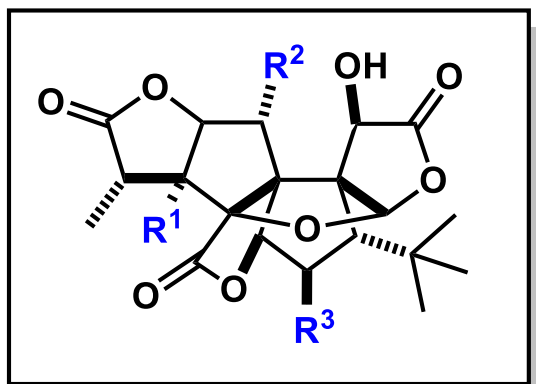
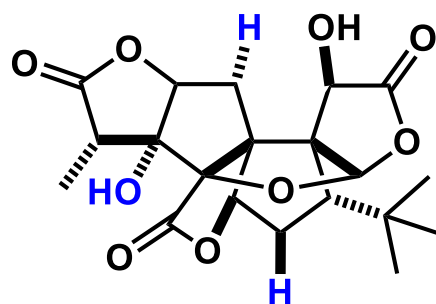


Total Synthesis of Ginkgolide C and Formal Syntheses of Ginkgolides A and B

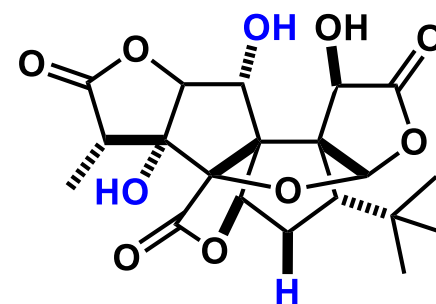
Martin Hébert, Gabriel Bellavance, and Louis Barriault*



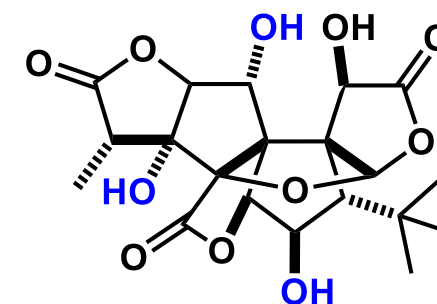
Ginkgolides



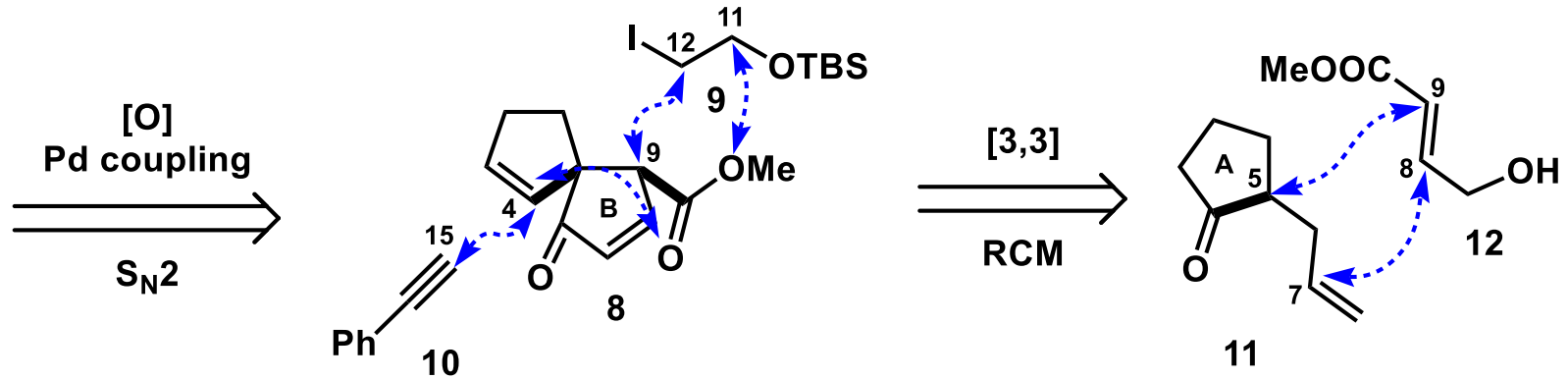
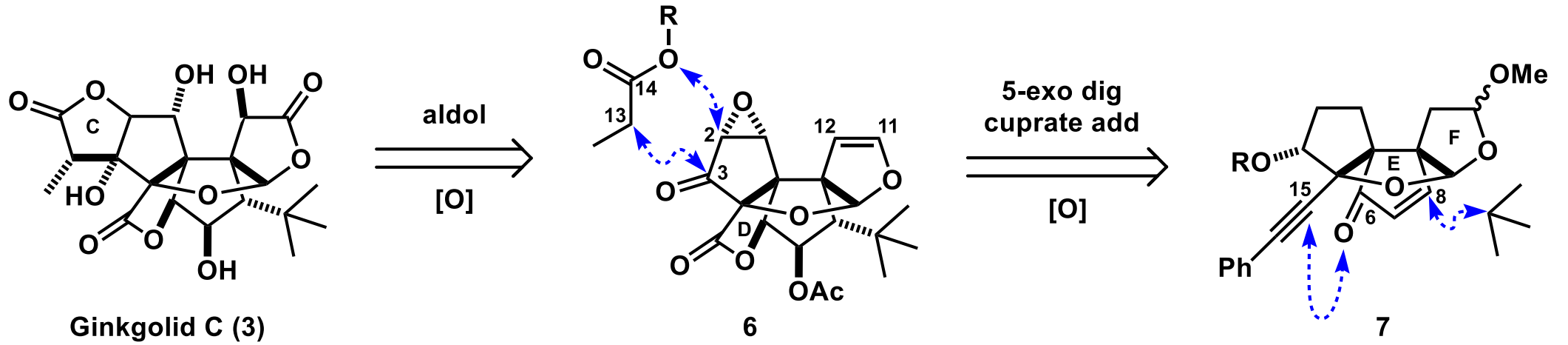
Ginkgolide A (1)

