B α-Alkylation Of Carbonyl Compounds Under Strongly Basic Conditions

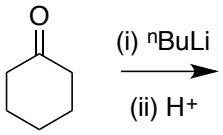
C-Alkylation Of Ketones

Stronger bases than HO^- drive most ketones to exist predominantly as enolates, but may also be *nucleophilic / electrophilic* enough to react at the carbon of carbonyl groups.

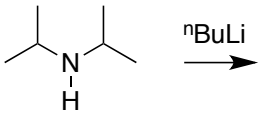
Deprotonation of simple carbonyl compounds in preference to addition to the carbonyl group of these compounds, requires a base that is *strong / weak* and *nucleophilic / non-nucleophilic*.

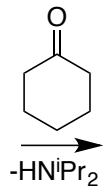
One strategy to favor deprotonation of carbonyl compounds is to use *small / hindered* alkali metal amides.

Draw products of the following reactions.



tertiary alcohol





lithium diisopropylamide LDA
pKa 35 / 10 / -5

enolate