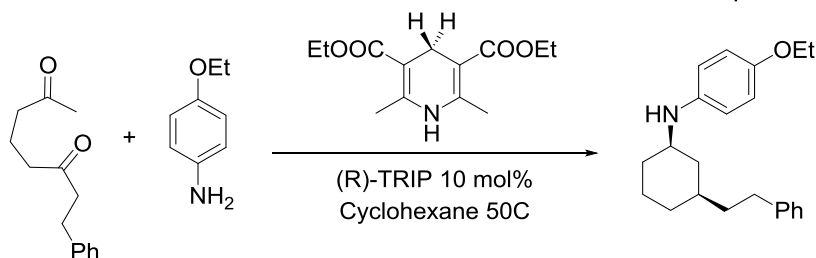
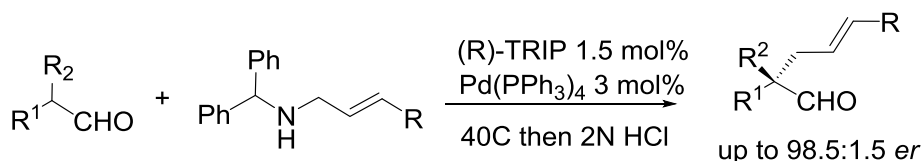
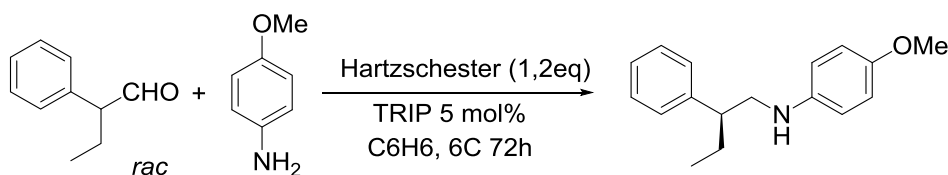
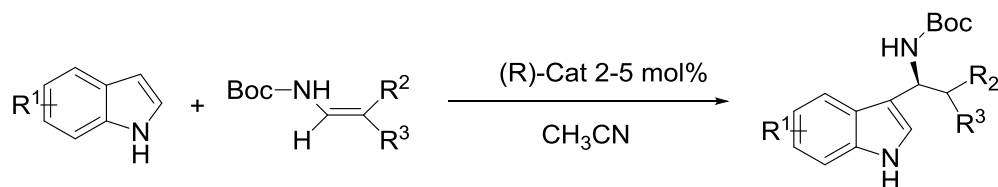


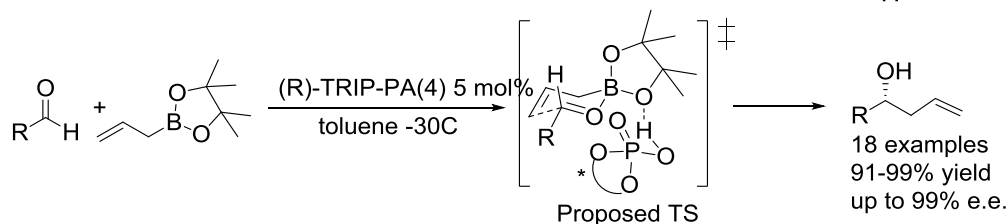
Technical Notes:

- Reductive Amination:** Catalyst for the organocatalytic asymmetric reductive amination of aldehydes. Treating racemic α -branched aldehydes with *p*-anisidine and a Hantzsch ester in the presence of catalyst, TRIP, gave β -branched secondary amines.
- α -Allylation:** Highly enantioselective Pd/chiral acid-catalyzed α -allylation of α -branched aldehydes with an allyl amine as the allylating species, that creates all-carbon quaternary stereogenic centers in high yields and enantioselectivities.
- Hydrogenation:** A achiral amine in combination with a catalytic amount of a chiral Brønsted acid can accomplish an aldol addition-dehydration-conjugate reduction-reductive amination to provide potential intermediates of pharmaceutically active compounds in good yields and excellent enantioselectivities.
- Friedel-Crafts Reaction:** The first enantioselective catalysis of the Friedel-Crafts reaction via activation of electron-rich multiple bonds by a chiral Brønsted acid.
- Allylboration:** A new high-yielding and highly enantioselective chiral Brønsted acid-catalyzed allylboration of aldehydes.
- Aza-Darzens Reaction:** Aza-Darzens reaction of ethyl diazoacetate with aldimines, derived from phenyl glyoxal, furnished *cis*-aziridine carboxylates with excellent enantioselectivities by means of a chiral phosphoric acid.
- Intramolecular Aldol Condensation:** Transformation applicable to a wide variety of substrates to give chiral cyclohexenones in high yields and with excellent enantioselectivity.

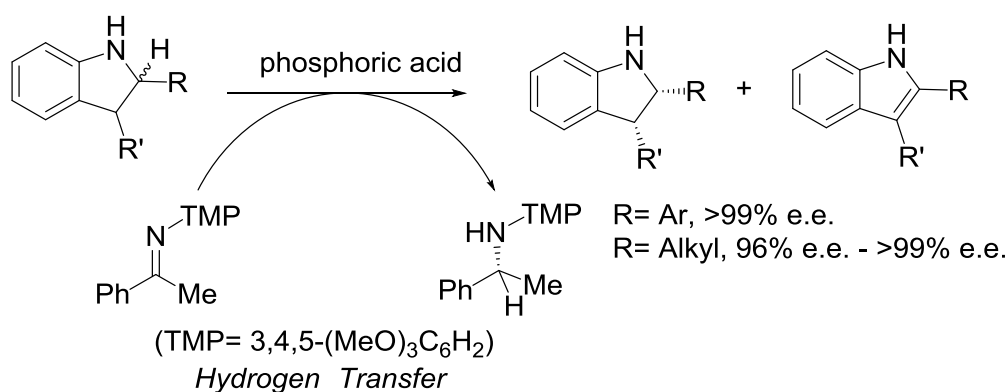




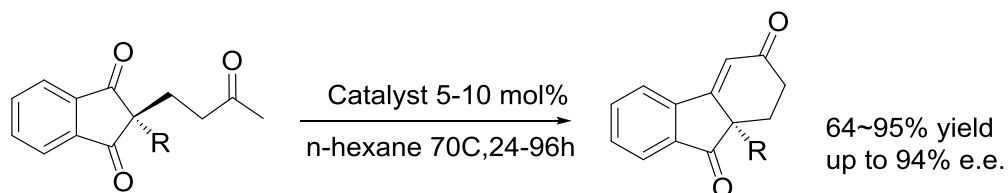
Tech Note (4)
Ref. (4)



Tech Note (5)
Ref. (5)



Tech Note (6)
Ref. (6)



Tech Note (7)
Ref. (7)

References:

1. *J. Am. Chem. Soc.*, **2006**, *128*, 13074-13075.
2. *J. Am. Chem. Soc.*, **2007**, *129*, 11336-11337.
3. *J. Am. Chem. Soc.*, **2007**, *129*, 7498-7499.
4. *J. Am. Chem. Soc.*, **2007**, *129*, 292-293.
5. *J. Am. Chem. Soc.*, **2010**, *132*, 11884-11886.
6. *J. Am. Chem. Soc.*, **2013**, *135*, 11740-11743.
7. *Angew. Chem. Int. Ed.*, **2009**, *48*, 9652-9654.