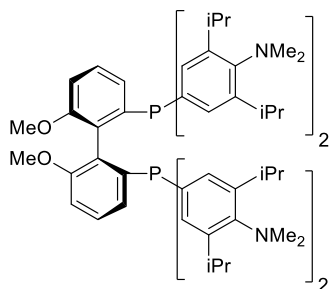
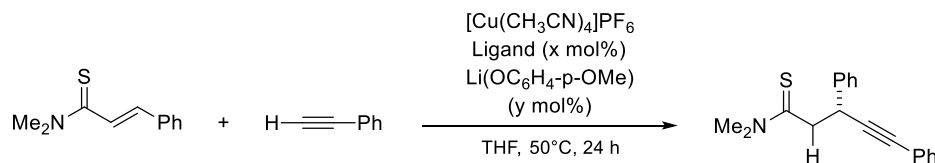


Catalog # 15-0653 (S)-(+)-2,2'-Bis[di(3,5-di-*i*-propyl-4-dimethylaminophenyl)phosphino]-6,6'-dimethoxy-1,1'-biphenyl, min. 97%

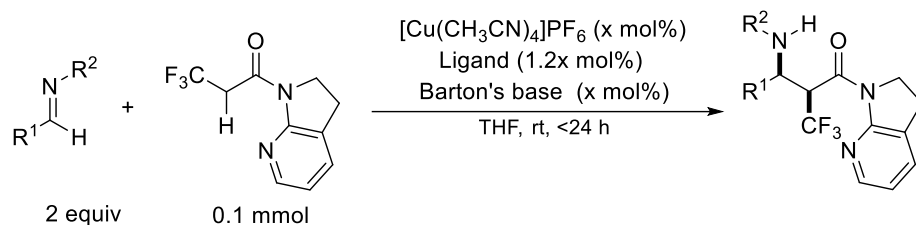


**Technical Notes:**

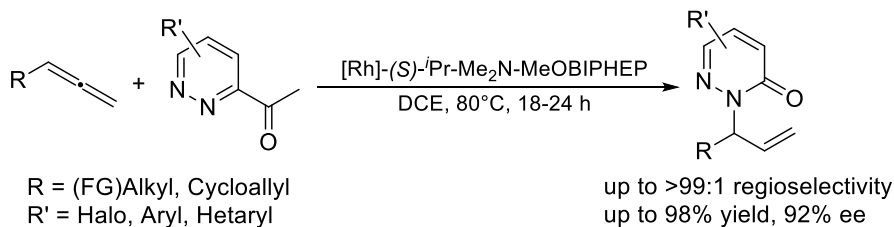
1. Cooperative activation of alkyne and thioamide functionalities; Direct catalytic asymmetric conjugate addition of terminal alkynes to  $\alpha,\beta$ -unsaturated thioamides.
2. Direct catalytic asymmetric Mannich-Type reaction of  $\alpha$ - and  $\beta$ -fluorinated amides.
3. Chemo-, Regio-, and enantioselective rhodium-catalyzed allylation of pyridazinones with terminal allenes.



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



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



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

**References:**

1. *Chem. Asian J.*, **2011**, 6, 1778.
2. *J. Am. Chem. Soc.*, **2015**, 137, 15929.
3. *Org. Lett.*, **2017**, 19, 2326.