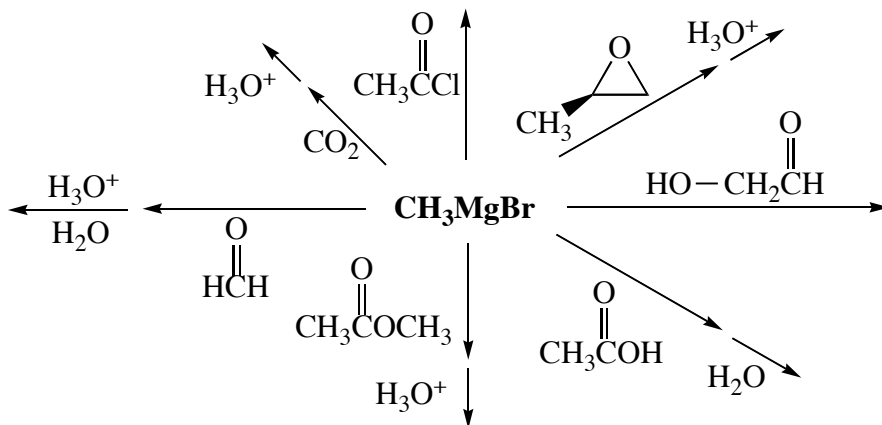
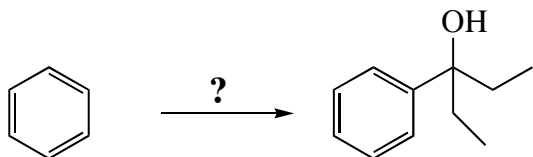


51C Practice Problems 4
Spring, 2019

1. Predict the products from the following reactions:

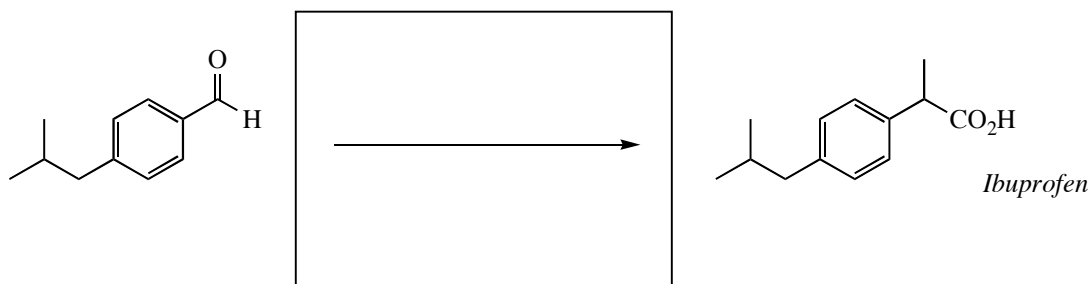


2. Provide two different routes to the following alcohol starting from benzene:

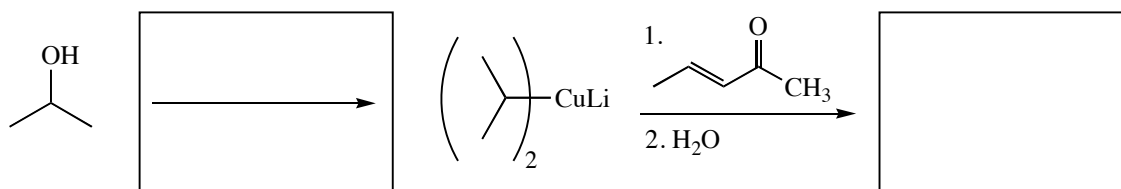


From previous midterms:

3. Show how to synthesize ibuprofen, the active ingredient in Advil[®] and Motrin[®] from the given starting material. Number individual steps.



4. Provide reagents and major product for the following transformation:



5. Show how to synthesize the following product from the given starting material. Show reagents and products for each step.

