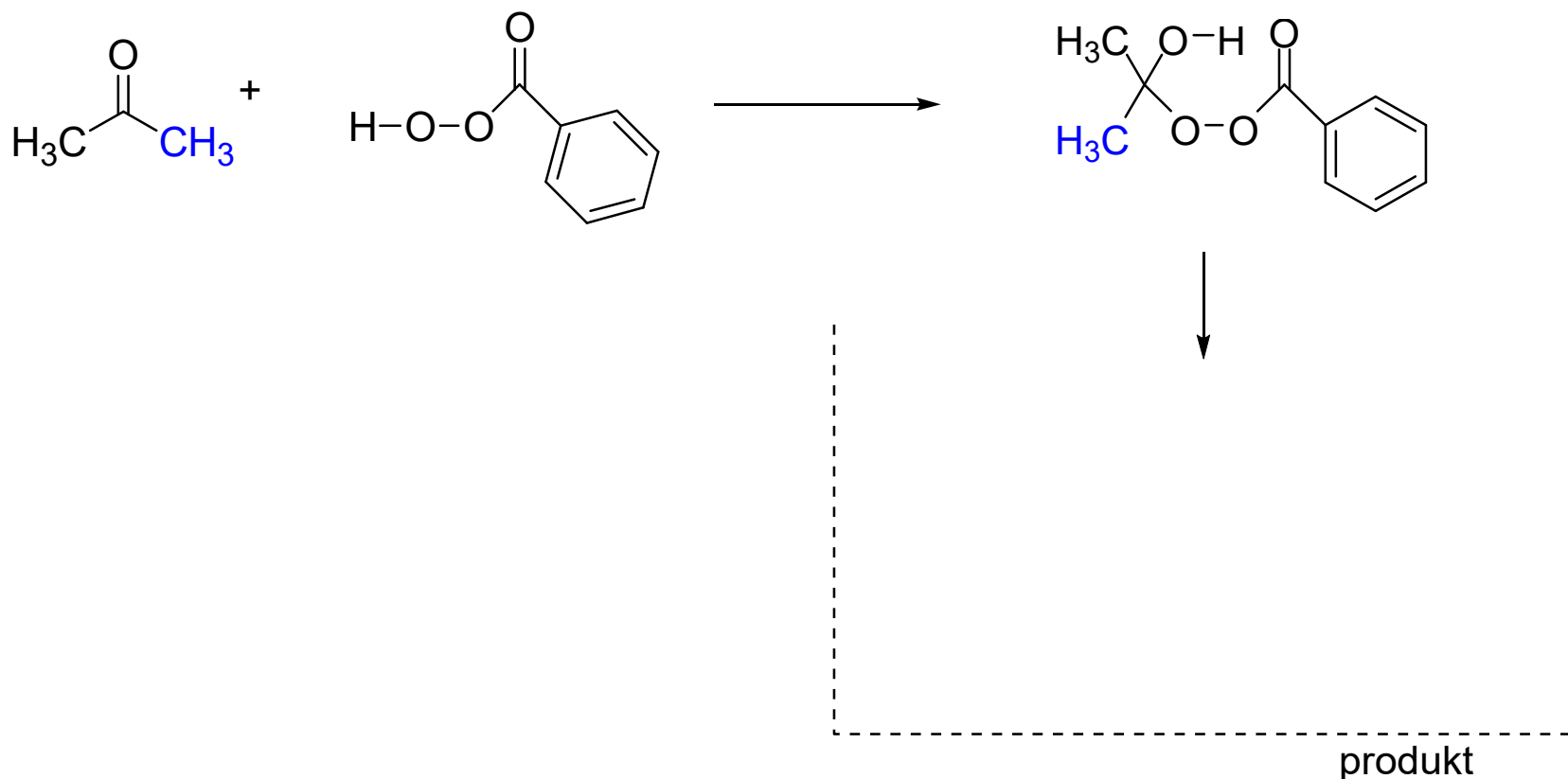


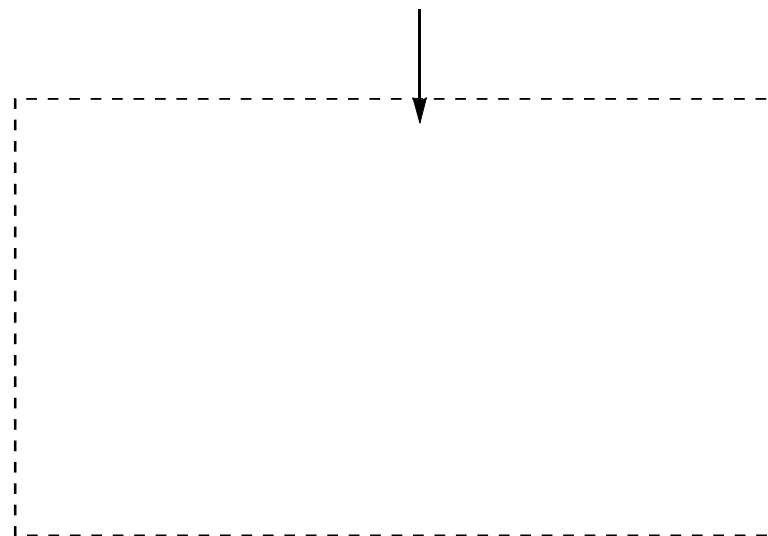
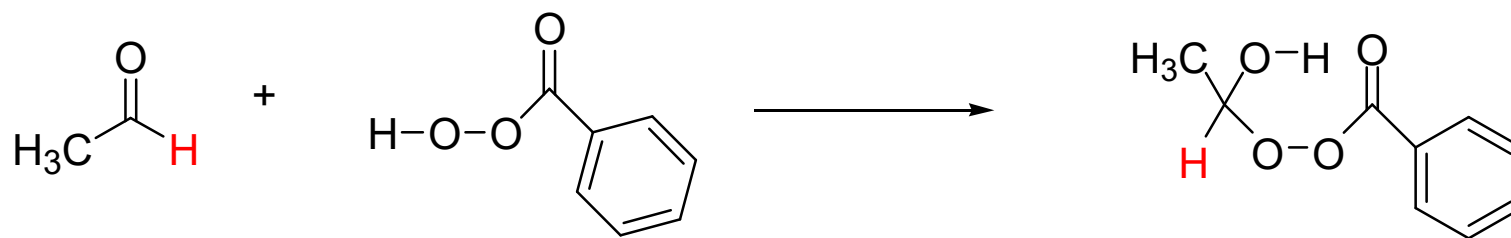
Bayer – Villigerova oxidace



Pomůcka: migrační schopnost skupin
methyl < primární < fenyloxy = sekundární < terciární < H



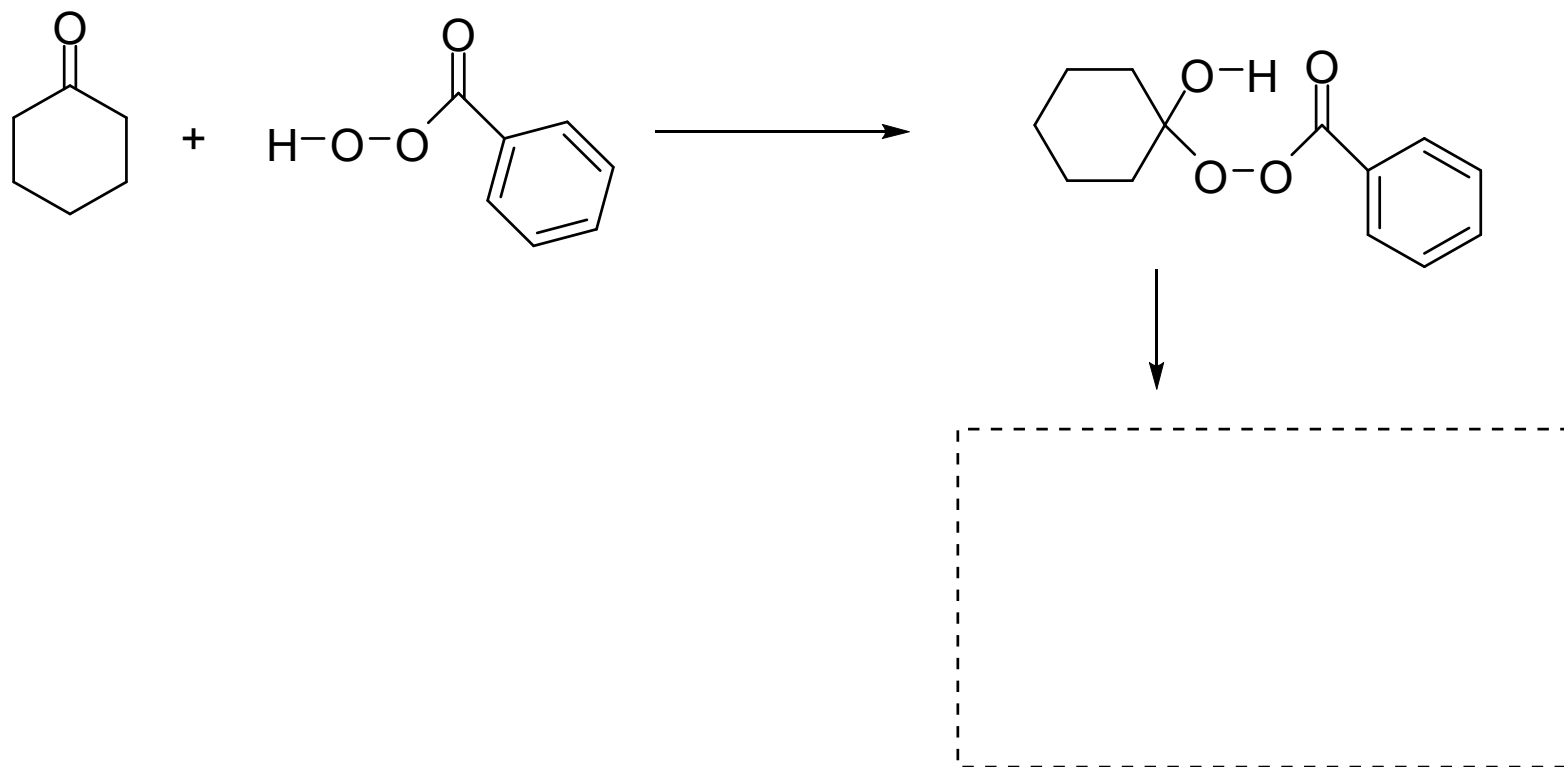
Bayer – Villigerova oxidace



Pomůcka: migrační schopnost skupin
methyl < primární < fenyloxy = sekundární < terciární < H



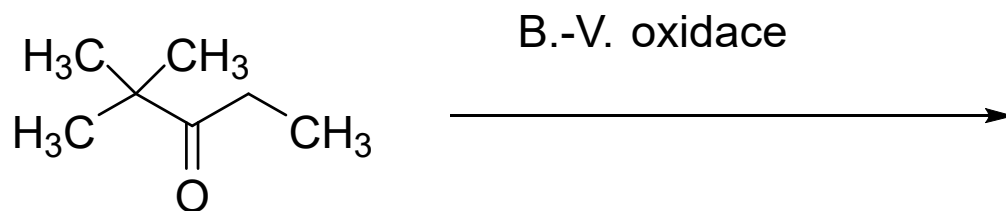
Bayer – Villigerova oxidace



Pomůcka: migrační schopnost skupin
methyl < primární < fenyl = sekundární < terciární < H



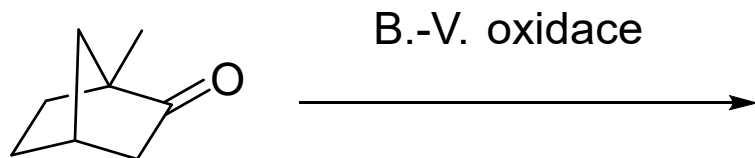
Bayer – Villigerova oxidace



Pomůcka: migrační schopnost skupin
methyl < primární < fenyl = sekundární < terciární < H



Bayer – Villigerova oxidace



Pomůcka: migrační schopnost skupin
methyl < primární < fenyl = sekundární < terciární < H

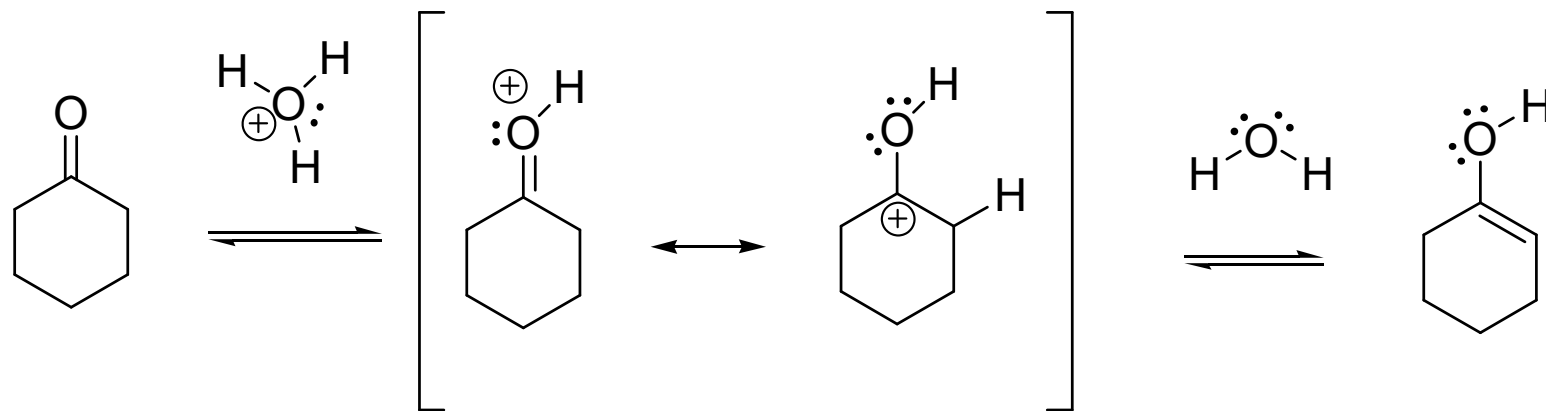


ENOLY A ENOLÁTY

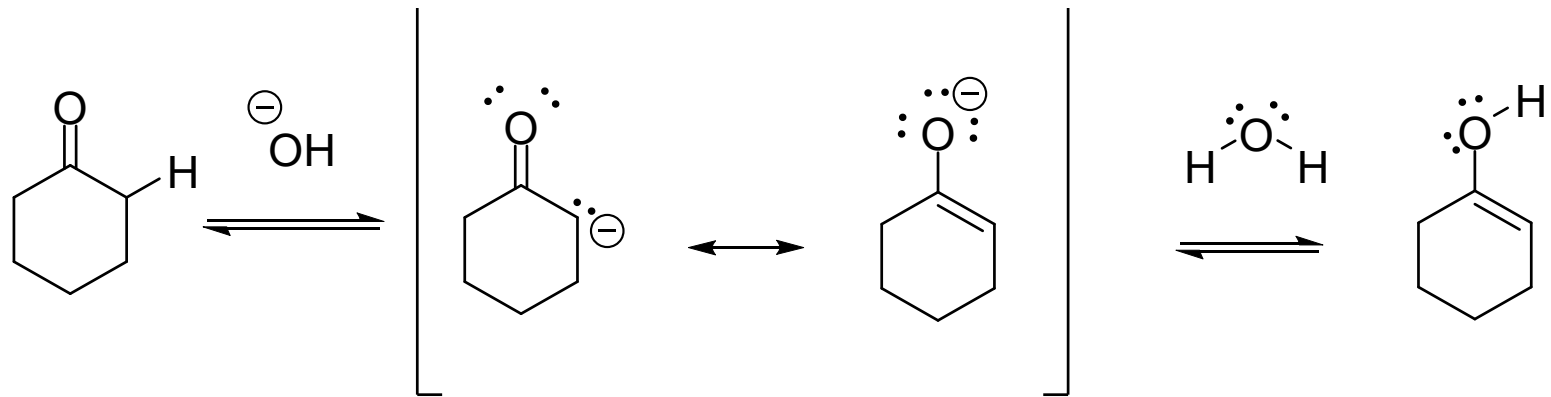


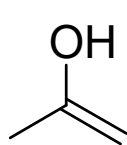
	pK_a		pK_a
$R-CH_2-C(=O)-NH_2$	30		
$R-CH_2-C(=O)-OR^1$	25	$RO-C(=O)-CH_2-C(=O)-OR$	13
$R-CH_2-C(=O)-R'$	20	$R-C(=O)-CH_2-C(=O)-OR^1$	11
$R-CH_2-C(=O)-H$	17	$R-C(=O)-CH_2-C(=O)-R$	9
$R-CH_2-C(=O)-Cl$	16	$H-C(=O)-CH_2-C(=O)-H$	5

Keto – enol tautomerie kyselá katalýza

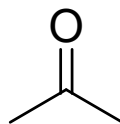


Keto – enol tautomerie bazická katalýza

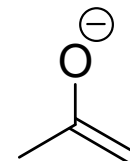




kyselá nebo
bazická katalýza



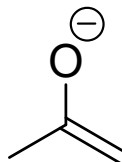
silná báze
aprotické rozpouštědlo THF

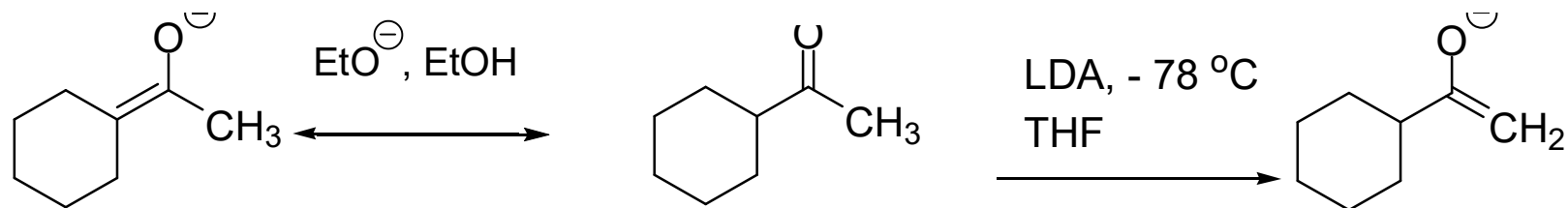


kompletní "nevratná" deprotonace

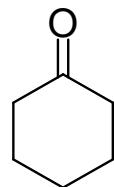


EtO^-
 EtOH

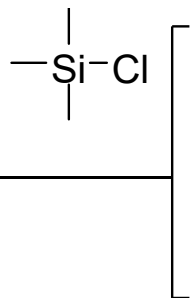




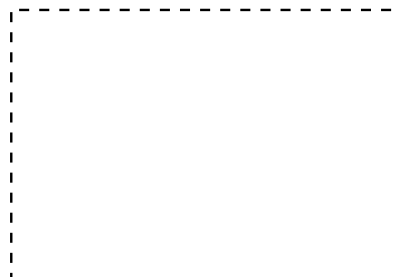
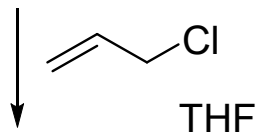
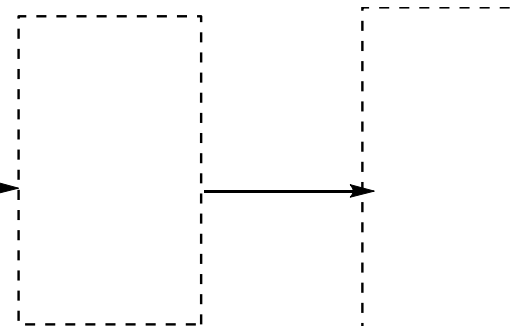
O- versus C-alkylace



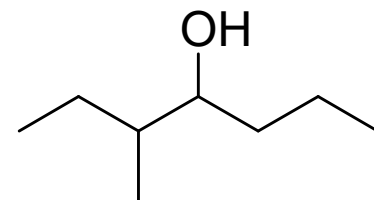
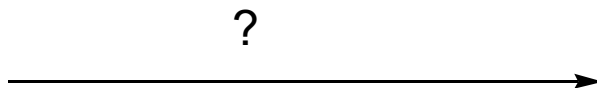
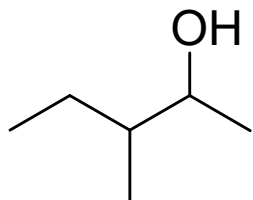
LDA



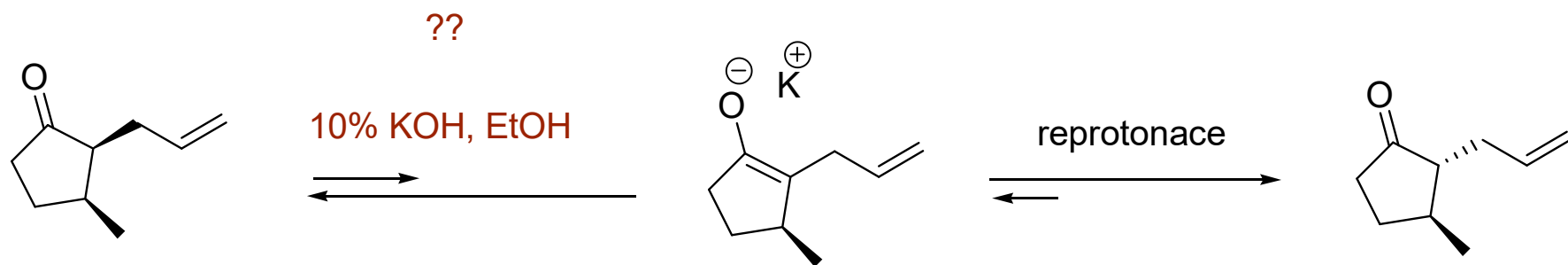
H_3O^+



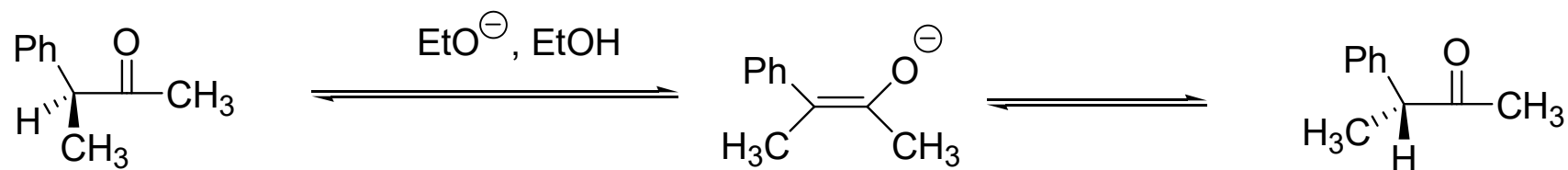
Navrhněte následující syntézu



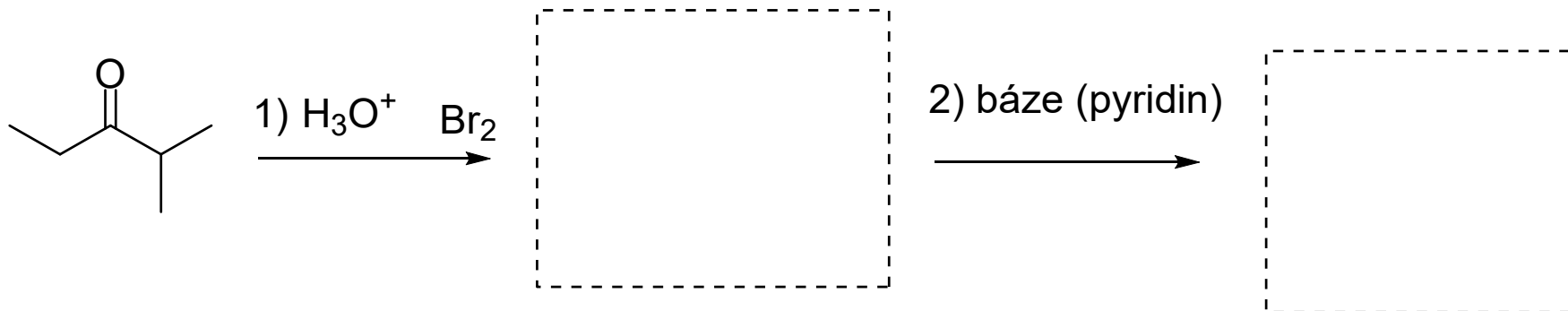
Bazicky katalyzovaná izomerace na alfa-substituovaném ketonu

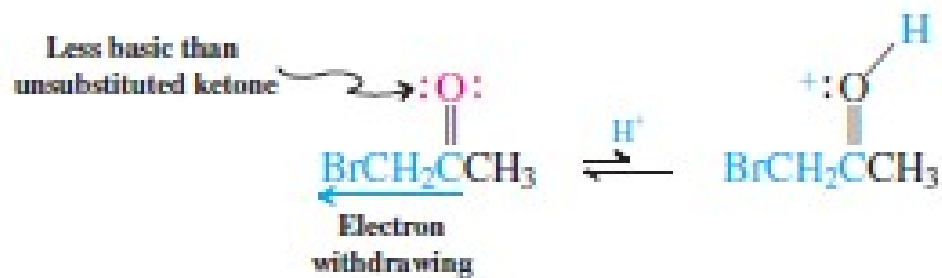
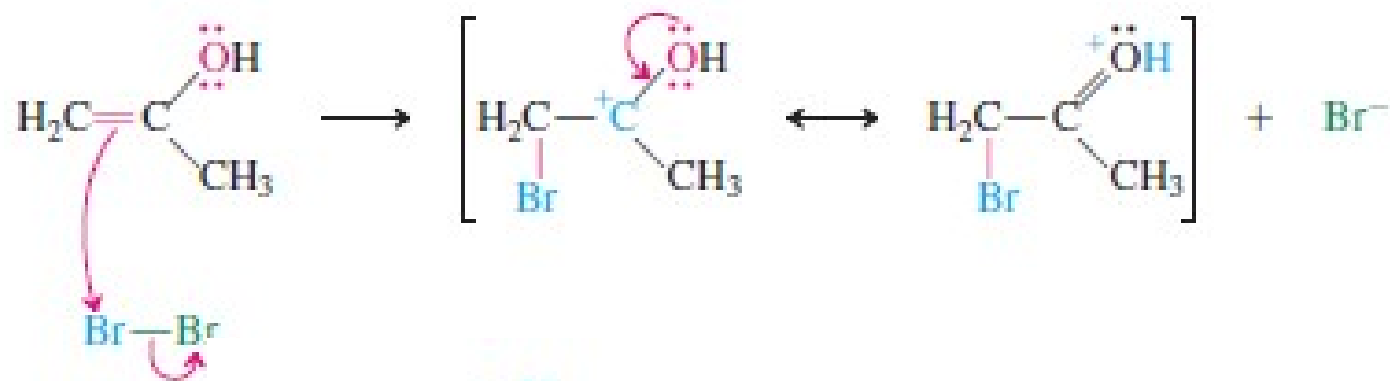
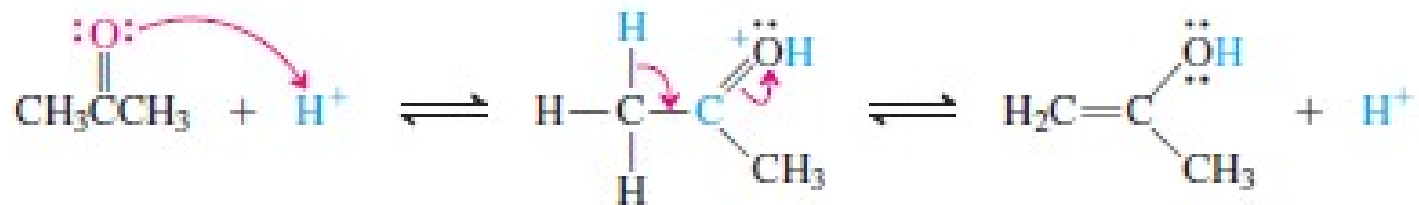


Racemizace opticky aktivního 3-fenylbutan-2-onu

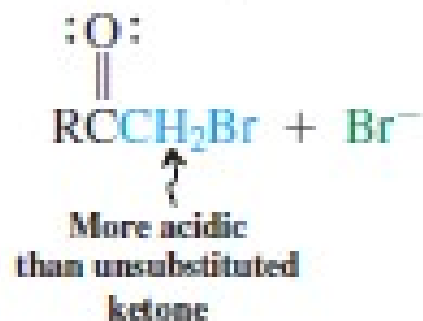
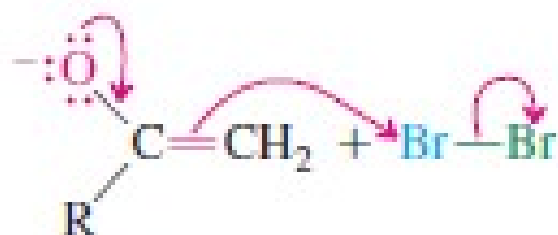


Doplňte produkty uvedených reakcí

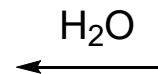
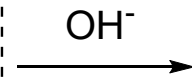
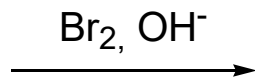
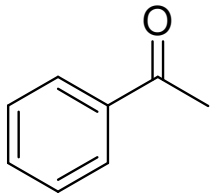
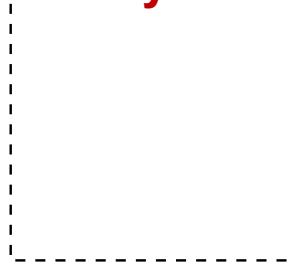
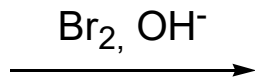
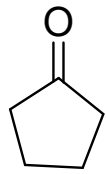




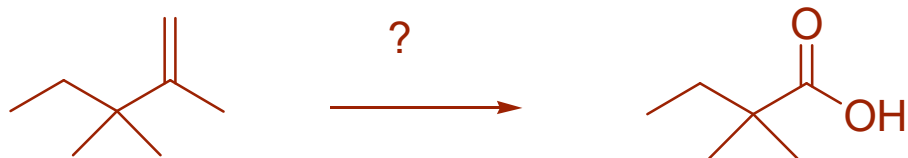
Mechanism of Halogenation of an Enolate Ion



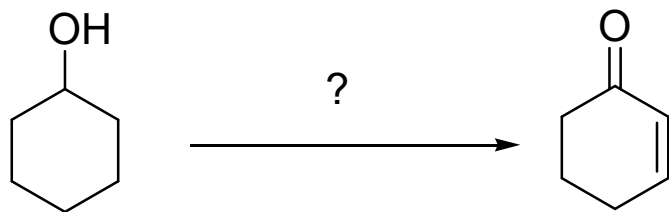
Doplňte produkty uvedených reakcí



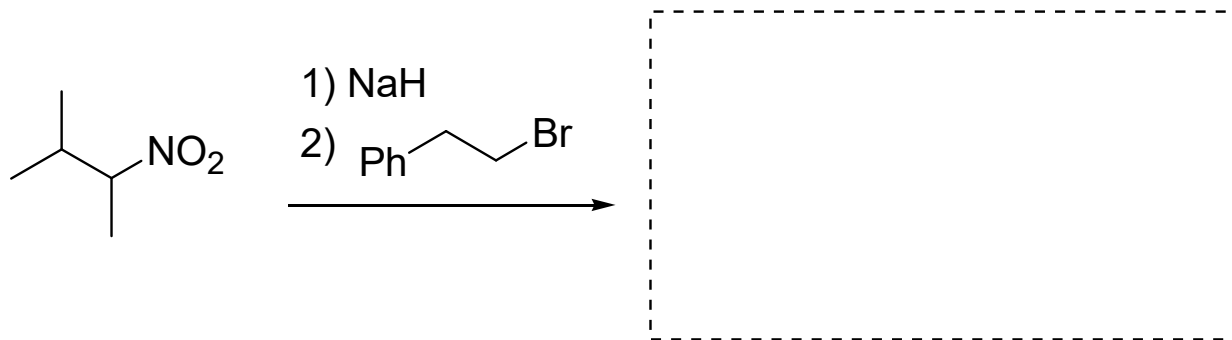
Navrhněte syntézu



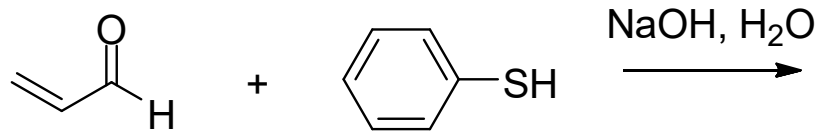
Navrhněte podmínky pro uvedenou syntézu



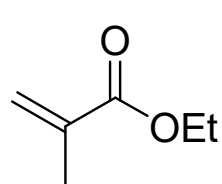
Doplňte produkty reakcí



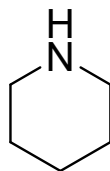
Doplňte produkty reakcí



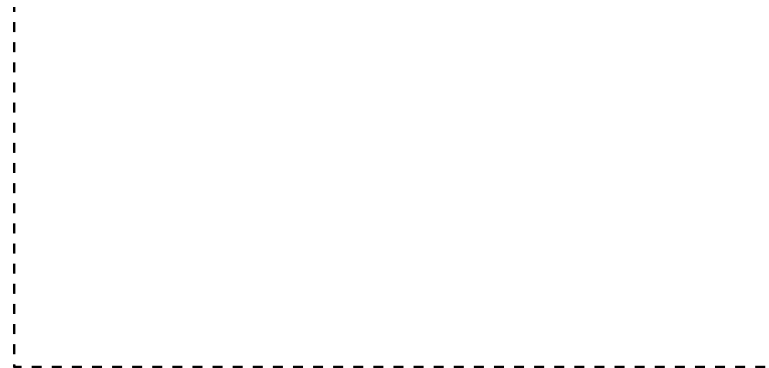
Doplňte produkty reakcí



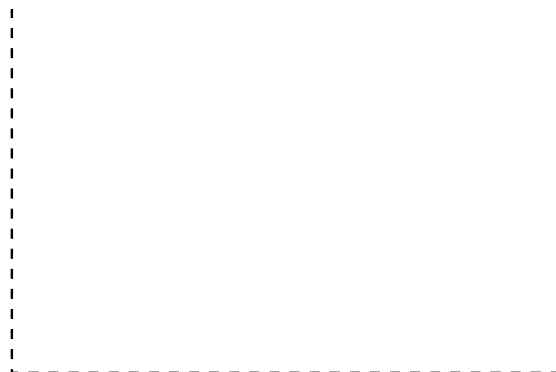
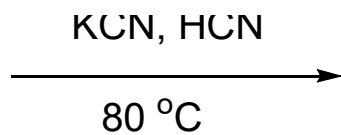
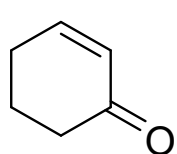
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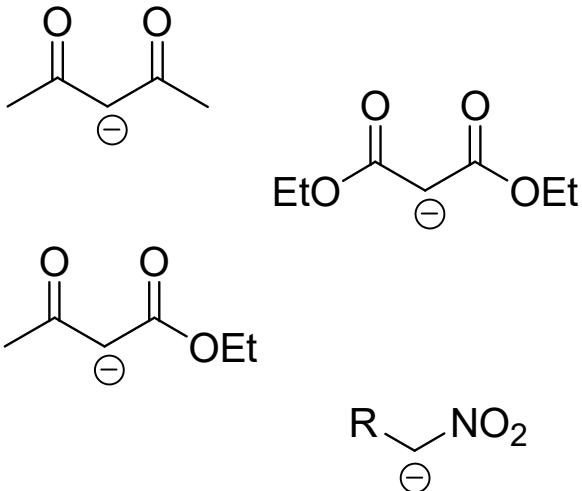

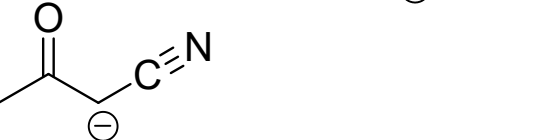

100 °C



Doplňte produkty reakcí

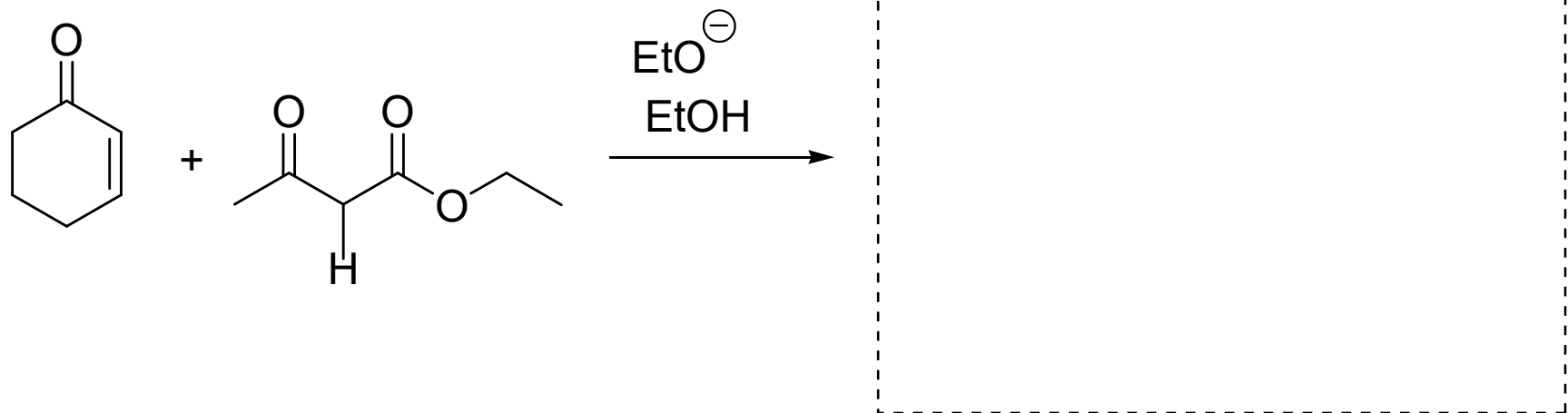


Michaelova adice

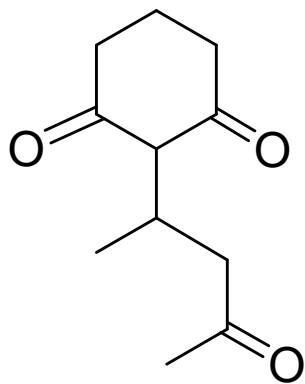
Michaelovy donory	Michaelovy akceptory
	
	



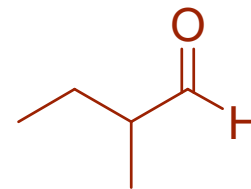
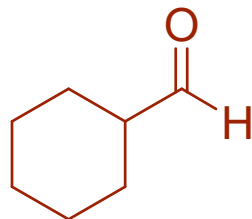
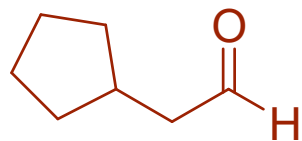
Michaelova adice

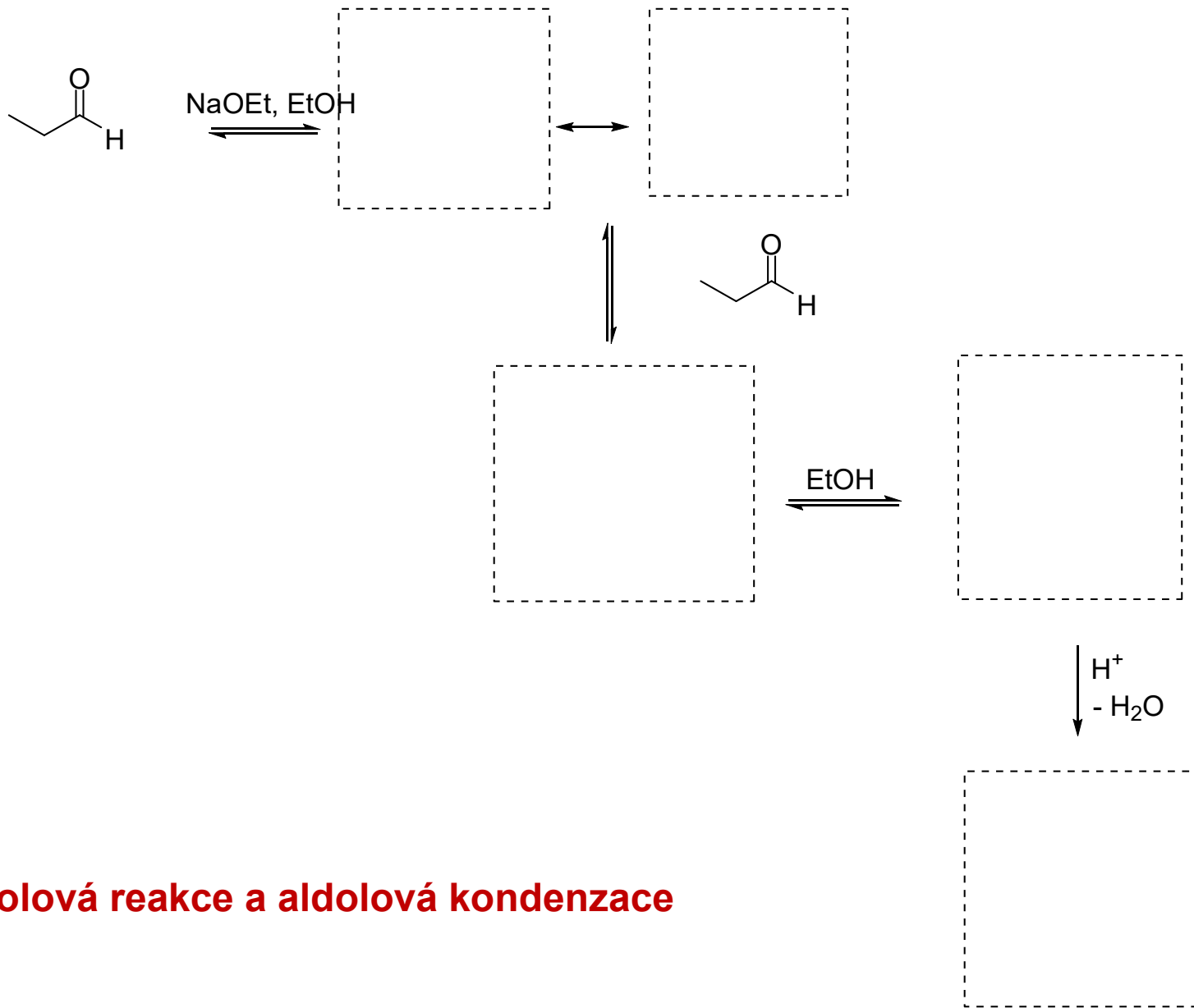


Michaelova adice
navrhněte syntézu uvedené sloučeniny



Aldolová reakce a aldolová kondenzace

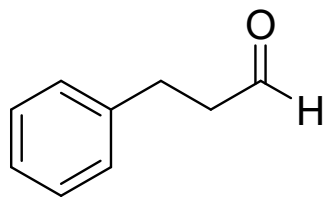




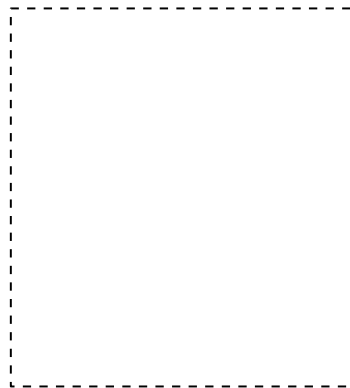
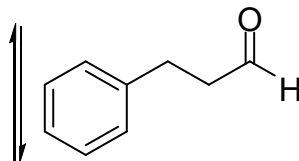
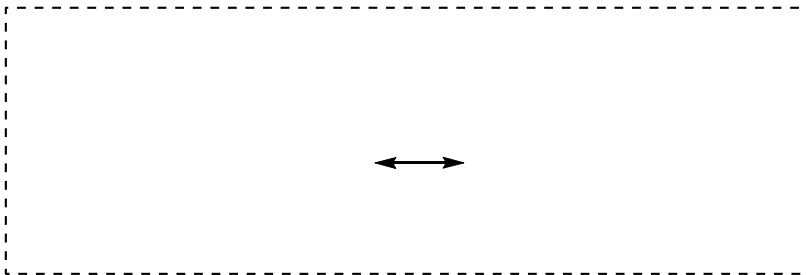
Aldolová reakce a aldolová kondenzace



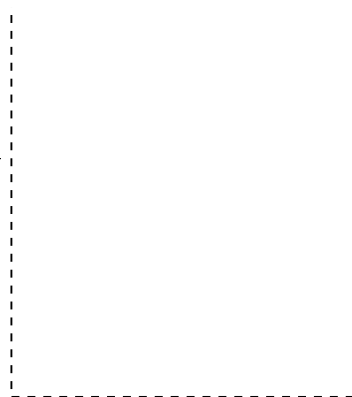
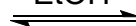
Aldolová reakce a aldolová kondenzace



NaOEt, EtOH

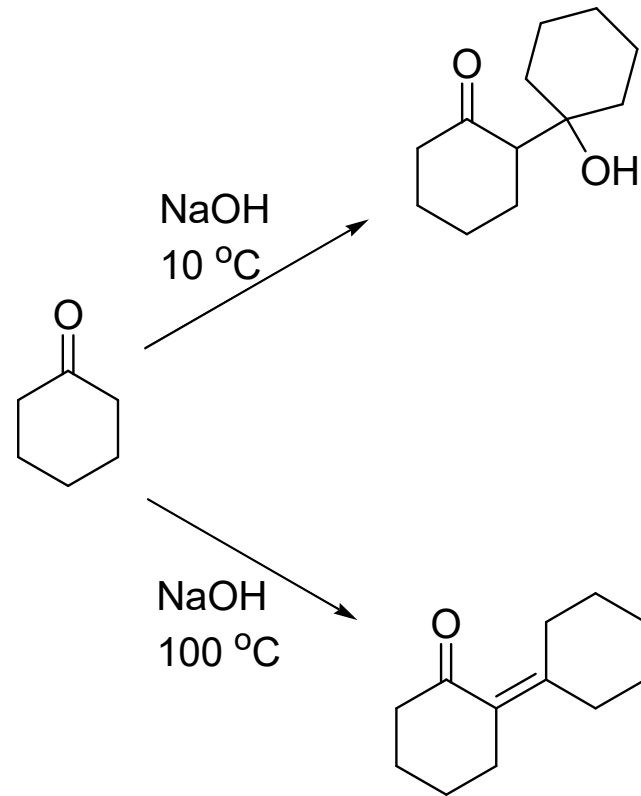


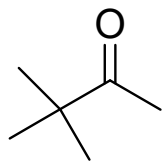
EtOH



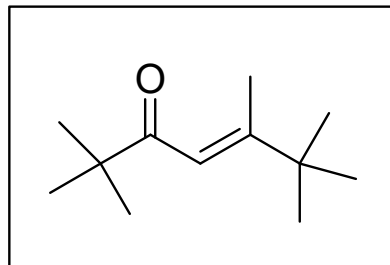
\downarrow H⁺
- H₂O



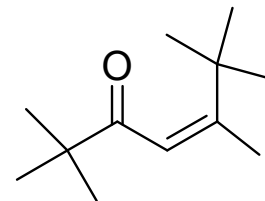




? produkt aldolové kondenzace



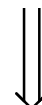
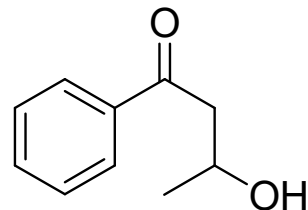
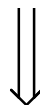
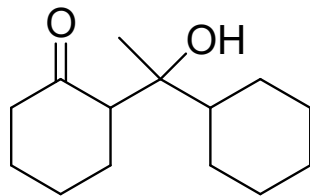
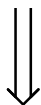
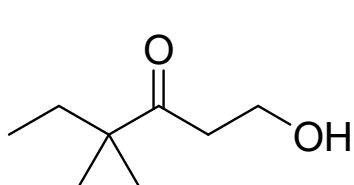
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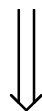
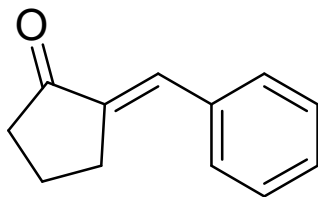
prevládá
menší sterická zábrana



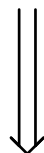
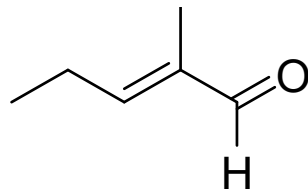
Identifikujte reagenty, které poskytly následující sloučeniny



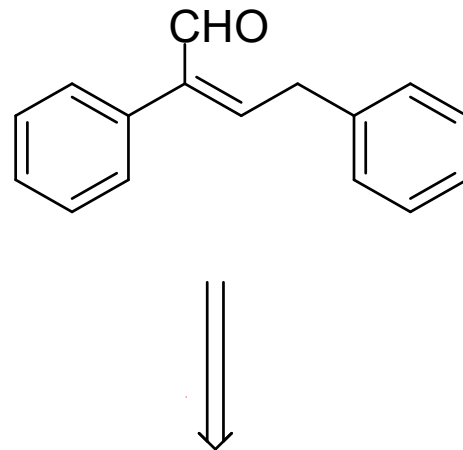
Identifikujte reagenty, které poskytly následující sloučeninu



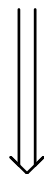
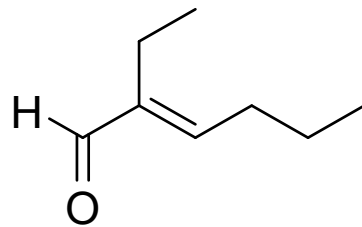
Aldolová kondenzace - retrosyntéza



Aldolová kondenzace - retrosyntéza

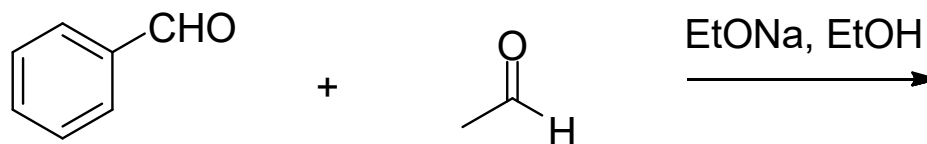


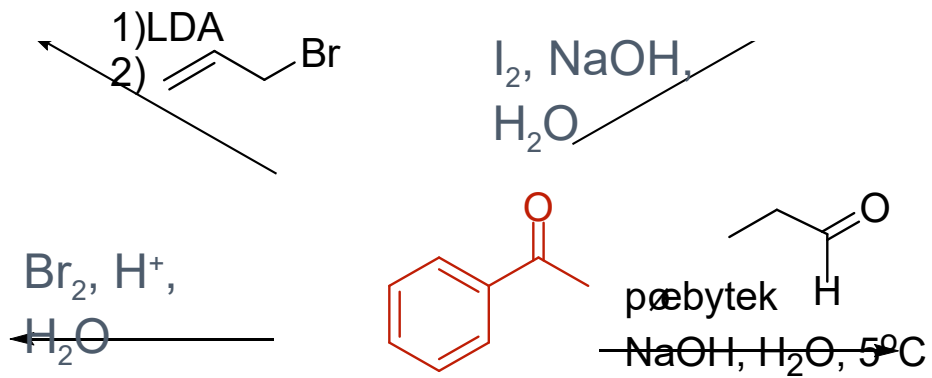
Aldolová kondenzace - retrosyntéza

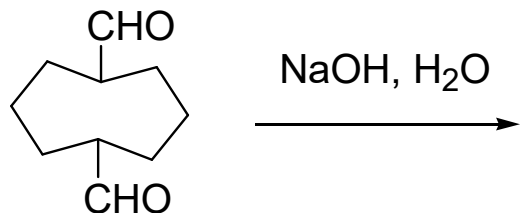


Zkřížená aldolová reakce

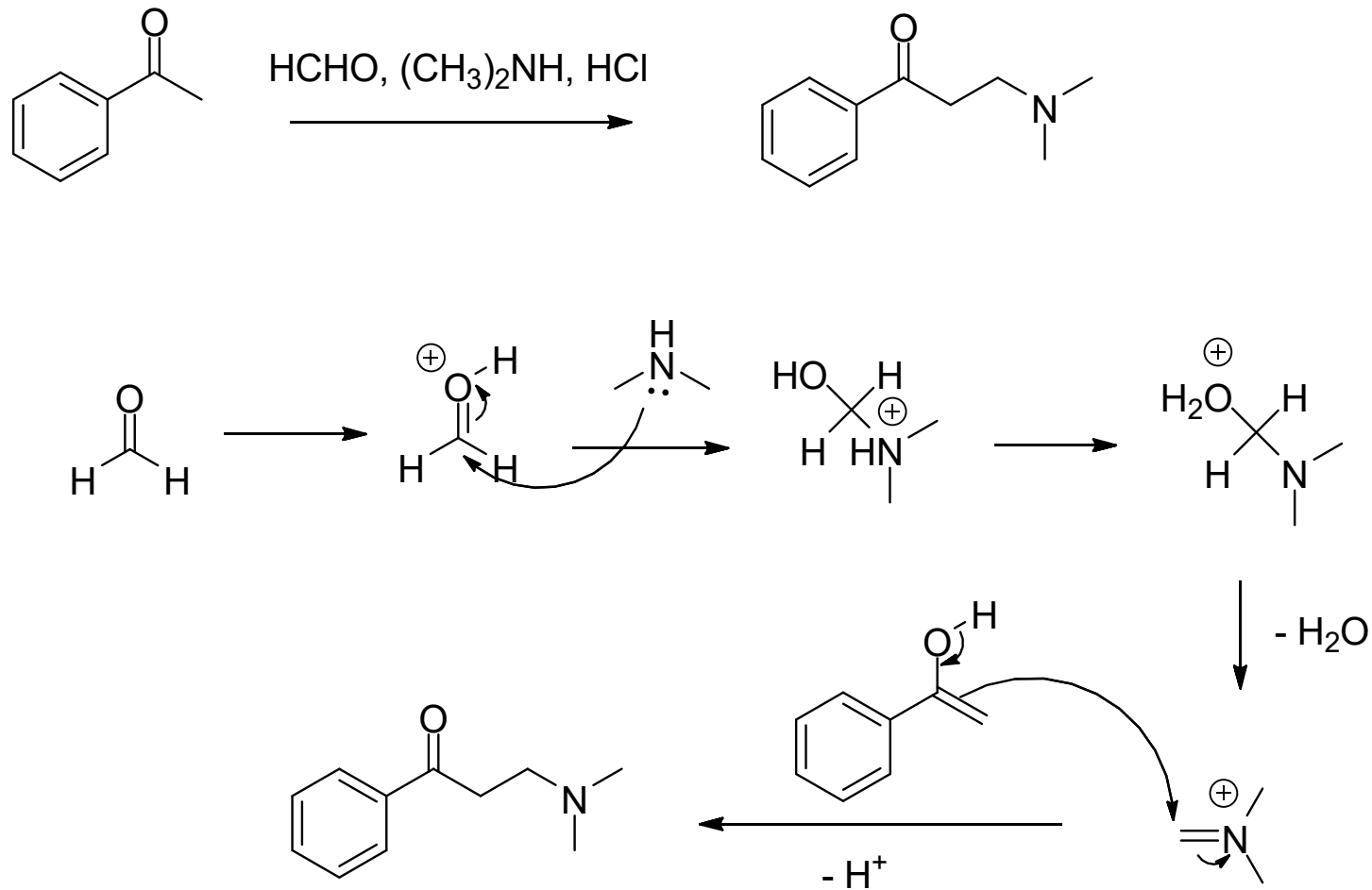
- 1) Jeden z aldehydů nemá v alfa pozici vodíky
- 2) LDA – 100% tvorba enolátu a potom přidavek další komponenty



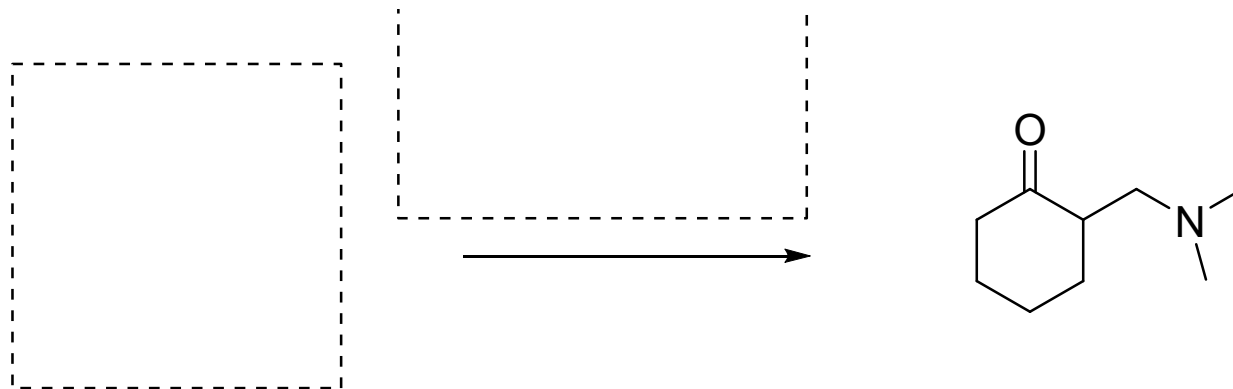


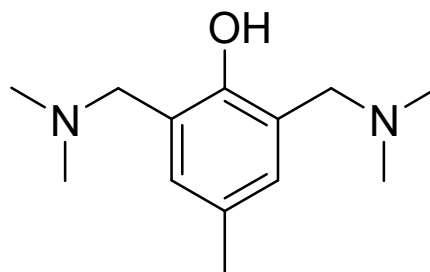
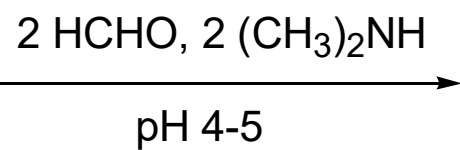
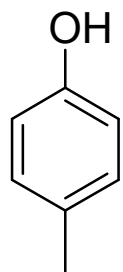


