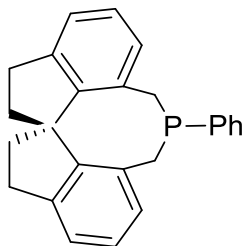
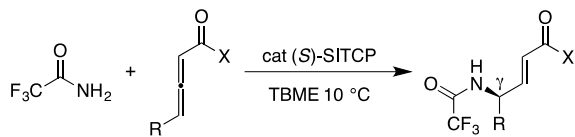
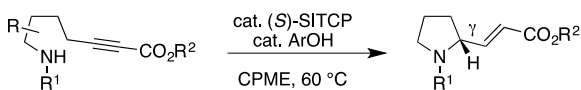


Catalog # 15-5184 (11aR)-(+)-5,6,10,11,12,13-Hexahydro-5-phenyl-4H-diindeno[7,1-cd:1',7'-ef]phosphocin, min. 97% (R)-SITCP

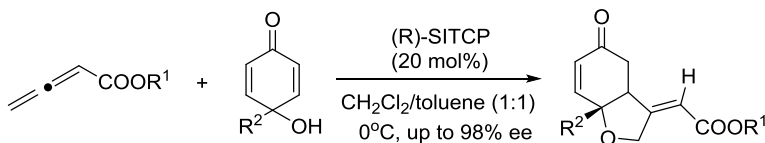


Technical Notes:

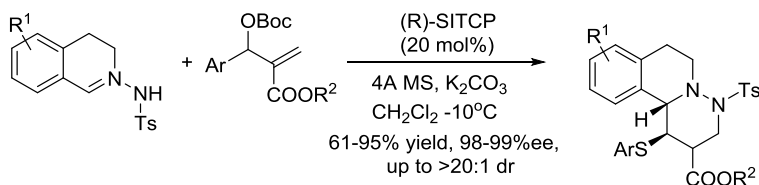
1. Chiral catalyst for the intra and intermolecular  $\gamma$ -addition of nitrogen nucleophiles to  $\gamma$ -substituted alkynoates or allenates.
2. Phosphine-catalyzed  $\beta,\gamma$ -umpolung domino reaction of allenic esters: facile synthesis of tetrahydrobenzofuranones bearing a chiral tetrasubstituted stereogenic carbon center.
3. Phosphine-catalyzed highly enantioselective [3+3]cycloaddition of Morita-Baylis-Hillman carbonates with C,N-cyclic azomethine imines.



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



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



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

References:

1. *Angew. Chem. Int. Ed.*, **2013**, *52*, 2525.
2. *Angew. Chem. Int. Ed.*, **2015**, *54*, 1511.
3. *J. Am. Chem. Soc.*, **2015**, *137*, 4316.