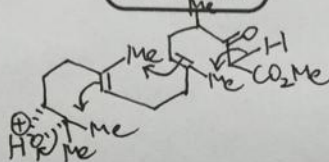
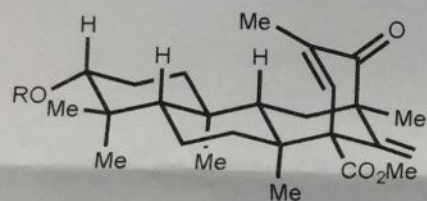


Reagents?
 Hint: two steps
 1. $\text{Me-CH}_2\text{-CO}_2\text{Me}$
 $\text{NaH, } n\text{-BuLi}$;
 2. *m*-CPBA

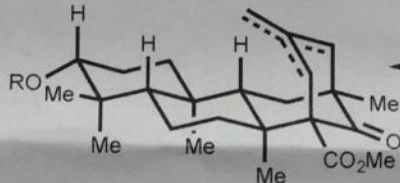
Mechanism?



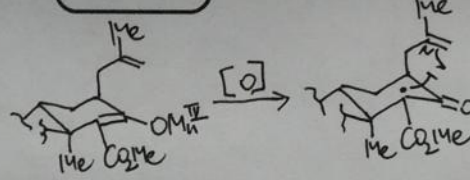
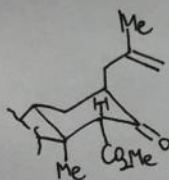
cationic cascade



1. Ph_3PCH_2
 2. $\text{CrO}_3 \cdot \text{DMP}$

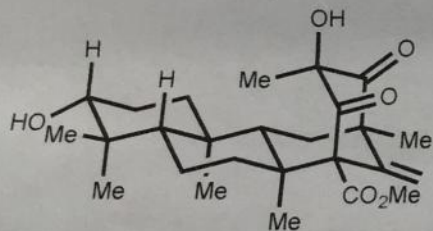


Bonus:
Mechanism



Intermediate and Mechanism

[3,3]-sigmatropic rearrangement



berkeleyone A

Tim, Newhouse; 2017, JACS

mixture of alkenes