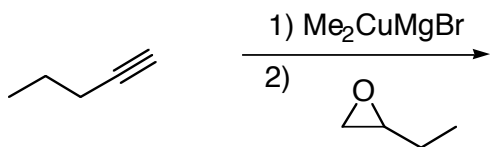


Chem 634
Professor Fox
Exam 2
May 4, 2004
1 hour 15 min

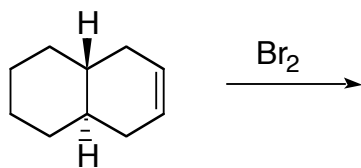
Your Name _____

1. Show the products of the following transformations. Mechanistic details are not required, but be sure to indicate relative stereochemistry where necessary (four parts; 5 points each)

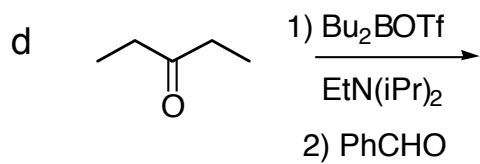
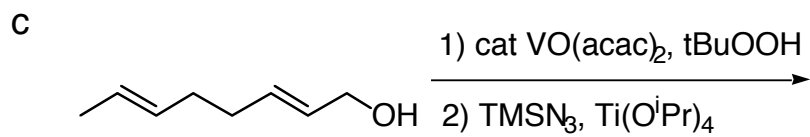
a



b

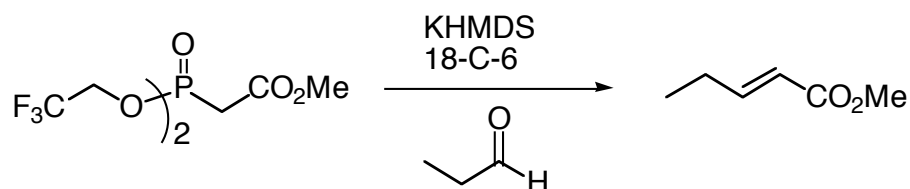


1. (continued)

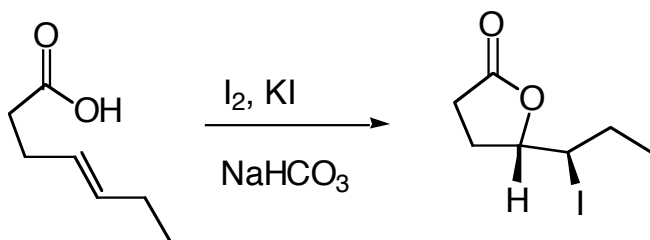


2. Predict if each of the following reactions would proceed as written. If you feel that the reaction would proceed, simply write "will proceed as written". If you feel that the reaction would not proceed as written, provide a brief but detailed explanation, and indicate the structure of the product(s) that would be formed instead of (or in addition to) the product that is drawn (5 points each).

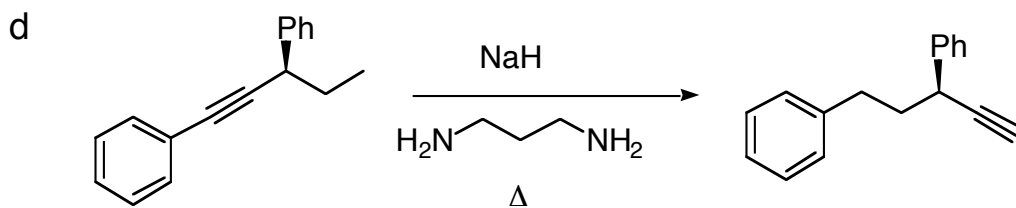
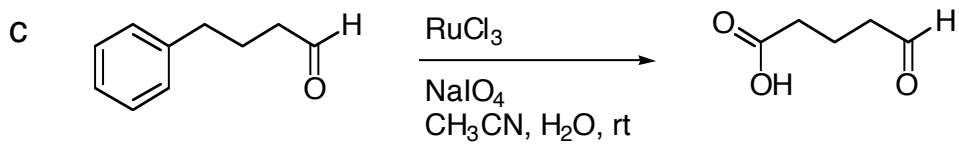
a



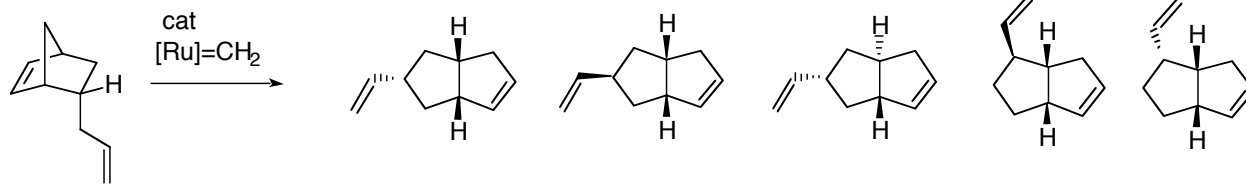
b



2. (continued).

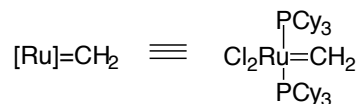


3. The reaction below gives only one of the five products below.



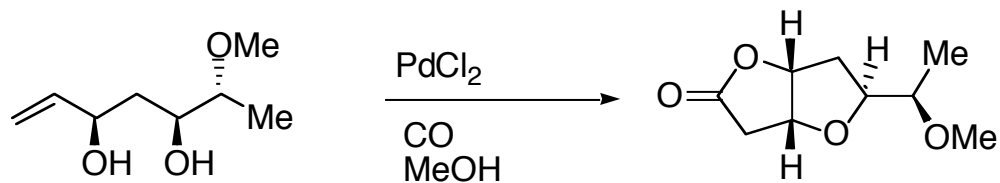
- a. Circle the correct structure
b. Provide a detailed arrow pushing mechanism for its formation.

(20 pts)



using the abbreviation $[Ru]$ is sufficient for this problem

4. Provide a detailed arrow pushing mechanism (20 points)



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5. Outline a multistep synthesis using any materials with 6 carbons or less(20 points)

