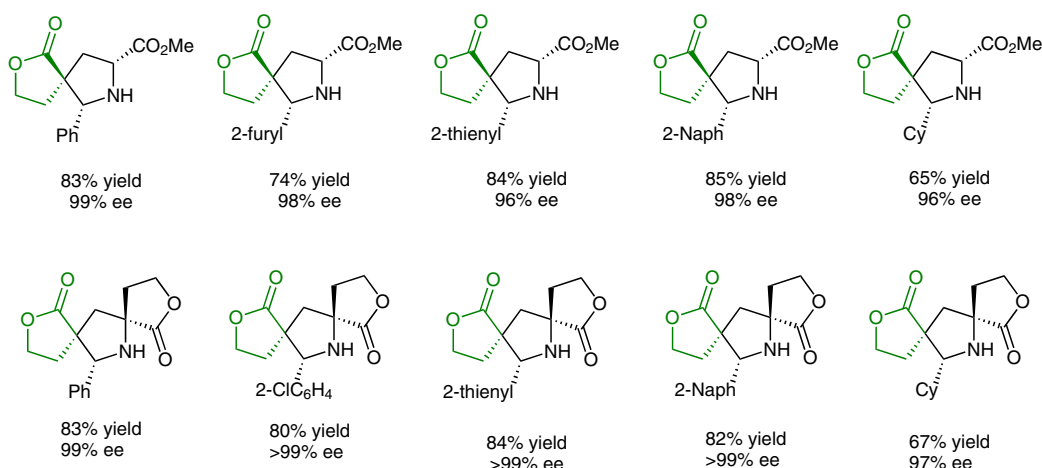


Q.-H. LI, T.-L. LIU, L. WEI, X. ZHOU, H.-Y. TAO, C.-J. WANG* (WUHAN UNIVERSITY AND SHANGHAI INSTITUTE OF ORGANIC CHEMISTRY, P. R. OF CHINA)
exo-Selective Construction of Spiro-[Butyrolactone-Pyrrolidine] via 1,3-Dipolar Cycloaddition of Azomethine Ylides with α -Methylene- γ -butyrolactone Catalyzed by Cu(I)/DTBM-BIPHEP
Chem. Commun. **2013**, 49, 9642–9644.

Synthesis of Spiro-[Butyrolactone-Pyrrolidine]



Selected examples:



Significance: The authors developed an asymmetric synthesis of spiro-[butyrolactone-pyrrolidine] catalyzed by Cu(I)-DTBM-BIPHEP delivering *exo*-selective 1,3-dipolar cycloadducts of azomethine ylides and α -methylene- γ -butyrolactone. In all cases excellent chemical yields and stereo-selectivities were achieved.

Comment: Several natural alkaloids and important biological compounds contain spiro-[butyrolactone-pyrrolidine] as core structure making them very attractive targets in the synthetic community. Thus, this finding for the syntheses of bicyclic and tricyclic skeletons with multiple quaternary stereogenic centers is very attractive.

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