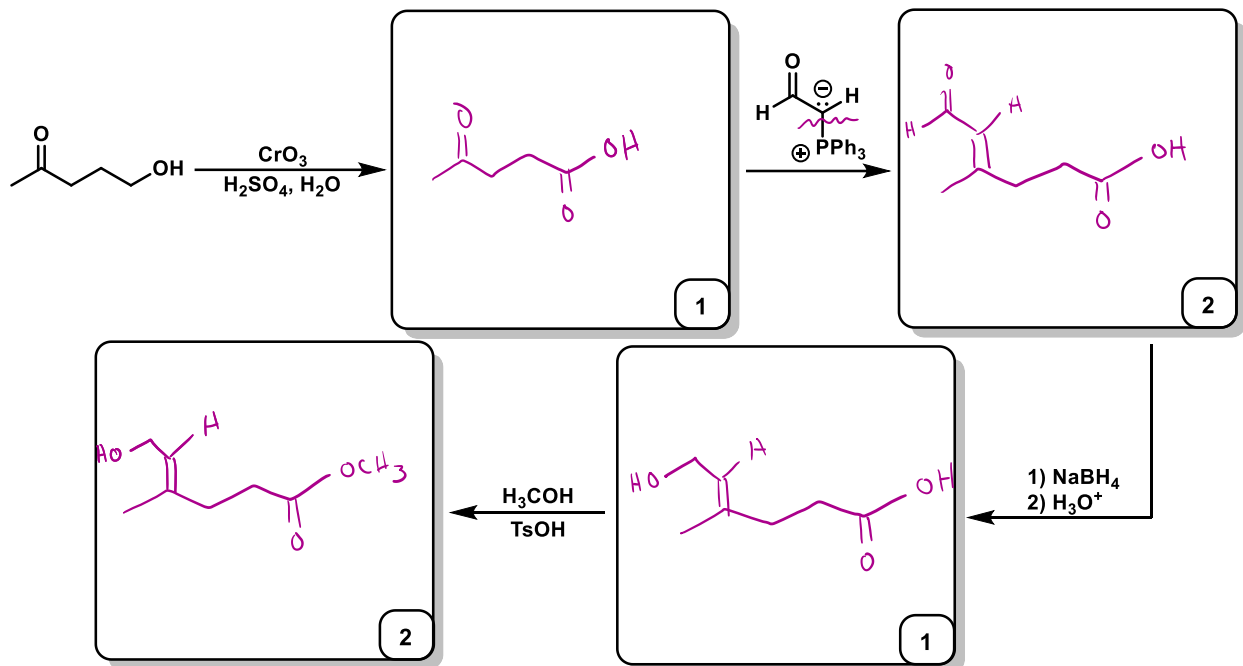
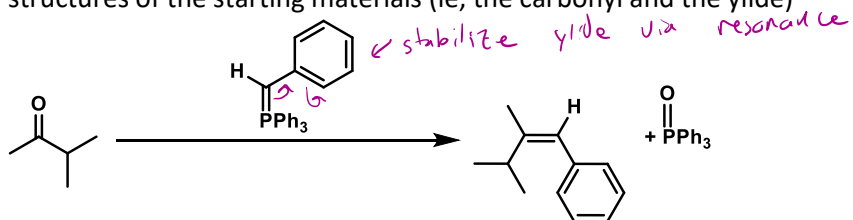


1. **Guided Synthesis.** Complete the synthesis below by filling in each box with the correct products from each reaction.



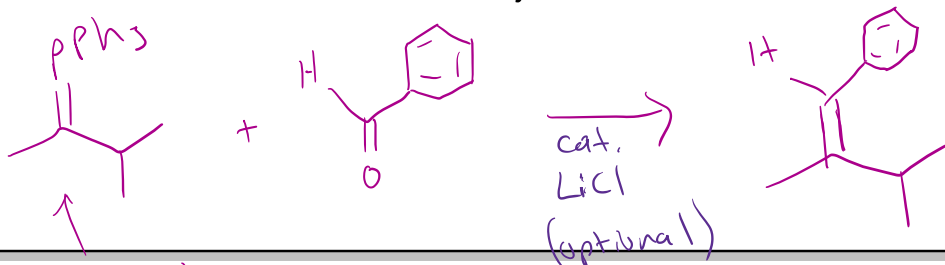
2. **Flawed Synthesis.** The following synthesis will not yield the Z-isomer below as the major product. First, determine what the flaw inherent in the synthesis is, followed by a correction to that synthesis. You can change the structures of the starting materials (ie, the carbonyl and the ylide)



Synthetic Flaw:

Stabilized ylide will give E as the major isomer

New Synthesis:



"simple" unstabilized ylide favors Z (esp. in presence of LiCl)