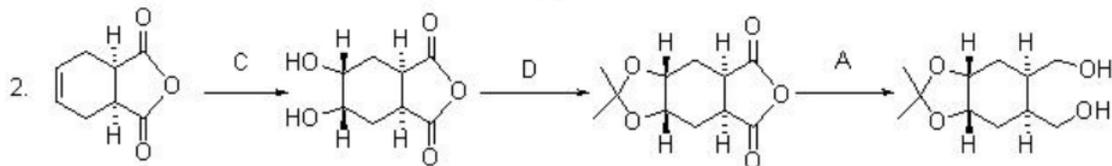
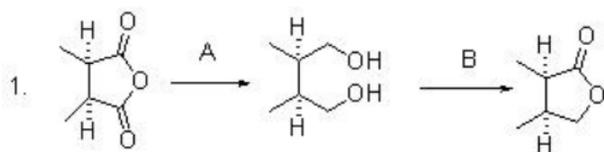


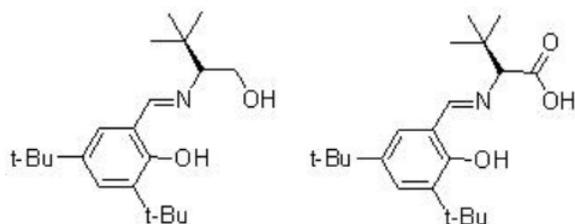
5.7: Problems and Reference

Problems:

Complete the following transformations.



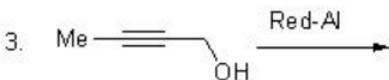
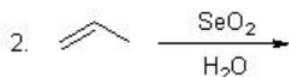
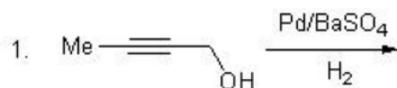
How will you prepare the following chiral ligands?



Complete the following reactions.



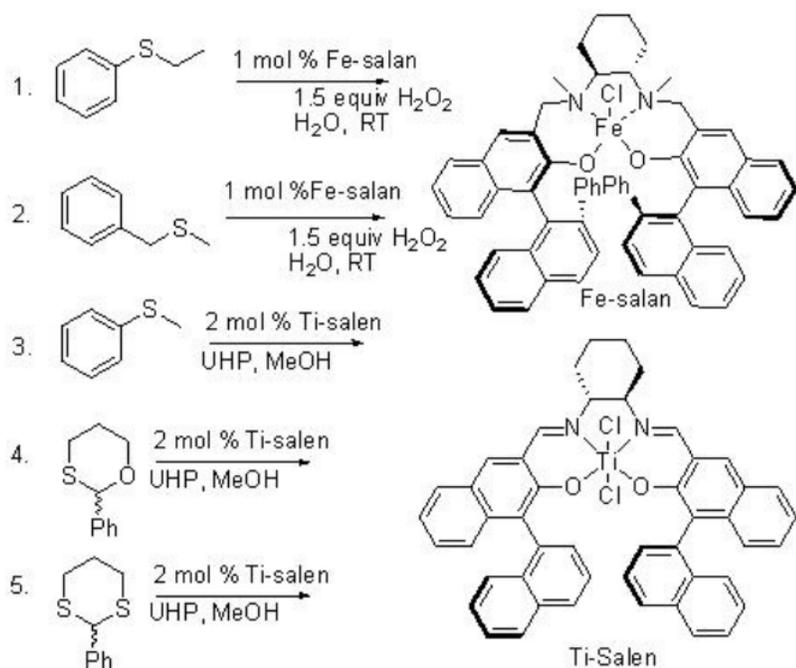
Predict the major products for the following reactions.



List three effective organo catalysts for the epoxidation of α,β -unsaturated ketones. Provide mechanism.

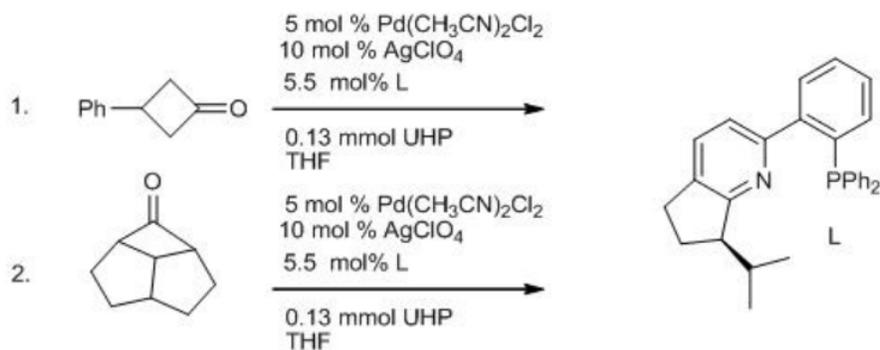
List three effective organo catalysts for the epoxidation of α,β -unsaturated aldehydes. Provide mechanism.

Complete the following reactions.

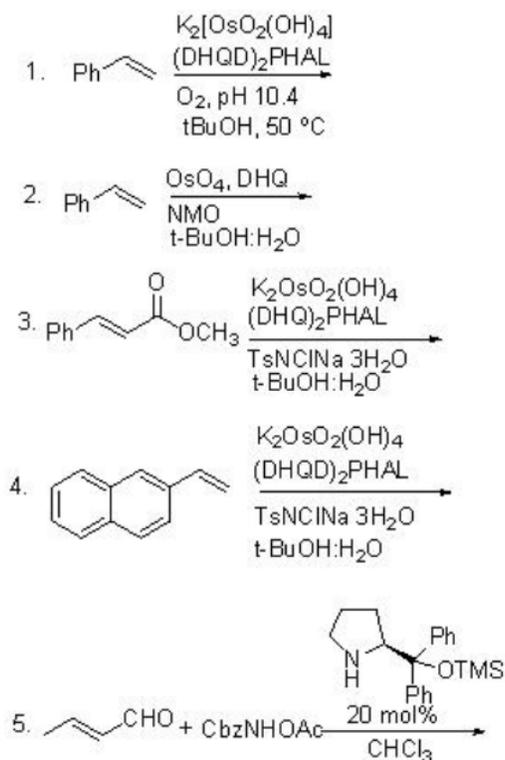


Describe chiral phosphoric acid catalyzed asymmetric Baeyer-Villiger oxidation.

Complete the following reactions.



What product(s) would you expect from the following reactions?



Reference/Text Book

1. I. Ojima, *Catalytic Asymmetric Synthesis*, 3 rd ed., Wiley, New Jersey, 2010.
 2. M. B. Smith, *Organic Synthesis*, 2 nd edition, McGraw Hill, New Delhi, 2004.
- Ojima, *Catalytic Asymmetric Synthesis*, VCH Publishers, Inc., New York 1993.

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