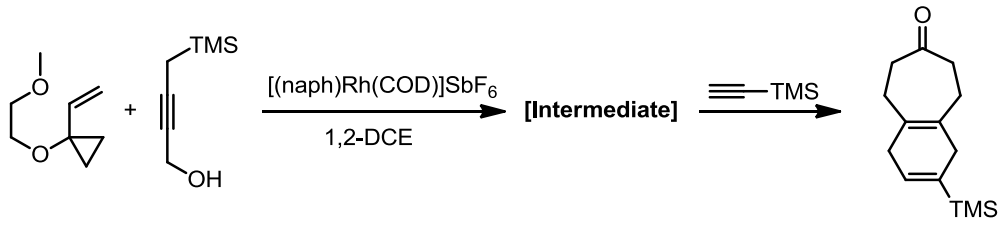
Group Problems 20.05.14

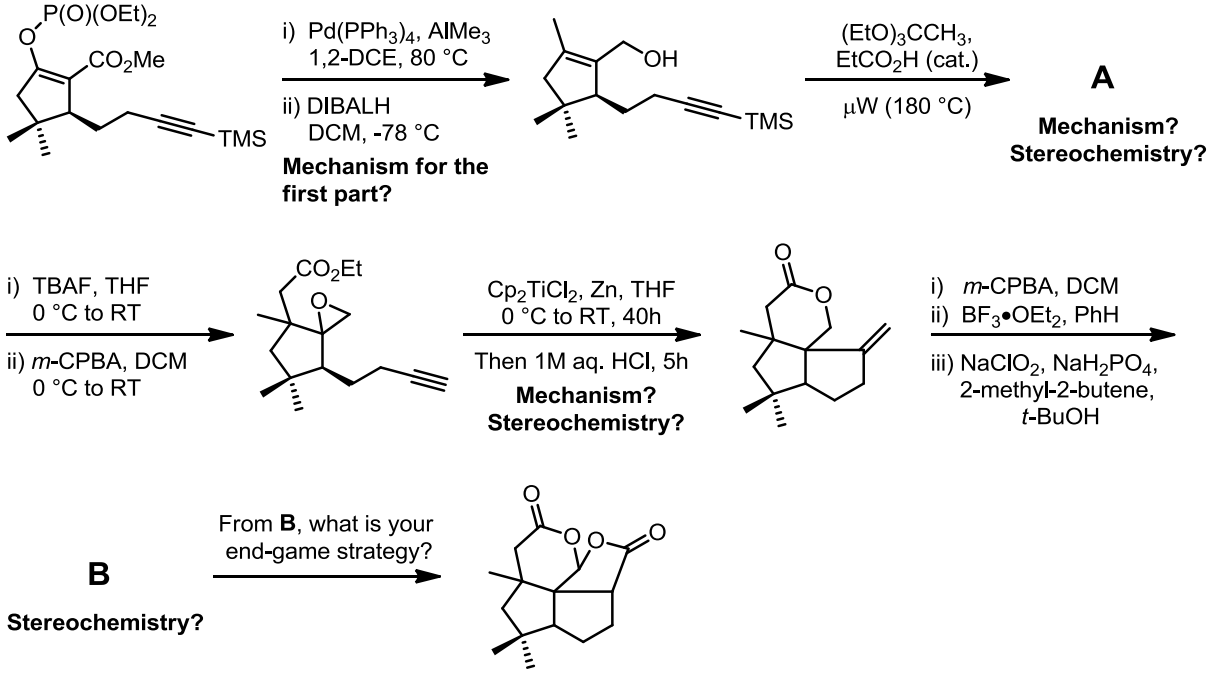
Problem 1

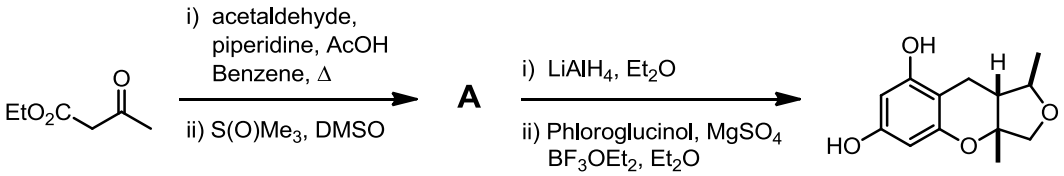
Please identify the intermediate formed and provide a detailed mechanism for the synthesis of this polycyclic compound. The reaction is carried out at RT and upon consumption of VCP, the second alkyne is added. The reaction was quenched with dilute acid.



Problem 2

Provide mechanism and stereochemical rational where indicated as well as providing structures for compounds **A** and **B**. Additionally, having identified **B**, how would you make the bislactone?



Problem 3

Please provide the mechanism for the synthesis of xyloketal H, as well as identifying the structure of **A.**