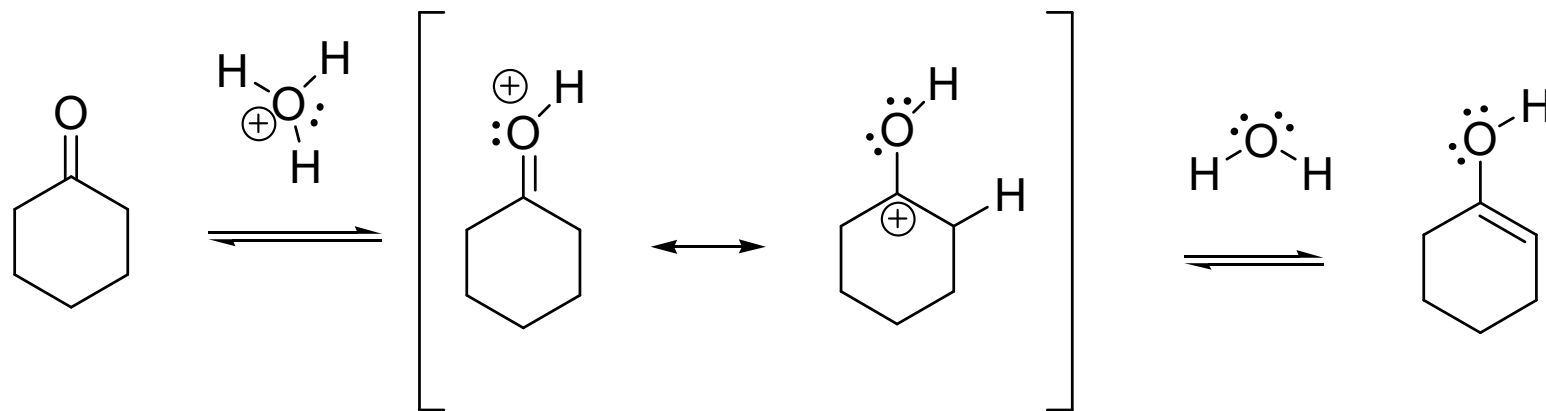


ENOLY A ENOLÁTY

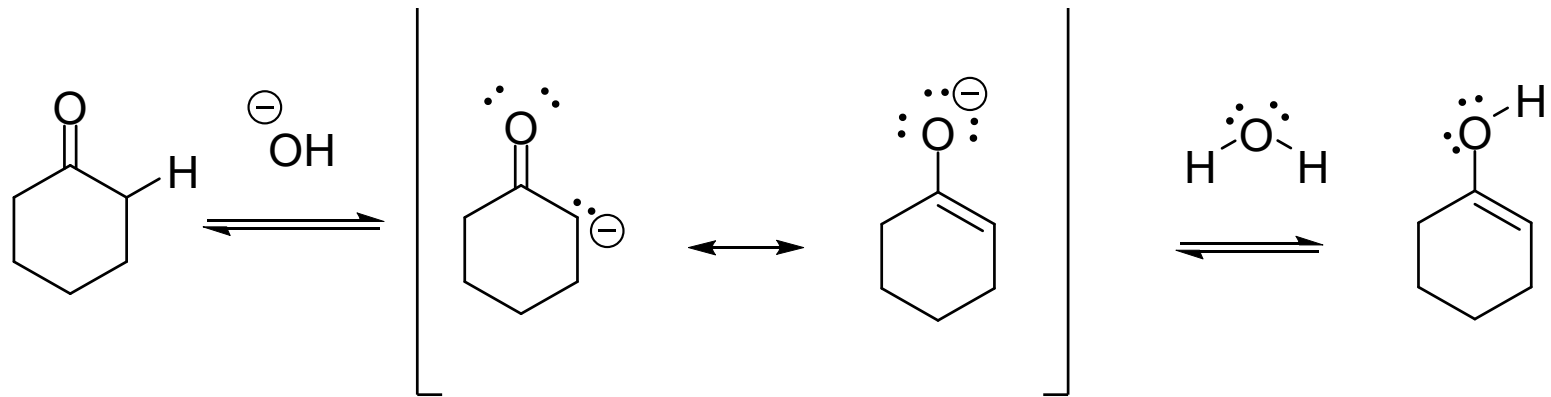


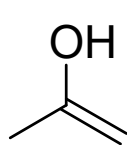
	pK_a		pK_a
$R-CH_2-C(=O)-NH_2$	30		
$R-CH_2-C(=O)-OR^1$	25	$RO-C(=O)-CH_2-C(=O)-OR$	13
$R-CH_2-C(=O)-R'$	20	$R-C(=O)-CH_2-C(=O)-OR^1$	11
$R-CH_2-C(=O)-H$	17	$R-C(=O)-CH_2-C(=O)-R$	9
$R-CH_2-C(=O)-Cl$	16	$H-C(=O)-CH_2-C(=O)-H$	5

Keto – enol tautomerie kyselá katalýza

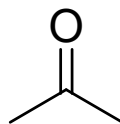
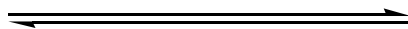


Keto – enol tautomerie bazická katalýza

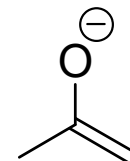




kyselá nebo
bazická katalýza



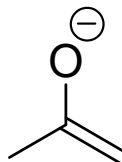
silná báze
aprotické rozpouštědlo THF

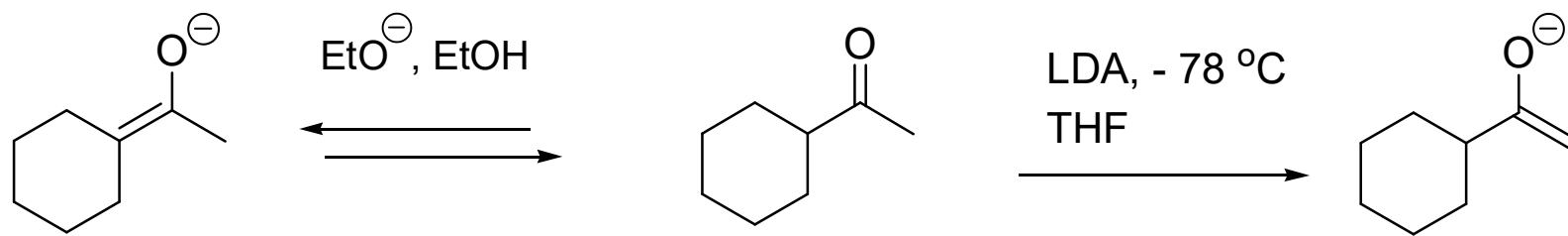


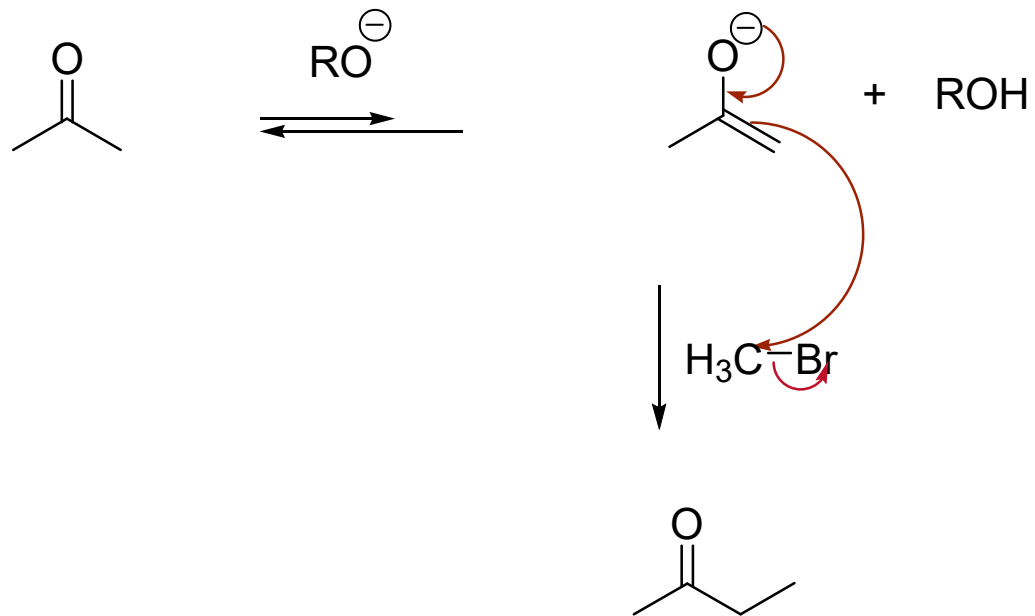
kompletní "nevratná" deprotonace



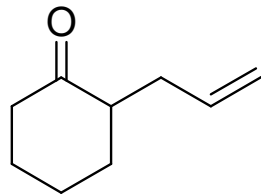
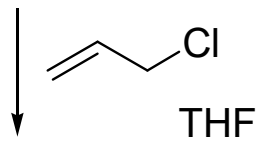
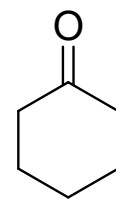
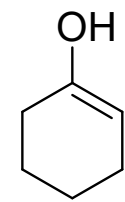
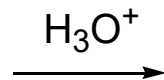
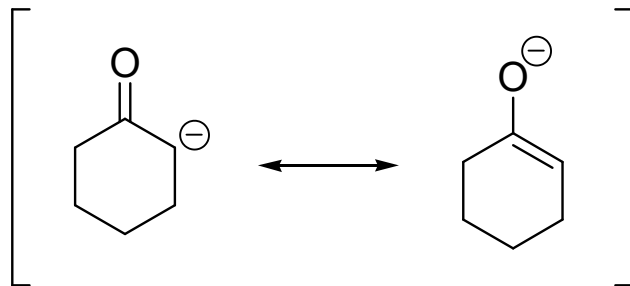
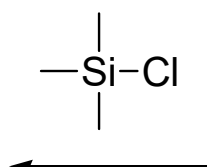
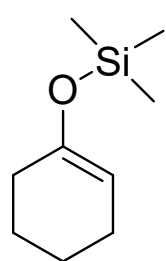
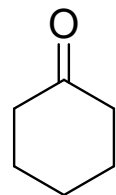
EtO^-
 EtOH



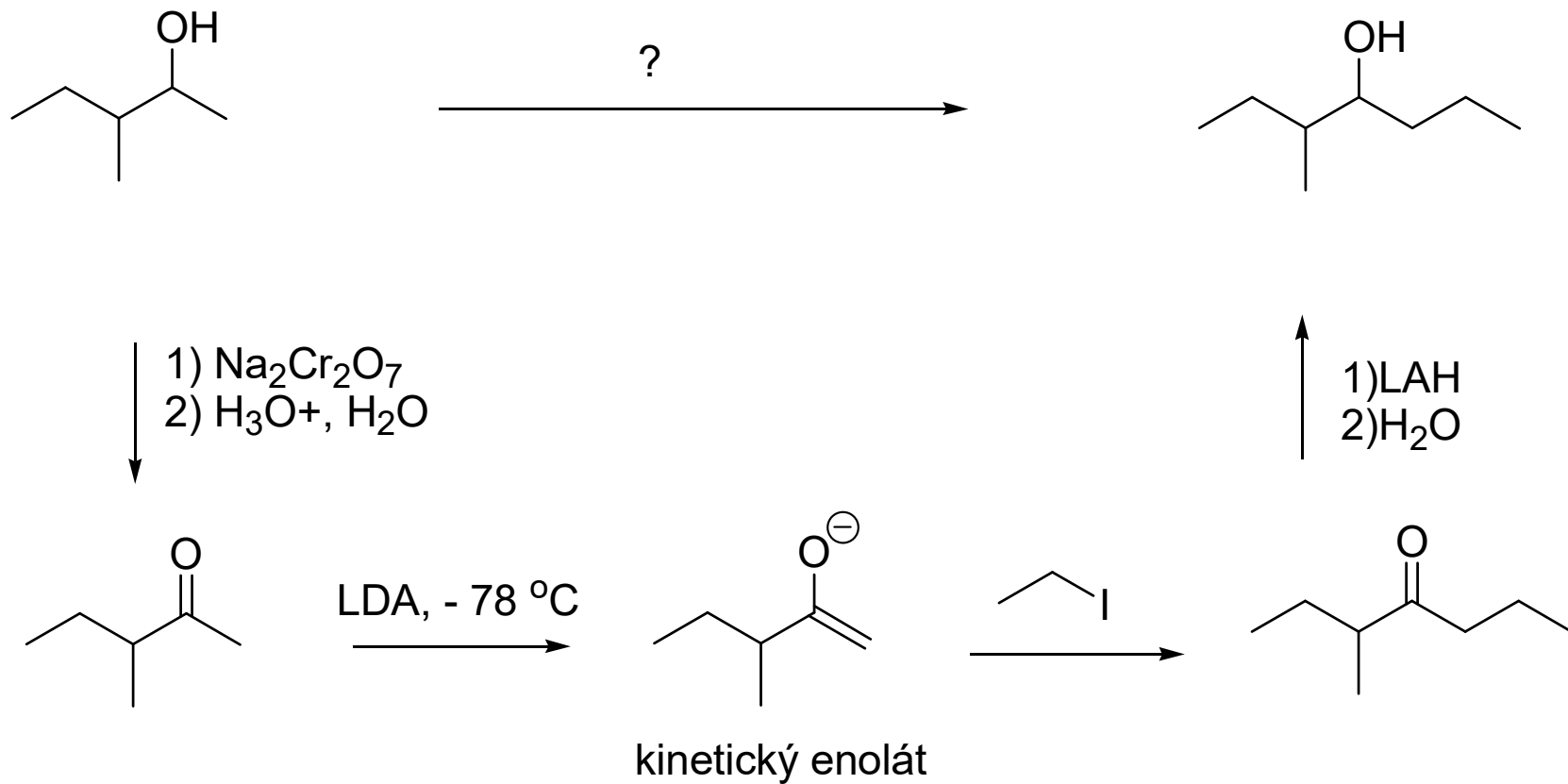




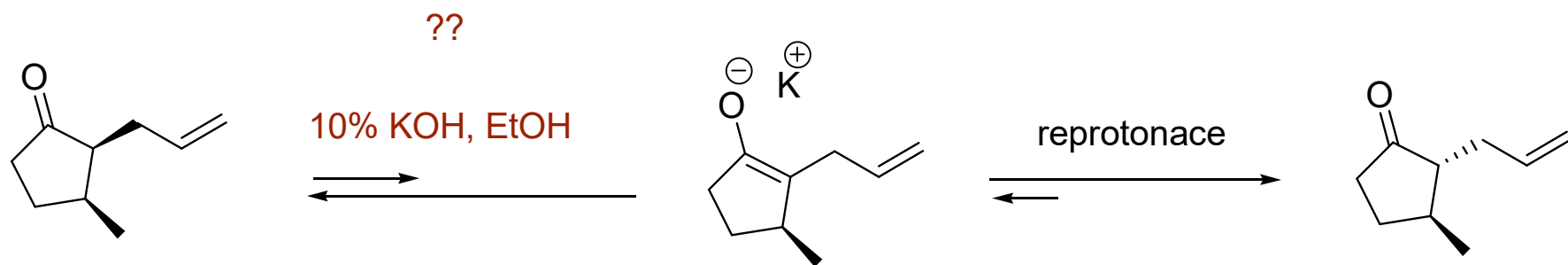
O- versus C-alkylace



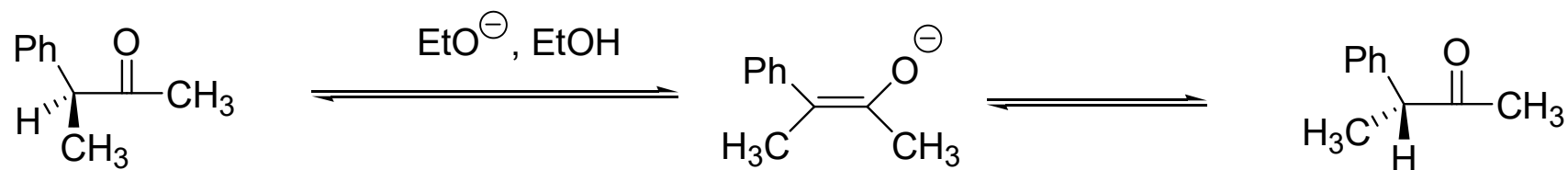
Navrhněte následující syntézu



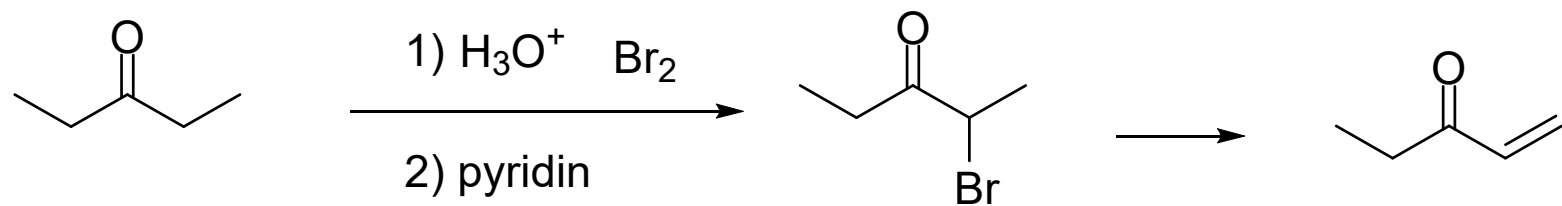
Bazicky katalyzovaná izomerace na alfa-substituovaném ketonu

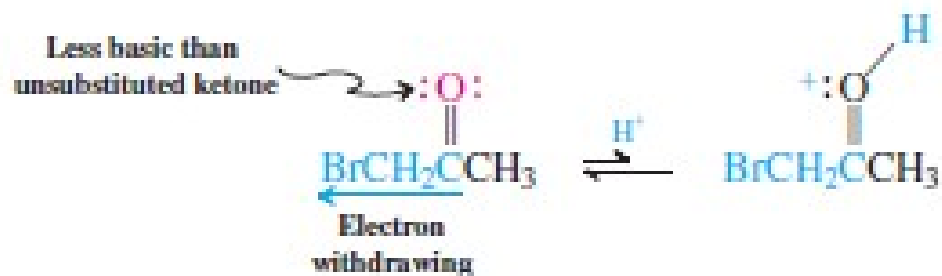
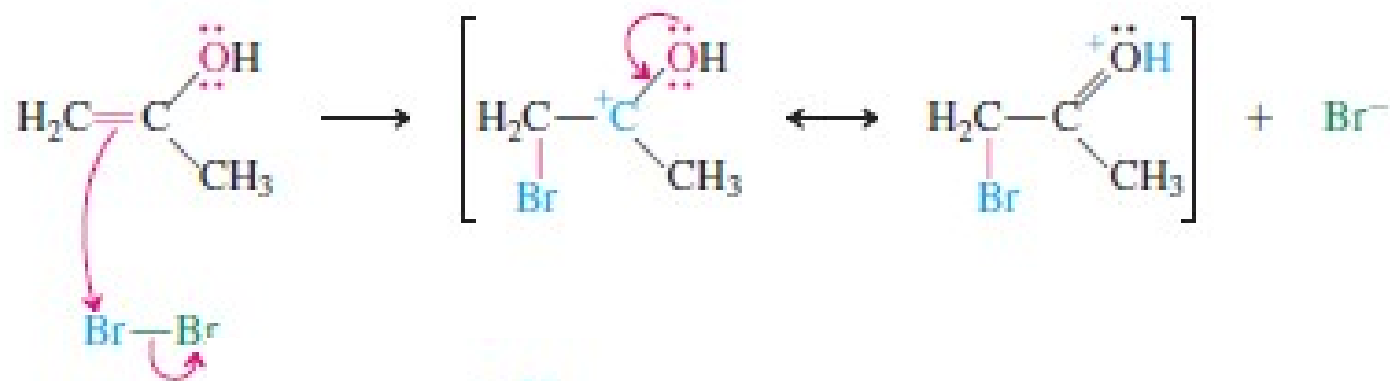
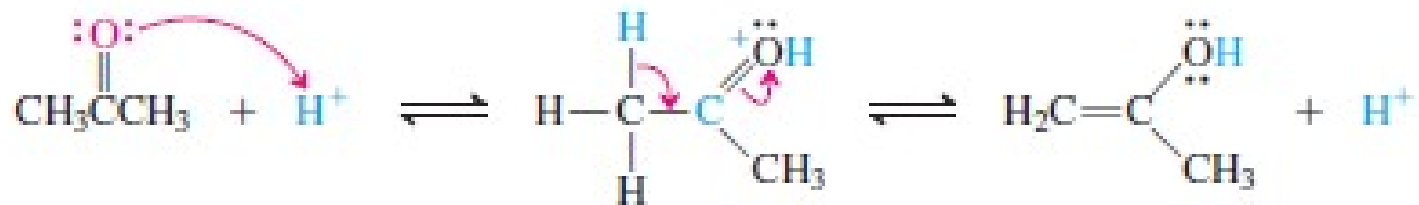


Racemizace opticky aktivního 3-fenylbutan-2-onu

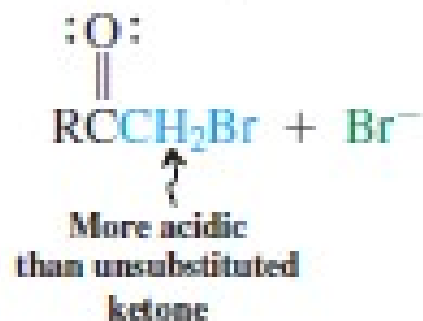
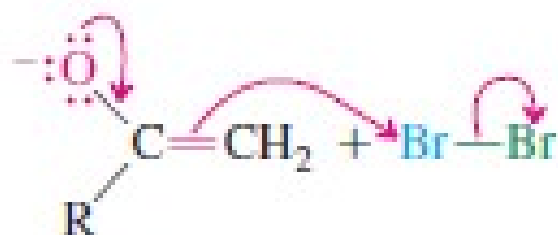


Doplňte produkty uvedených reakcí

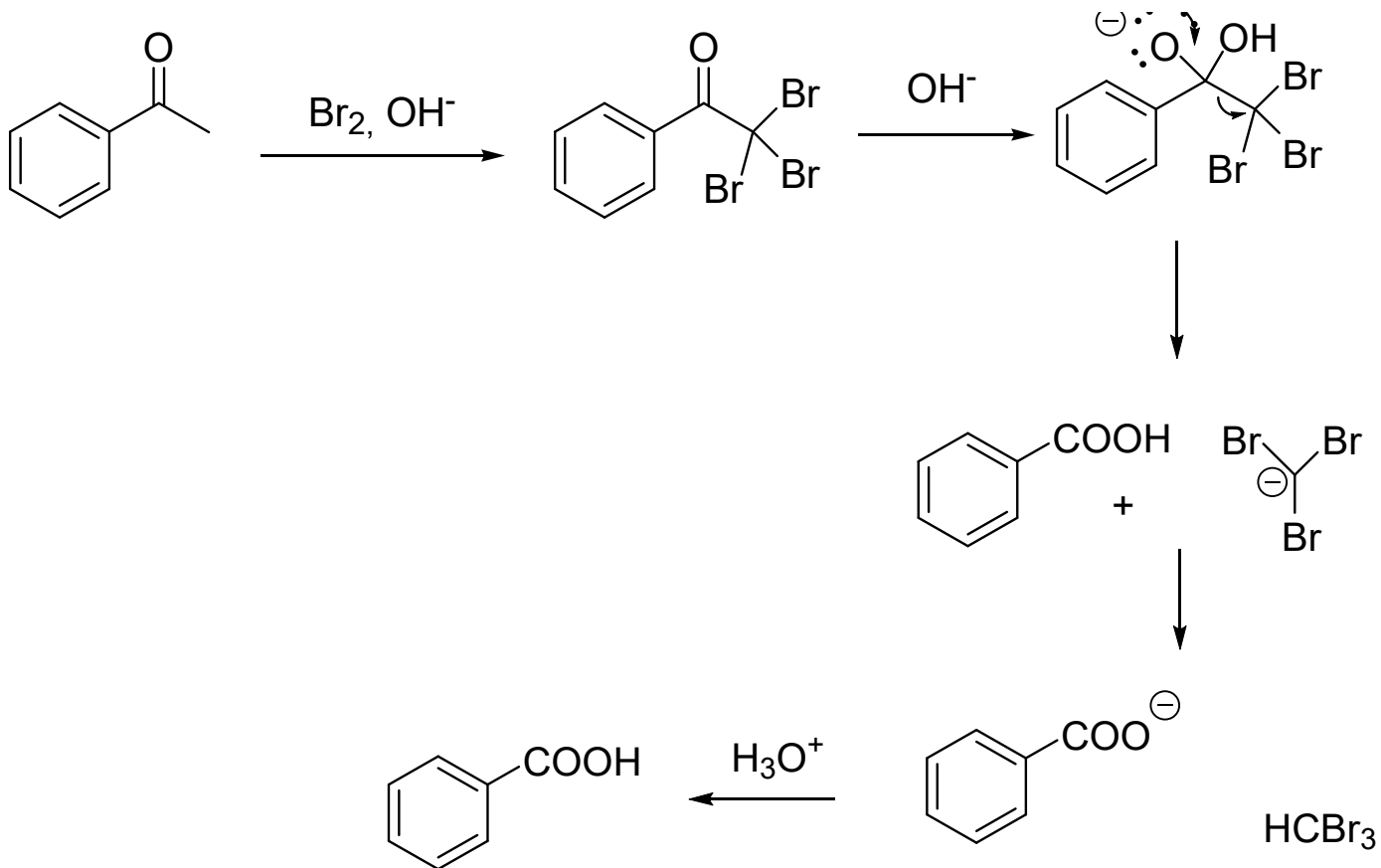
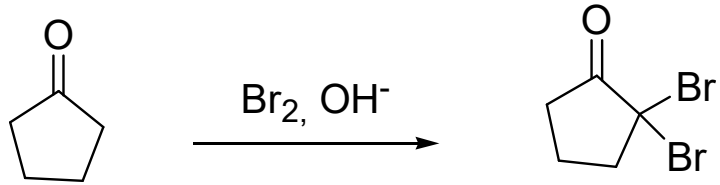




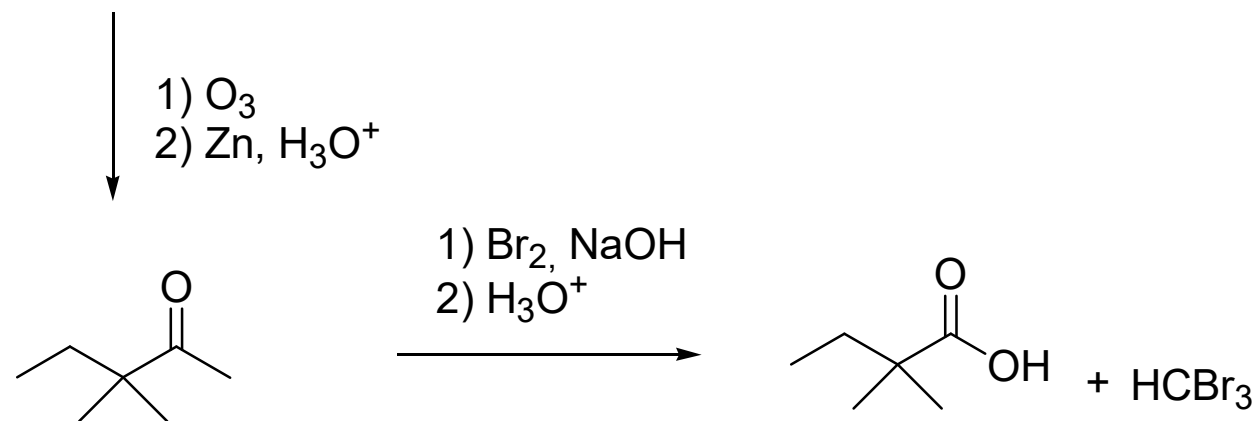
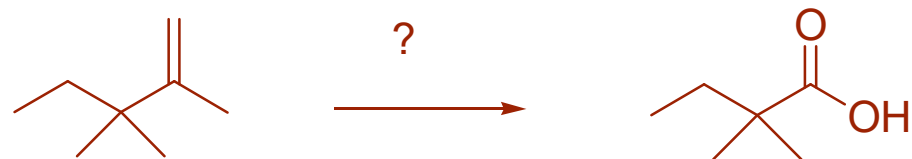
Mechanism of Halogenation of an Enolate Ion



Doplňte produkty uvedených reakcí



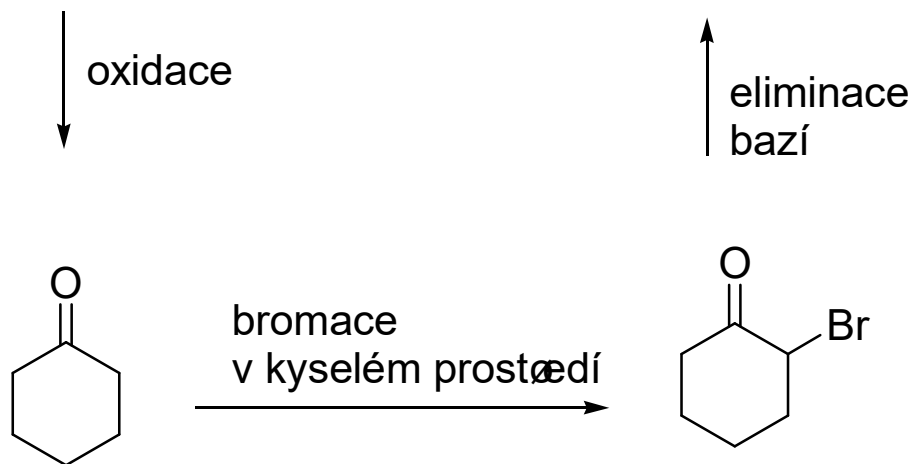
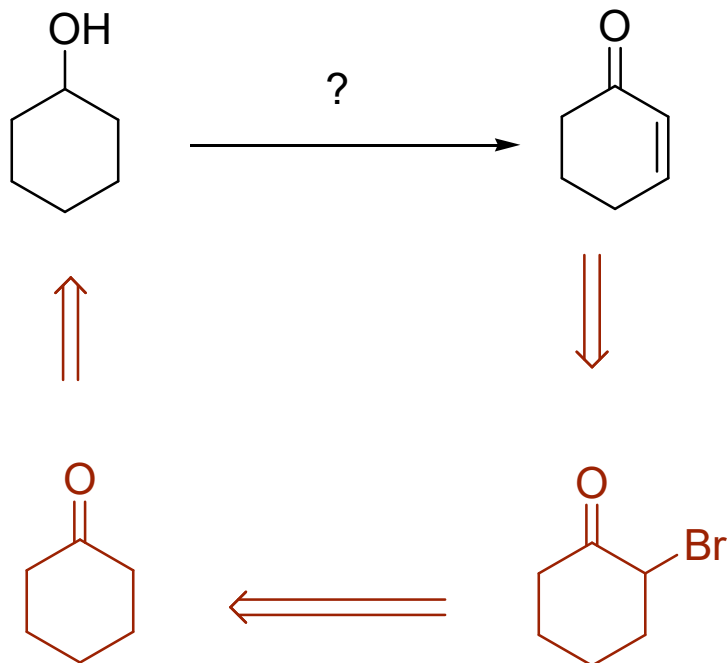
Doplňte produkty uvedených reakcí



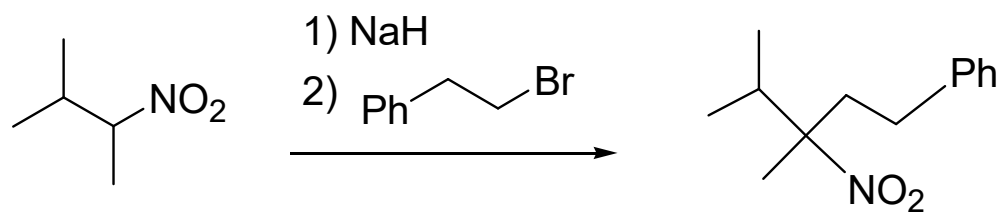
likvidace methylu haloformovou reakcí



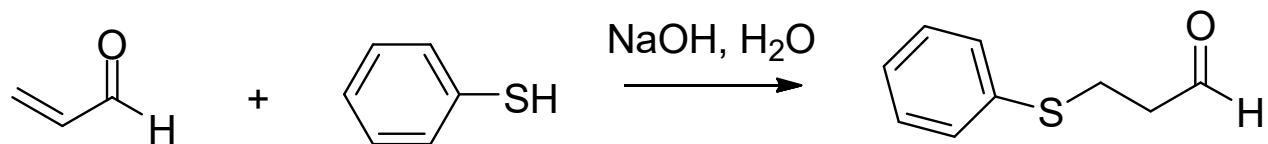
Navrhněte podmínky pro uvedenou syntézu



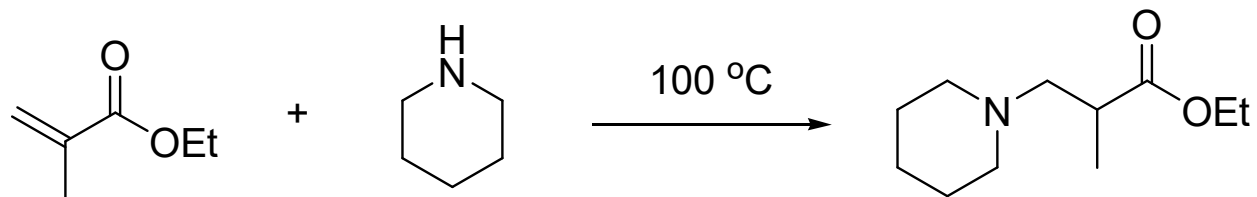
Doplňte produkty reakcí



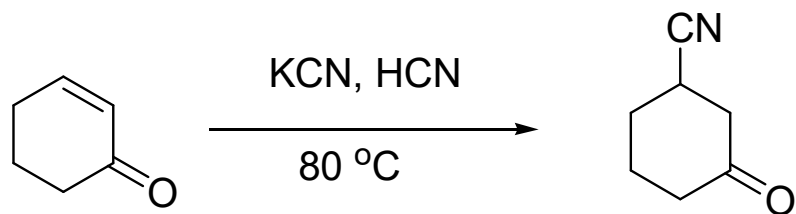
Doplňte produkty reakcí



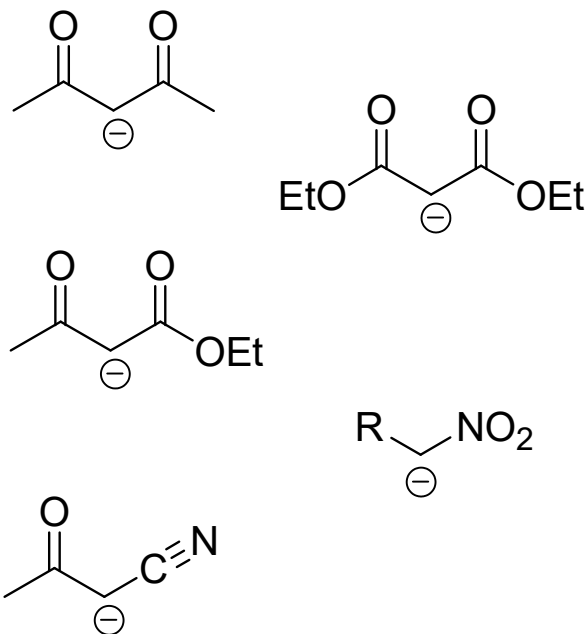
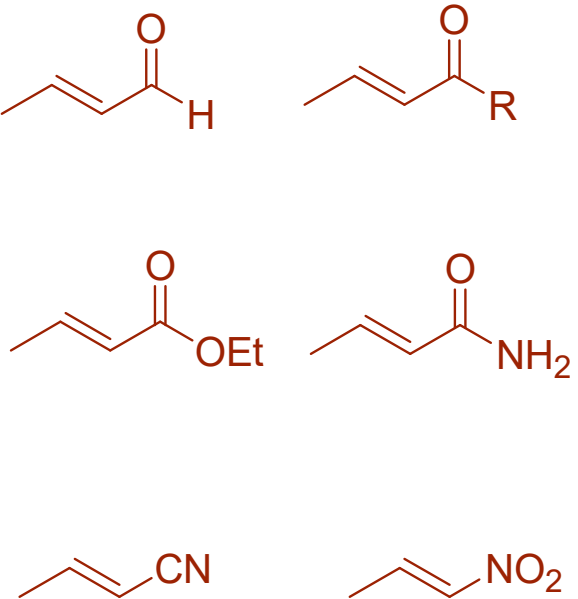
Doplňte produkty reakcí



Doplňte produkty reakcí

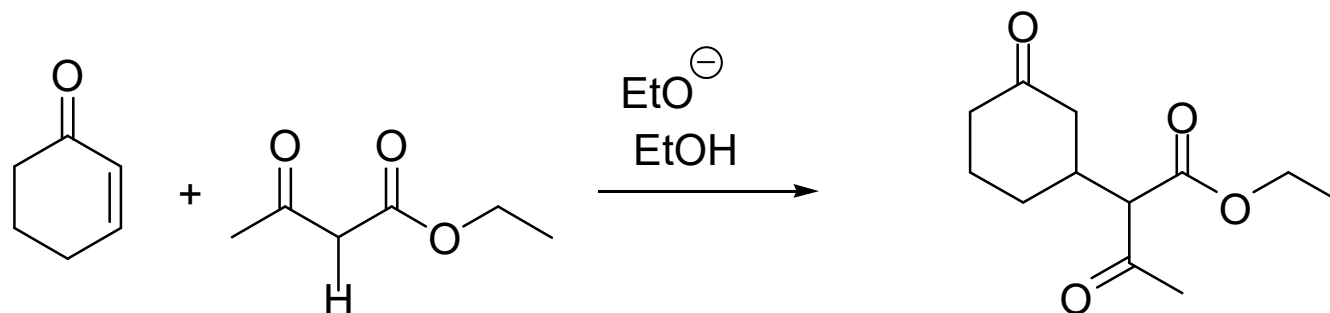


Michaelova adice

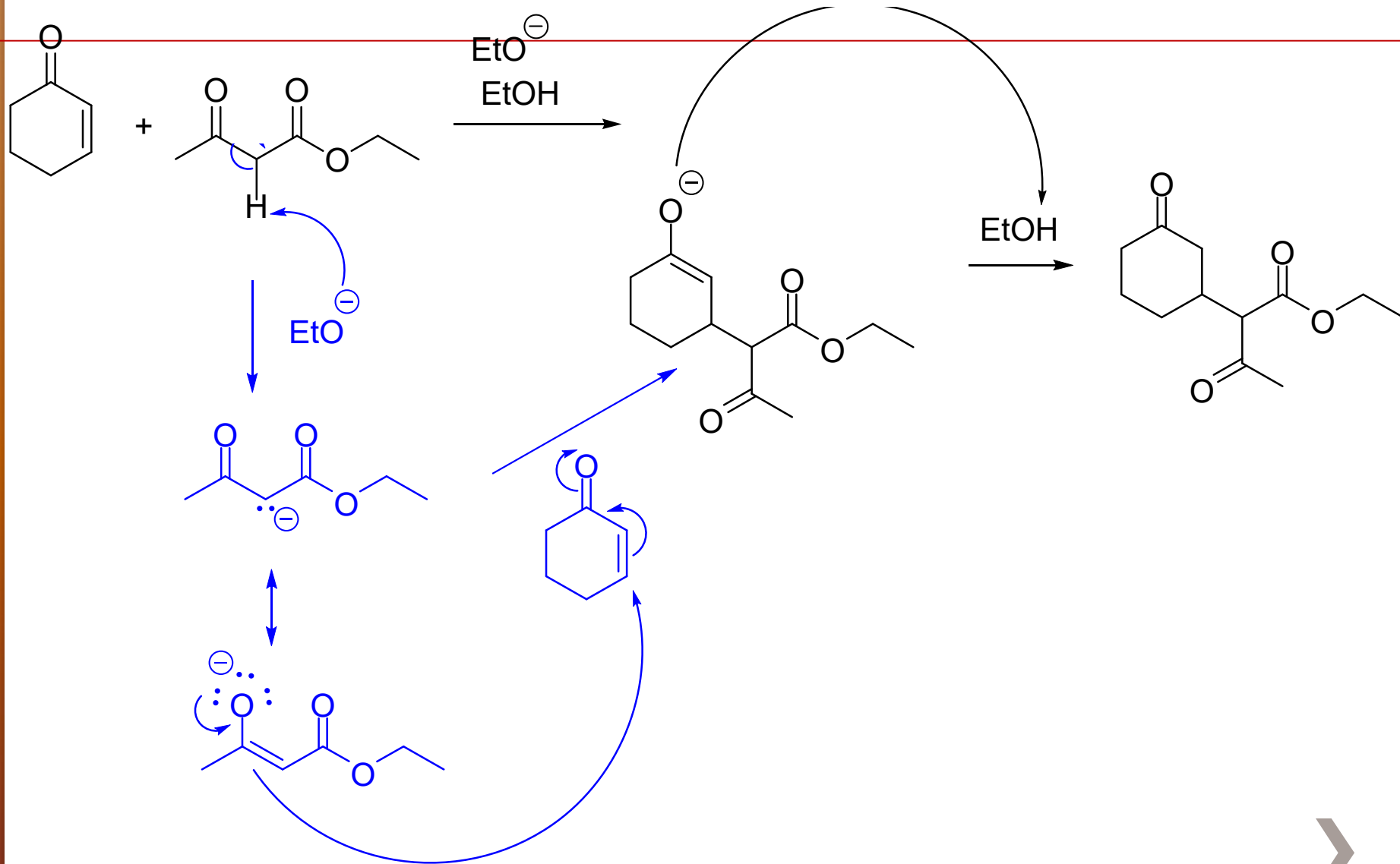
Michaelovy donory	Michaelovy akceptory
	



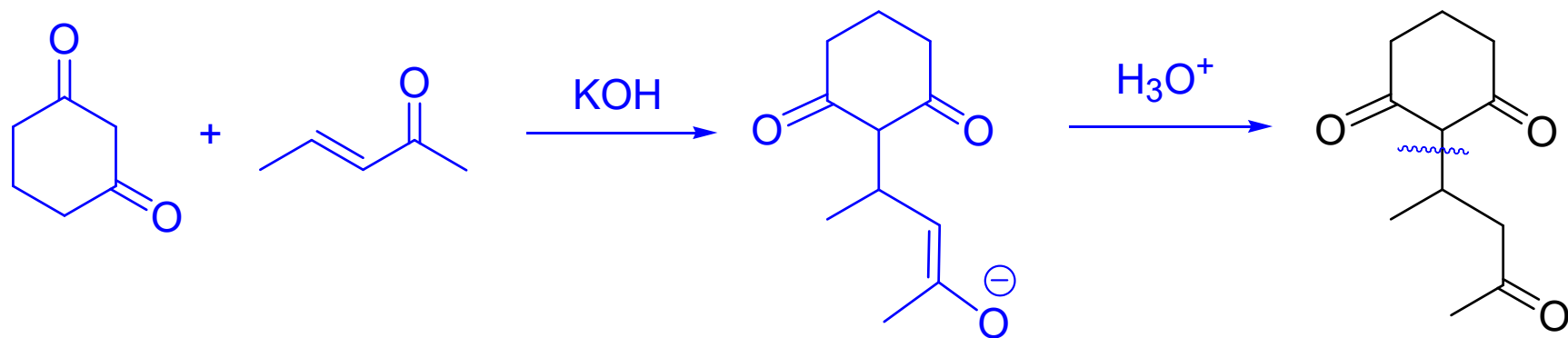
Michaelova adice



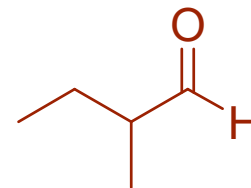
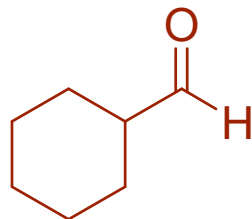
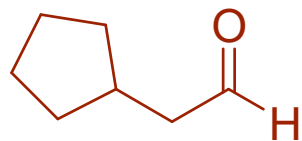
Michaelova adice

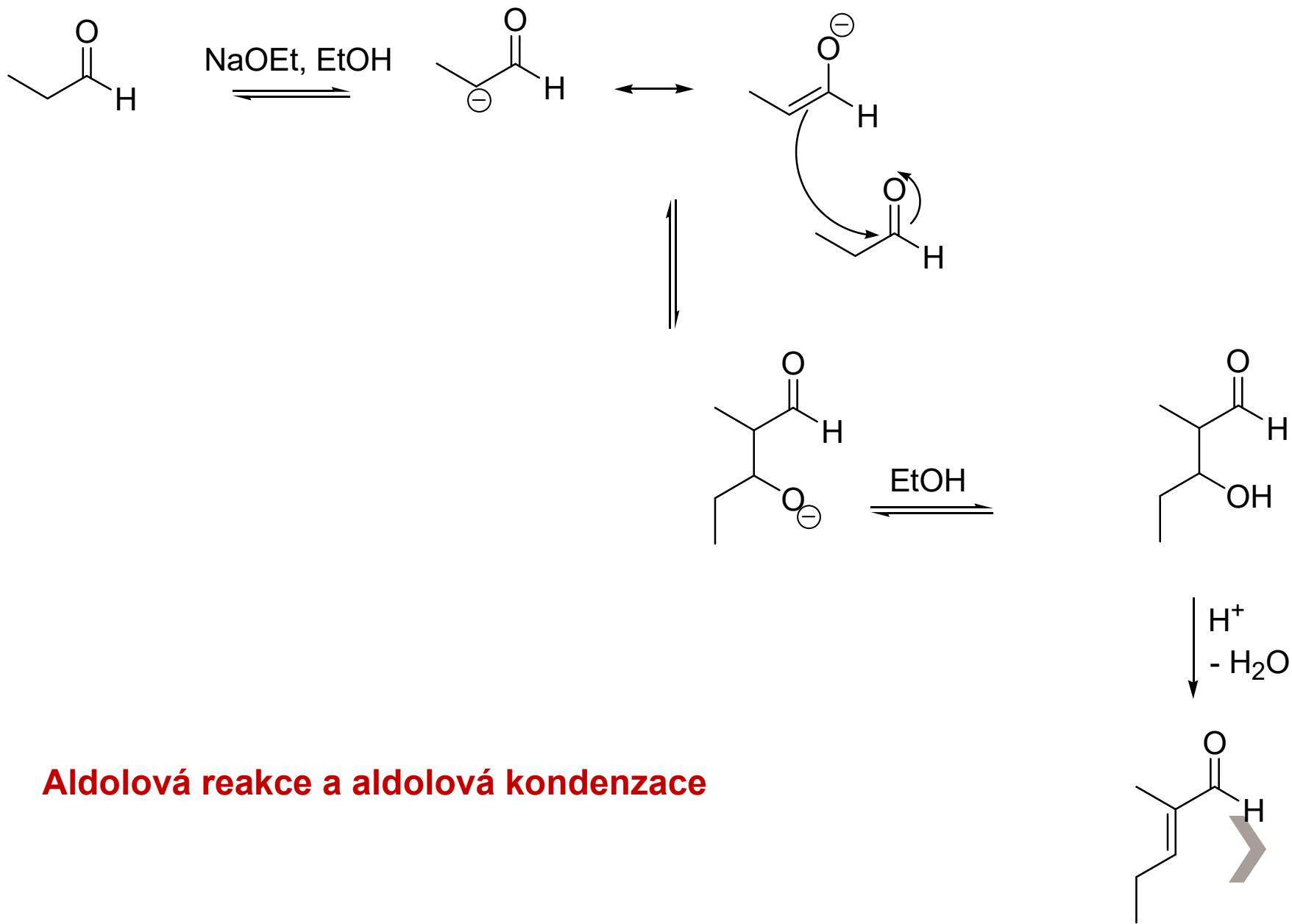


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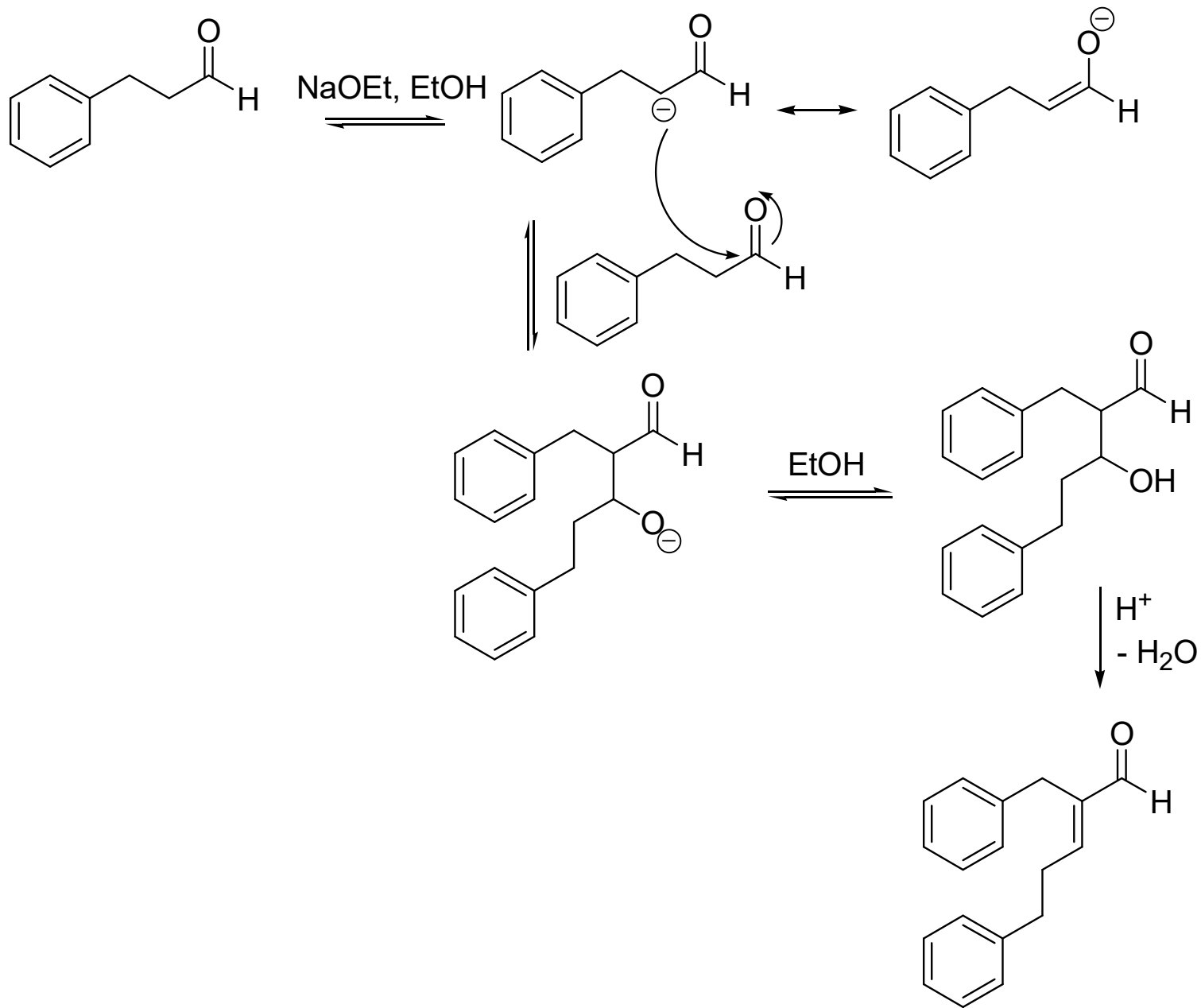


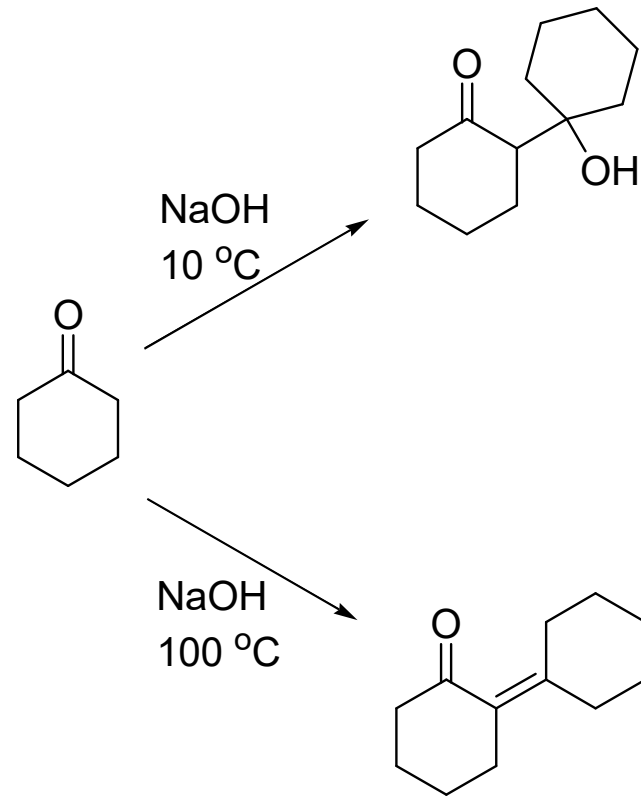
Aldolová reakce a aldolová kondenzace

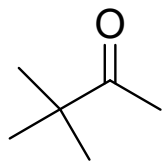




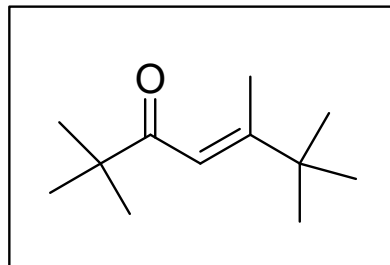
Aldolová reakce a aldolová kondenzace



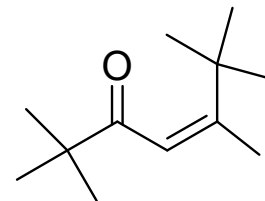




? produkt aldolové kondenzace



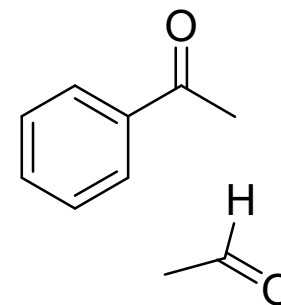
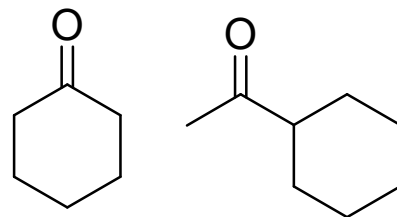
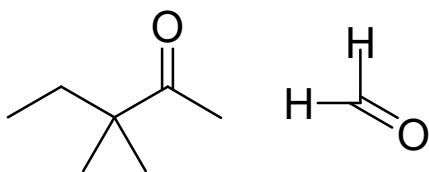
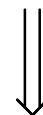
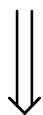
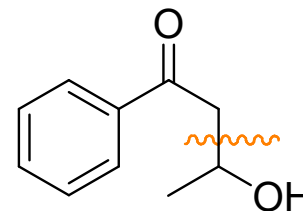
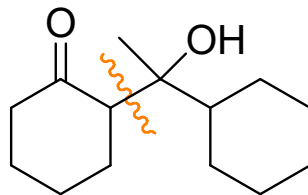
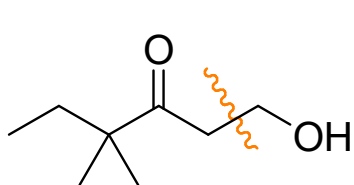
+



