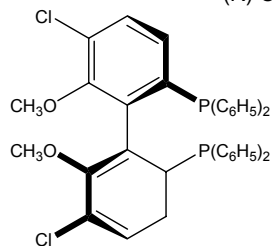


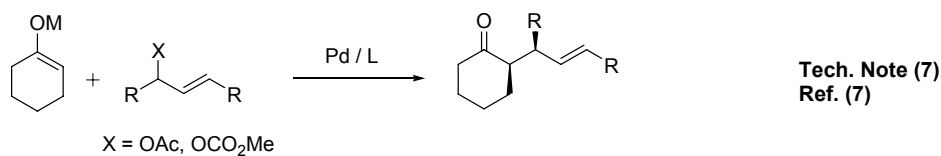
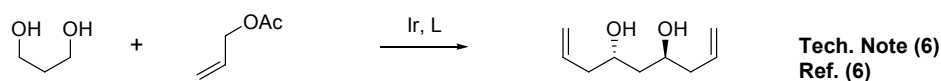
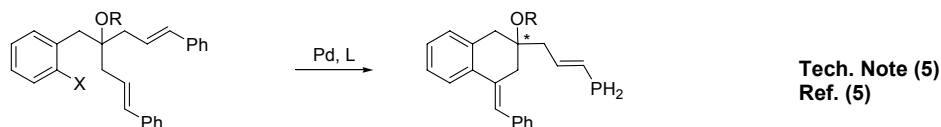
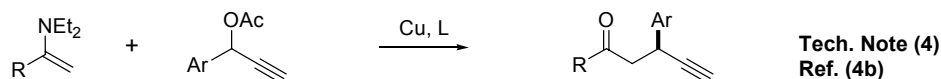
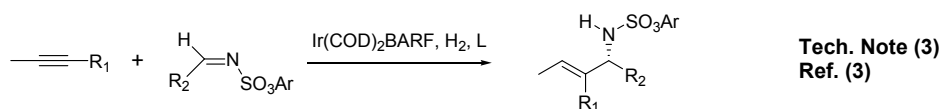
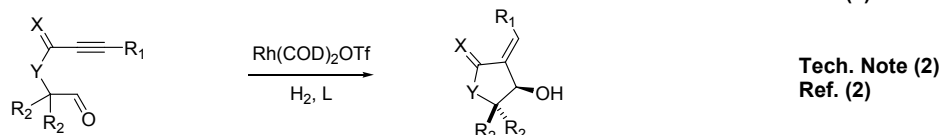
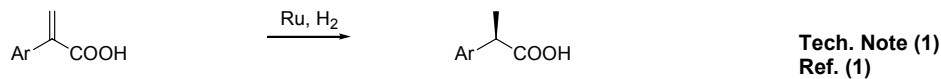
Catalog # 15-1055 (R)-(+)-5,5'-Dichloro-6,6'-dimethoxy-2,2'-bis(diphenylphosphino)-1,1'-biphenyl, min. 95% (R)-Cl-MeO-BIPHEP

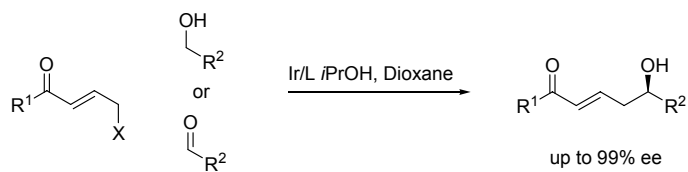


Note: Sold in collaboration with Lanxess for research purposes only. US Patents 5,710,339 and 5,801,261.

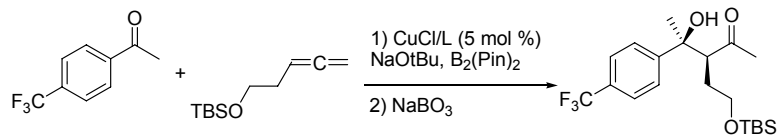
Technical Notes:

1. Ligand used in the ruthenium catalyzed, enantioselective hydrogenation of alkenes, carbonyls, and imines.
2. Ligand used in the rhodium-catalyzed cyclization of acetylenic aldehydes.
3. Ligand used in the iridium-catalyzed hydrogenative coupling of alkynes to aromatic and aliphatic N-arylsulfonyl aldimines.
4. Asymmetric Cu-catalyzed propargylic substitution with amines,^{4a} and enamines.^{4b}
5. Catalytic desymmetrizing intramolecular Heck reaction.
6. Assembly of 1,3-polyols.
7. Pd-catalyzed diastereo/enantioselective allylic alkylations of ketone enolates.
8. Enantioselective vinylogous Reformatsky-type addition.
9. Cu-catalyzed chemoselective preparation of 2-(pinacolato)boron- substituted allylcopper complexes and their In situ site-, diastereo-, and enantioselective additions to ketones.





Tech. Note (8)
Ref. (8)



Tech. Note (9)
Ref. (9)

References:

1. Patents (Bayer) EP 0749973, DE 10027154.
2. *J. Am. Chem. Soc.*, **2006**, 128, 10674.
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9. *Angew. Chem. Int. Ed.*, **2013**, 52, 5046.

92 % yield
> 98:2 d.r., 91:9 e.r.