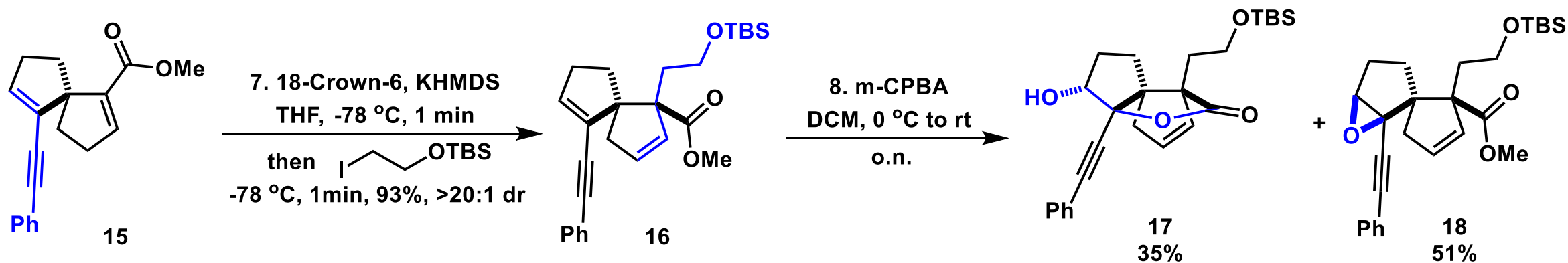
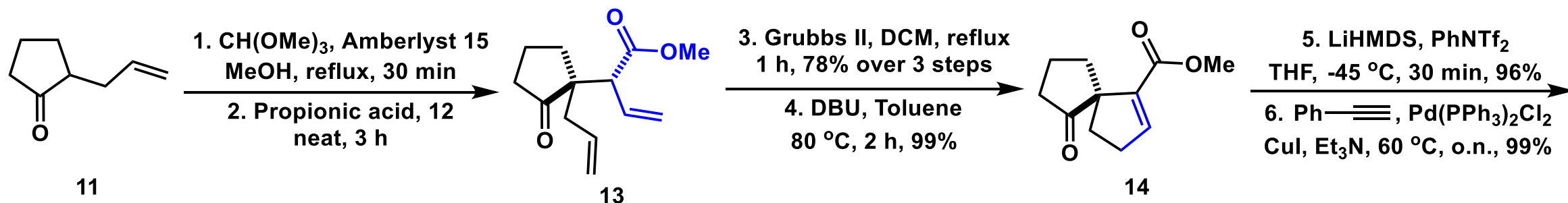
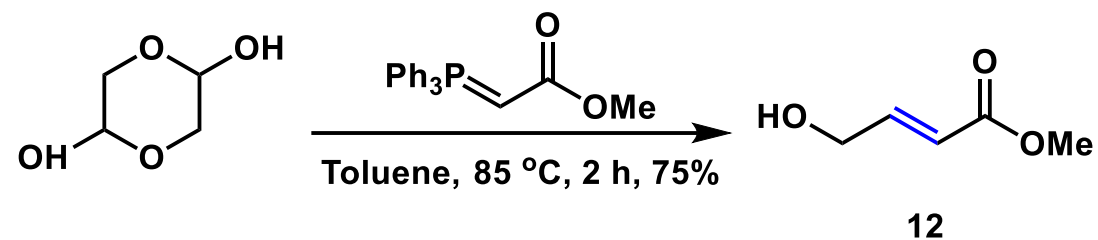
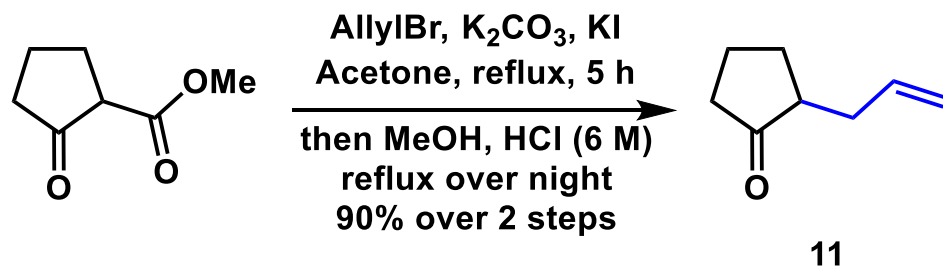


Ginkgolide B (2)

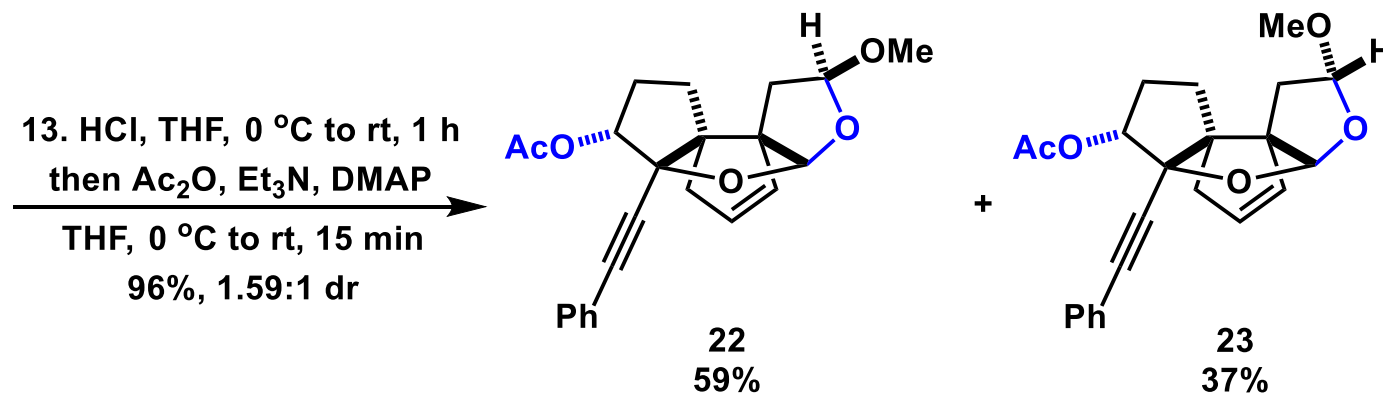
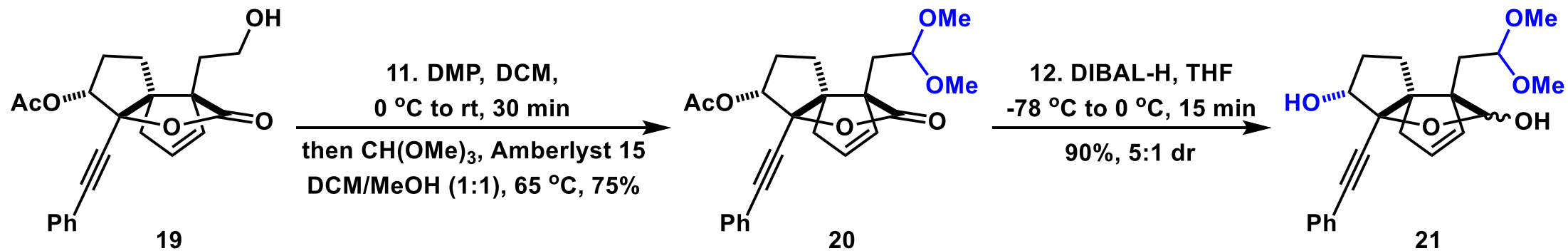
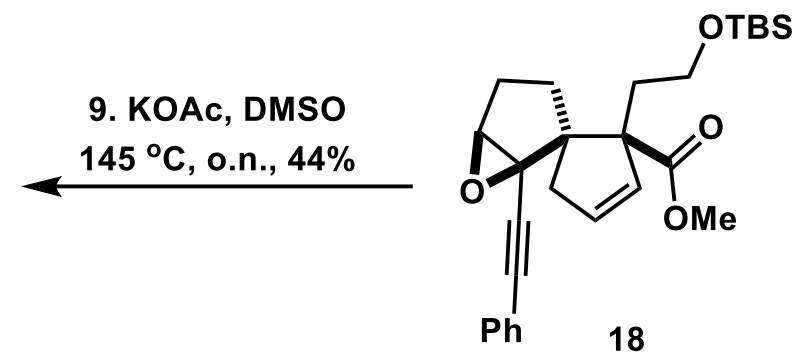
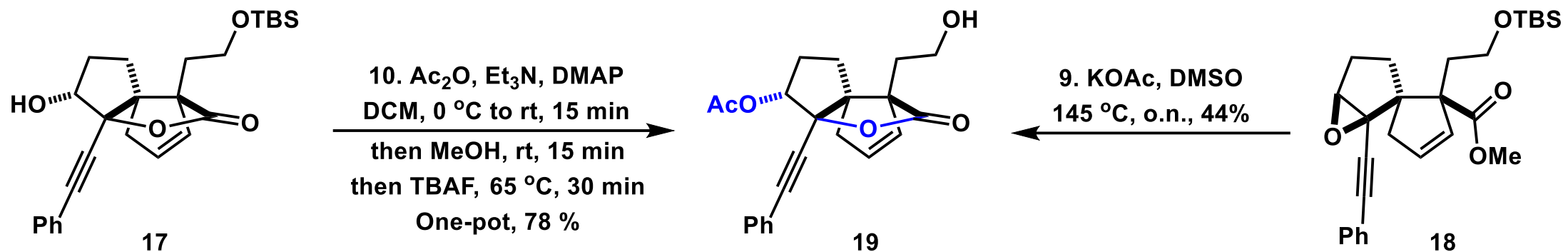


