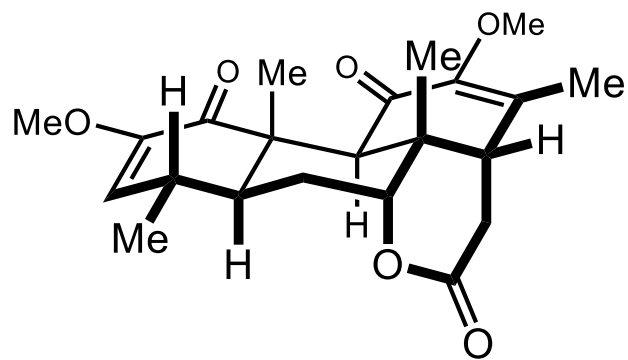


A Concise Enantioselective Approach to Quassinoids

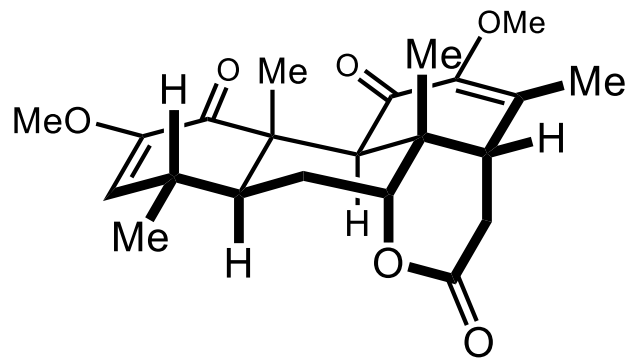


Quassin

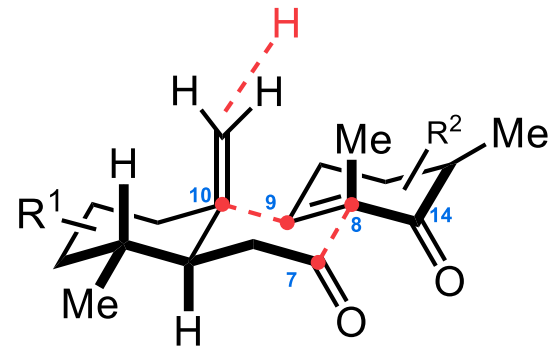
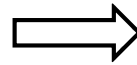
- Quassinoids comprise a large group of terpenoid natural products isolated from plants of the *Simaroubaceae* family, which have been used in folk medicine to treat a variety of diseases.
- Potent cytotoxicity toward different cancer cell lines and antimalarial activity against drug-resistant strains of *P. falciparum*.

Ziyong Wang
Liu Research Group
Total Synthesis Presentation
4/15/2022

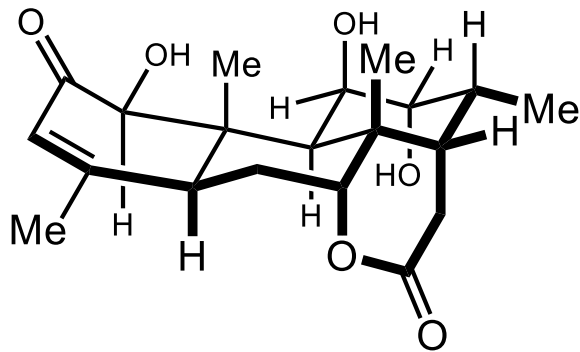
HAT-Initiated Annulation Approach to Polycyclic Motif



