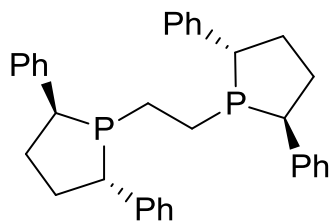
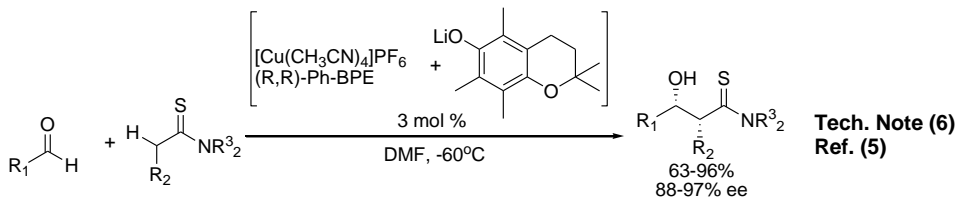
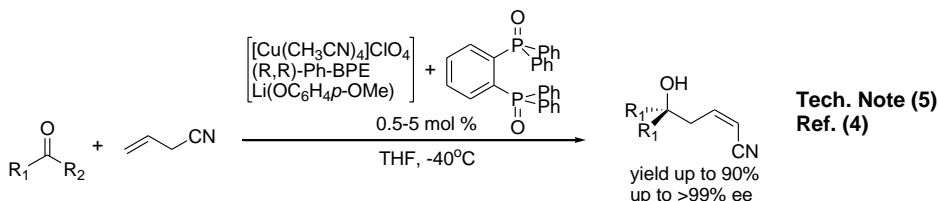
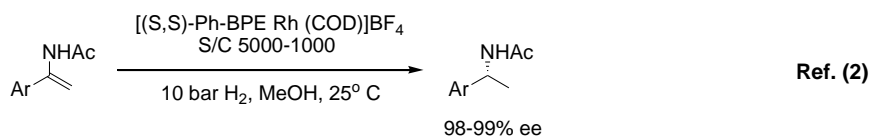
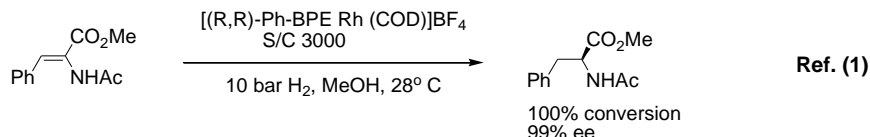
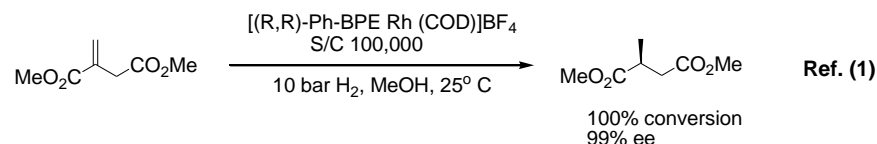


