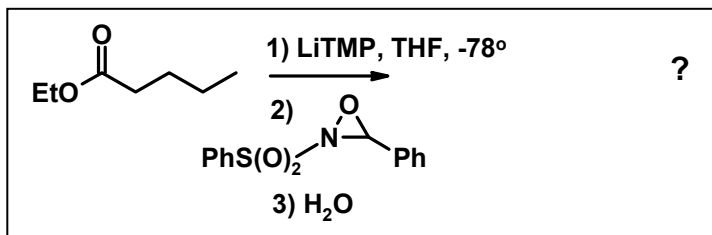


Midterm Exam
Chemistry and Biochemistry
59-431/531

Time 50 minutes

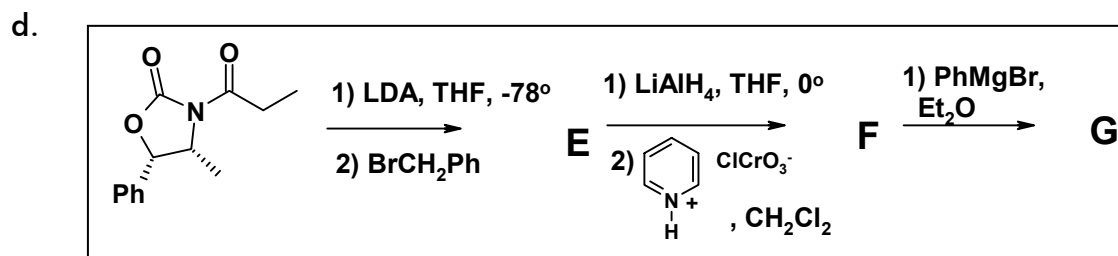
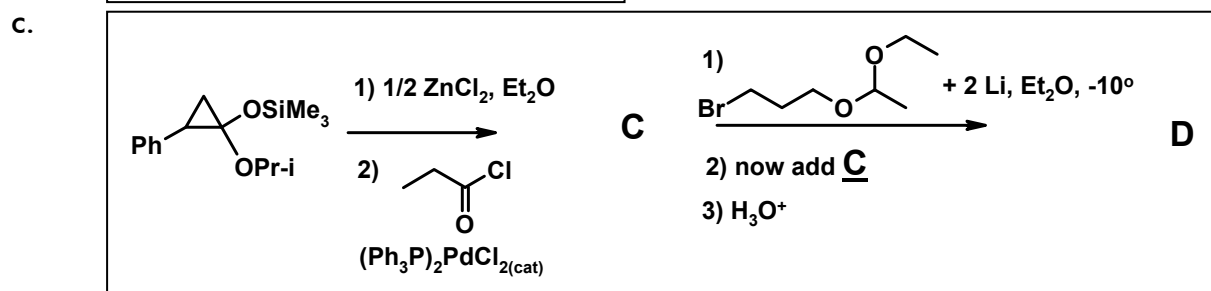
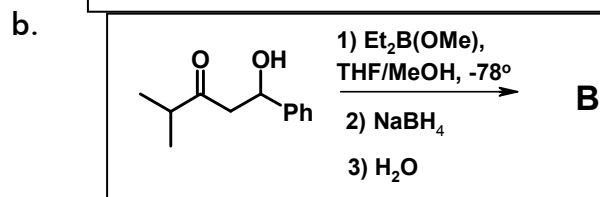
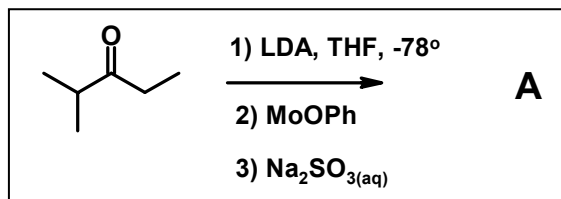
Nov. 15, 2000

- 1** Show the mechanistic steps for step 2 in the following transformation. Include the correct enolate geometry and the final product in your answer. I have made one poor decision here. What is it, and what are its consequences (show how that consequence arises).



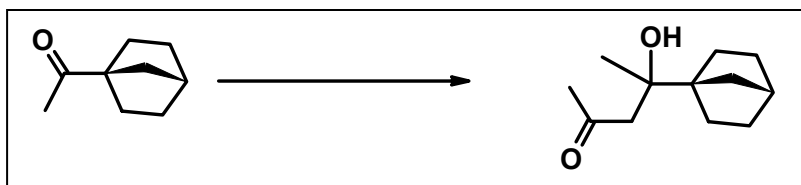
- 2** Indicate the structure of the major expected product of each of the following transformations. Include the product stereochemistry where it applies. Mechanisms are not necessary, but showing your work may be a help. *I also wish to see isolable intermediates along the way.*

a. What is the structure of MoOPh?

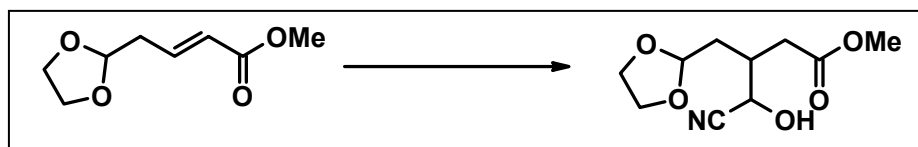


3. Show by equation how you would prepare the products illustrated from the given starting material. You may use any other reagent you deem fit. Show all reagents, conditions, and isolable intermediates. Mechanisms are not necessary, but showing your work may be a help.

a.



b.



c.