prevládá
menší sterická zábrana



Identifikujte reagenty, které poskytly následující sloučeniny



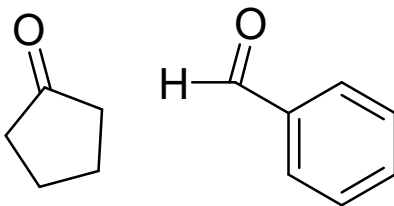
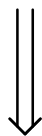
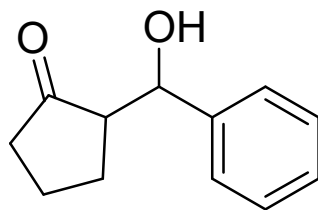
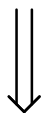
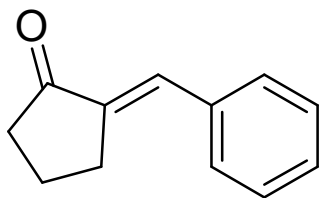
aldolová reakce

aldolová reakce

aldolová reakce



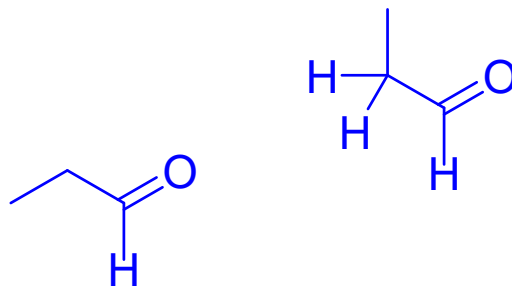
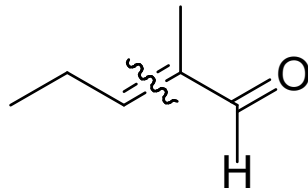
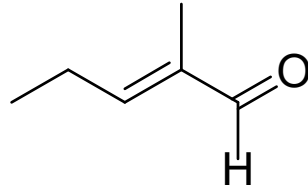
Identifikujte reagenty, které poskytly následující sloučeninu



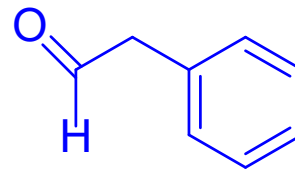
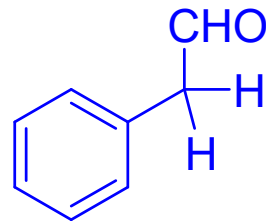
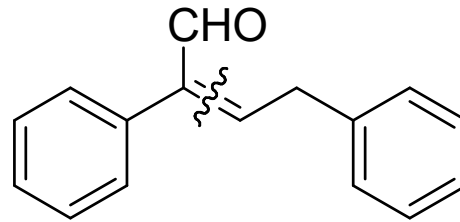
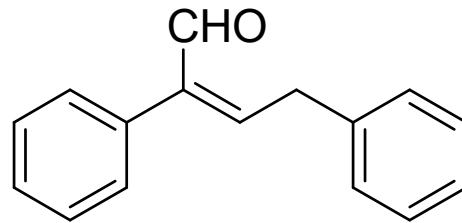
aldolová kondenzace



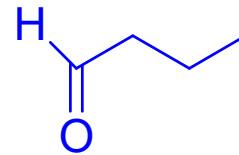
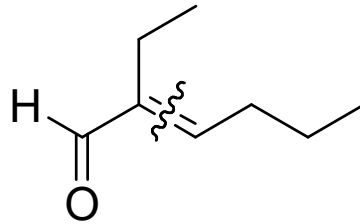
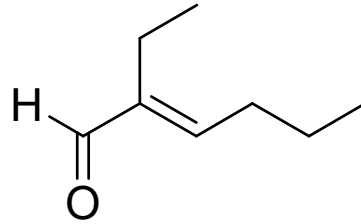
Aldolová kondenzace - retrosyntéza



Aldolová kondenzace - retrosyntéza

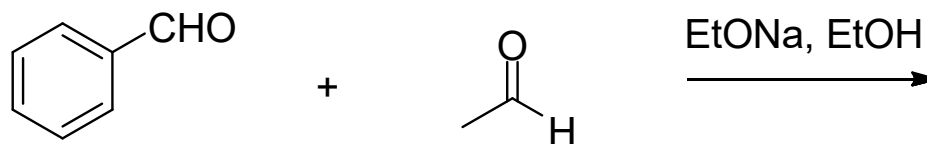


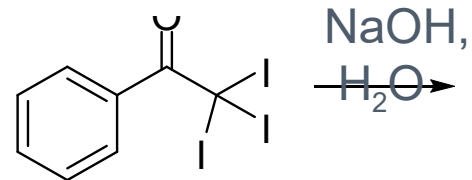
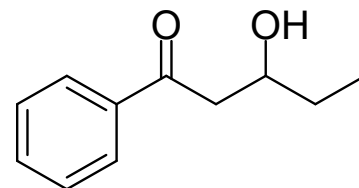
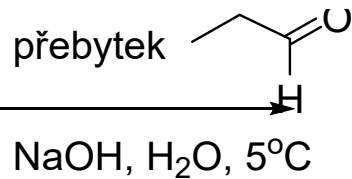
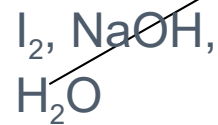
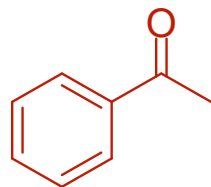
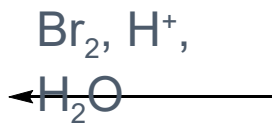
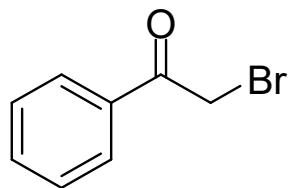
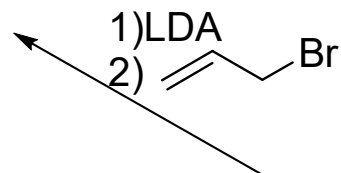
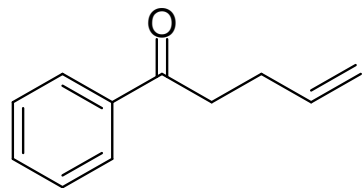
Aldolová kondenzace - retrosyntéza

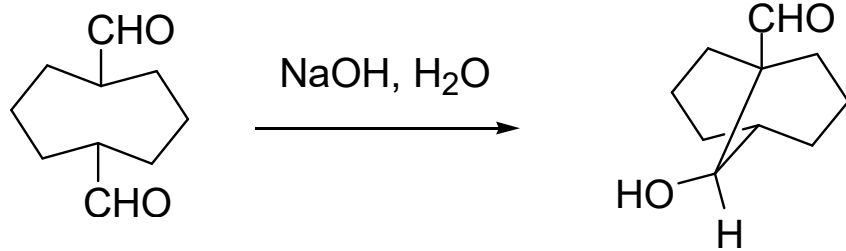


Zkřížená aldolová reakce

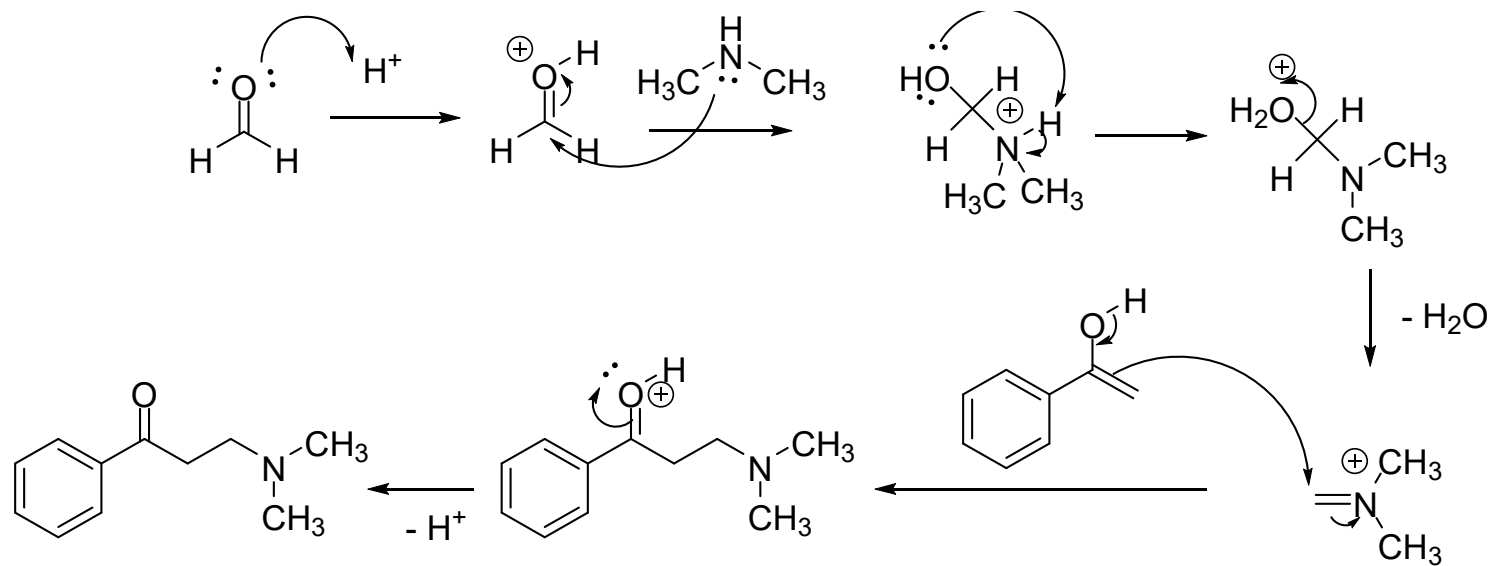
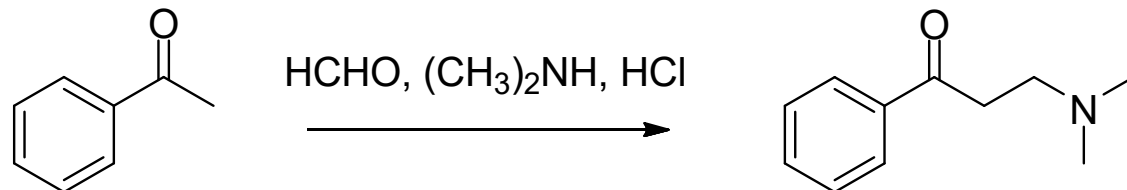
- 1) Jeden z aldehydů nemá v alfa pozici vodíky
- 2) LDA – 100% tvorba enolátu a potom přidavek další komponenty



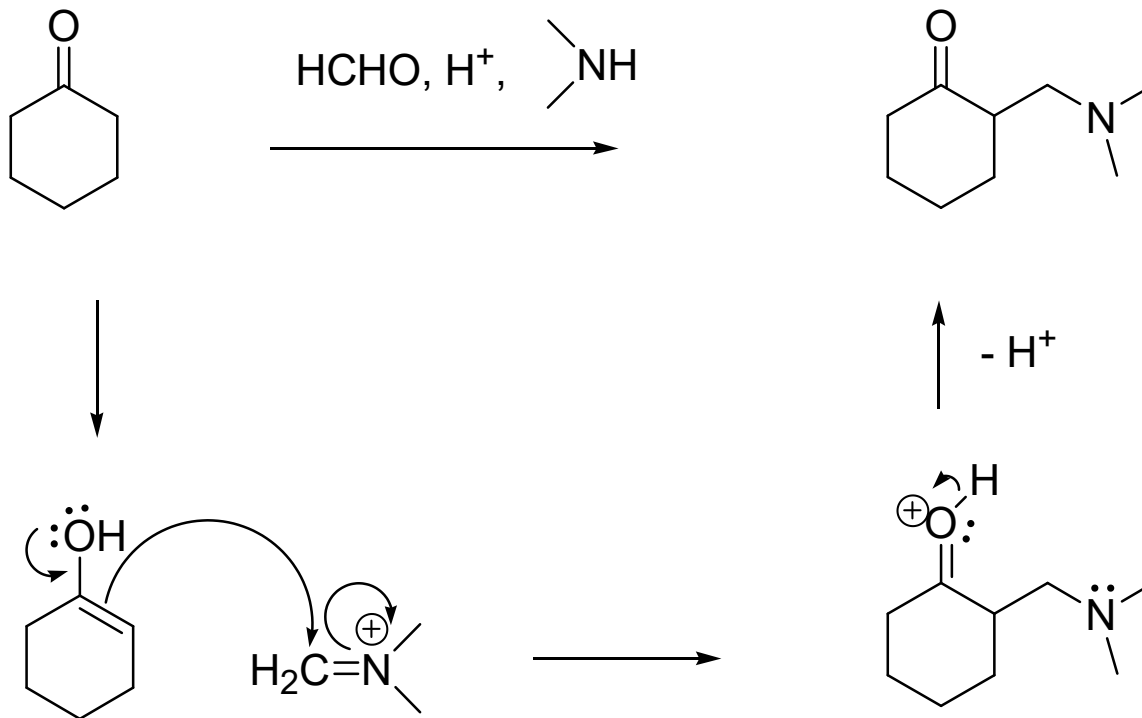


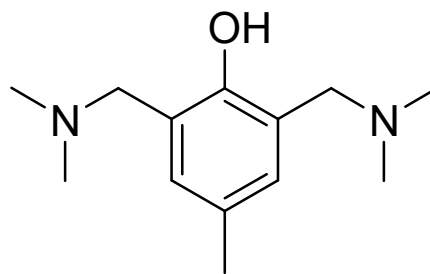
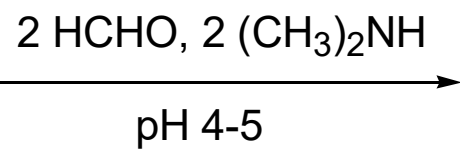
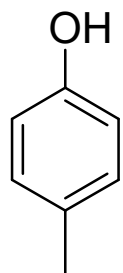


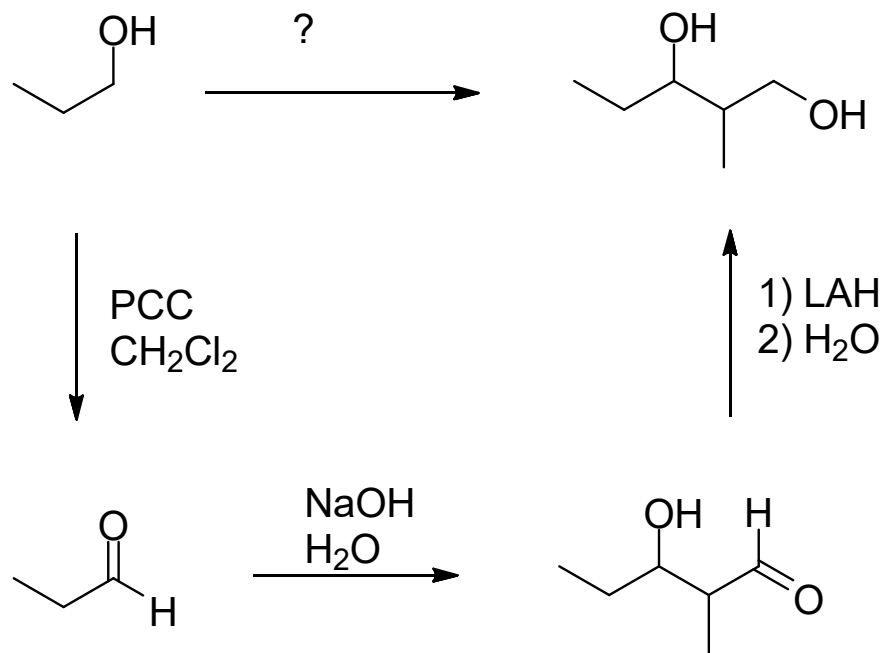
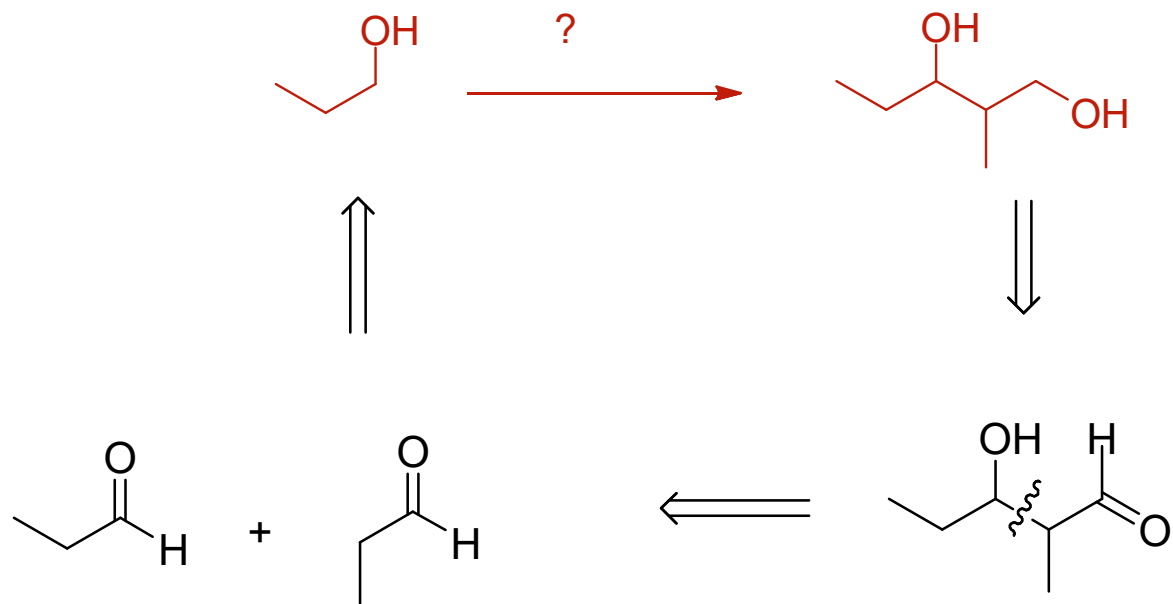
Mannichova reakce - aminomethylační reakce v alfa pozici ke karbonylu

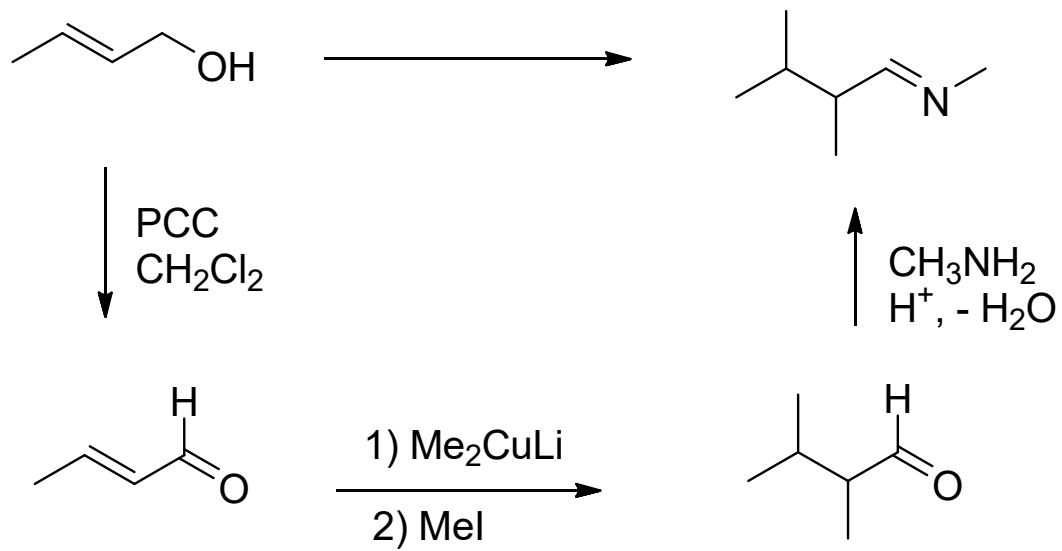
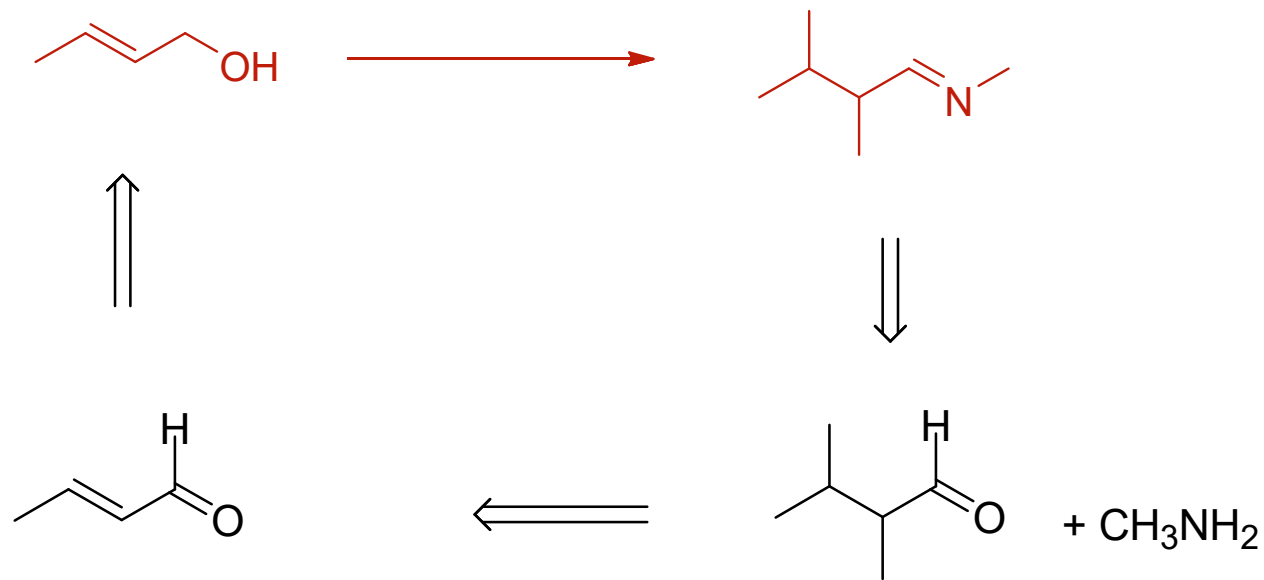


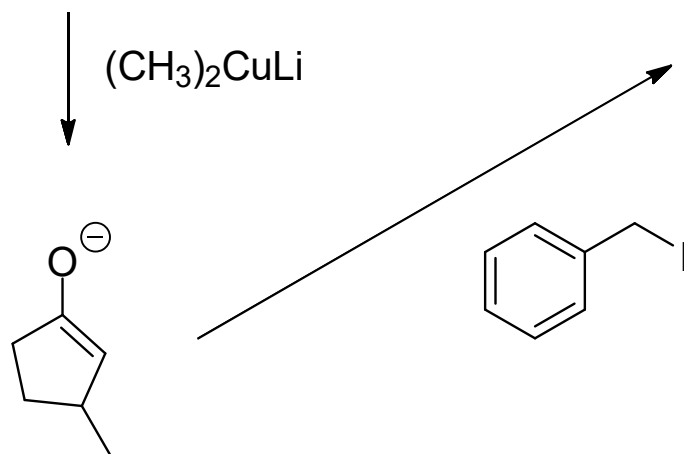
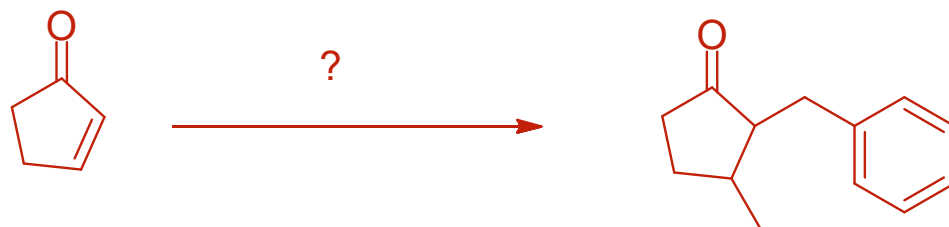
Identifikujte reagenty, které poskytly následující sloučeninu