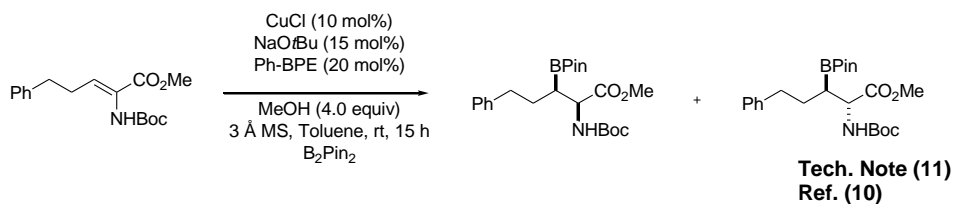
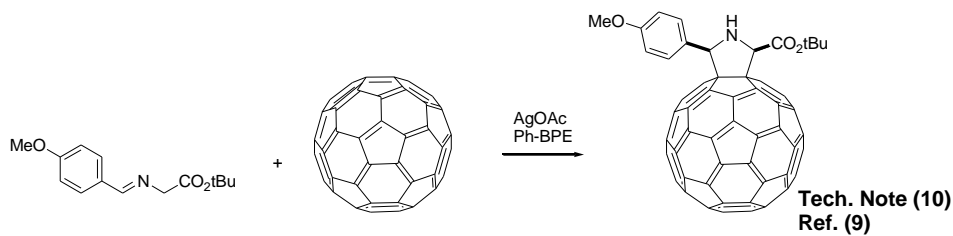
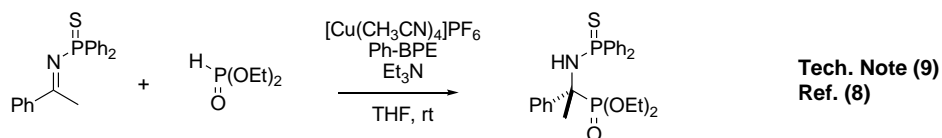
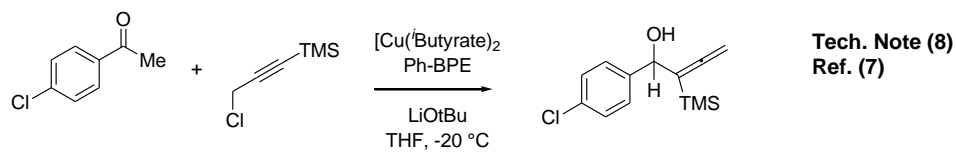
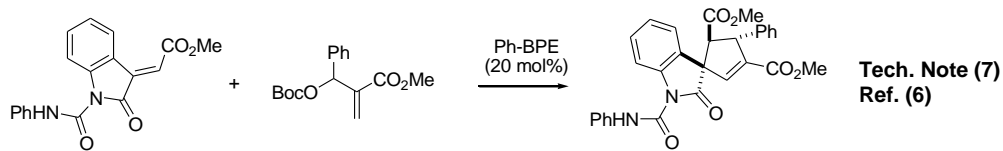
Catalog # 15-0474 (+)-1,2-Bis((2*S*,5*S*)-2,5-diphenylphospholano)ethane, min. 98% (*S,S*)-Ph-BPE



Technical Notes:

1. Phenyl-BPE exhibits enhanced activity and selectivity over existing members of the BPE ligand family in rhodium catalyzed asymmetric hydrogenation.
2. This ligand is highly efficient for the hydrogenation of *N*-acyl aryl-enamides.
3. Molar substrate/catalyst ratios of up to 100,000/1 are achieved with excellent reactivity and enantioselectivity using commercial grade substrates and solvents.
4. Ligand in the rhodium-catalyzed asymmetric hydroformylation of olefins.
5. Ligand for asymmetric addition of allyl cyanide to ketones.
6. Ligand for catalytic enantio- and diastereoselective aldol reaction of thioamides.
7. Organocatalytic 3+2 cycloaddition.
8. Site selective allenylation.
9. Asymmetric Phosphonate addition.
10. Hydroboration of enamines.





References:

1. *Org. Lett.*, **2003**, 5, 1273.
2. *Tetrahedron Lett.*, **2004**, 45, 9277.
3. *Angew. Chem. Int. Ed.*, **2005**, 44, 5834.
4. *J. Am. Chem. Soc.*, **2010**, 132, 5522.
5. *J. Am. Chem. Soc.*, **2011**, 133, 5554.
6. *J. Am. Chem. Soc.*, **2011**, 133, 4672.
7. *Org. Lett.*, **2013**, 15, 1214.
8. *J. Am. Chem. Soc.*, **2013**, 135, 10338.
9. *J. Am. Chem. Soc.*, **2014**, 136, 705.
10. *Org. Lett.*, **2014**, 16, 1426.