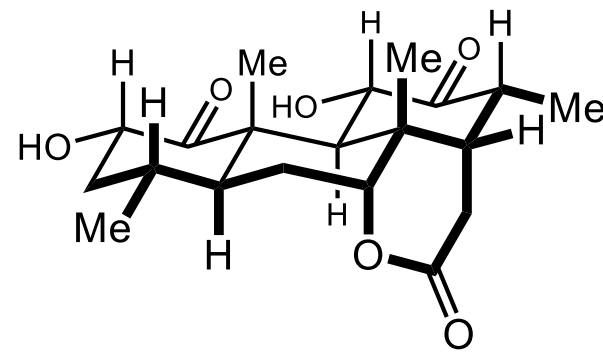
Quassin



HAT-initiated annulation

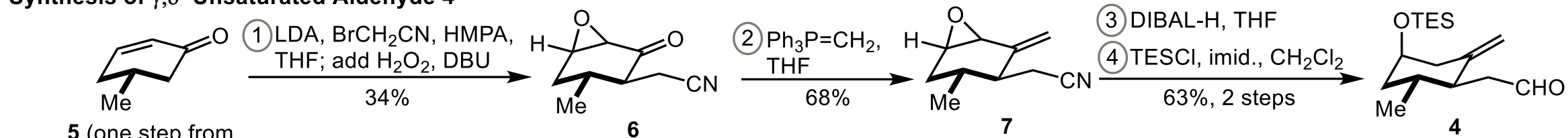


Klaineanone

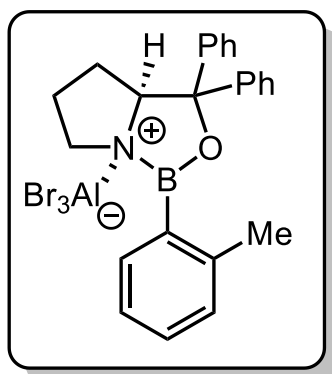
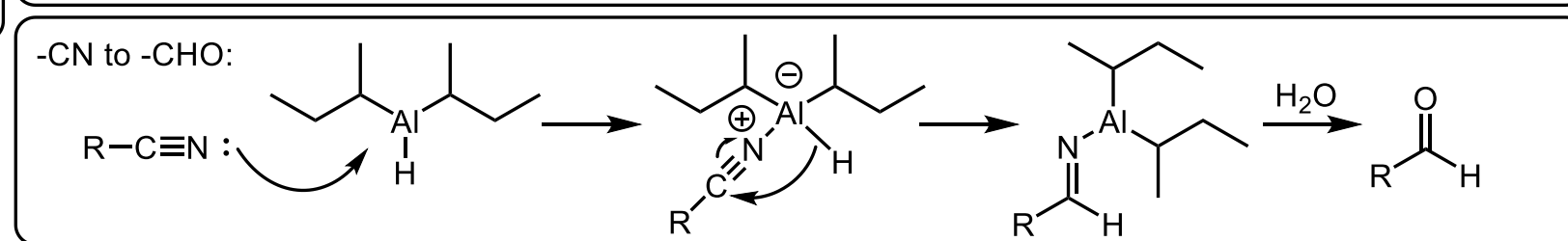
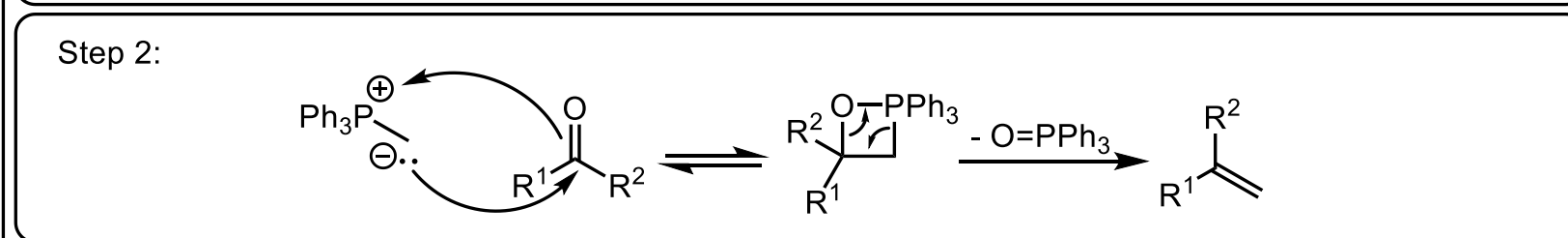
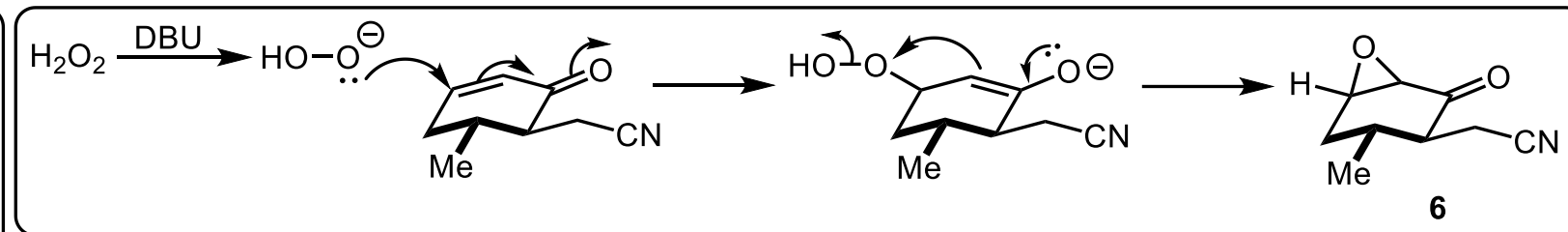
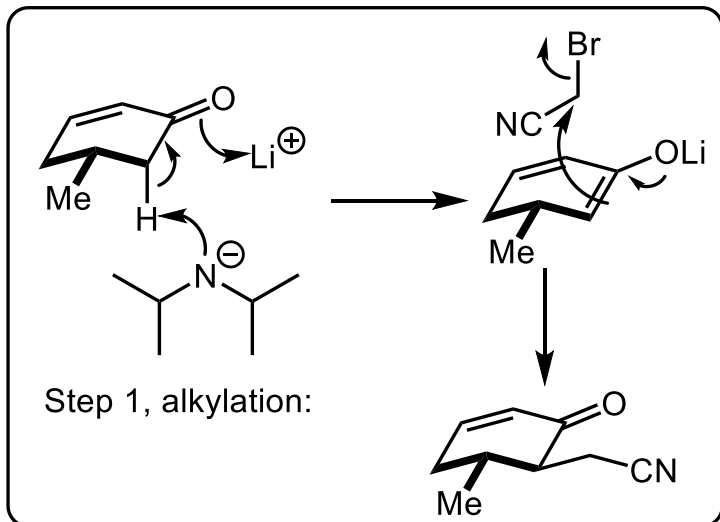


