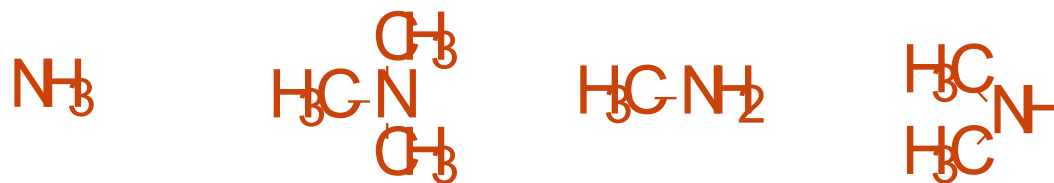


AMINY



NH_3	$\text{H}_3\text{C-NH}_2$	$\begin{array}{c} \text{H}_3\text{C} \\ \diagdown \\ \text{N} \\ \diagup \\ \text{H}_3\text{C} \end{array}$	$\begin{array}{c} \text{H}_3\text{C} \\ \diagdown \\ \text{N} \\ \diagup \\ \text{H}_3\text{C} \end{array}$
NH_4^+	$\text{H}_3\text{C-NH}_3^+$	$\begin{array}{c} \text{H}_3\text{C} \\ \diagdown \\ \text{N}^+ \\ \diagup \\ \text{H}_3\text{C} \end{array}$	$\begin{array}{c} \text{H}_3\text{C} \\ \diagdown \\ \text{N}^+ \\ \diagup \\ \text{H}_3\text{C} \end{array}$
9,26	pK_a konjugované kyseliny		9,70
	10,64	10,72	

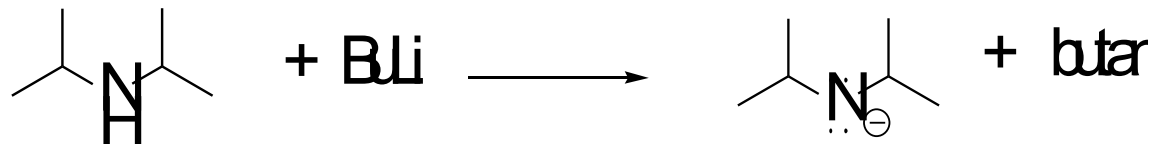
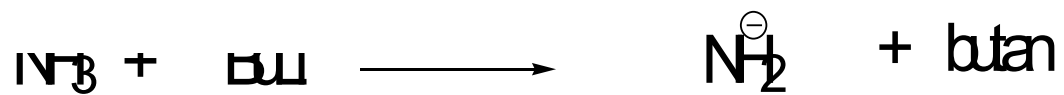




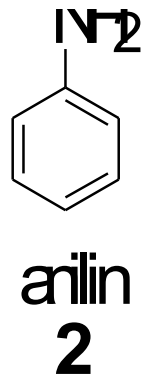
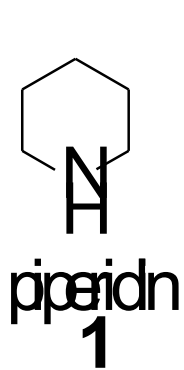
růst bazičnosti



NH_3		$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{NH}_2$	
33	36	17	83

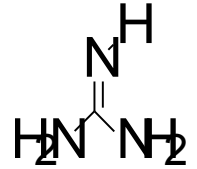
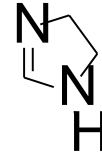
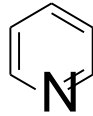
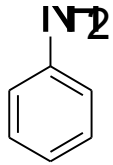
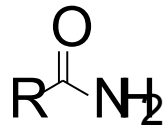


Seřad'te podle klesající bazicity



1 > 3 > 2 > 4





pK_a

0-(-1)

