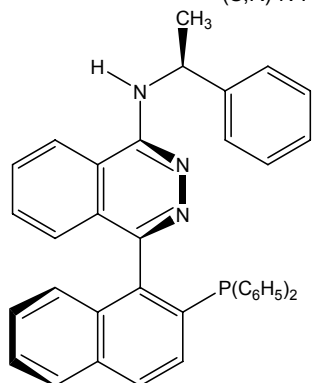


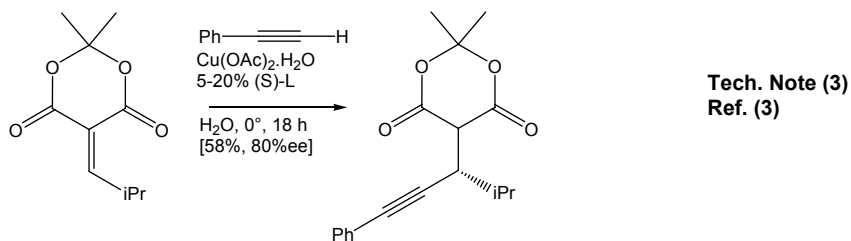
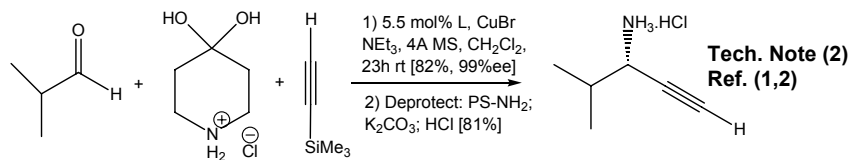
Catalog # 15-1787 (R)-(+)-4-[2-(Diphenylphosphino)-1-naphthalenyl]-N-[(S)-1-phenylethyl]-1-phthalazinamine, min. 97% (S,R)-N-PINAP



Note: Sold under license of Sumitomo Chemical for research purposes only. US application 11/149,643, PCT application PCT/JP2005/010746.

Technical Notes:

1. The PINAP family of P,N ligands is a synthetically more accessible but a similarly performing analog of the QUINAP (15-1777, 15-1778) ligand in enantioselective hydroboration, alkyne addition, and azomethine cycloaddition reactions. (Ref. 1)
2. With copper, enantioselective addition of alkynes to aldehydes to synthesize propargylamines.
3. With copper, catalytic, enantioselective, conjugate alkyne addition in aqueous media.



References:

1. *Angew. Chem. Int. Ed.*, **2004**, 43, 5971.
2. *Org. Lett.*, **2006**, 8, 2437.
3. *J. Am. Chem. Soc.*, **2005**, 127, 9682.