Amarolide

Synthesis of γ,δ -Unsaturated Aldehyde 4

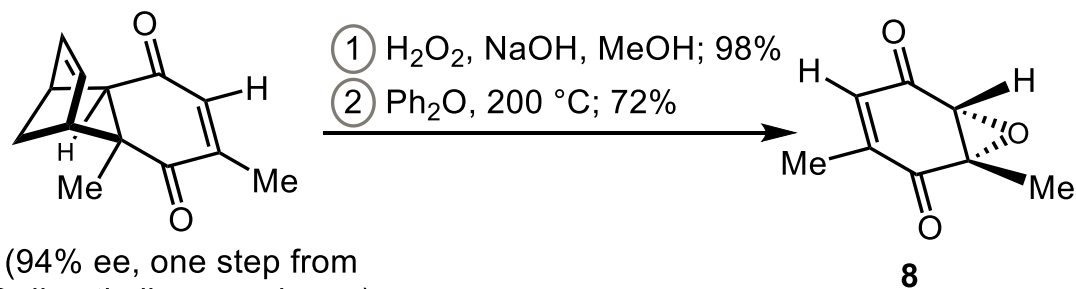


5 (one step from (+)-3-methylcyclohexanone)

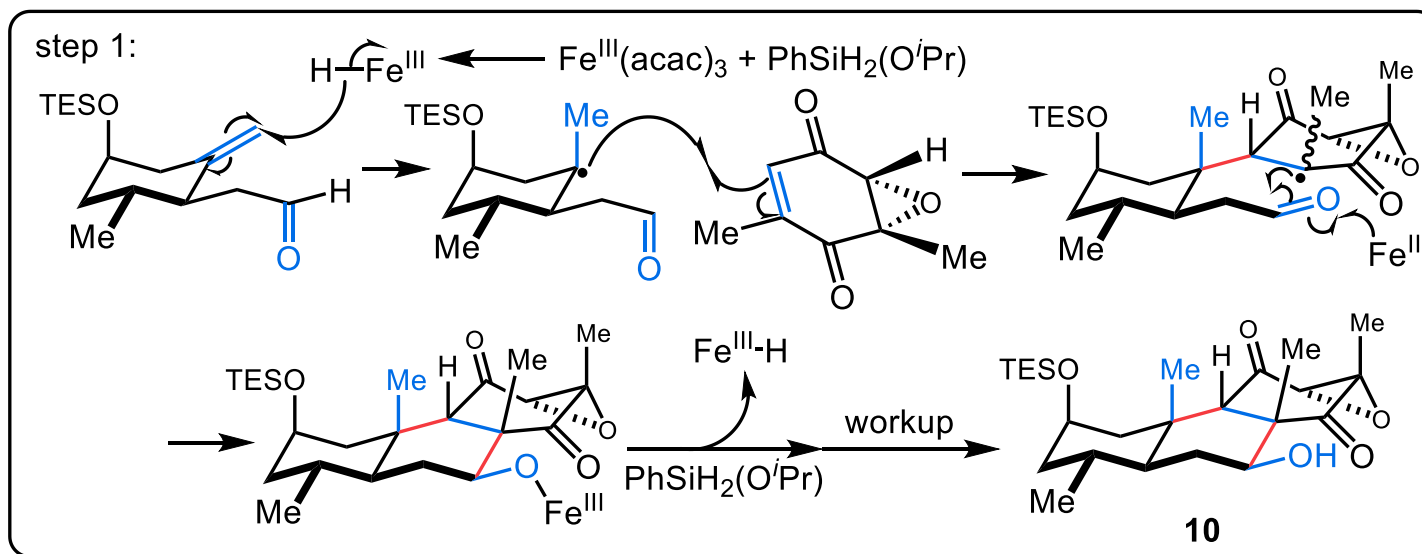
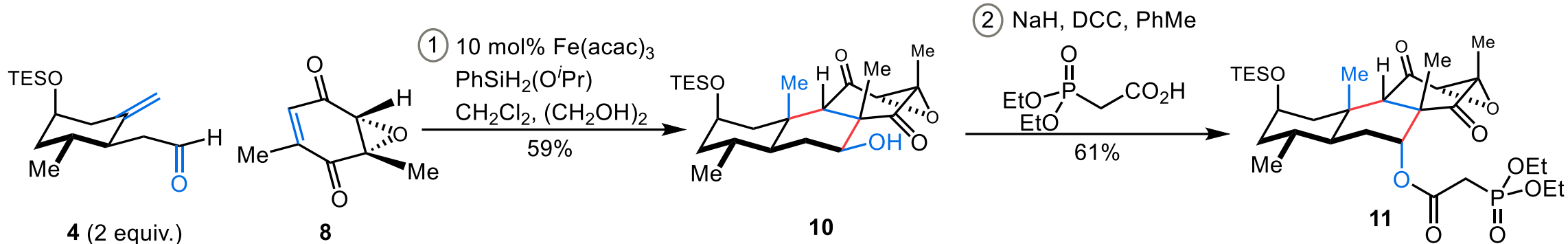


