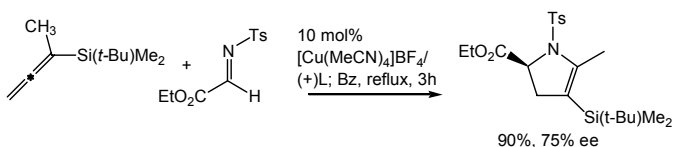


Catalog # S161391 (S)-(-)-5,5'-Bis(di(3,5-xylyl)phosphino)-4,4'-bi-1,3-benzodioxole, min. 98% (S)-DM-

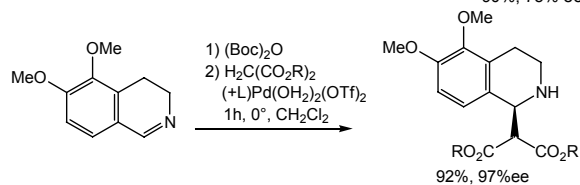
SEGPHOS Note: Manufactured under license of Takasago patent. Takasago SEGPHOS Ligand Kit component.

Technical Notes:

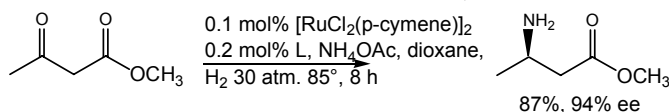
1. Biaryl bisphosphine ligand with narrow dihedral angle. The DM-SEGPHOS ligand, as the ruthenium complex, gives superior enantioselectivity and diastereoselectivity in the asymmetric hydrogenation of α -substituted- β -ketoesters. See [15-0066](#).
2. Copper catalyzed enantioselective [3 + 2] cycloaddition as a route to γ -amino ketones and 3-pyrrolidinones.
3. Palladium catalyzed enantioselective addition of malonates to dihydroisoquinolines.
4. Ruthenium catalyzed enantioselective synthesis of β amino acids by hydrogenation.
5. Ruthenium catalyzed asymmetric hydrogenation of 3-quinuclidinone. See [44-0098](#) for Ru catalyst.
6. Diastereo- and enantioselective ruthenium-catalyzed hydrohydroxyalkylation of 2-silyl-butadienes.



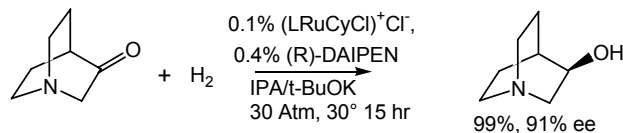
Tech. Note (2)
Ref. (1)



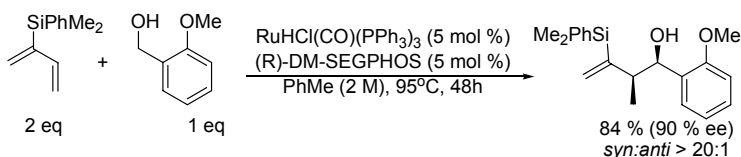
Tech. Note (3)
Ref. (2)



Tech. Note (4)
Ref. (3)



Tech. Note (5)
Ref. (4)



Tech. Note (6)
Ref. (5)

References:

1. *Org. Lett.*, **2005**, 7, 1051.
2. *J. Am. Chem. Soc.*, **2006**, 128, 14010.
3. *WIPO Pat.* WO2005028419.
4. *U.S. Pat. App.* 2006047122.
5. *J. Am. Chem. Soc.*, **2011**, 133, 10582.