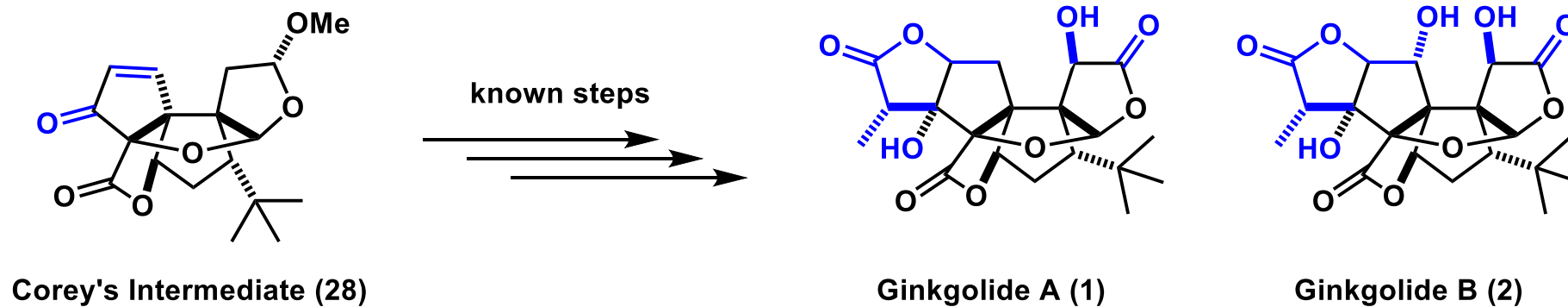
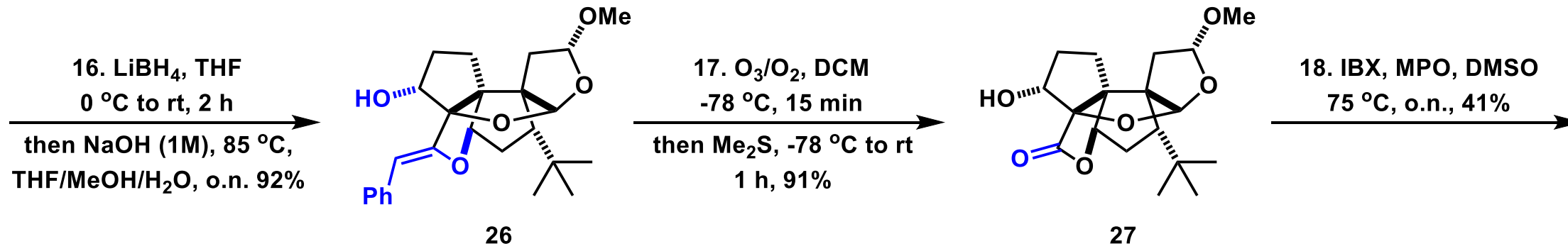
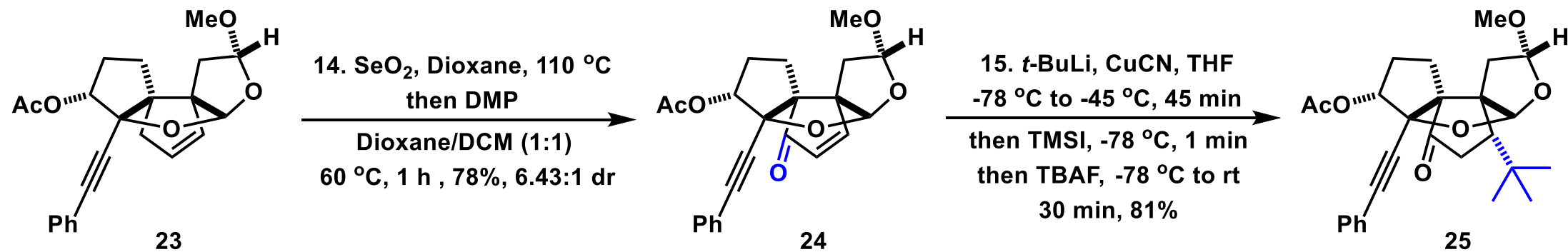
Ginkgolide C (3)