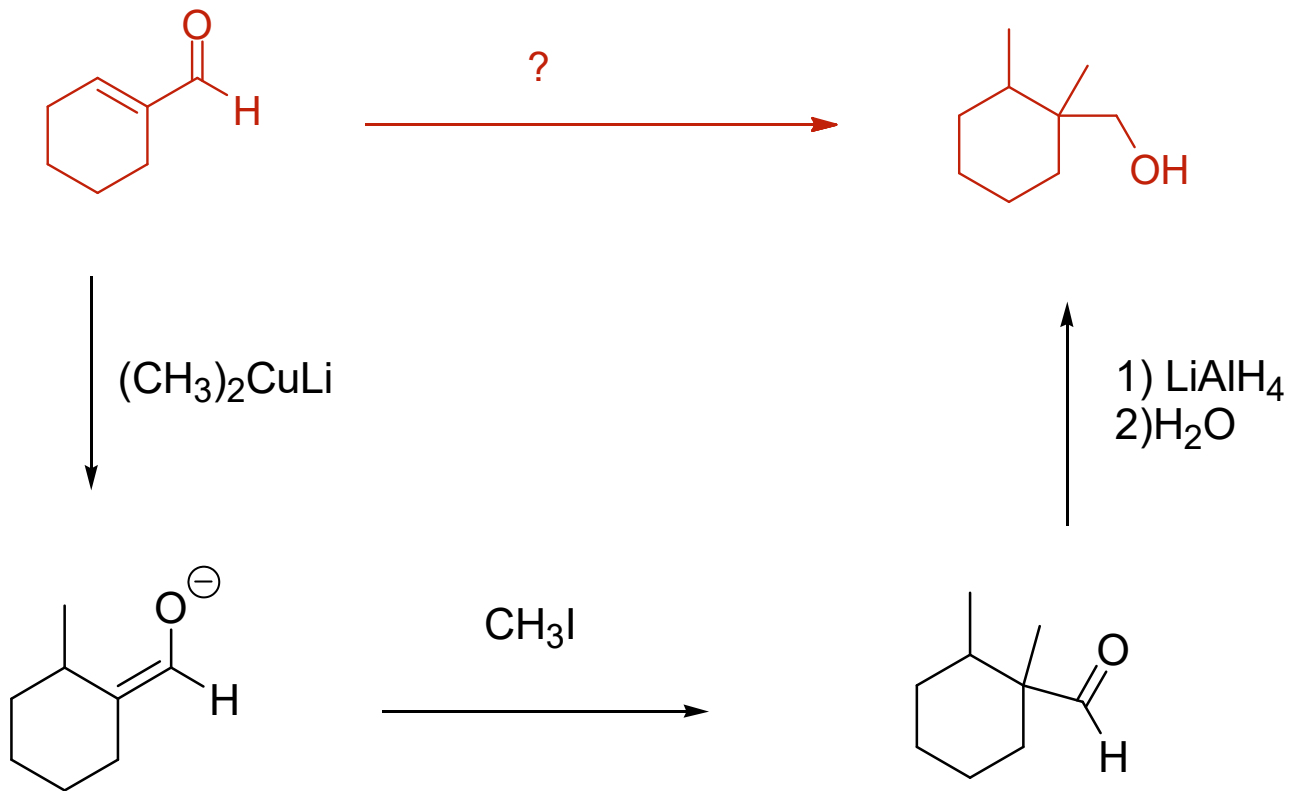


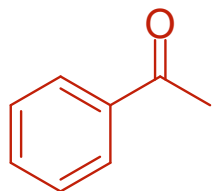




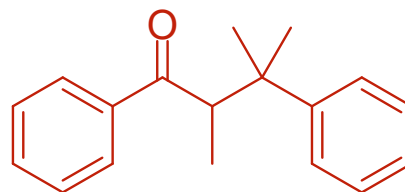




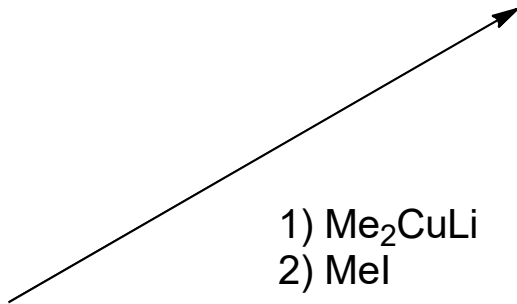
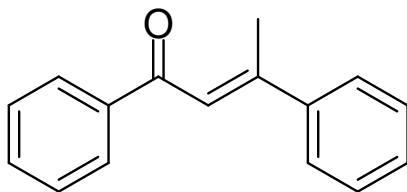




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NaOH, H₂O
ΔT

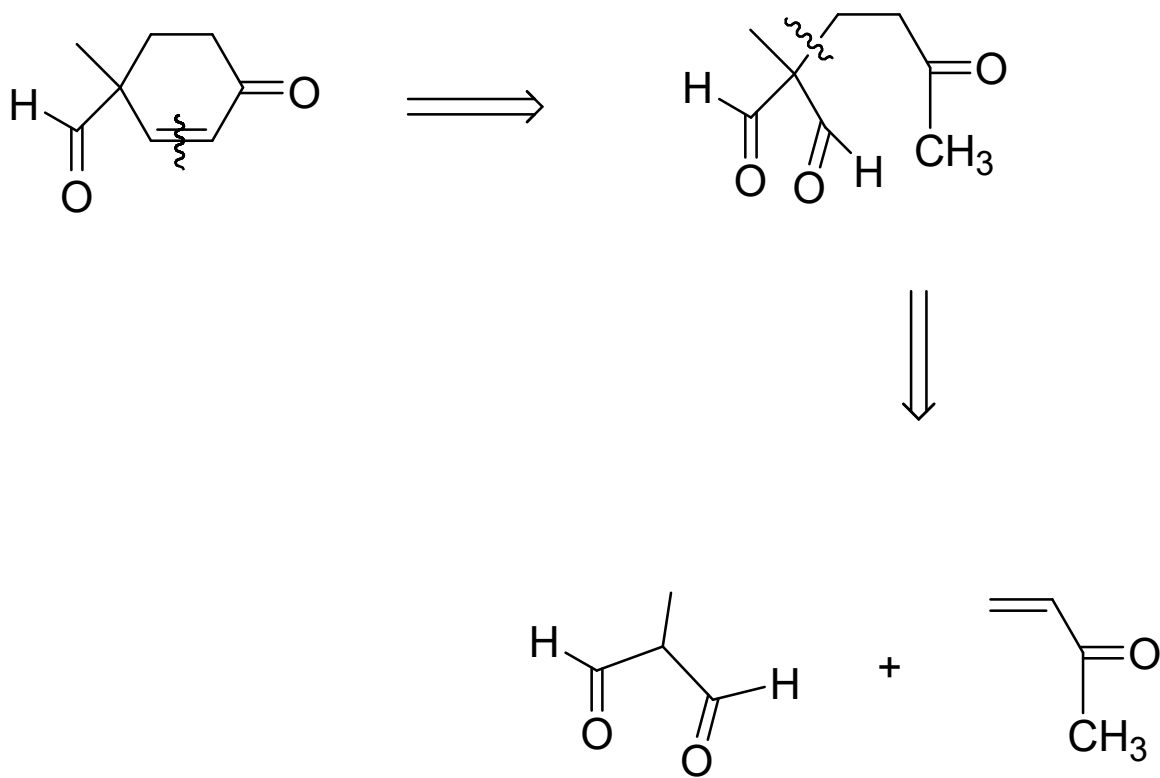


1) Me₂CuLi
2) MeI

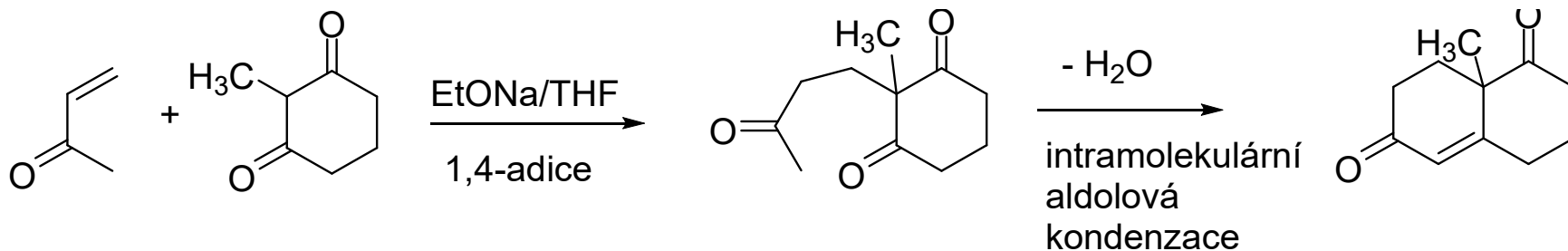
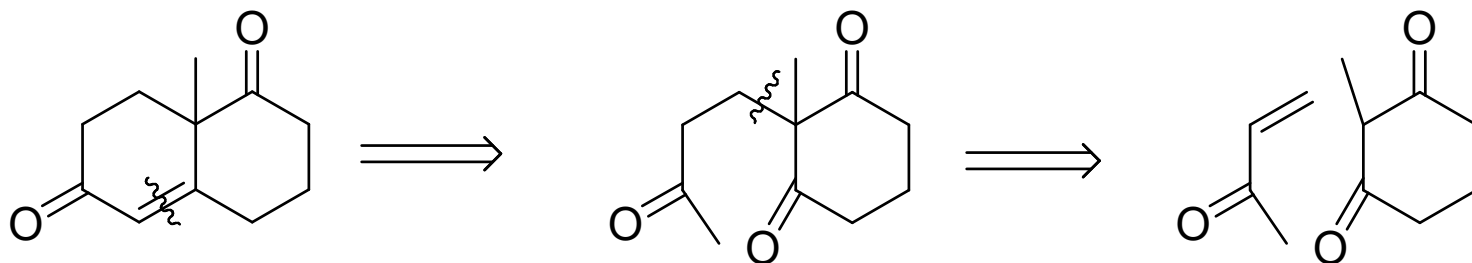


Identifikujte reagenty, které poskytly následující sloučeninu

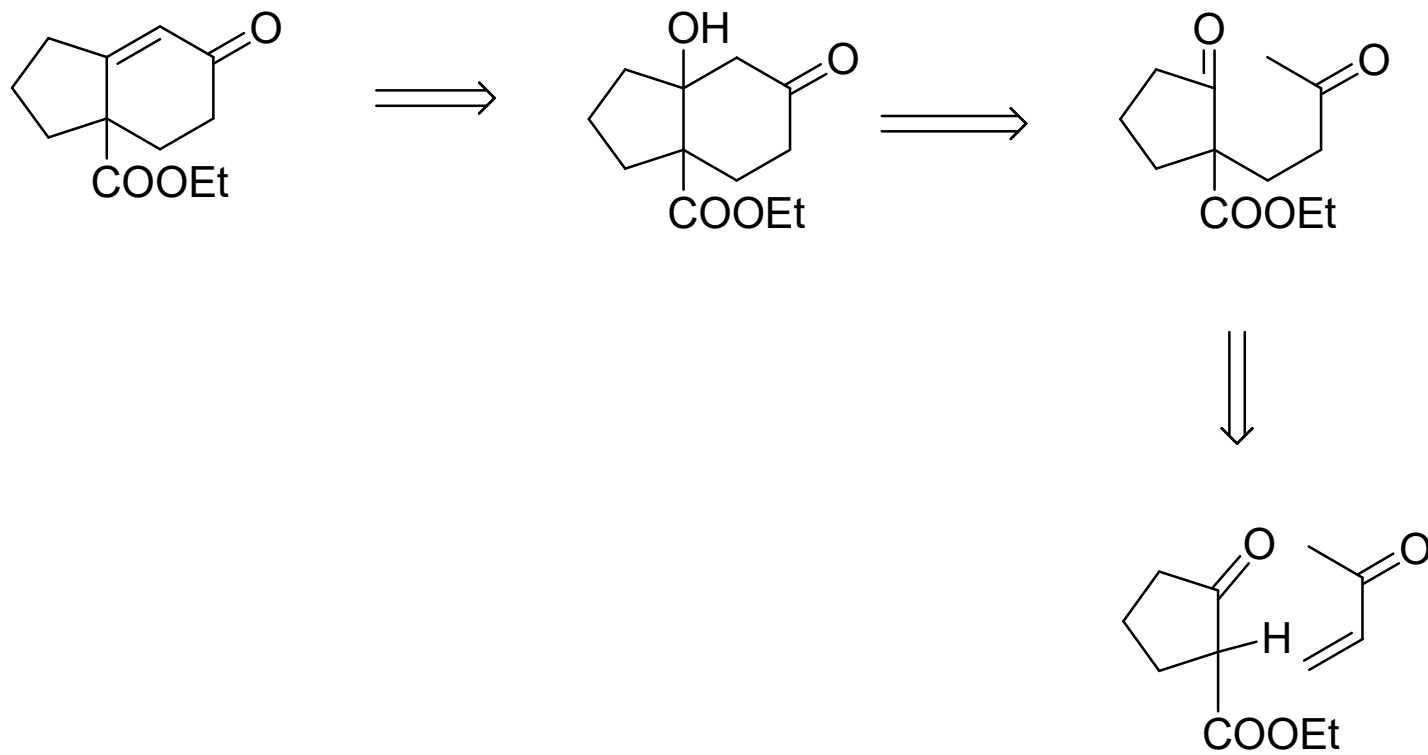
Robinsonova anelace



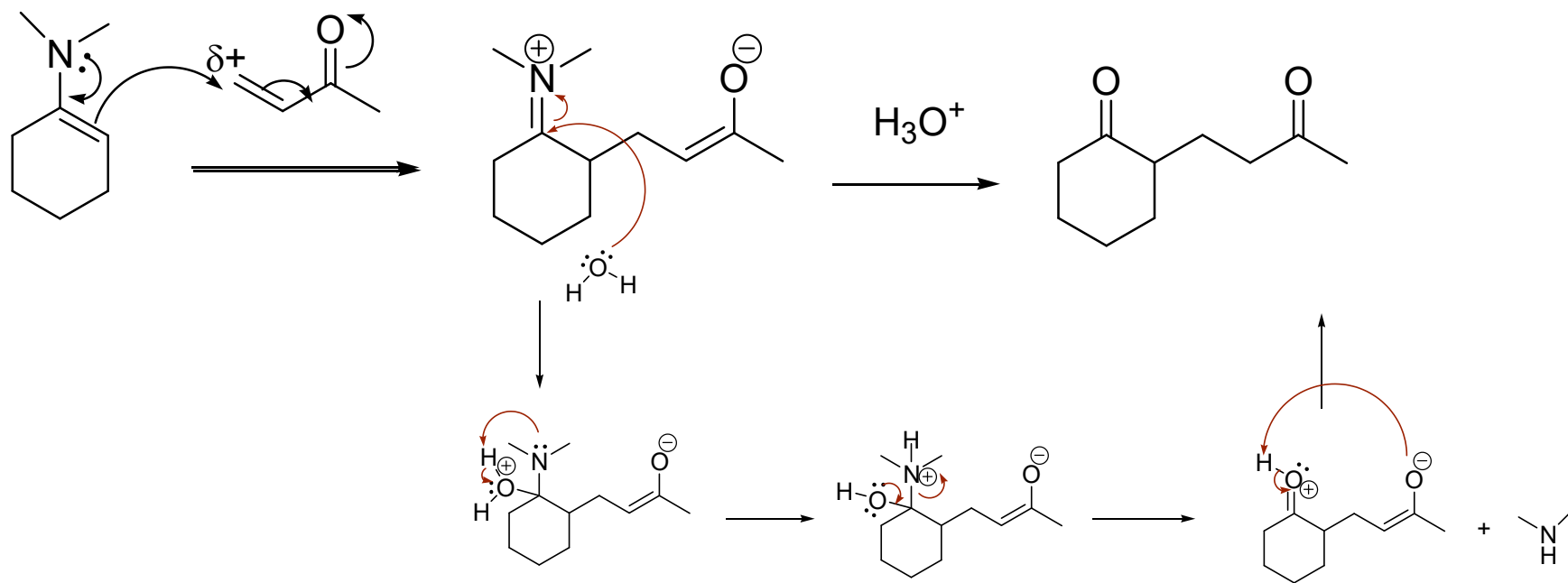
Identifikujte reagenty, které poskytly následující sloučeninu



