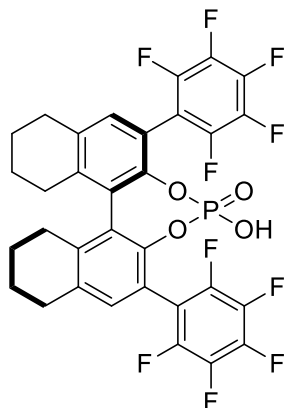
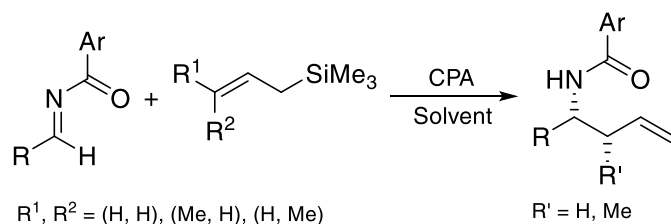


Catalog # 15-0567 (11bR)-4-Oxide-8,9,10,11,12,13,14,15-octahydro-4-hydroxy-2,6-bis(2,3,4,5,6-pentafluorophenyl)-dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin

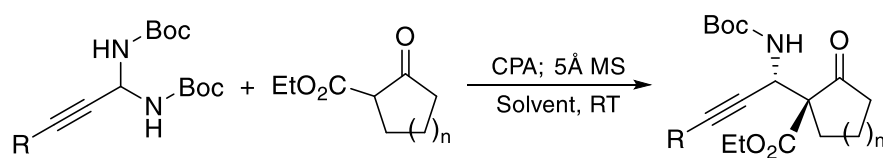


**Technical Notes**

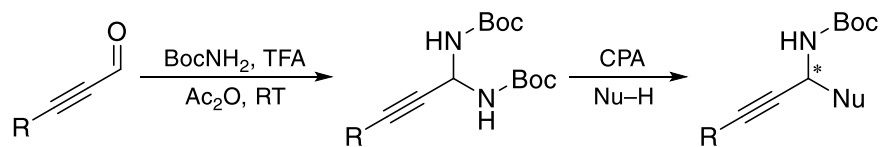
1. Chiral Brønsted acid catalysis for enantioselective Hosomi-Sakurai reaction of imines with allyltrimethylsilane.
2. Chiral Brønsted acid catalysis for stereoselective Mannich-type reactions of in situ generated C-alkynyl imines with  $\beta$ -keto esters.
3. Chiral Brønsted acid catalysis for Mannich-type reaction of N-Boc-iminium intermediates, generated in situ from N-Boc-aminals.



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



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



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

**References:**

1. *Org. Lett.*, **2011**, 13, 2126.
2. *Angew. Chem. Int. Ed.* **2013**, 52, 11509.
3. *Tetrahedron*, **2016**, 72, 3687.