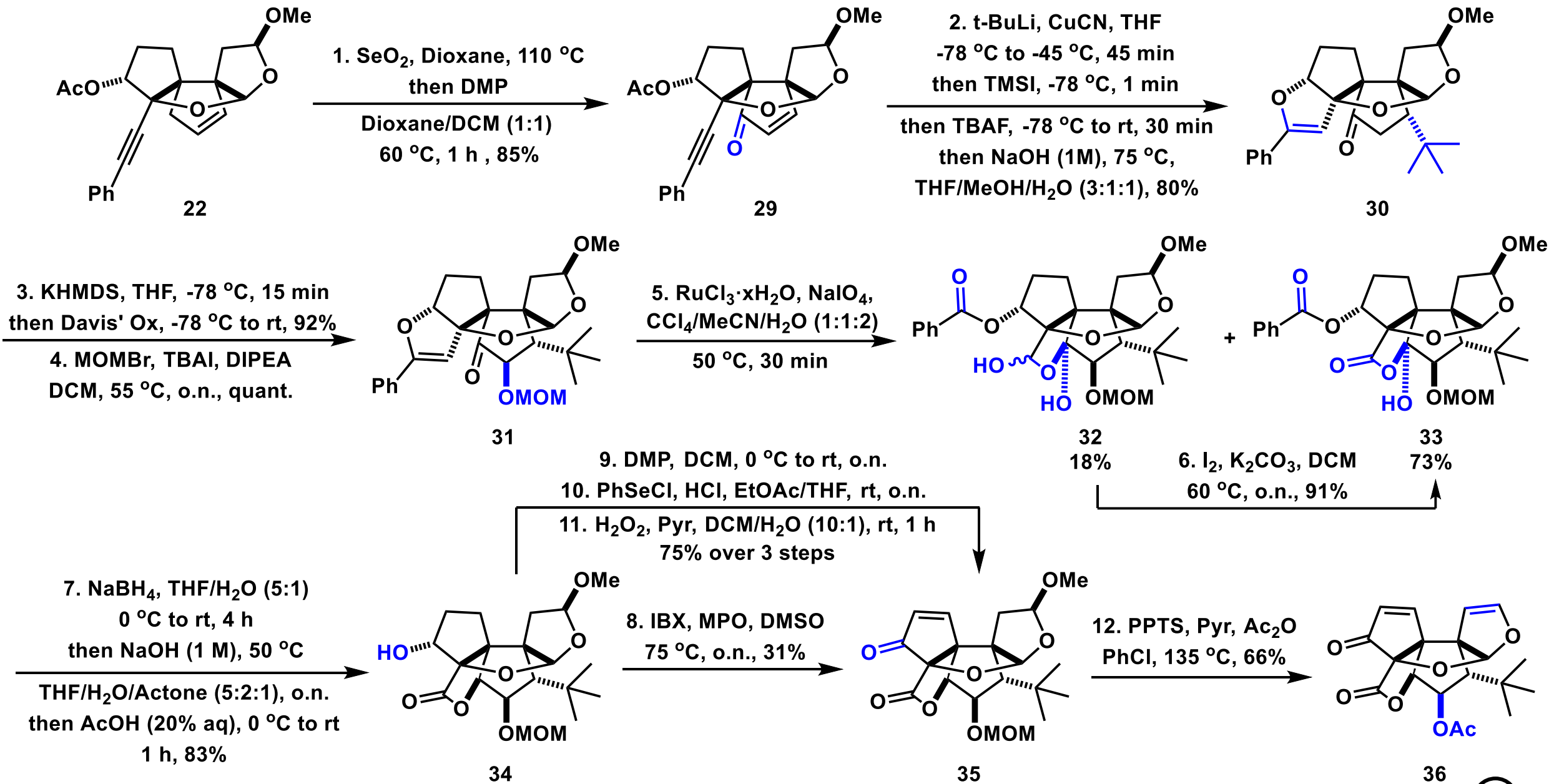


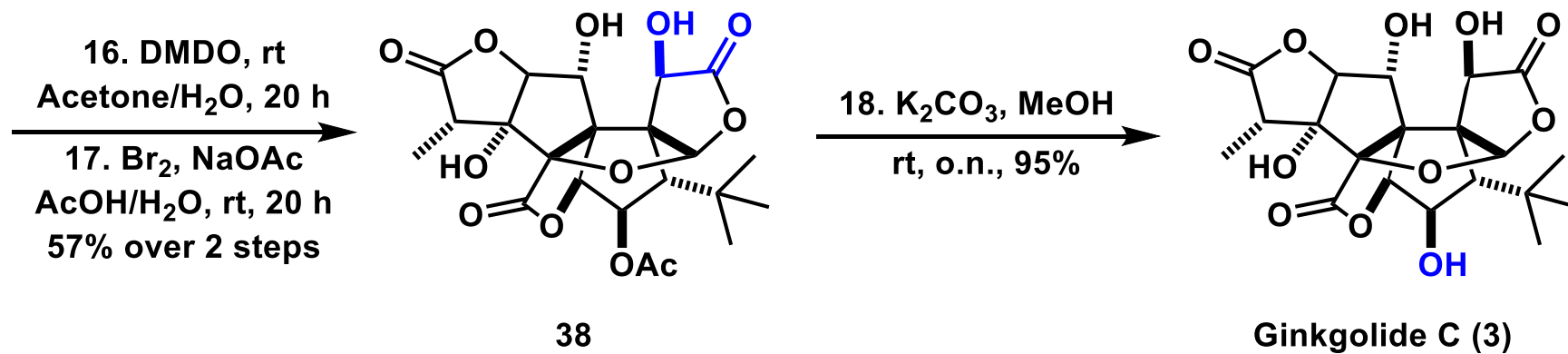
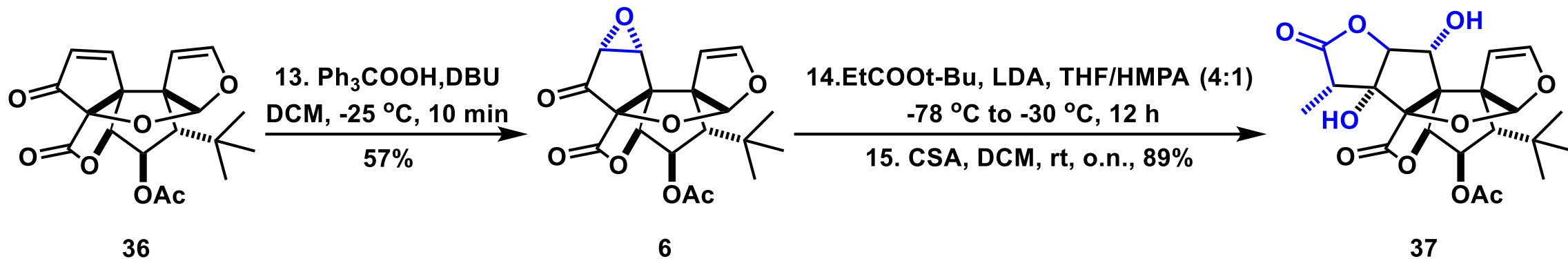


