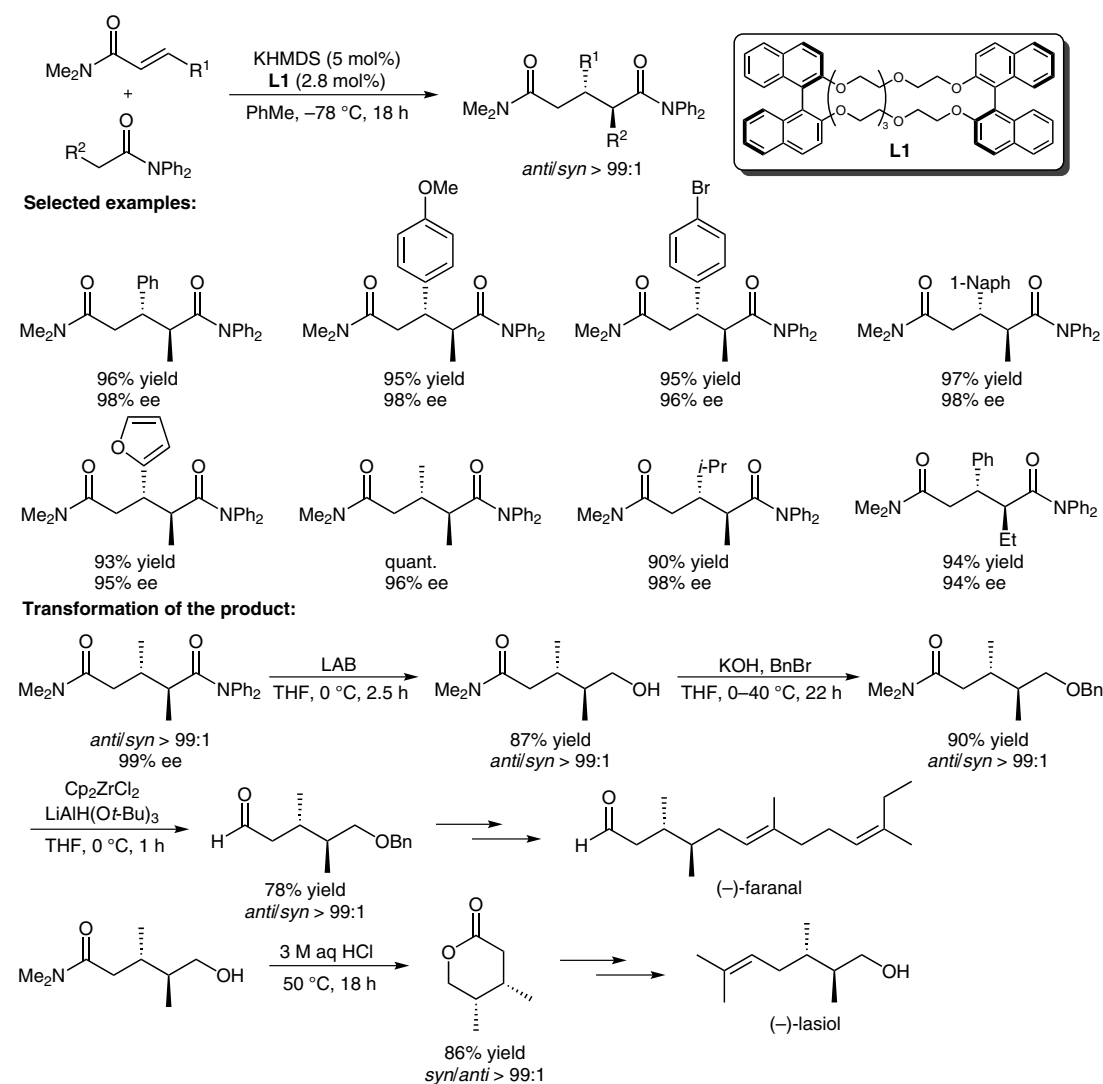


Enantioselective 1,4-Addition of Amides with α,β -Unsaturated Carbonyls



Significance: Kobayashi and co-workers present asymmetric direct 1,4-addition reactions of simple amides with α,β -unsaturated carbonyl compounds catalyzed by a combination of a potassium base and a chiral crown ether. A series of 1,5-dicarbonyl compounds were prepared with excellent stereoselectivities (*anti/syn* > 99:1, up to 98% ee).

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Comment: A macrocyclic chiral crown ether was found to be effective for the chiral modification of the potassium cation, and the desired reaction proceeded in excellent yields with outstanding diastereo- and enantioselectivities. The products can be converted into useful derivatives, including the formal syntheses of natural products.