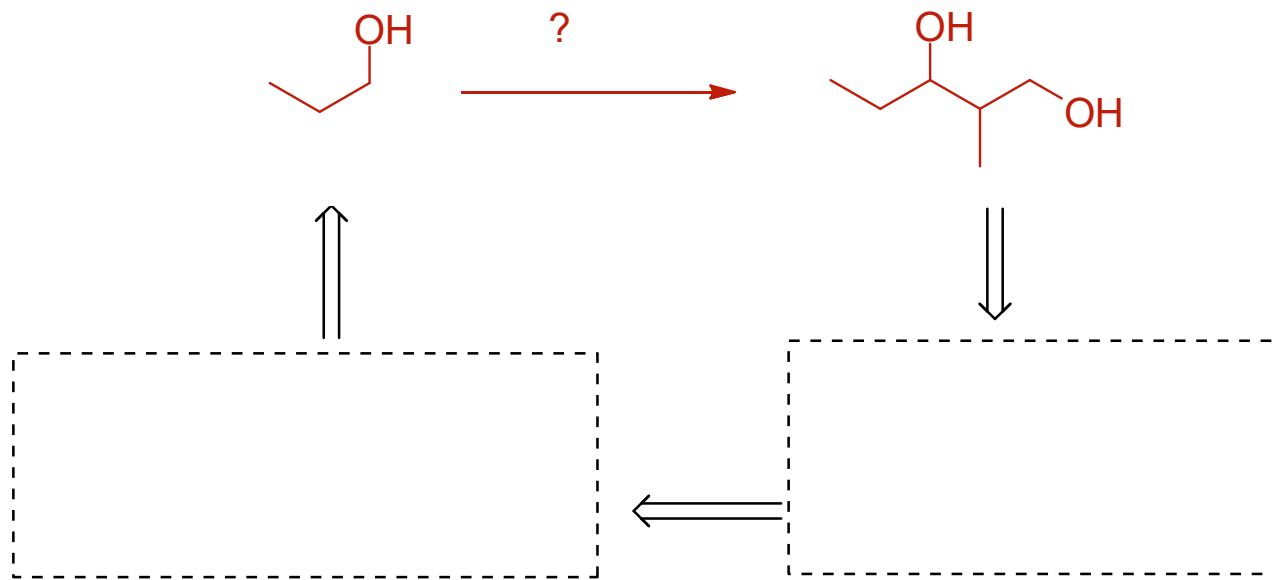
Mannichova reakce - aminomethylační reakce v alfa pozici ke karbonylu

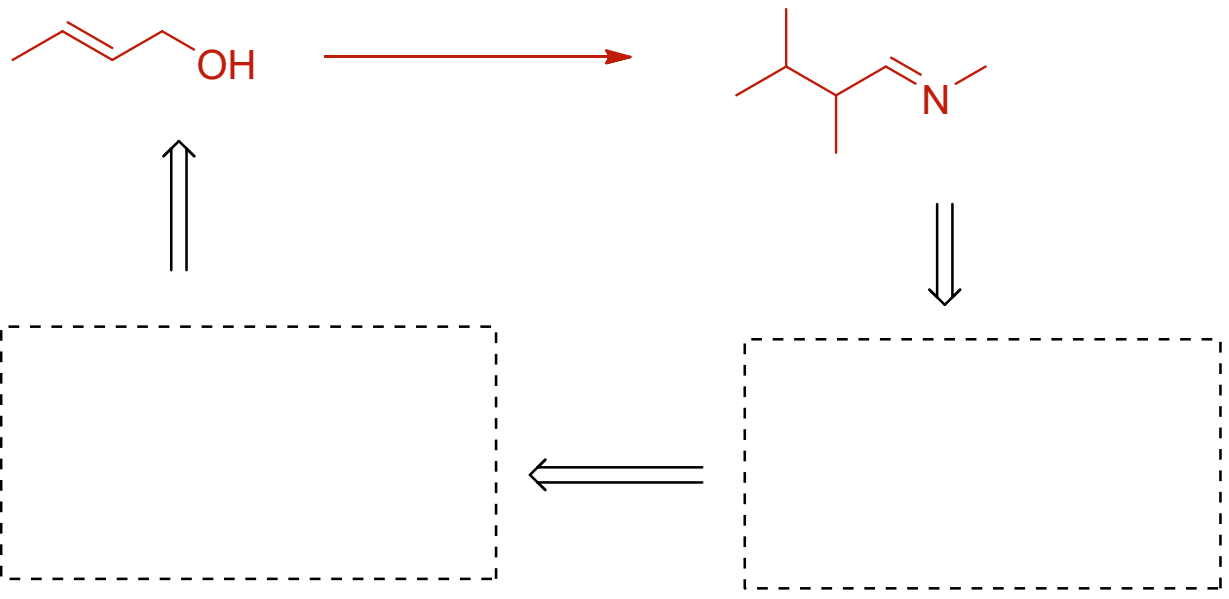


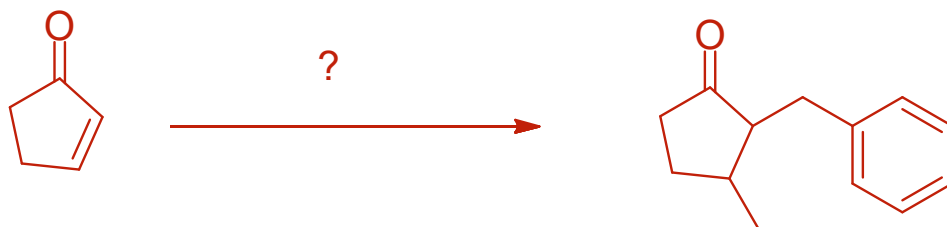
Identifikujte reagenty, které poskytly následující sloučeninu

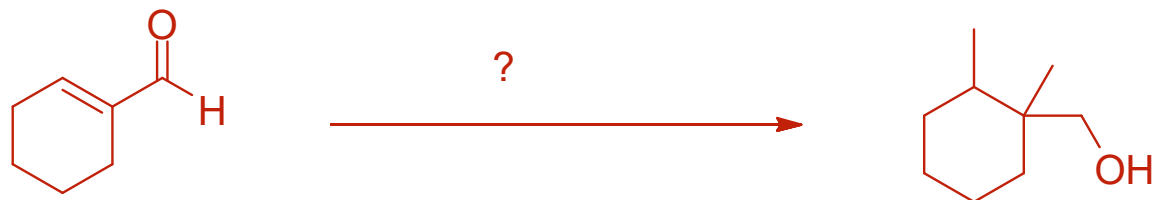


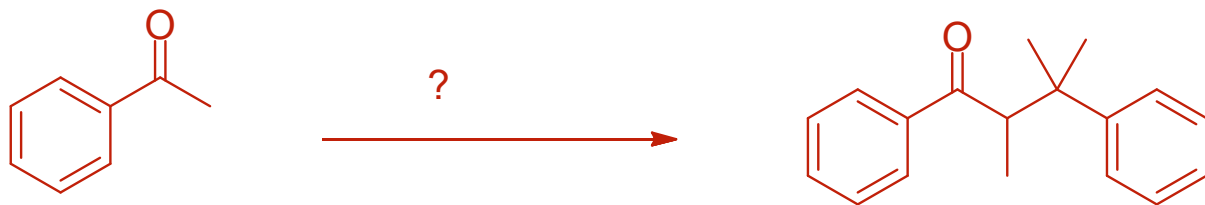






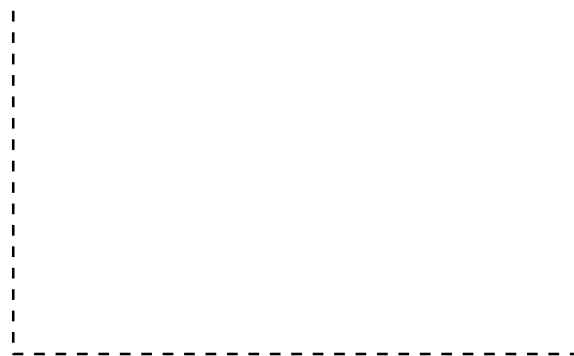
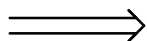
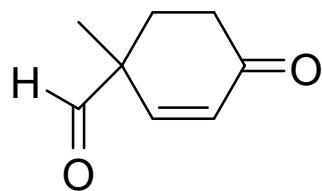




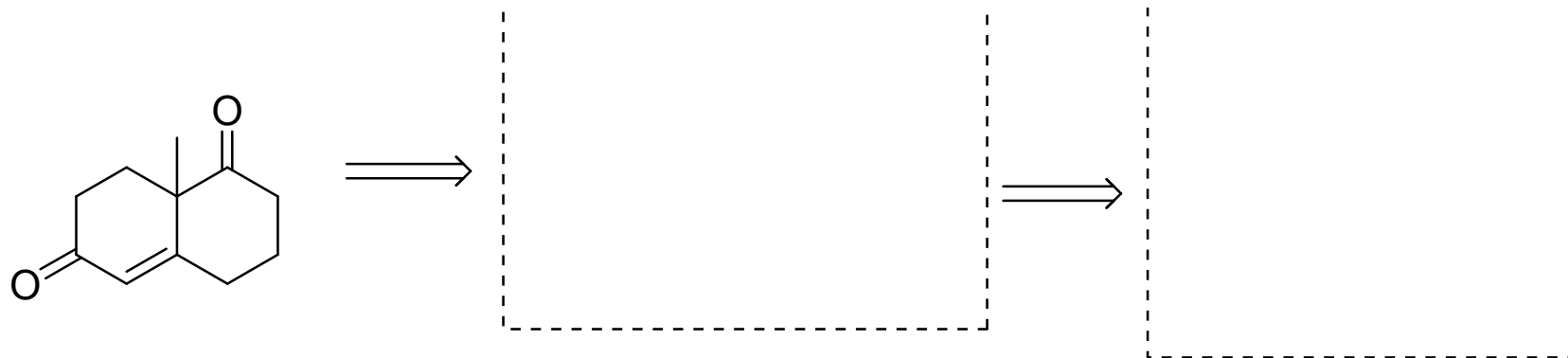


Identifikujte reagenty, které poskytly následující sloučeninu

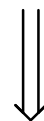
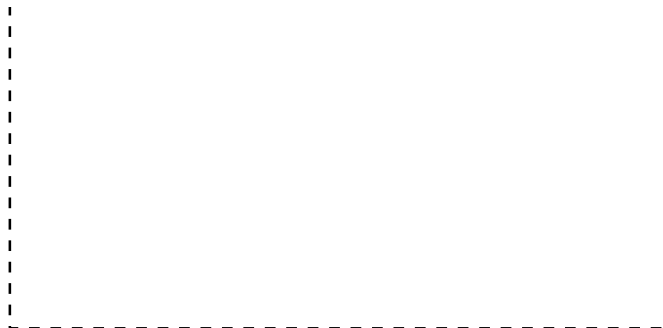
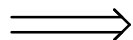
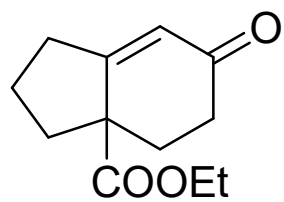
Robinsonova anelace