(2) (3) (6) (8)

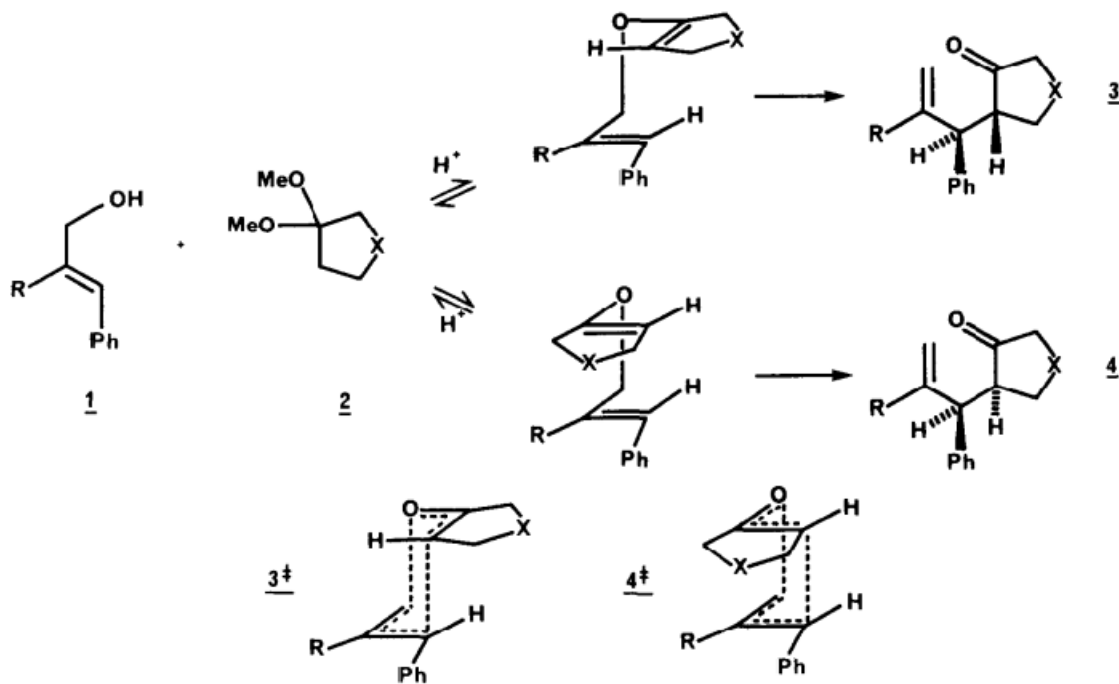
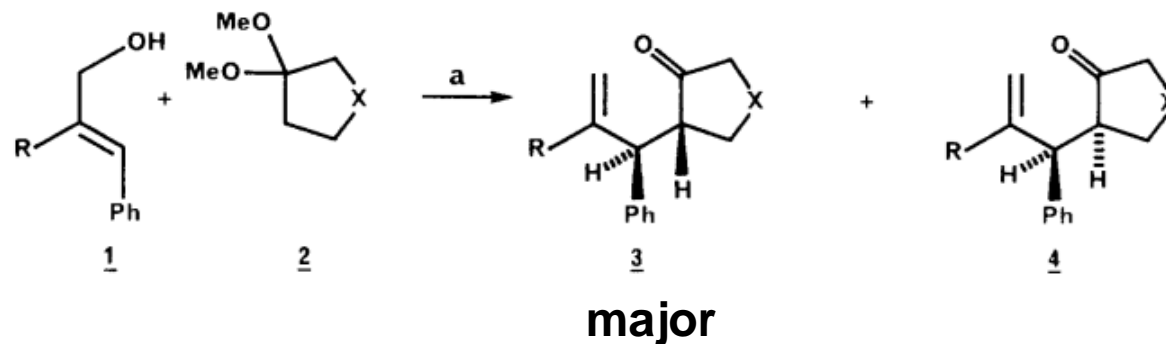








