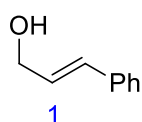


15 March 2016

Group Problems

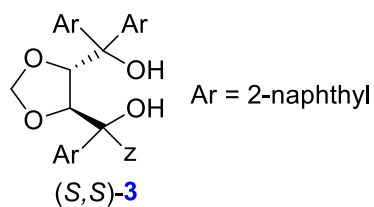
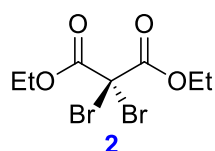
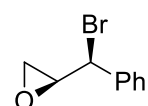
I) Provide a mechanism and explain the stereoselectivity of the following reactions

A)

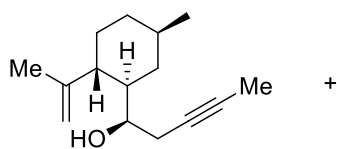


(i) 1.0 equiv. **2**
 $\text{BrTi}(\text{O}i\text{-Pr})_3$ (4.0 equiv.)
20 mol % (*S,S*)-**3**
2:1 $\text{CH}_3\text{NO}_2/\text{PhMe}$
16 h, rt.

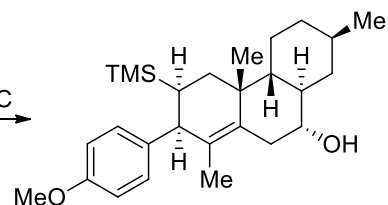
(ii) 2M aq. NaOH
1,4-dioxane



B)



$\text{Ti}(\text{O}i\text{-Pr})_4$, n-BuLi
PhMe, $-78^\circ\text{C} - 50^\circ\text{C}$
then protic quench
 $-78^\circ\text{C} - 0^\circ\text{C}$



II) Please provide a mechanism for each step and Identify **A**, **B** and **C**