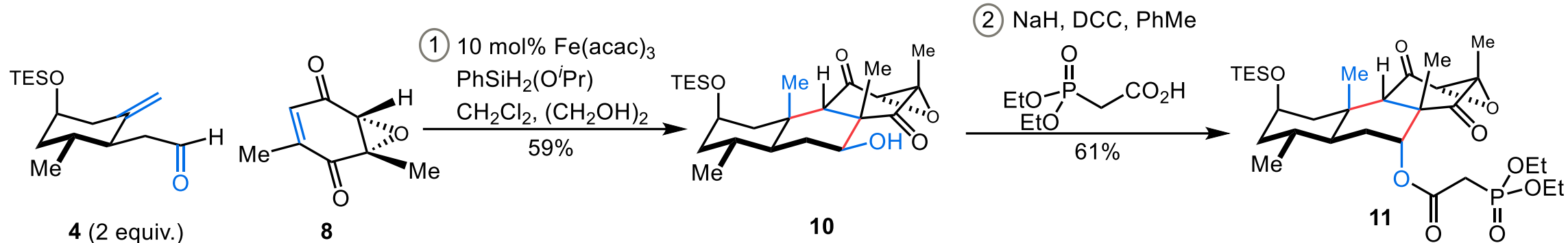
Chiral catalyst for enantioselective Diels-Alder reaction of synthesizing 9

Synthesis of Epoxyquinone 8

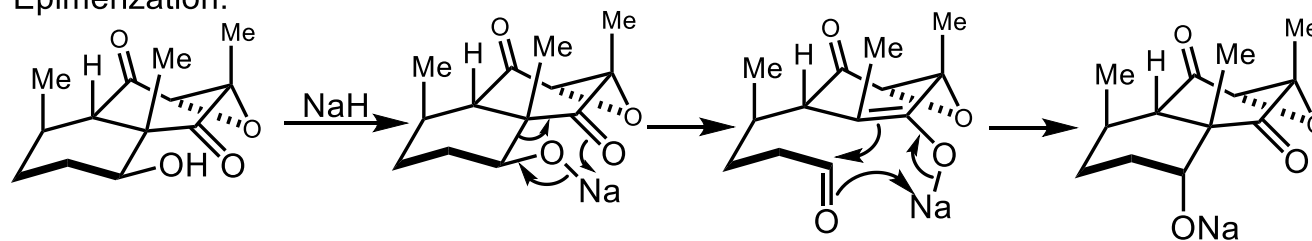


9 (94% ee, one step from 2,6-dimethylbenzoquinone)

