

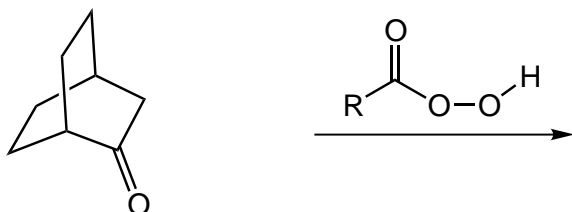
# Organic Chemistry c3444y

## Problem Set 4 - Aldehydes and Ketones

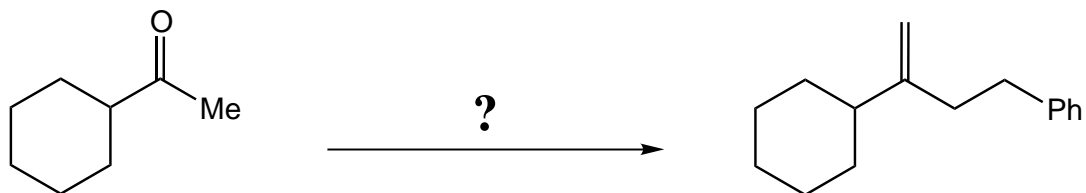
Relevant book problems: 18.48 (not necessarily the way the book does it), 19.32-19.35, 19.47, 19.48, 19.55

Relevant reading: 19.14, 19.16 (IR), pages 869-870 (reduction of esters), pages 877-878 (reduction and alkylation of nitriles), 22.5, 22.6, 22.8 (just the part about simple alkylation of enolates).

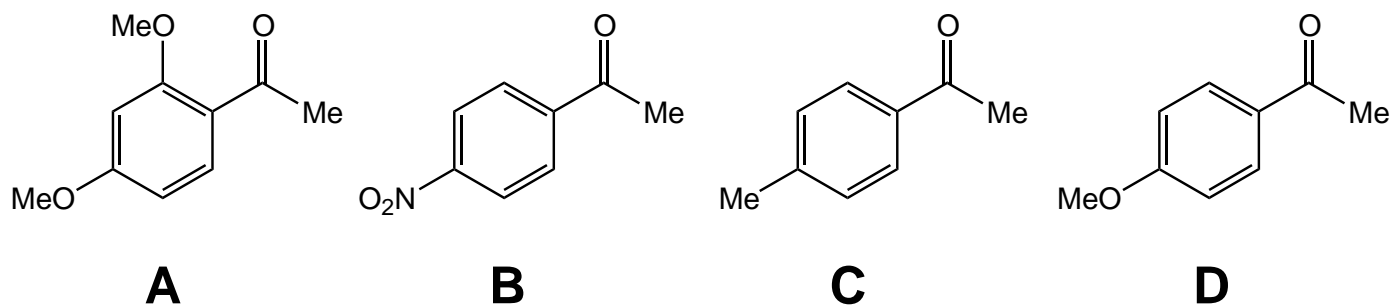
1. Write out a mechanism for, and predict the product of the following Baeyer-Villiger oxidation:



2. Propose a synthesis to accomplish the following transformation:



3. Rank the four ketones shown below in order of increasing  $C=O$  stretching frequency in the IR spectra.



4. Propose a synthesis to accomplish the following transformation:

