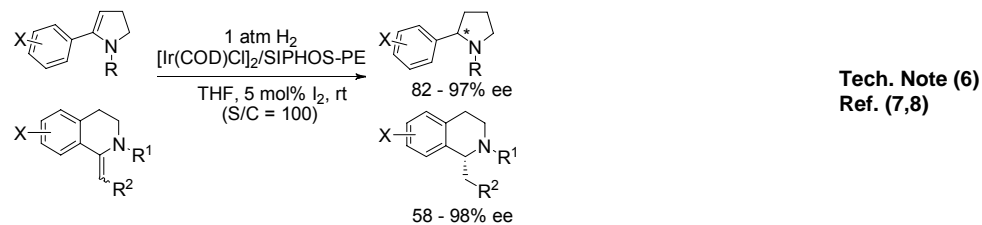
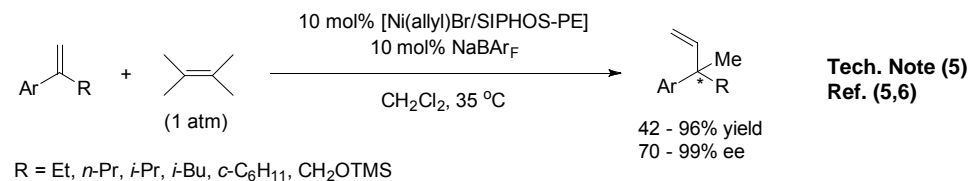
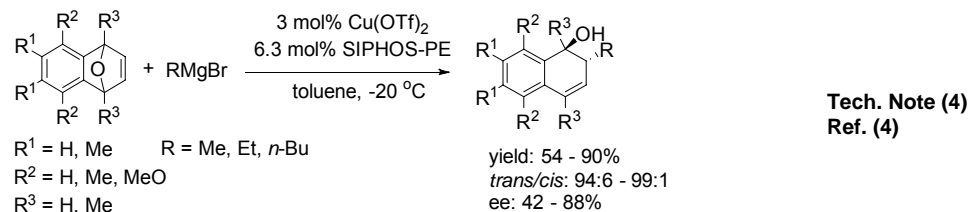
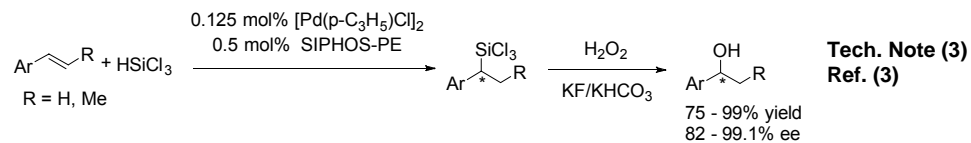
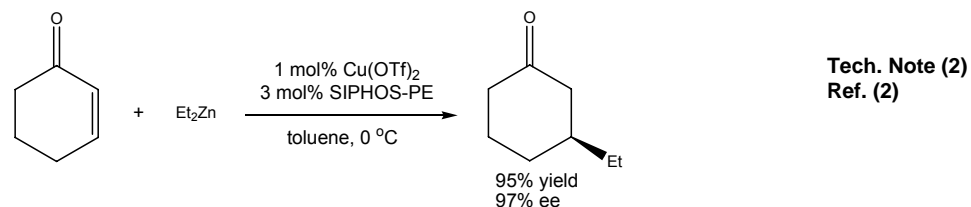
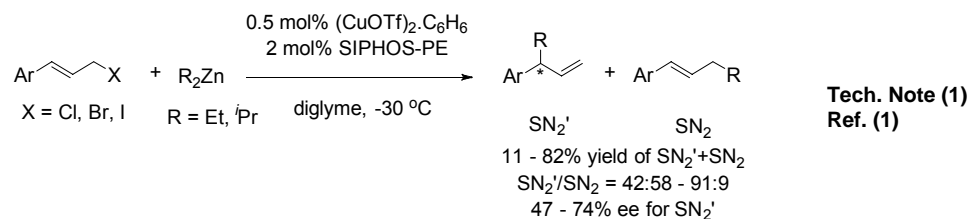


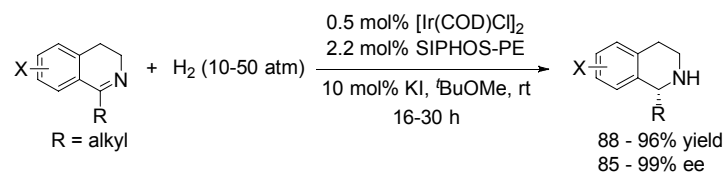
Catalog # 15-5163 (11aS)-(-)-10,11,12,13-Tetrahydroindeno[7,1-de:1',7'-fg][1,3,2]dioxaphosphocin-5-bis[(R)-1-phenylethyl]amine, min. 98% (S)-SIPHOS-PE

Note: Spiro Monophosphite and Monophosphoramidite Ligand Kit component.

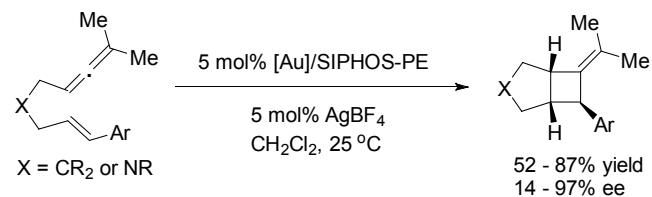
Technical Notes:

1. Chiral ligands for copper-catalyzed asymmetric allylic alkylation with dialkylzincs.
2. Chiral ligands for copper-catalyzed asymmetric conjugate addition of diethylzinc to enones.
3. Chiral ligands for palladium-catalyzed asymmetric hydrosilylation of styrenes
4. Chiral ligands for copper-catalyzed asymmetric ring-opening of oxabicyclic alkenes with Grignard reagents.
5. Chiral ligands for nickel-catalyzed asymmetric hydrovinylation of α -alkyl vinylarenes.
6. Chiral ligands for iridium-catalyzed asymmetric hydrogenation of cyclic enamines.
7. Chiral ligands for iridium-catalyzed asymmetric hydrogenation of cyclic imines.
8. Chiral ligands for gold-catalyzed asymmetric [2 + 2] cycloaddition reaction.
9. Chiral ligands for rhodium-catalyzed asymmetric hydroacylation of salicylaldehydes to homoallylic sulfides.
10. Chiral ligands for palladium-catalyzed asymmetric carboamination reactions.

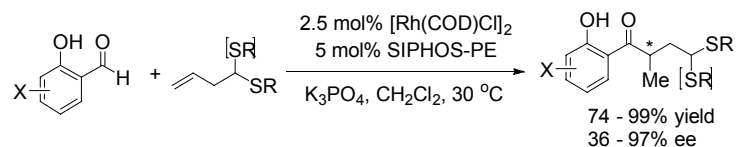




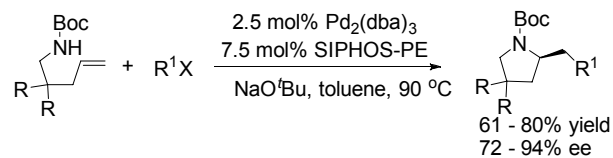
Tech. Note (7)
Ref. (9)



Tech. Note (8)
Ref. (10)



Tech. Note (9)
Ref. (11)



Tech. Note (10)
Ref. (12,13)

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