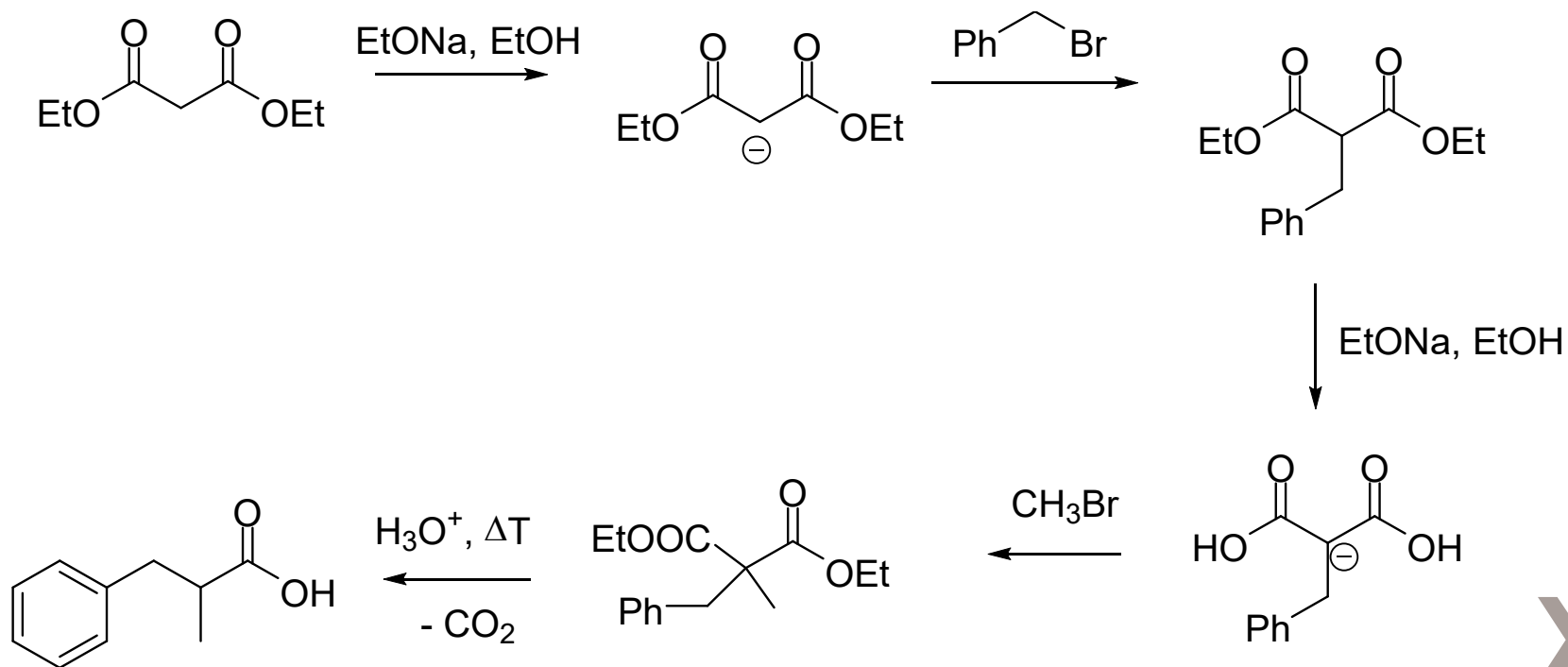
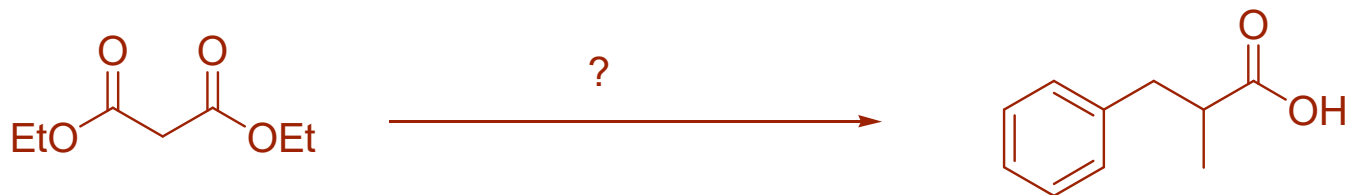
Robinsonova anelace



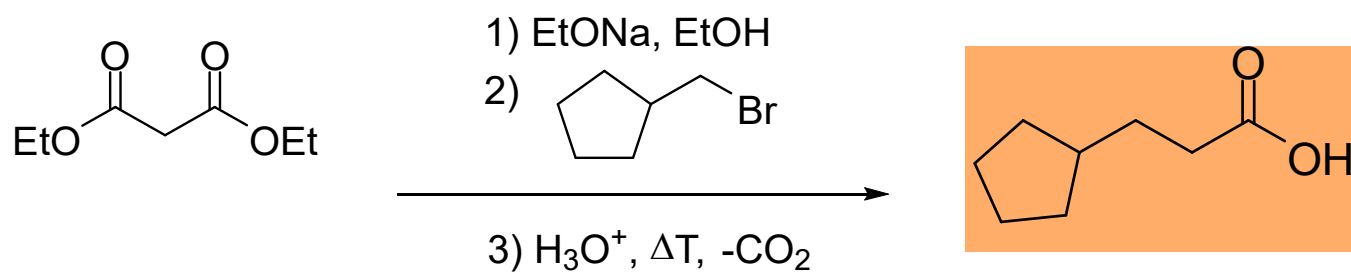
Storkova enaminová syntéza



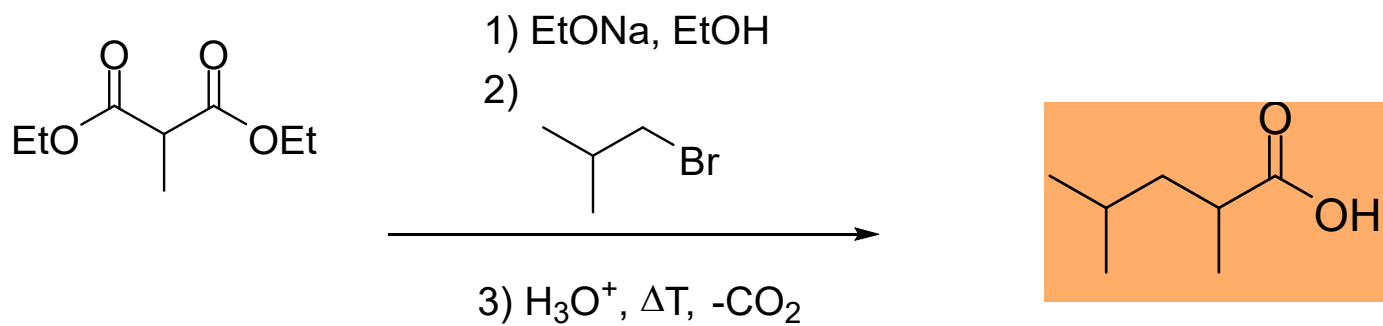
Využití malonesterové syntézy



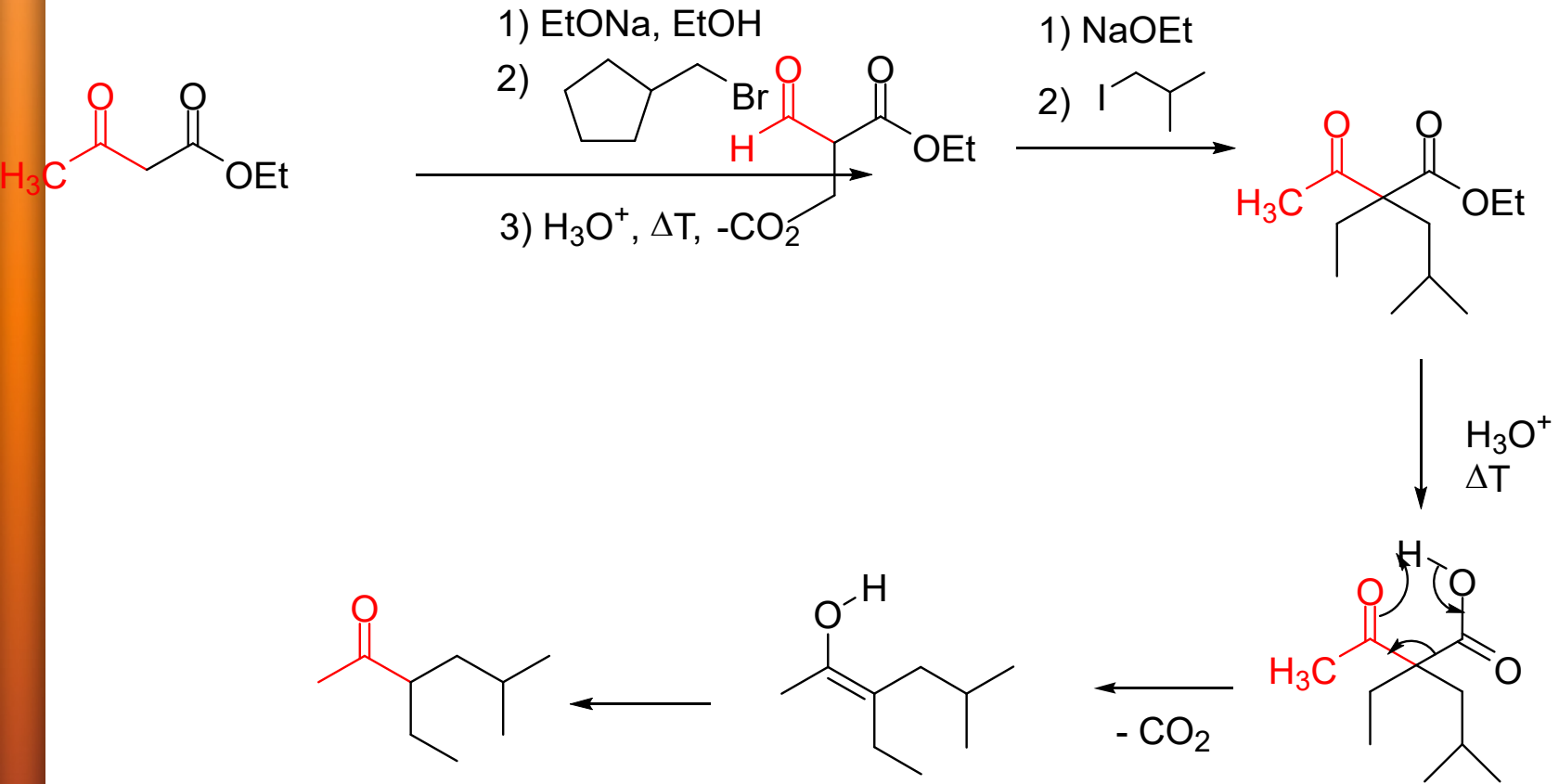
Malonesterová syntéza



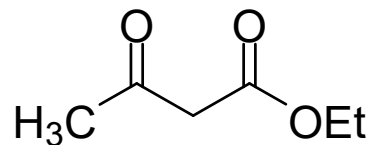
Malonesterová syntéza



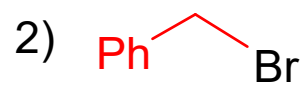
Acetocetanová syntéza



Acetocyanová syntéza



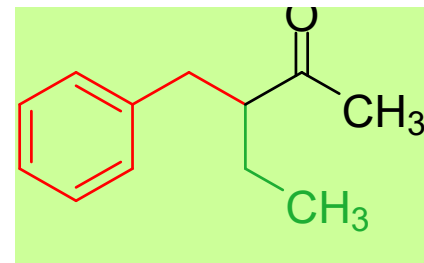
1) EtONa, EtOH



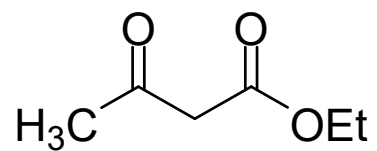
3) EtONa, EtOH



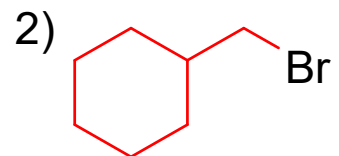
3) H_3O^+ , ΔT , $-\text{CO}_2$



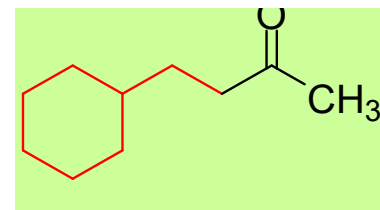
Acetocetanová syntéza



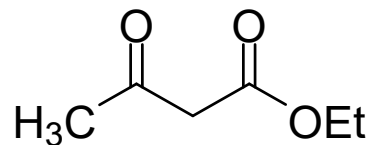
1) EtONa, EtOH



3) H_3O^+ , ΔT , $-\text{CO}_2$



Acetocetanová syntéza



1) EtONa , EtOH

2) $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{Br}$

3) EtONa , EtOH

4) $\text{H}_3\text{C}-\text{CH}_2-\text{Br}$



3) H_3O^+ , ΔT , $-\text{CO}_2$

