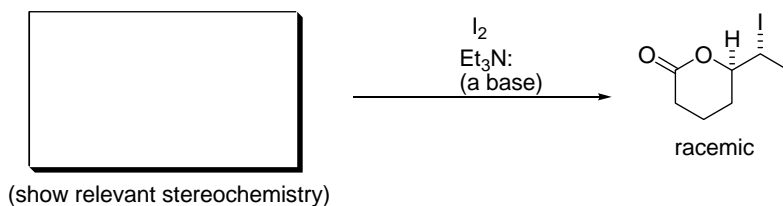
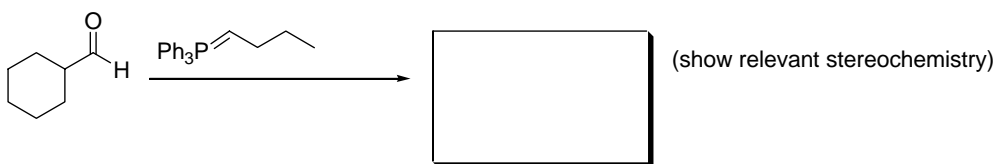
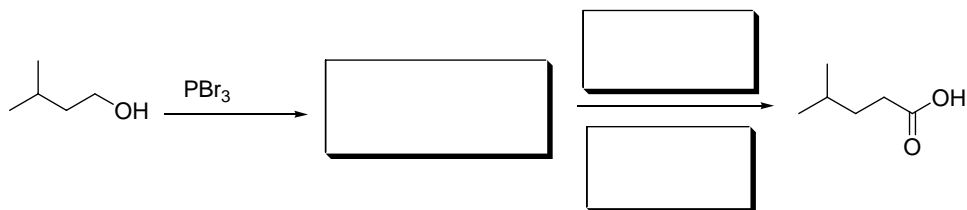
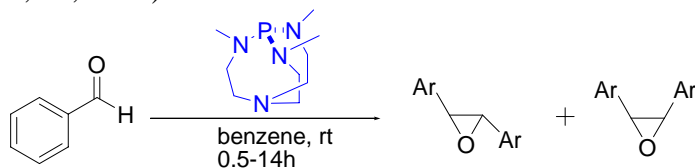


Group Meeting Problems
November 8, 2006

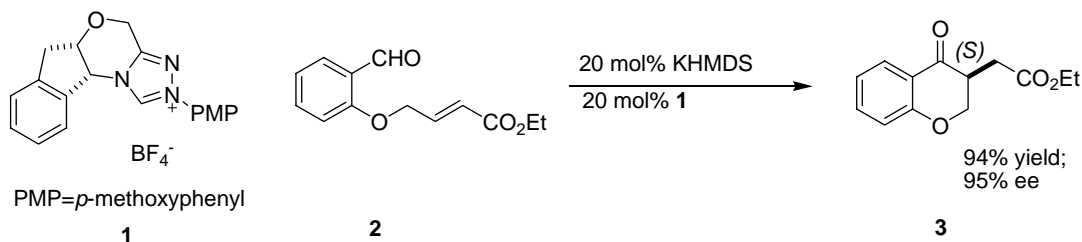
1. - Predict the major product or provide all reagents to accomplish each of the following transformations. (NOTE: More than one step may be required to complete each transformation). Contributor: Eric Jacobsen.
<http://evans.harvard.edu/problems/index.cgi>



2. - Provide a mechanism for the following transformation. (Liu X.; Verkade J.; *J.Org.Chem.* **2000**, 65, 4560)



3. - The development of chiral variants of the Stetter reaction is a current objective in the chemical literature. Such a study has been reported by Rovis and co-workers (*J. Am. Chem. Soc.* **2002**, 124, 10298). In the presence of 20 mol % of thiazolium salt **1**, and an equal amount of KHMDS, **2** is transformed into **3** in 94% yield and 95% ee.



Provide a mechanism for this rearrangement.