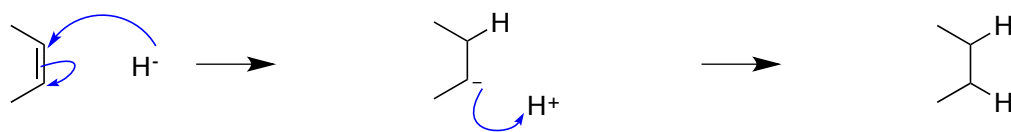


Hydridic Reductions

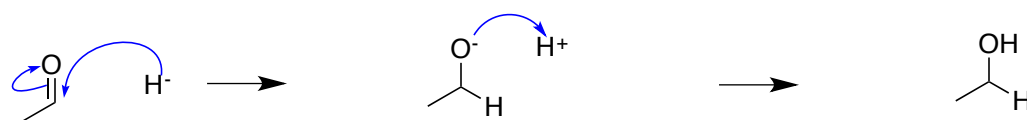
from chapter(s) _____ in the recommended text

A. Introduction

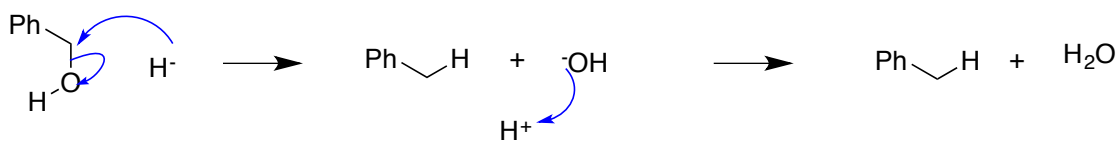
B. Mechanism



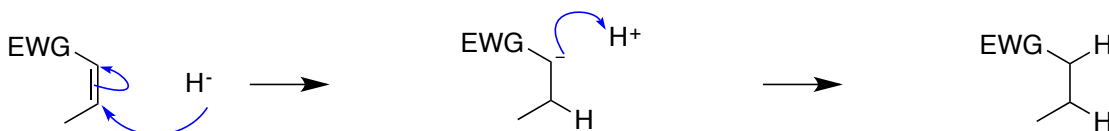
hard



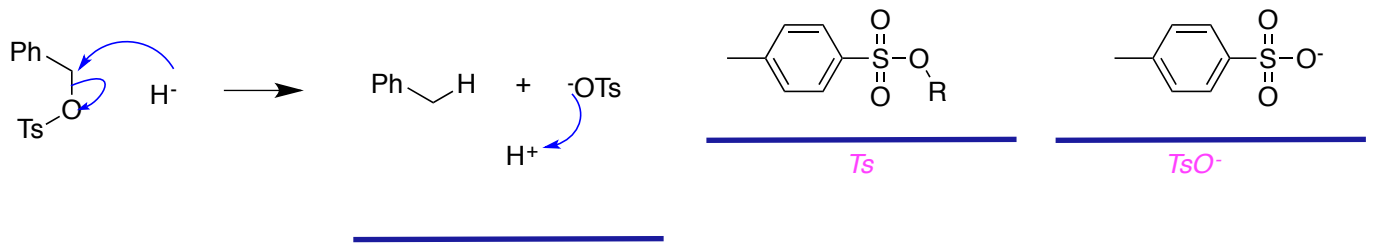
easy



hard



easy



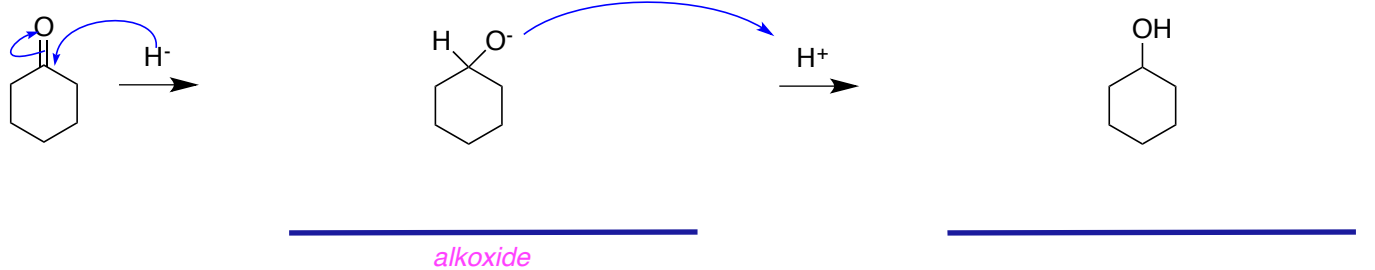
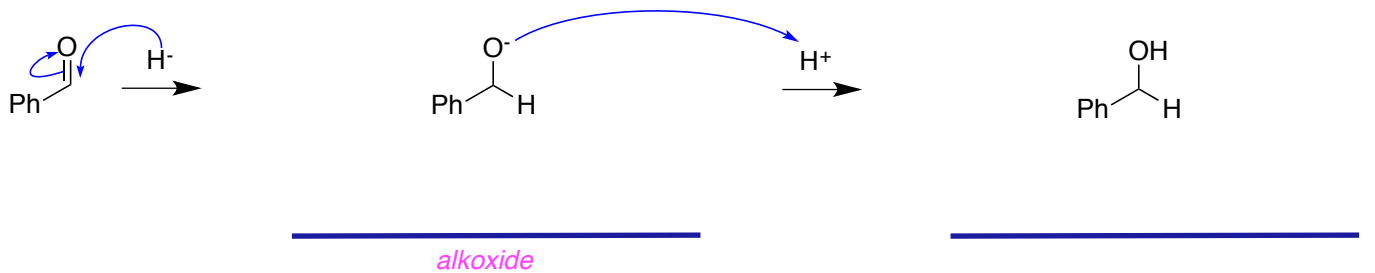