Stereoselective Ketal Claisen Rearrangement

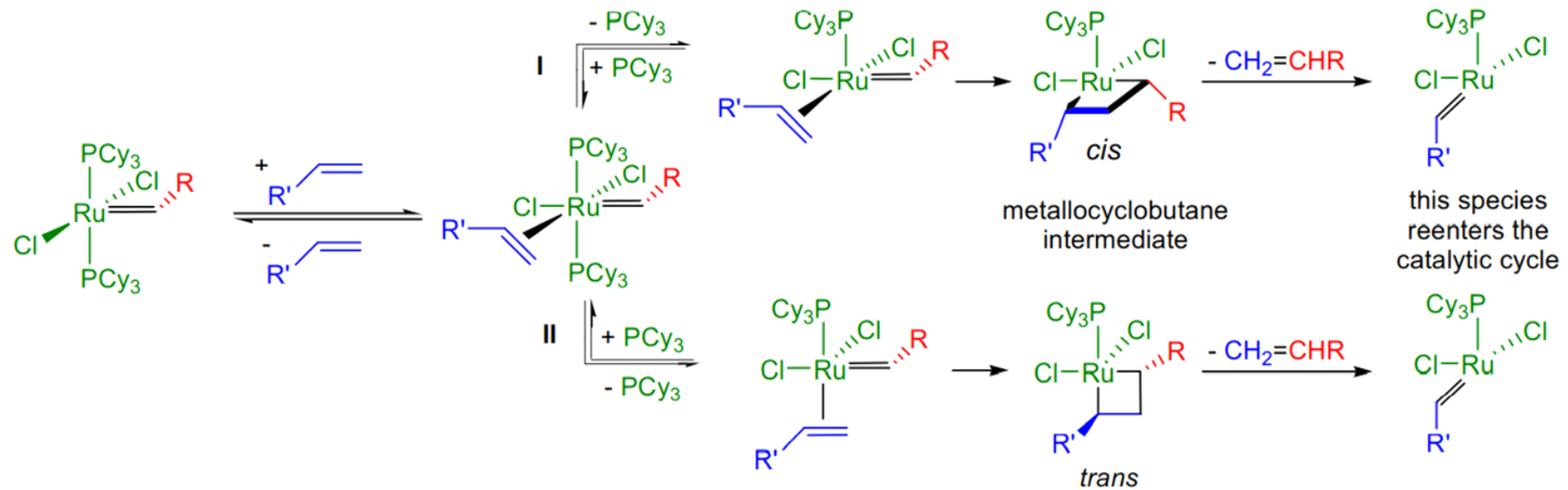
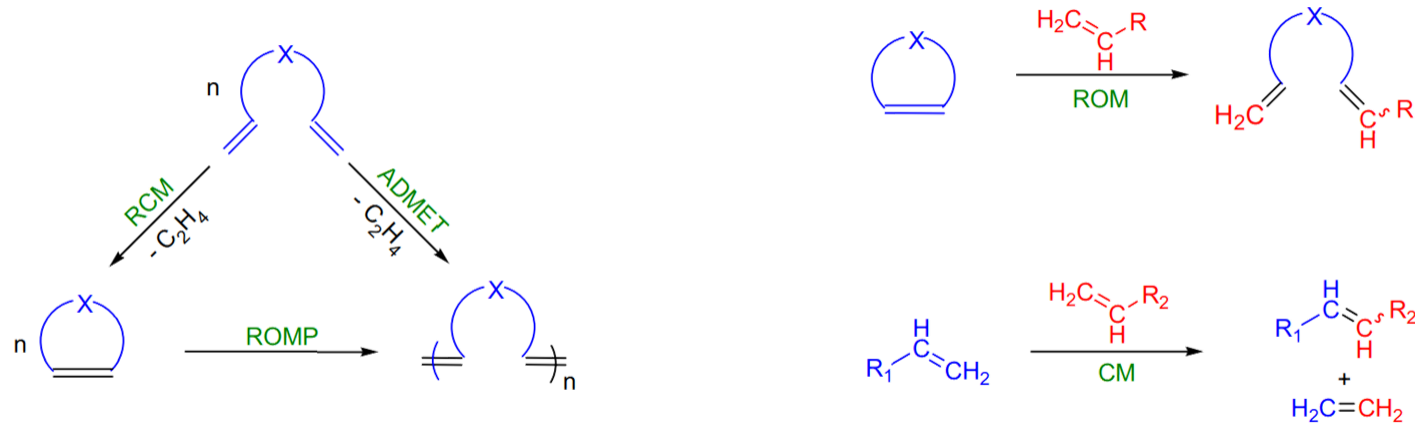


3. more stable chair-like transition state
major

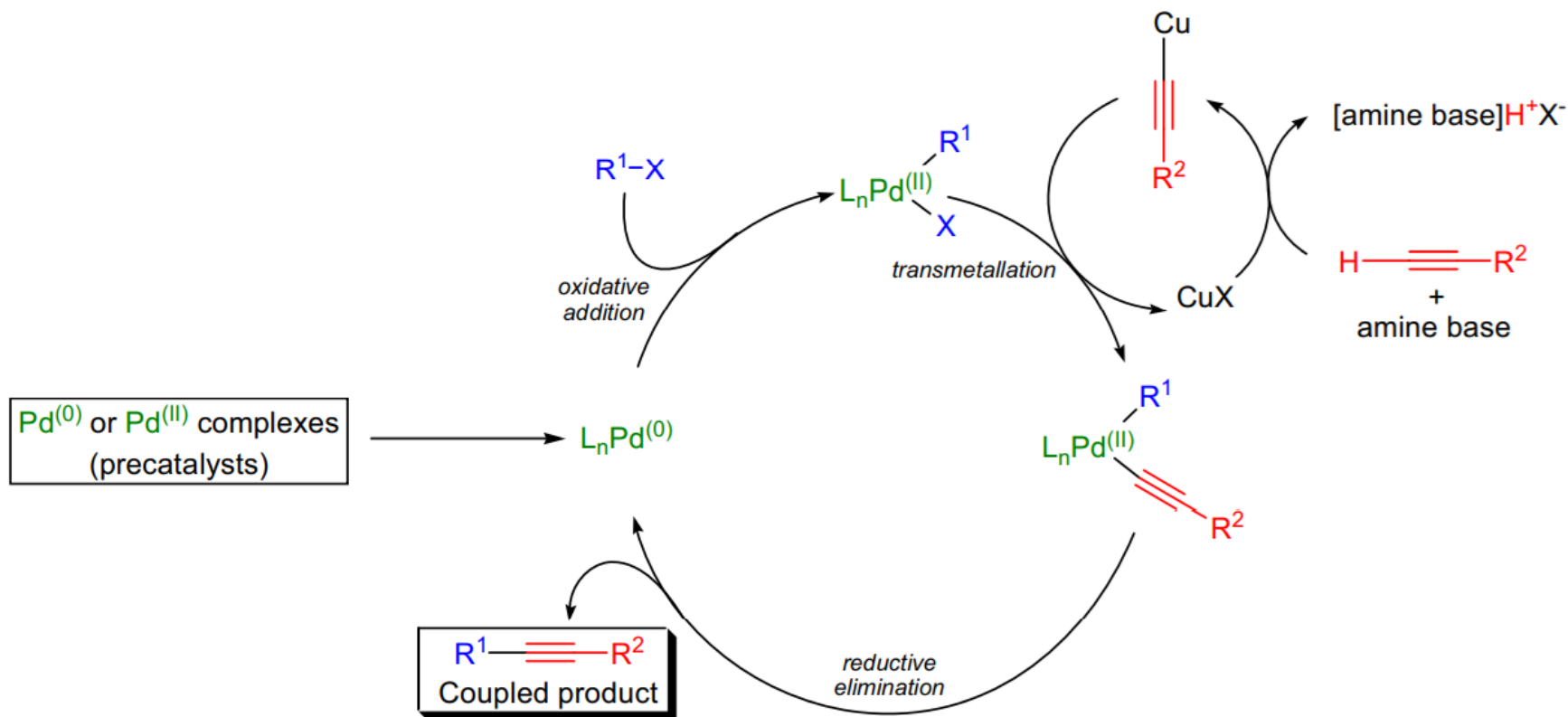
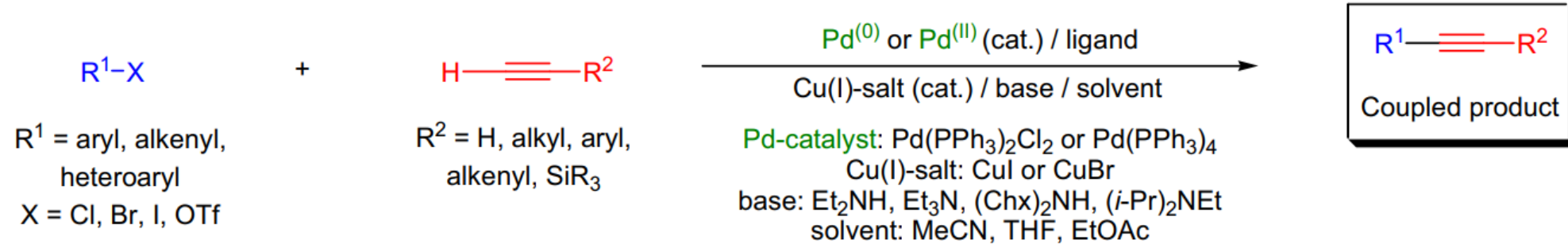
4. less stable boat-like transition state
minor



