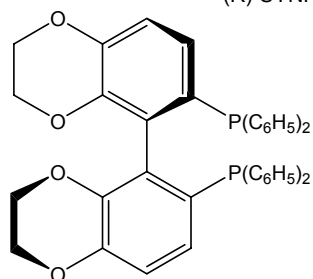


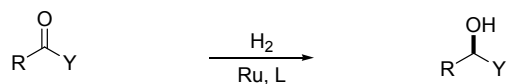
Catalog # 15-0490 R-(+)-6,6'-Bis(diphenylphosphino)-2,2',3,3'-tetrahydro-5,5'-bi-1,4-benzodioxin, min. 94% (R)-SYNPHOS™



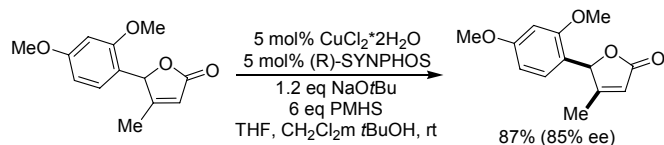
Note: Sold under license from Synkem for research purposes only – not for drug use. Patent application WO 03/029259. US Patent No. 6.878.665 B2. For directions of use and safety see MSDS sheet available at [www.strem.com](http://www.strem.com).

**Technical Notes:**

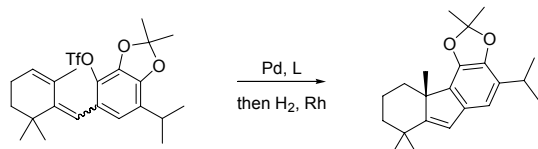
1. A chiral diphosphine ligand used in the highly-enantioselective hydrogenation of ketoesters, hydroxyketones, ketophosphonates and succinates.
2. A ligand used for the dynamic kinetic resolution of  $\alpha,\beta$ -unsaturated lactones via asymmetric copper-catalyzed conjugate reduction.
3. Used in the intramolecular Heck reaction for the synthesis of diterpenoids.
4. Used in asymmetric Pauson-Khand reaction.
5. Used in asymmetric iminonitroso Diels-Alder reaction.
6. Palladium catalyzed asymmetric hydrogenation of N-tosyl ketimines.
7. Ligand for asymmetric hydroalkynylation of norbornadienes



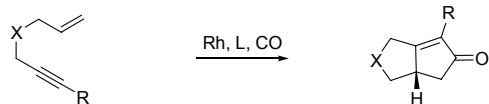
**Tech, Note (1)**  
**Ref. (1)**



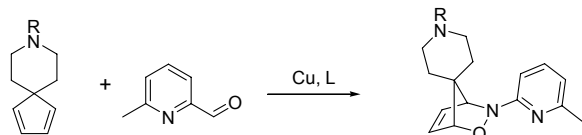
**Tech, Note (2)**  
**Ref. (2)**



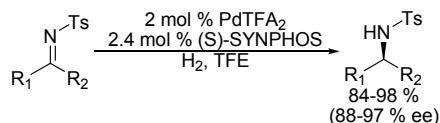
**Tech, Note (3)**  
**Ref. (3)**



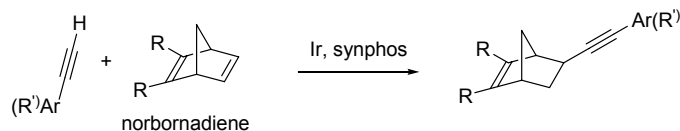
**Tech, Note (4)**  
**Ref. (4)**



**Tech, Note (5)**  
**Ref. (5)**



**Tech, Note (6)**  
**Ref. (6)**



**Tech, Note (7)**  
**Ref. (7)**

References:

1. *Tetrahedron Lett.*, **2003**, 44, 823.
2. *Angew. Chem. Int. Ed.*, **2005**, 44, 6177.
3. *J. Org. Chem.*, **2010**, 75, 190.
4. *Adv. Synth. Catal.*, **2007**, 349, 1999.
5. *Tetrahedron Lett.*, **2009**, 50, 5879.
6. *J. Org. Chem.*, **2007**, 72, 3729.
7. *Angew. Chem. Int. Ed.*, **2012**, 51, 7821.