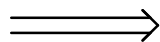
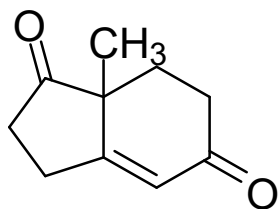
Identifikujte reagenty, které poskytly následující sloučeninu



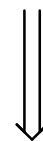
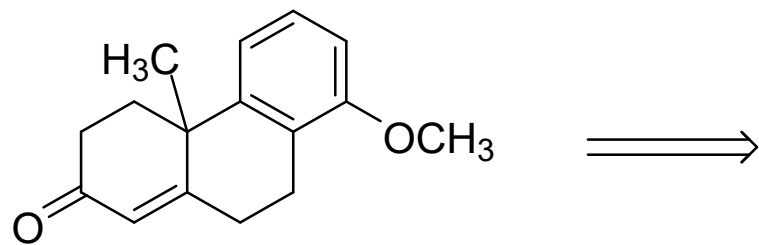
Robinsonova anelace



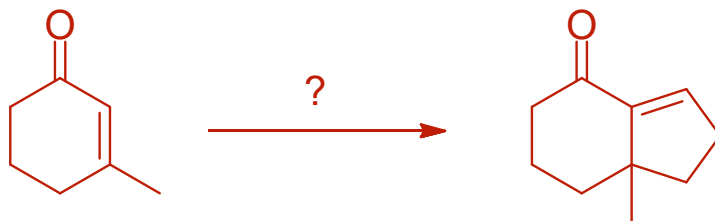
Robinsonova anelace



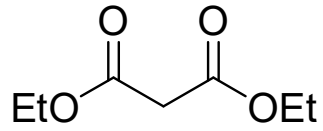
Robinsonova anelace



Identifikujte reagenty, které poskytly následující sloučeninu



Malonesterová syntéza



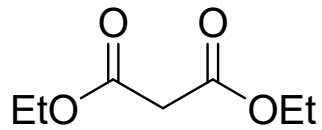
1) EtONa, EtOH

2) EtBr

3) H₃O⁺, ΔT



produkt



EtONa, EtOH



EtBr



H₃O⁺

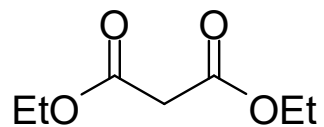
tautomer

- CO₂

produkt



Využití malonesterové syntézy



EtONa, EtOH



Ph-CH₂-Br



EtONa, EtOH



CH₃Br

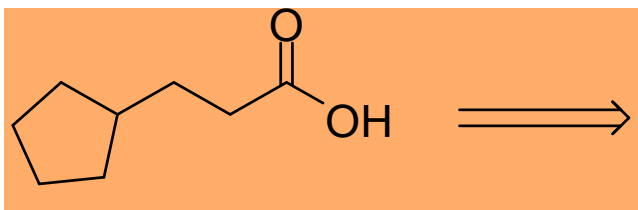


H₃O⁺, ΔT

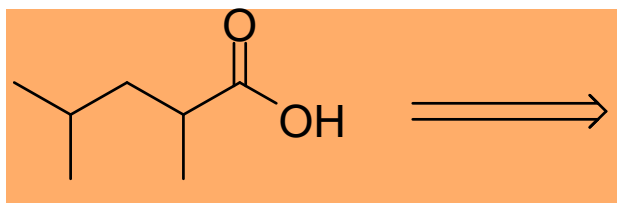
- CO₂



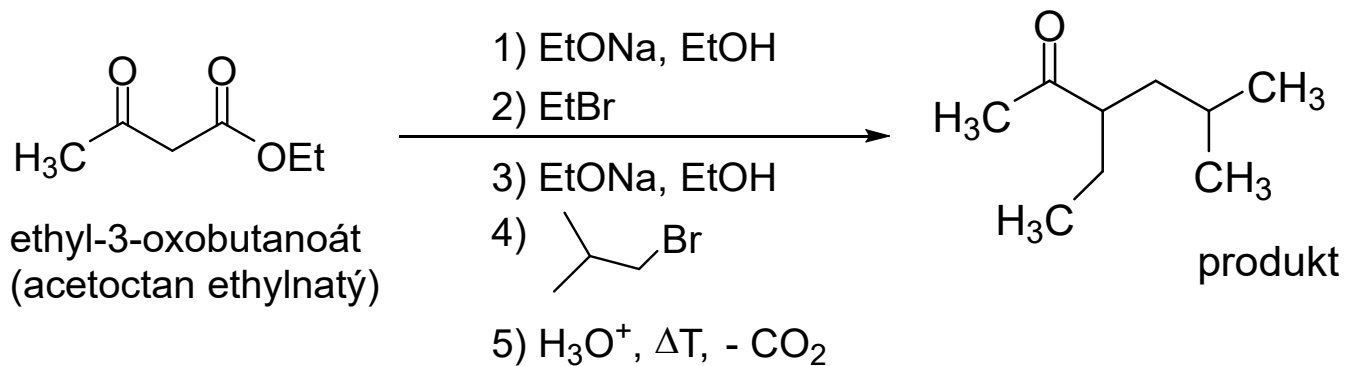
S využitím malonesterové syntézy naplánujte přípravu uvedených sloučenin



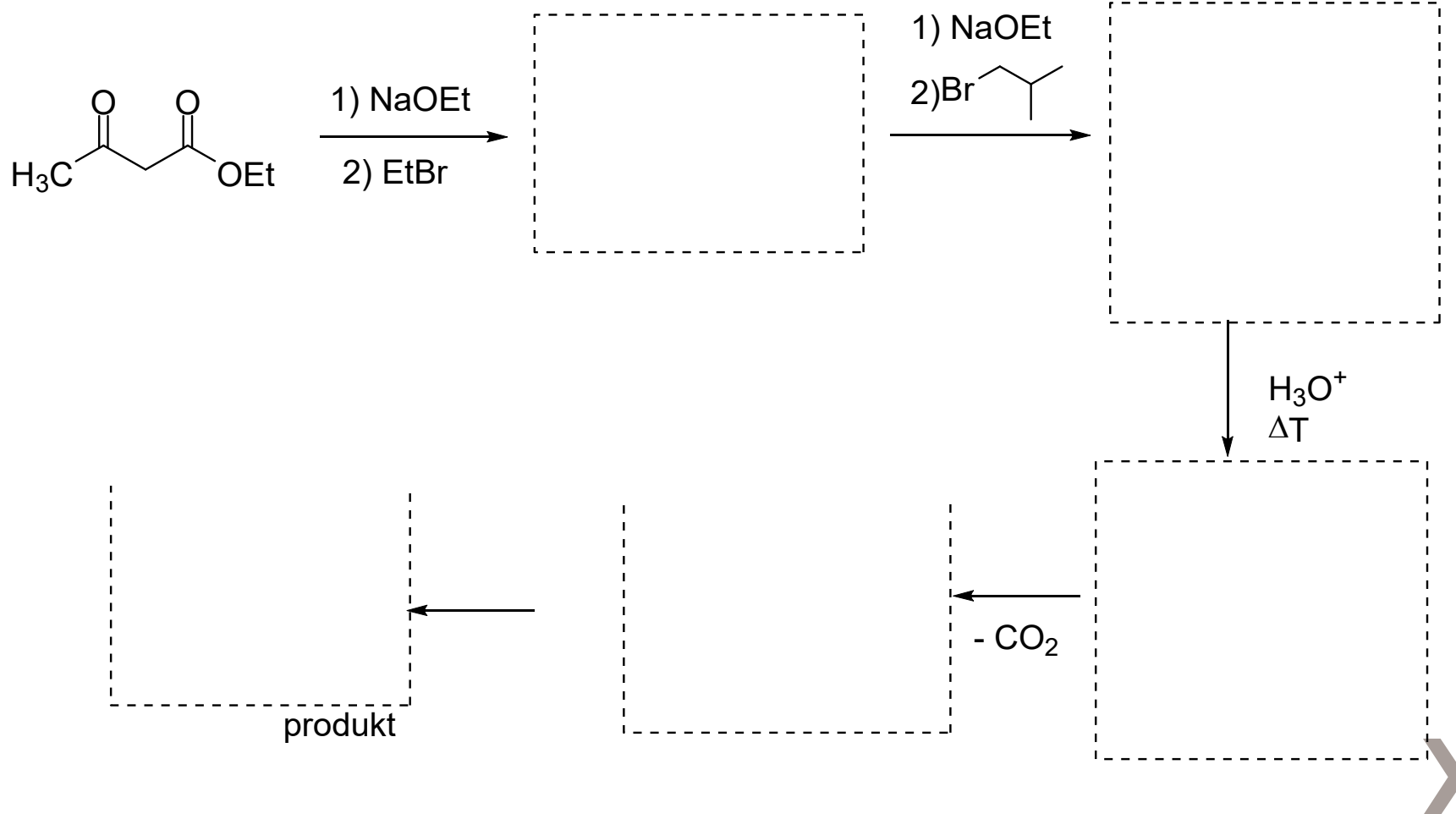
S využitím malonesterové syntézy naplánujte přípravu uvedených sloučenin



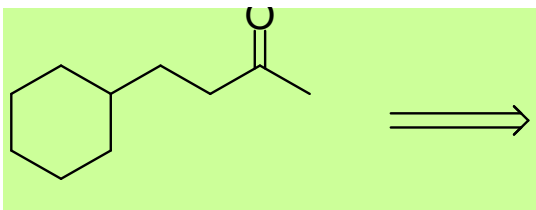
Acetocanová syntéza



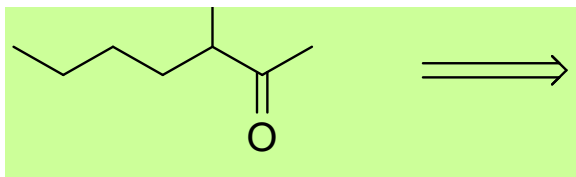
Acetocetanová syntéza dílní kroky



Acetocetanová syntéza



Acetoctanová syntéza



Acetocetanová syntéza