easy to reduce
hard to reduce them

tosylates are
tosyl groups are
ionic
chemoselective reductions

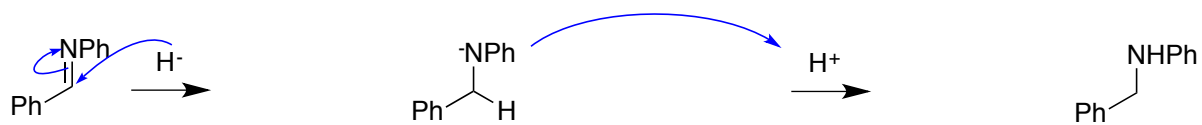
do not tend

C. Substrate Scope

One Reduction



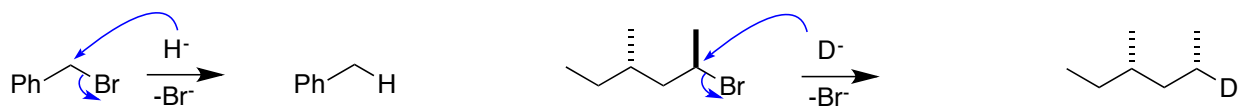
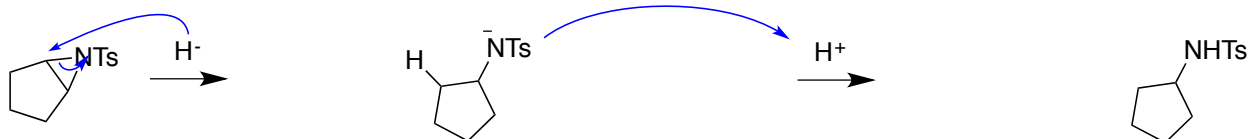
NaBH₄ because



amide anion

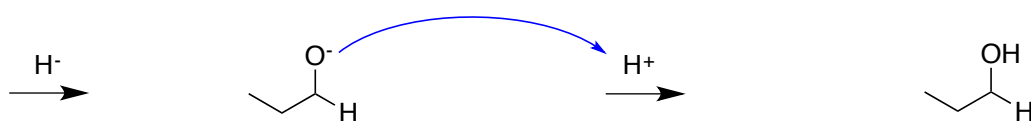
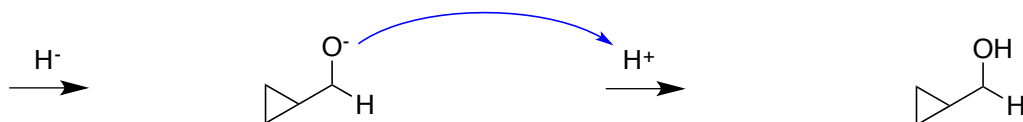
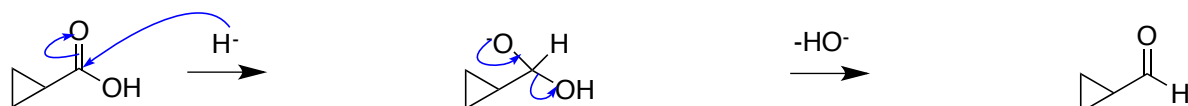


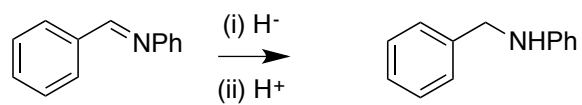
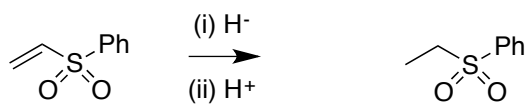
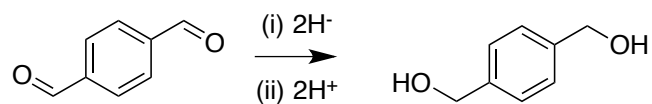
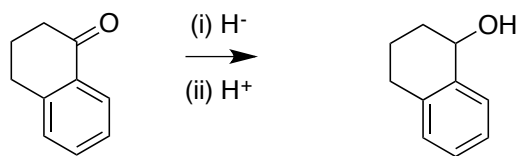
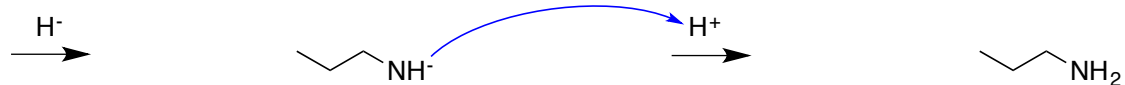
alkoxide



It takes 2

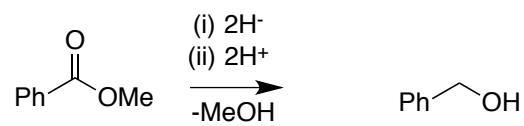
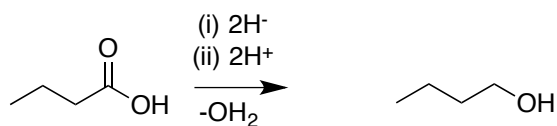
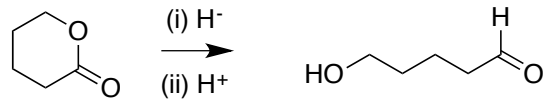
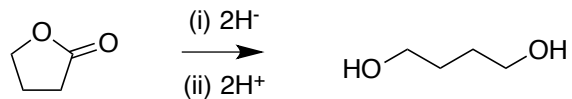
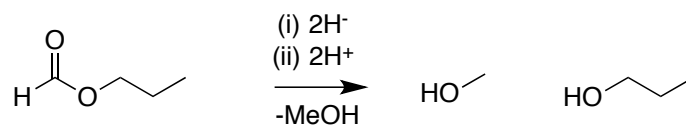
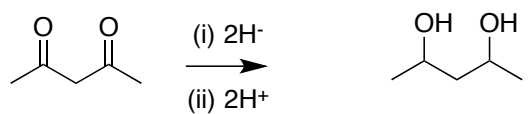
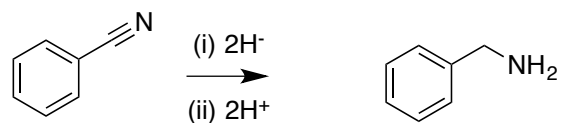
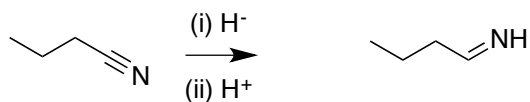
Two Step Reductions

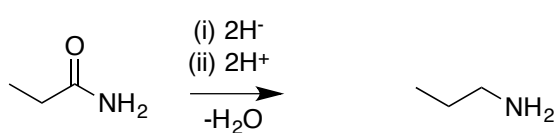
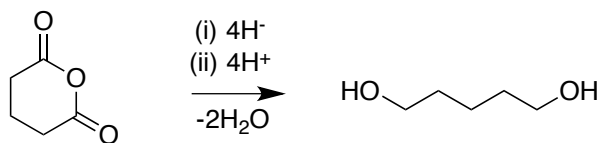
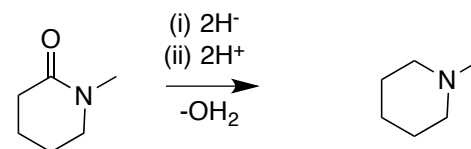
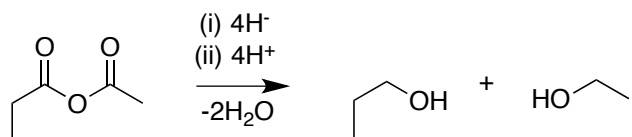
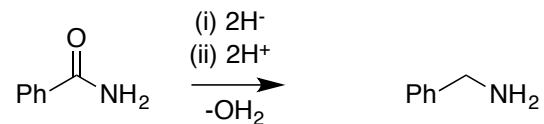
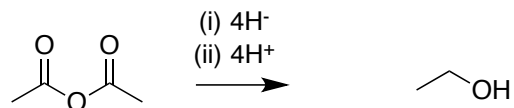
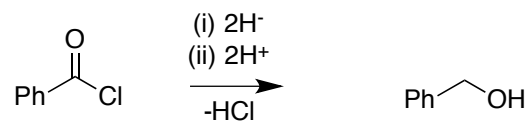
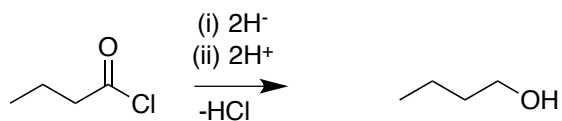
*alkoxide**alkoxide*



sulfone

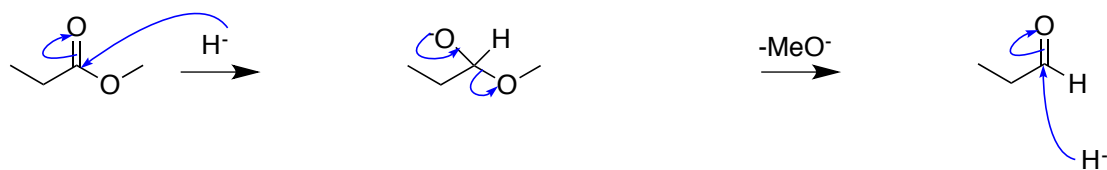
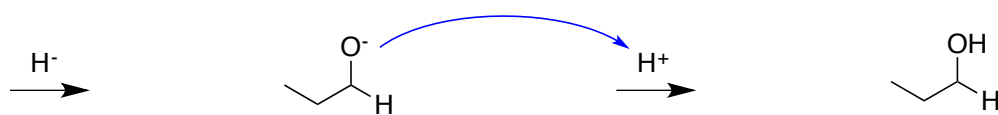
imine



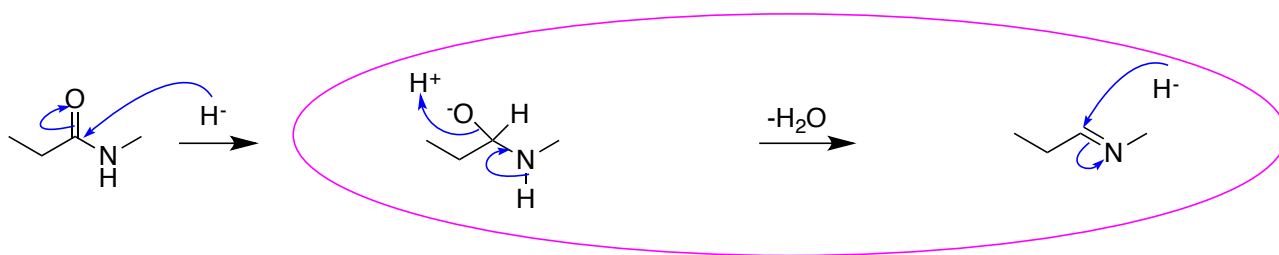
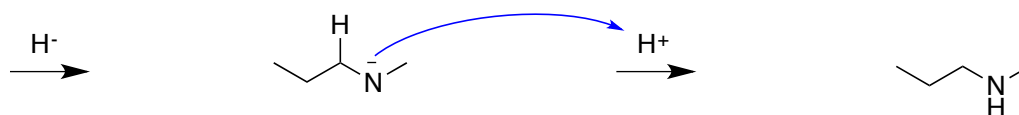


