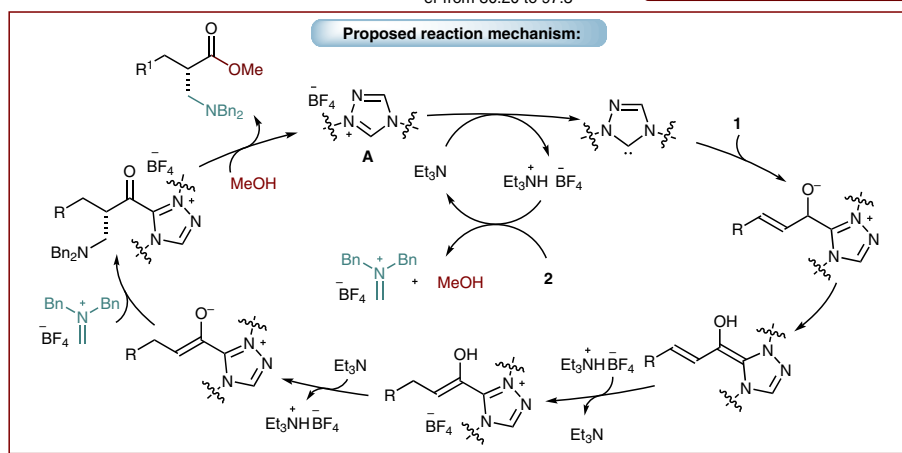
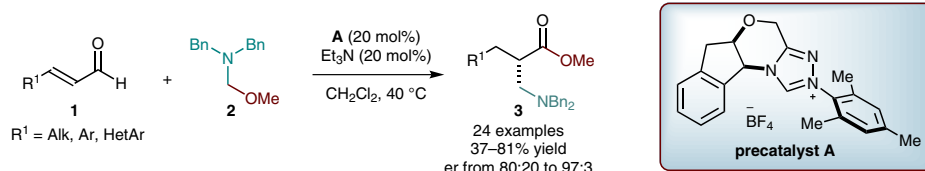
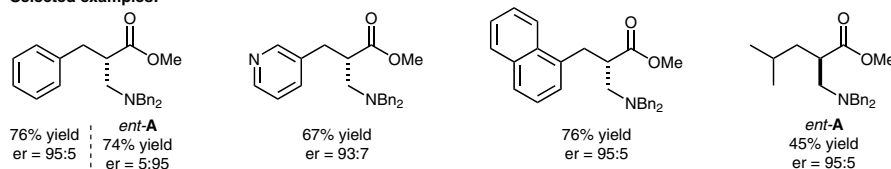


Facile Access to β^2 -Amino Esters by NHC Catalysis



Selected examples:



Significance: A novel, straightforward route for the enantioselective synthesis of β^2 -amino acids is reported by the Chi group. The methodology is promoted by an N-heterocyclic carbene catalyst generated from pre-catalyst **A** and converts enals **1** into the corresponding amino ester products **3** by a postulated cooperative catalytic mechanism. In fact, the mild Brønsted acid formed in situ converts the *N,O*-acetal substrate into a suitable electrophile for the nucleophilic attack of the enolate intermediate. A final esterification reaction concludes the redox neutral process, regenerating the pre-catalyst.

Comment: The synthetic interest in the development of scalable procedures for the synthesis of β -amino acids is due to their wide occurrence in natural products and pharmaceuticals. Here, the authors report a concise access to this class of compounds in the field of asymmetric NHC organocatalysis. The transformation proceeds smoothly under mild conditions delivering the desired products in moderate to good yields and good enantioselectivities. An application to the synthesis of protected β -homophenylalanine on a gram scale is also presented, further highlighting the synthetic robustness of the reported methodology.