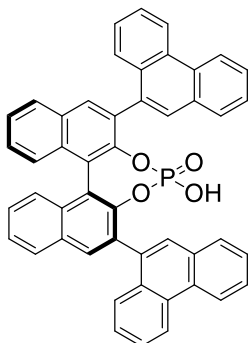
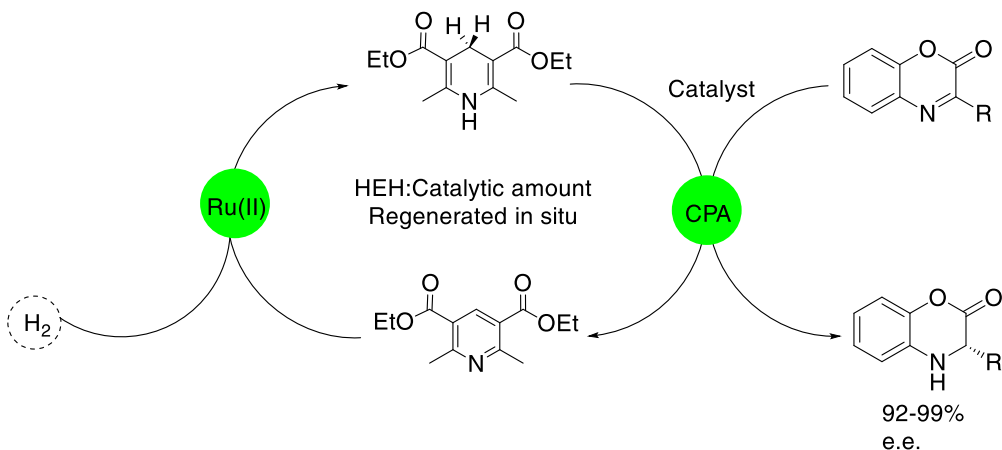


Catalog # 15-0837 (11bS)-2,6-Di-9-phenanthrenyl-4-hydroxy-4-oxide-dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 95%

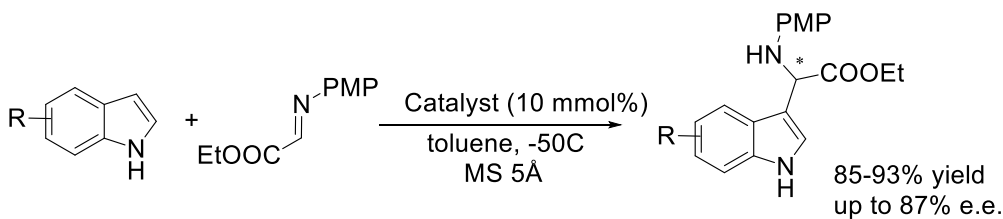


#### Technical Notes:

- Hydrogenation:** A catalytic amount of Hantzsch ester that could be regenerated in situ by Ru complexes under hydrogen gas has been employed in the biomimetic asymmetric hydrogenation of benzoxazinones with up to 99% ee in the presence of chiral phosphoric acid.
- Friedel-Crafts Reaction:** Chiral phosphoric acid-catalyzed enantioselective Friedel-Crafts reaction of indoles with ethyl glyoxylate imines was developed. With 10 mol% of the catalyst.



Tech Note (1)  
Ref. (1)



Tech Note (2)  
Ref. (2)

#### References:

- J. Am. Chem. Soc.*, **2011**, 133, 16432-16435.
- Tetrahedron. Lett.*, **2009**, 65, 1603-1607.