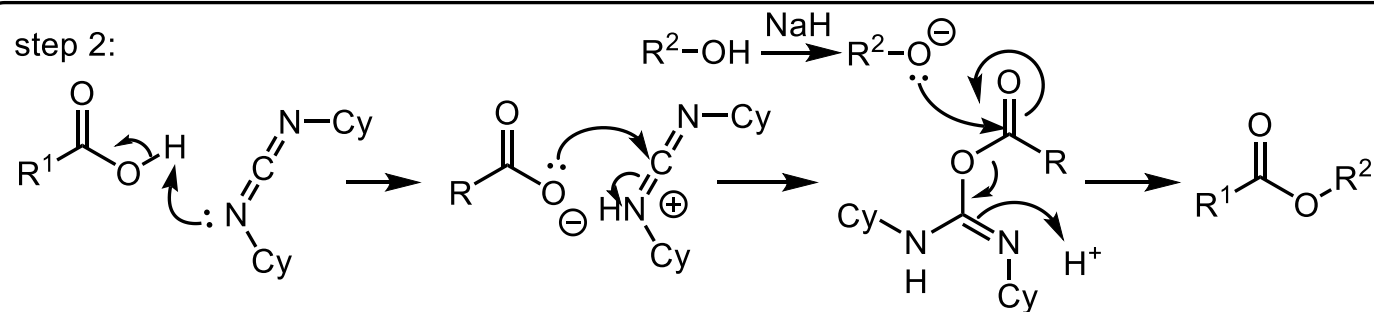


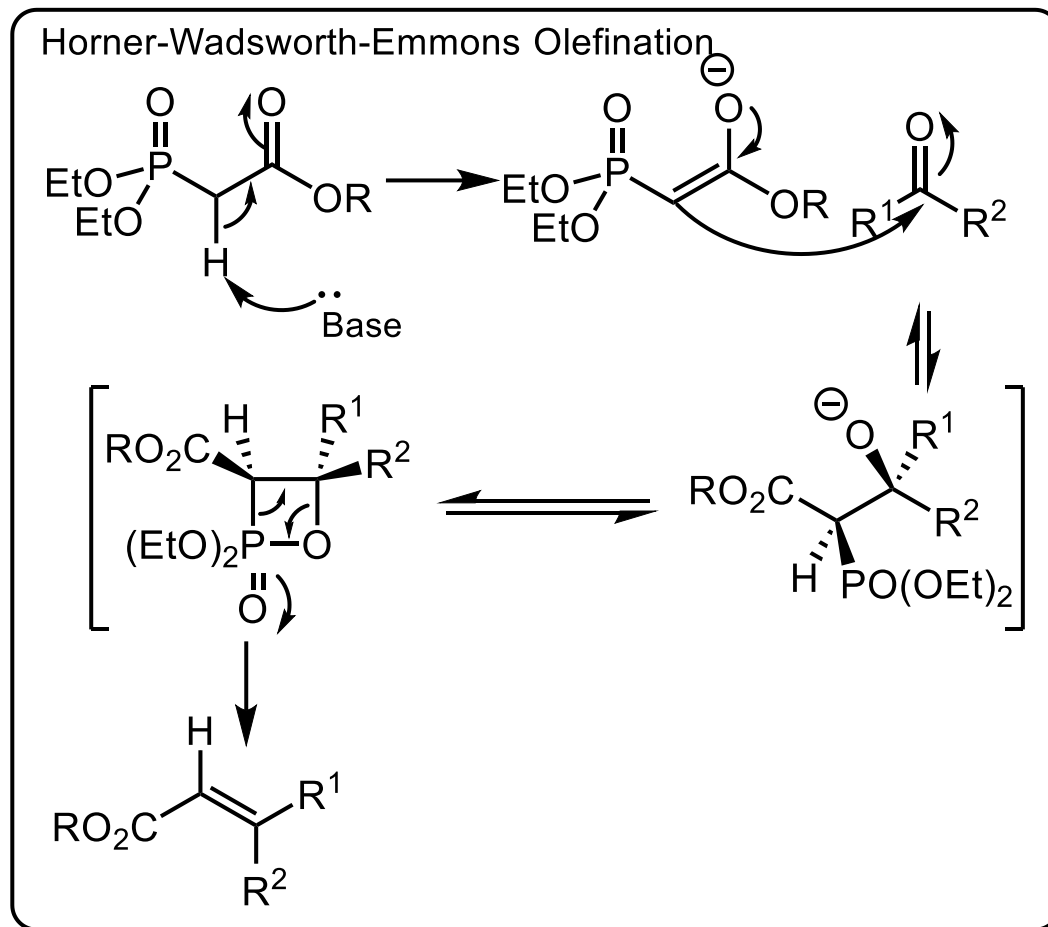
