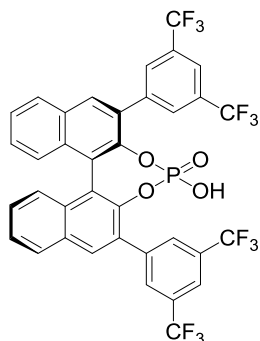
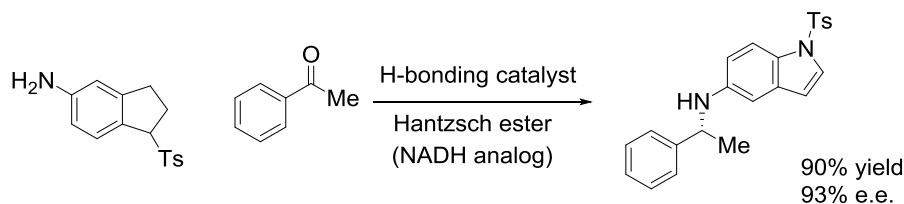


Catalog # 15-1366 (11bR)-2,6-Bis[3,5-bis(trifluoromethyl)phenyl]-4-hydroxy-4-oxide-dinaphtho
[2,1-d:1',2'-f][1,3,2]dioxaphoshepin, 98%, (99% ee)

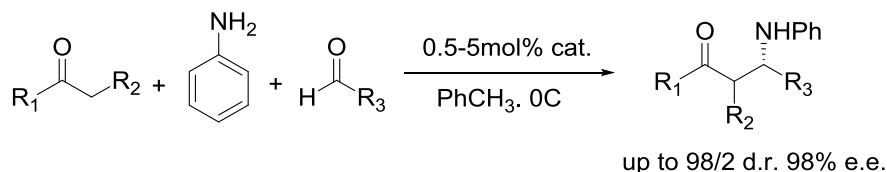


Technical Notes:

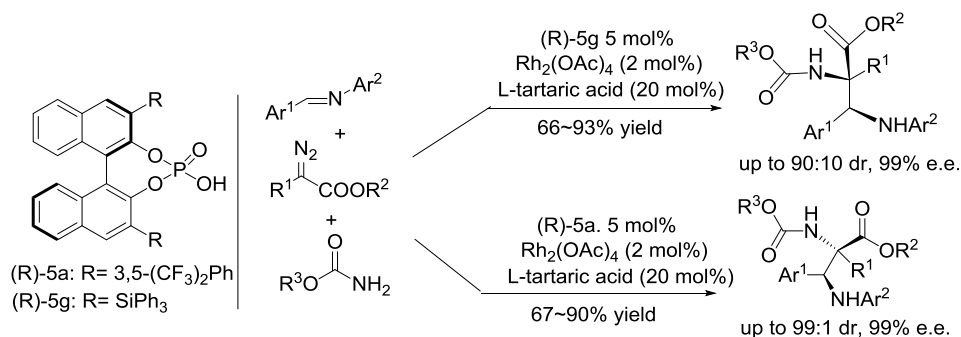
- Reductive Amination Reaction:** The first enantioselective organocatalytic reductive amination reaction has been accomplished.
- Mannich Reaction:** In the presence of a catalytic amt. of the phosphoric acid, anti-selective Mannich reactions of cyclic ketones with a wide scope of aldimines were obtained.
- The diastereoselectively switchable enantioselective trapping of protic carbamate ammonium ylides with imines is reported. The $\text{Rh}_2(\text{OAc})_4$ and chiral Brønsted acid cocatalyzed three-component Mannich-type reaction of a diazo compound, a carbamate, and an imine provides rapid and efficient access to both *syn*- and *anti*- α -substituted α,β -diamino acid derivatives.
- Protonation:** A catalytic asymmetric protonation of ketene dithioacetals is described. Various racemic α -aryl hydrocoumarin derivatives are transformed into enantioenriched dithioacetal-protected hydrocoumarins in the presence of a chiral Brønsted acid catalyst.
- Povarov Cyclization:** Tetrahydroquinolines containing two quaternary stereogenic centers were synthesized with excellent ee and dr via a four-component cyclization reaction catalyzed by a chiral phosphoric acid.
- Pictet-Spengler Reaction:** β -Carbolines could be synthesized with good enantioselectivity by the Pictet-Spengler reaction catalyzed by a chiral binol-derived Bronsted acid.
- In the glycosylation of racemic alcohols with 1 using the chiral phosphoric acid as an activator, one enantiomer of the racemic alcohol selectively reacts with 1 to give the corresponding glycoside with good to excellent α/β -stereo- and diastereoselectivity in high yield.



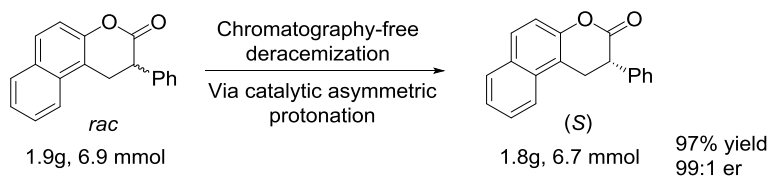
Tech Note (1)
Ref. (1)



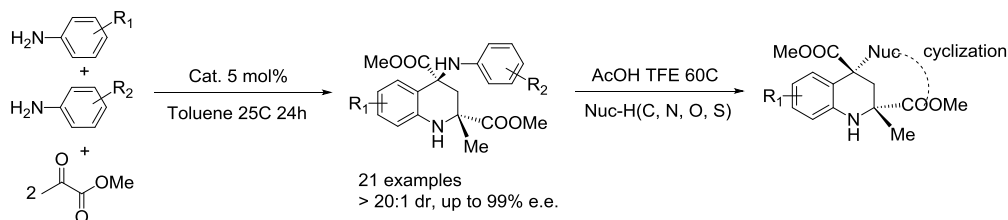
Tech Note (2)
Ref. (2)



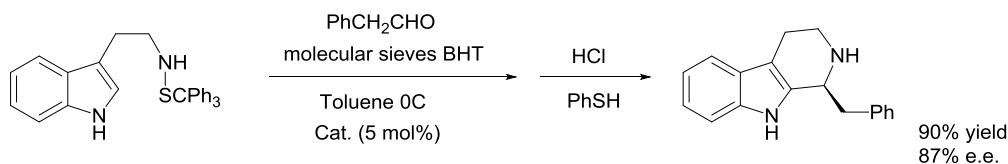
Tech Note (3)
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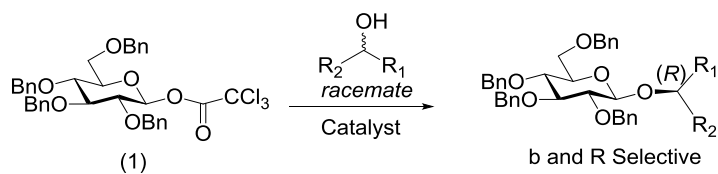
Tech Note (4)
Ref. (4)



Tech Note (5)
Ref. (5)



Tech Note (6)
Ref. (6)



Tech Note (7)
Ref. (7)

References:

1. *J. Am. Chem. Soc.*, **2006**, 128, 84-86.
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