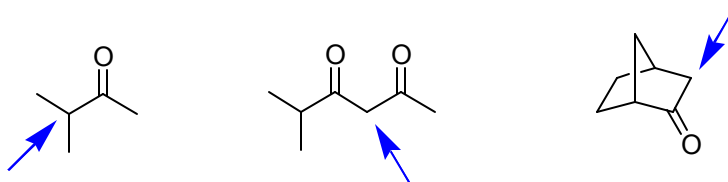


Section Solution Set

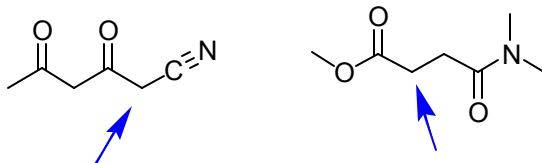
Carbonyl Chemistry III, Reactions at the Alpha Position

Problem 1 Acidity of organic compounds.

a) Identify the most acidic proton in each of the following compounds.

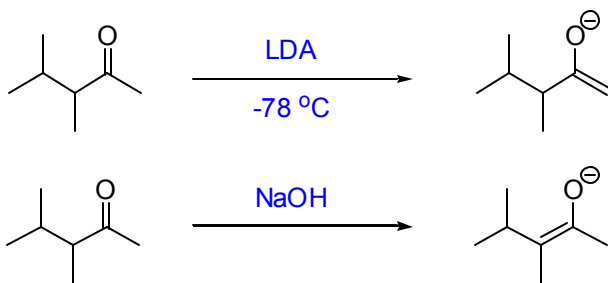


lone pair orbital at the bridgehead
would not align well with the
carbonyl group

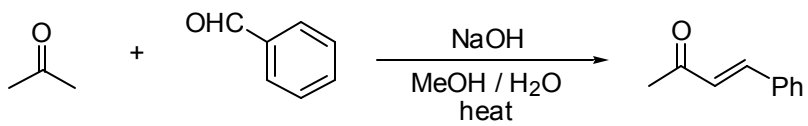


the lone pair on nitrogen donates more
electron density into the carbonyl group of
the amide than the oxygen lone pair
donates into the carbonyl group of the
ester, making the amide carbonyl less able
to stabilize any negative charge density at
its alpha position

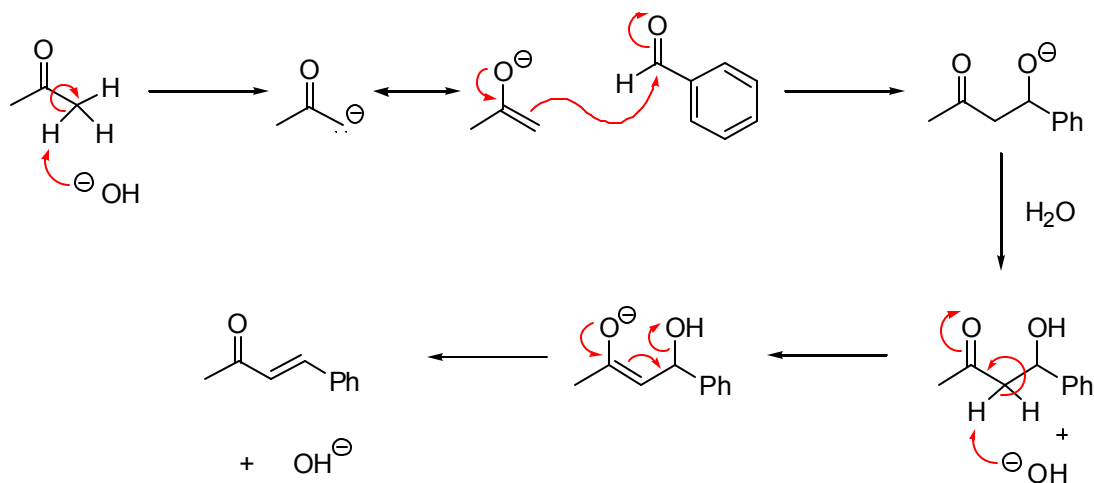
b) Provide the necessary reagents to generate the enolates shown.



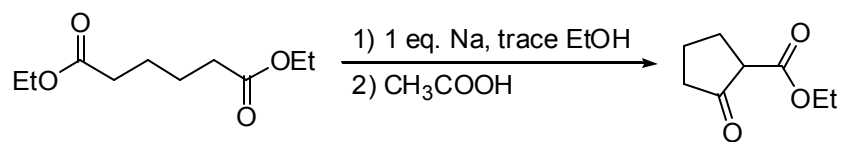
Problem 2 Propose a mechanism for this run-of-the-mill mixed Aldol condensation.



Solution



Problem 3 The Dieckmann reaction has a really cool sounding name. Provide a mechanism for it.



FYI:



Solution