4,6

5,2

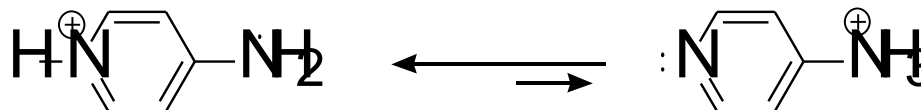
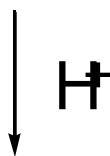
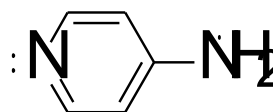
7,1

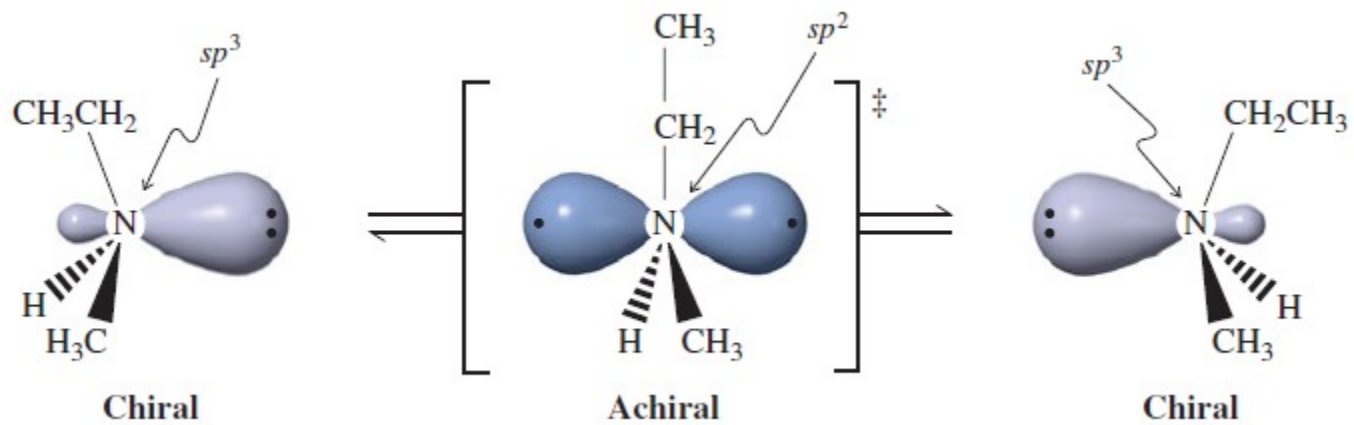
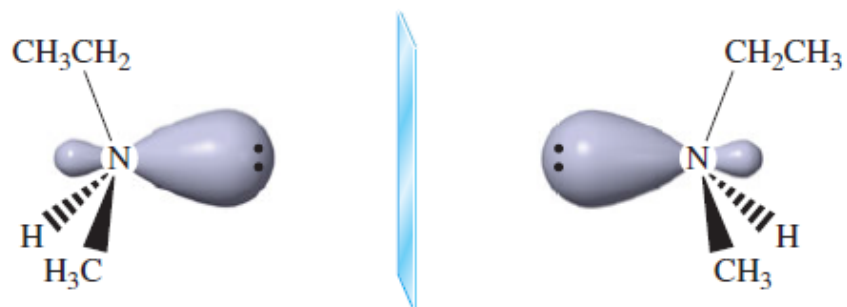
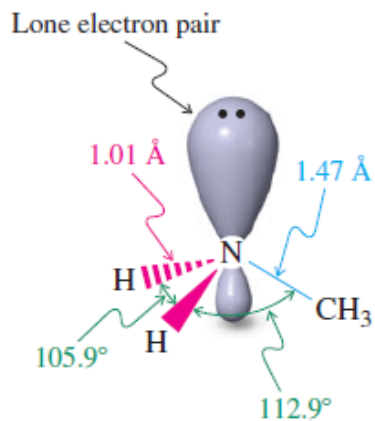
11