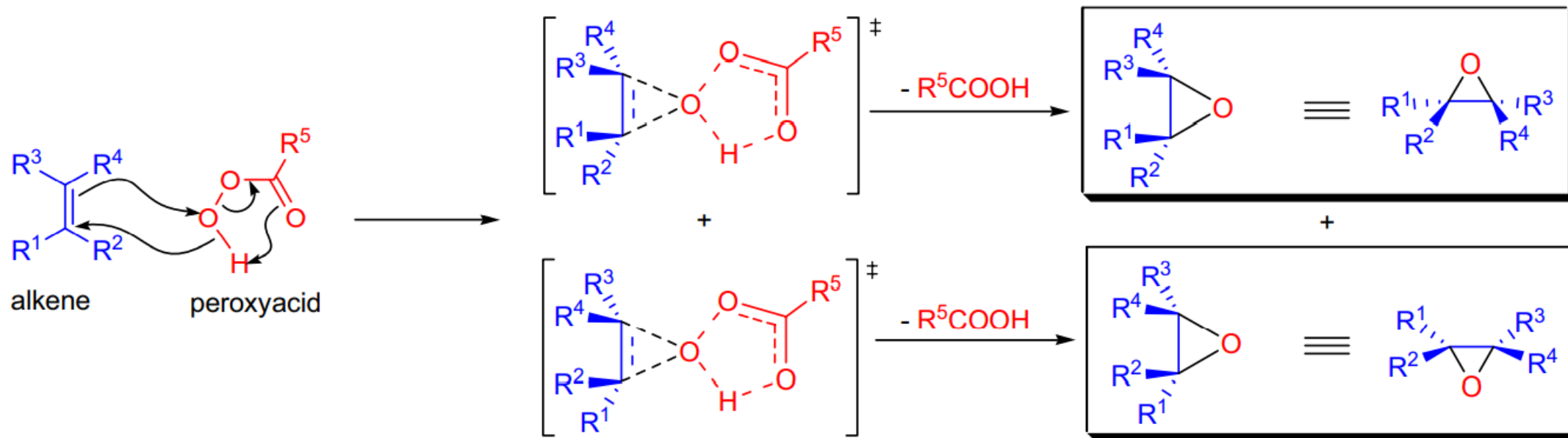
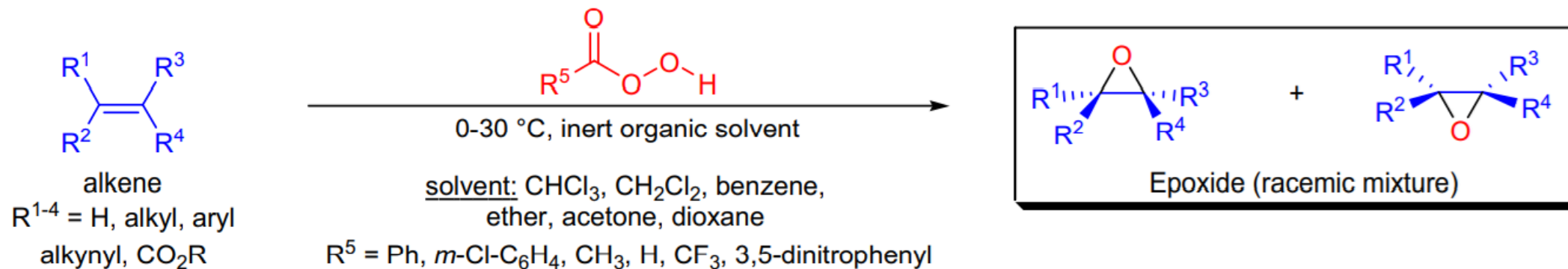
RCM Reaction (Alkene Metathesis)