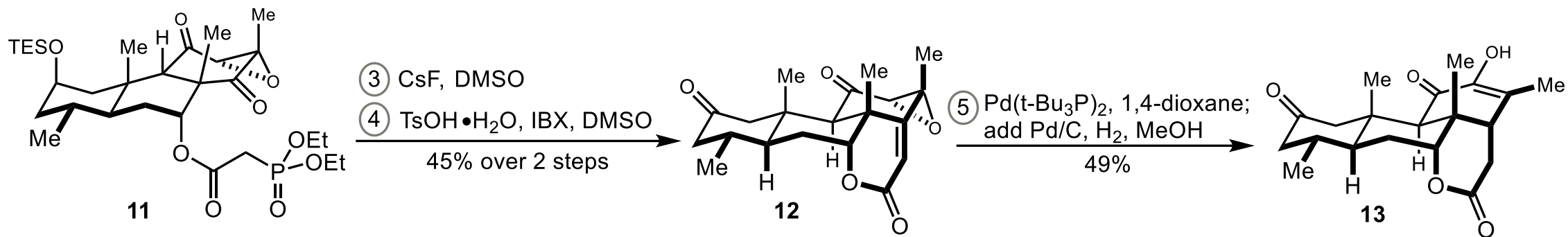


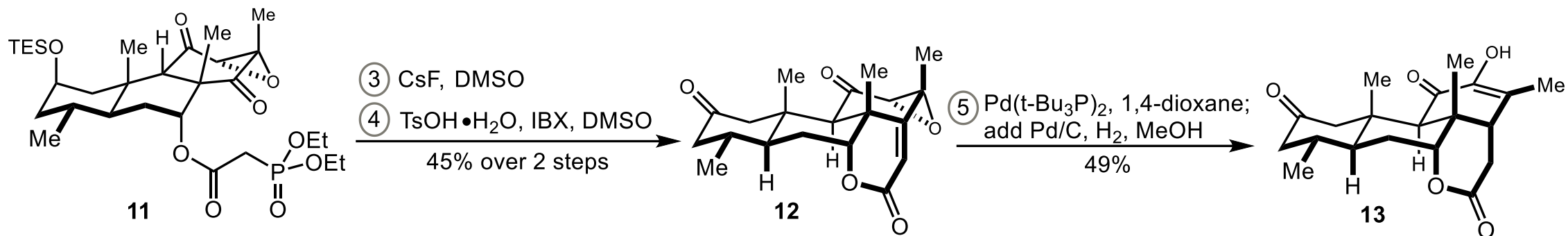
Epimerization:



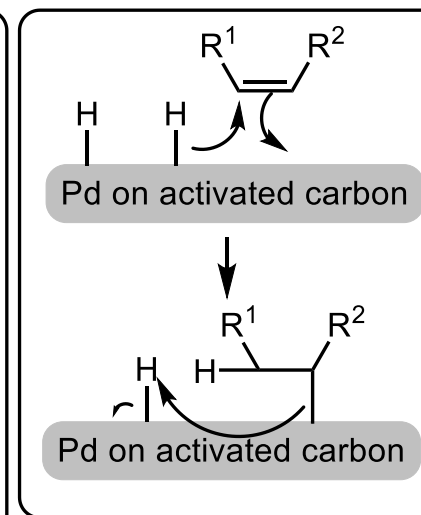
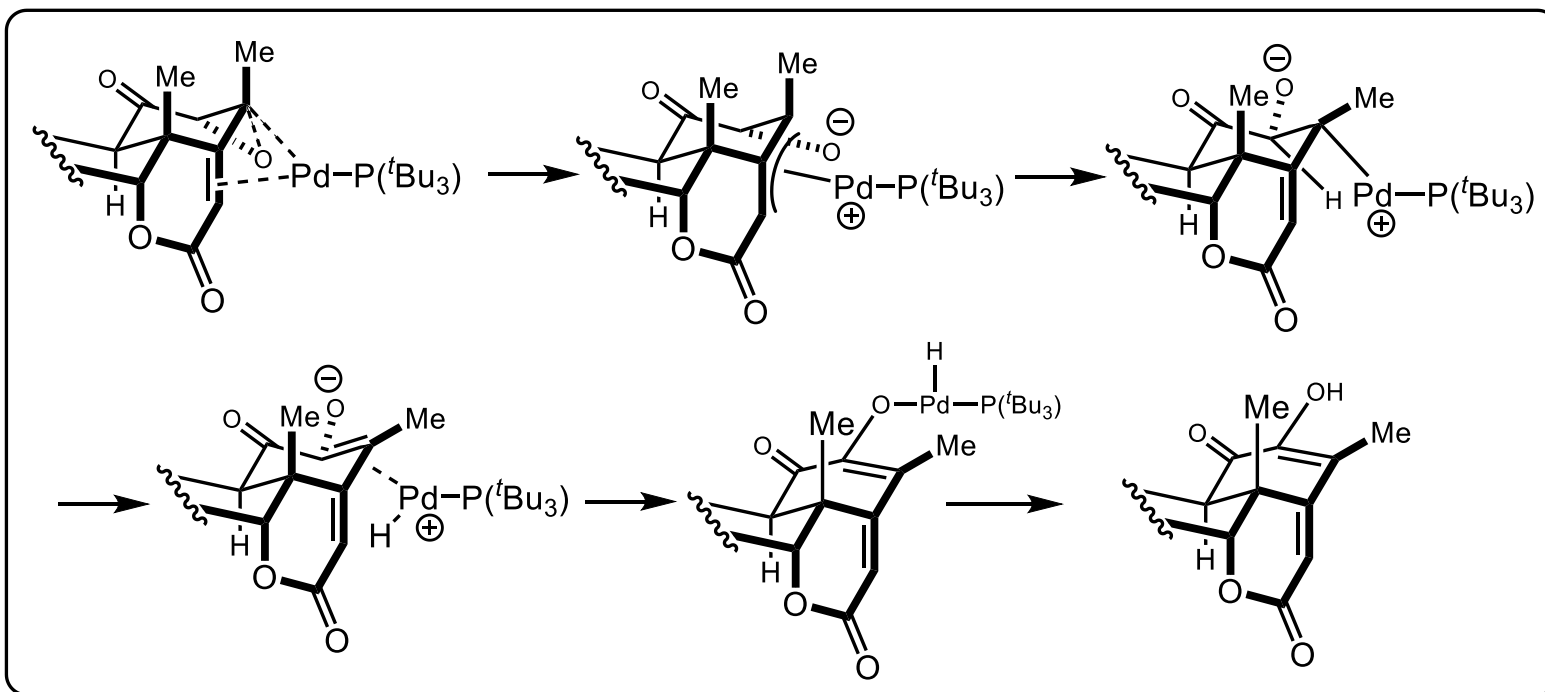
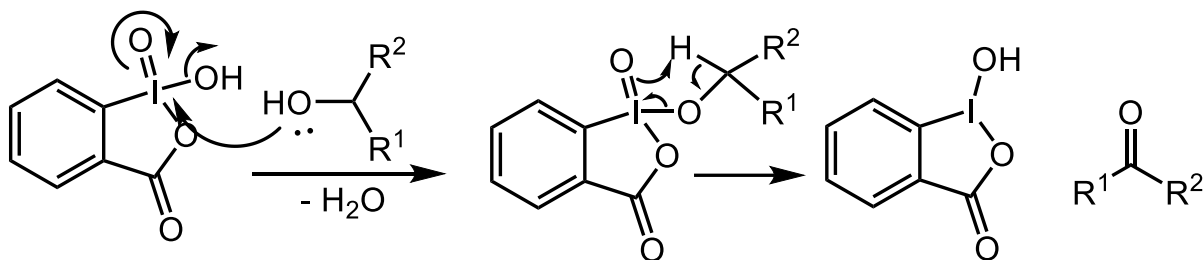
step 2:

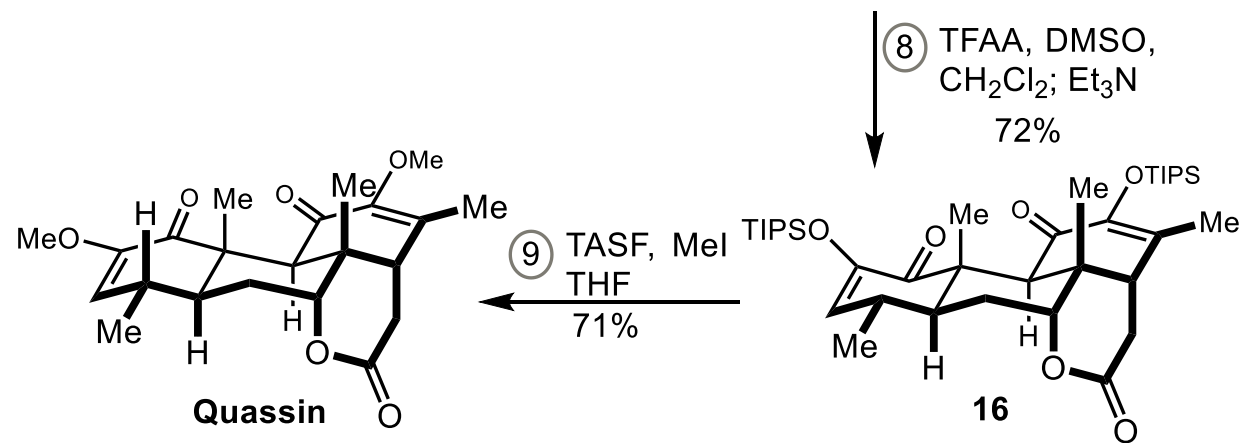
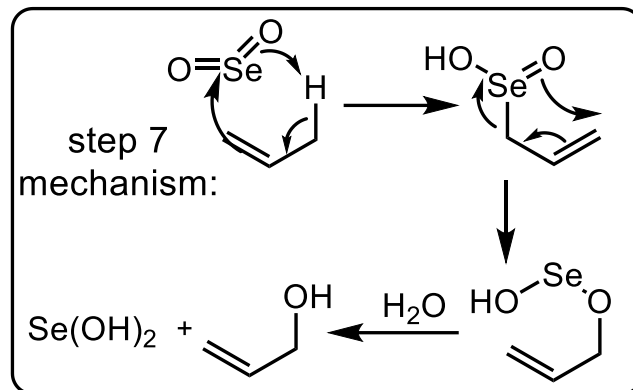
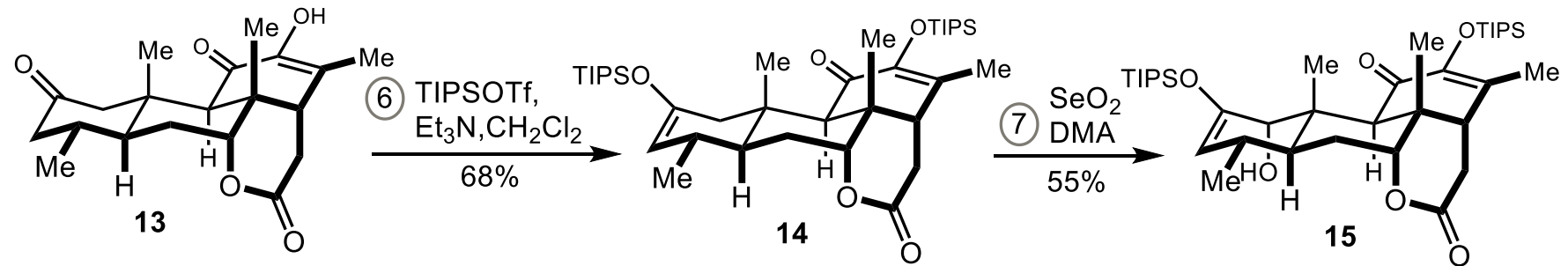






IBX oxidation:





Pfitzner-Moffat Oxidation:

