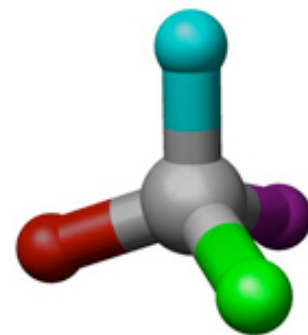
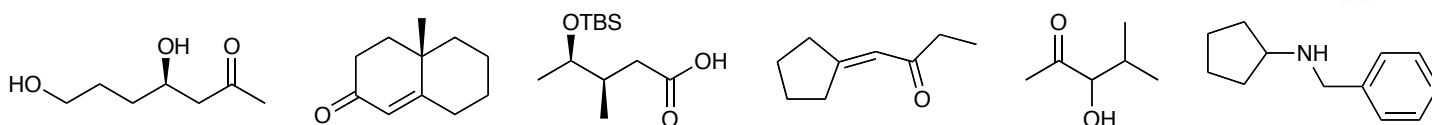


Chemistry 745 - Organic Synthesis

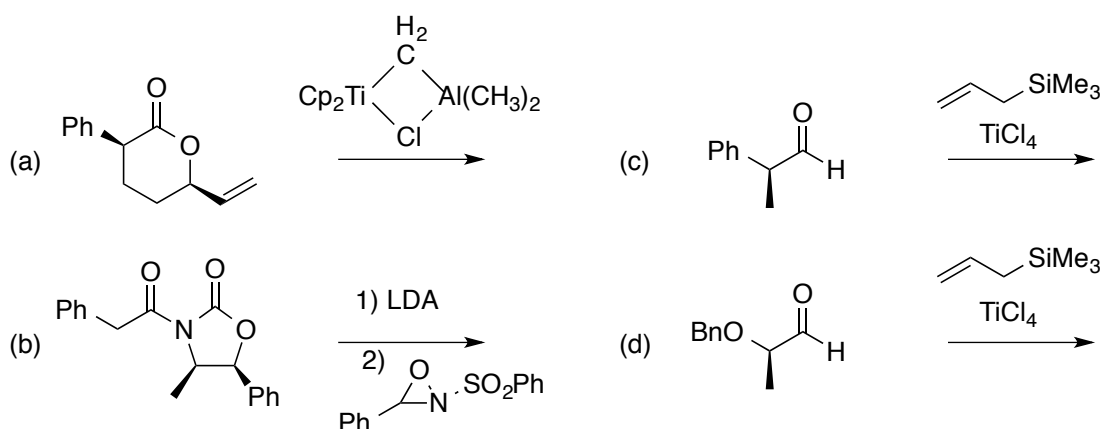
Homework 1 - Due Fri, Feb 13, 2015



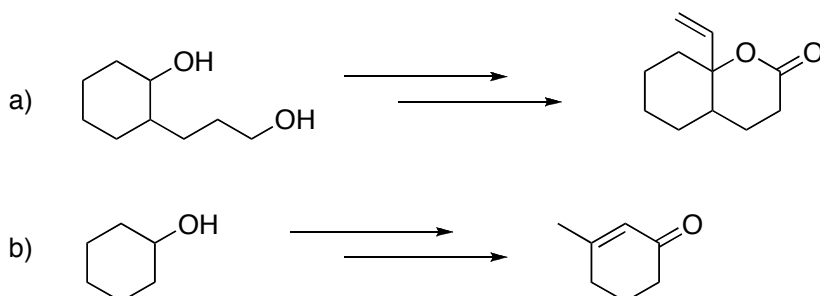
1. Provide a retrosynthesis for the following:



2. Draw the product for the following reaction. Show any stereochemistry and offer an explanation for the anticipated stereoselectivity. Conformational drawings may help.



3. Each of the following requires a multistep synthesis. Suggest a sequence of reactions with specific reagents and conditions to carry out the following syntheses.



4. The structure of the natural product dysidiolide is shown to the right. This compound shows marked inhibition of the growth of human lung carcinomas and leukemia cells. This is a challenging molecule to synthesize. Indicate what you see are key disconnections that may be useful for making dysidiolide. I do not want a full retrosynthetic analysis. Just indicate five key carbon-carbon bond disconnections and describe the rationale for your approach.