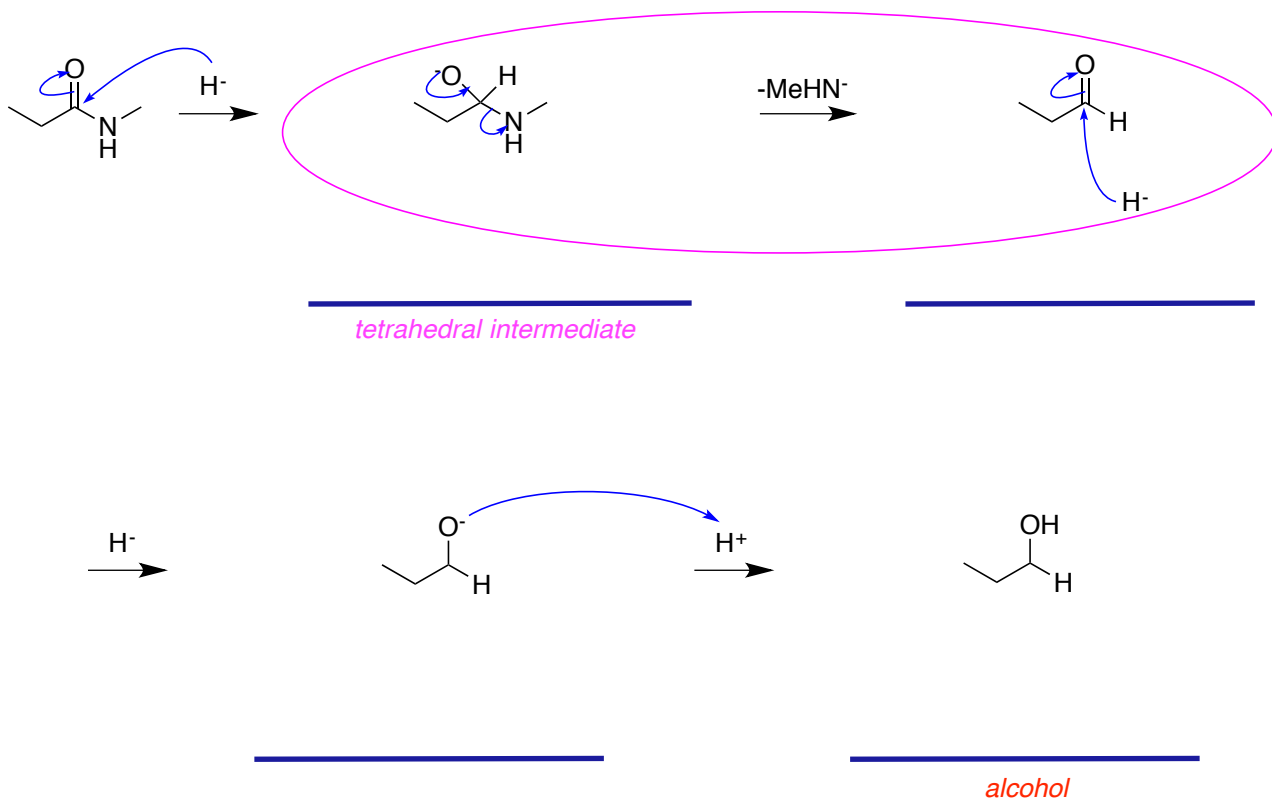
Difference Between Hydridic Reductions Of Amides And Esters

a

*tetrahedral intermediate**aldehyde**alkoxide*

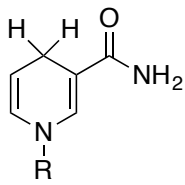
b

*tetrahedral intermediate**imine**amine*

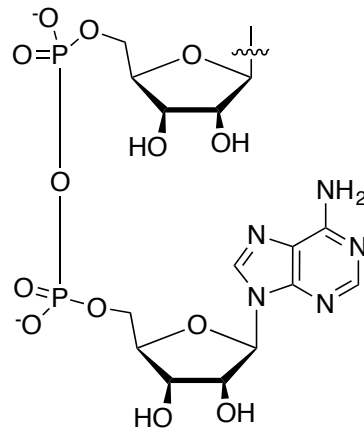
cmechanism **b**.

Because the amine anion is not a good leaving group.

D. NADH: A Hydride Source *In Vivo*



R =



NADH full name: Reduced nicotinamide adenine dinucleotide



*by-product full name:
Nicotinamide adenine
dinucleotide (NAD)*

is *NADH*.