Sonogashira Cross-Coupling

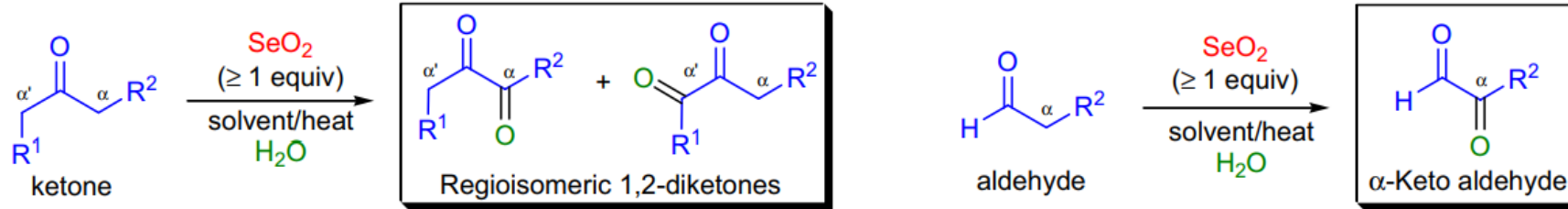


Prilezhaev Reaction

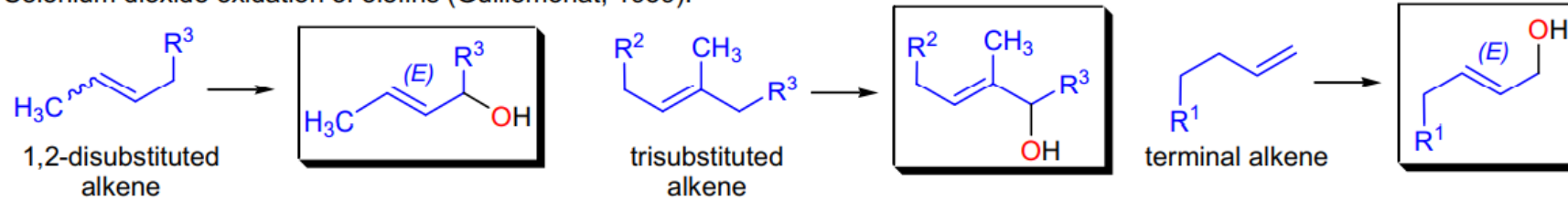


Riley Oxidation

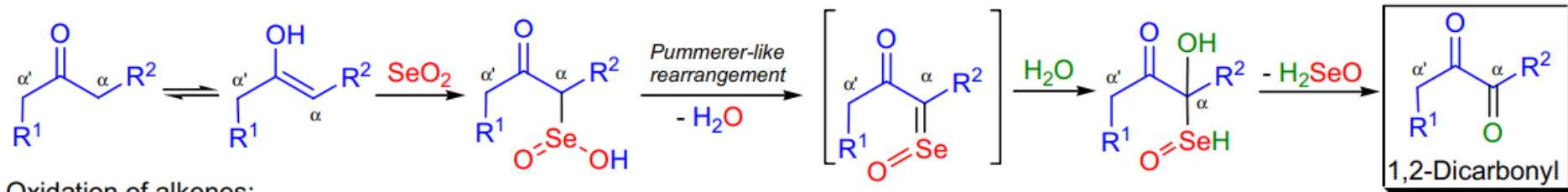
Selenium dioxide oxidation of ketones and aldehydes (Riley, 1932):



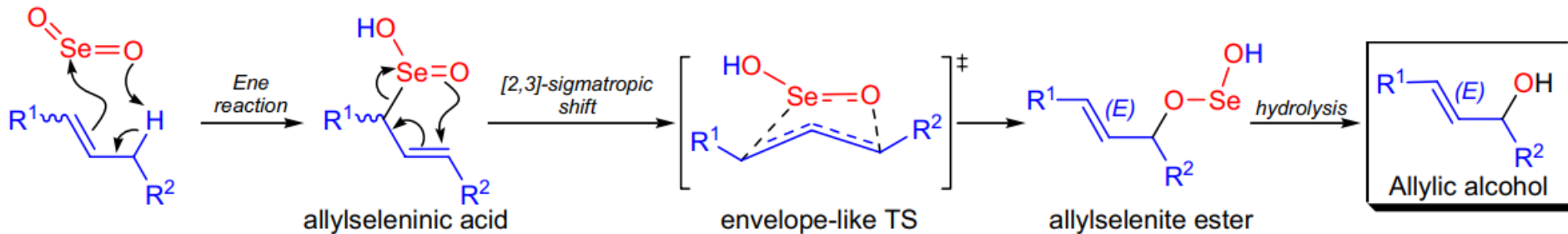
Selenium dioxide oxidation of olefins (Guillemonat, 1939):



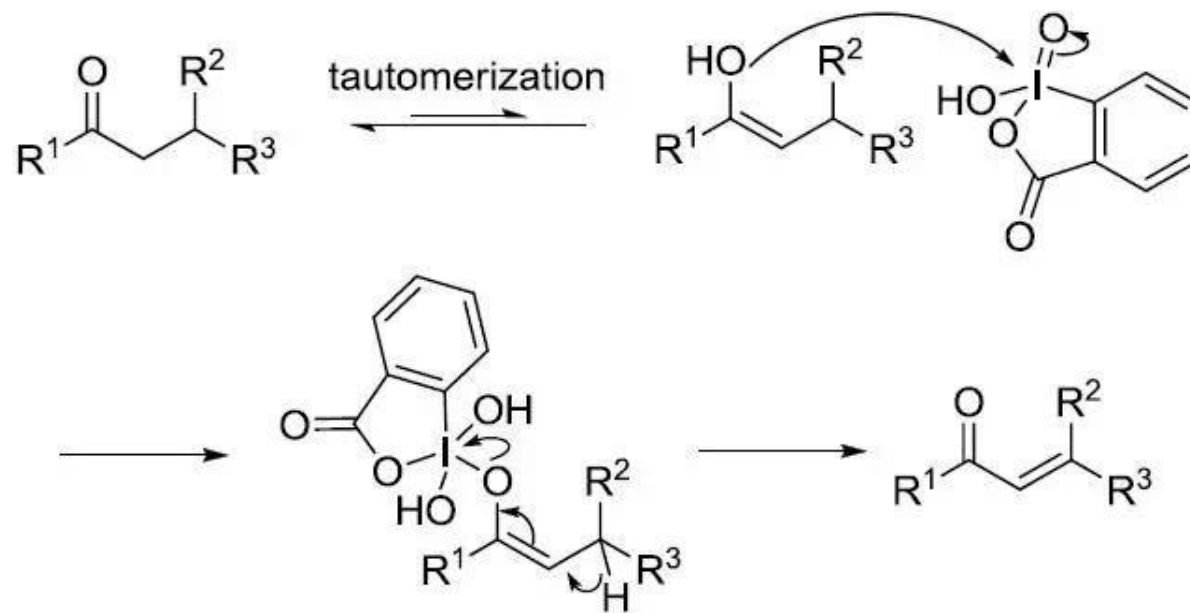
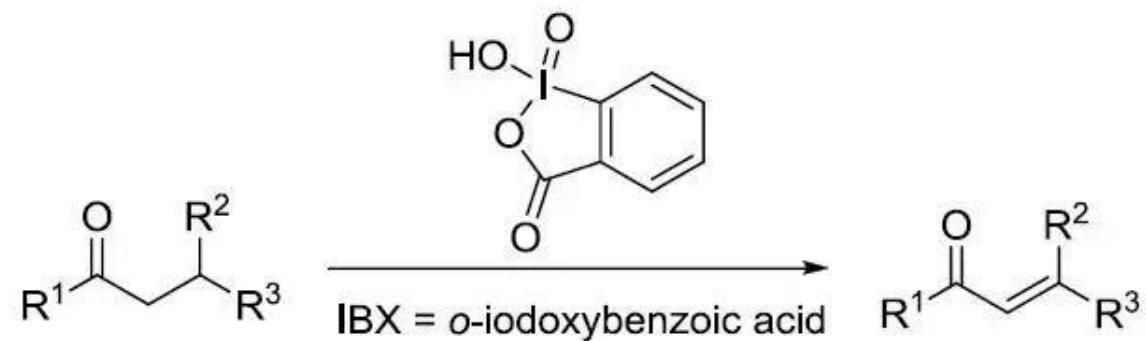
Oxidation of carbonyl compounds:



Oxidation of alkenes:



Nicolaou Dehydrogenation



Davis' Oxaziridine Oxidations