13,6

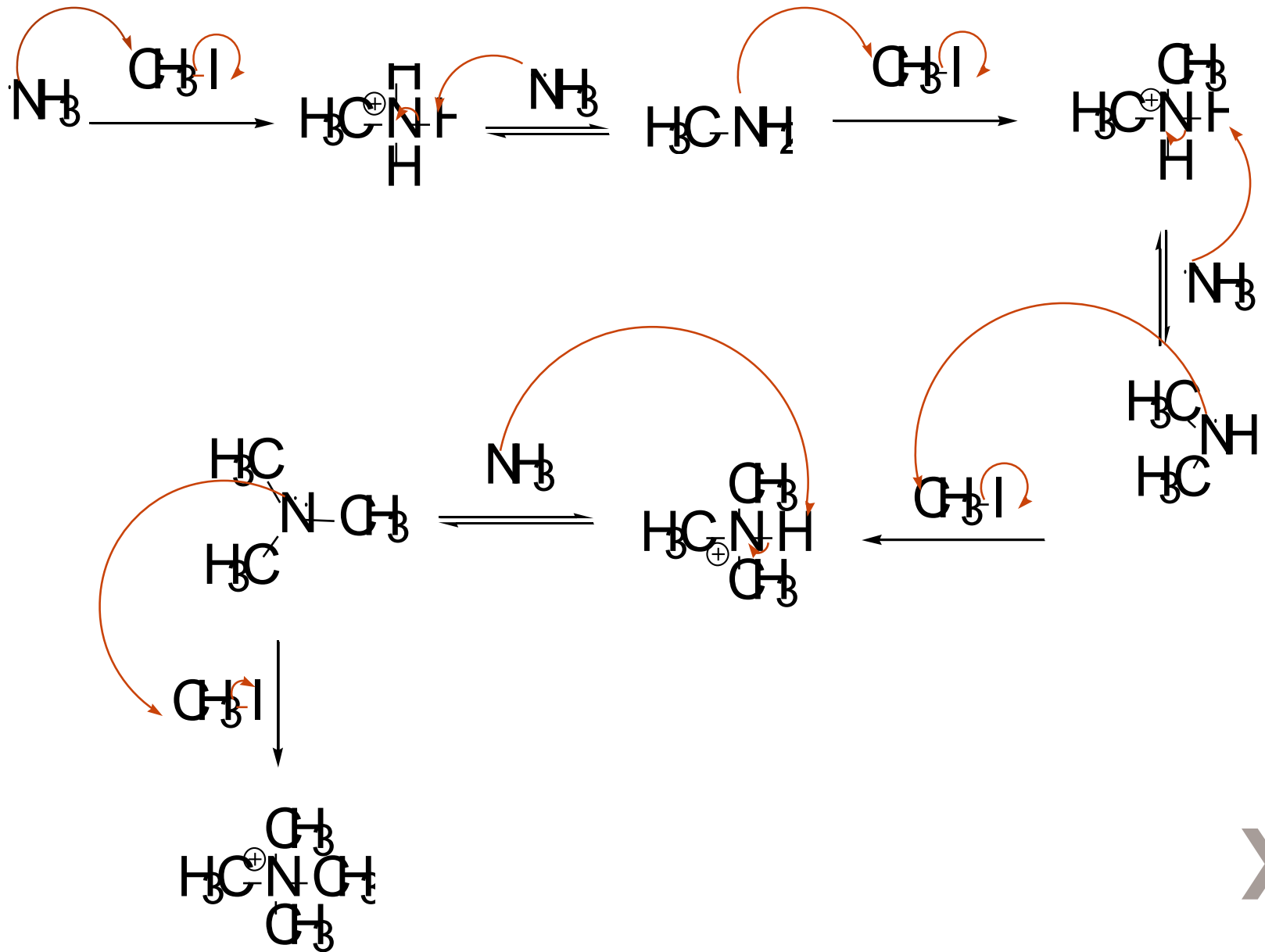


Rozhodněte, který dusík bude přednostně protonován

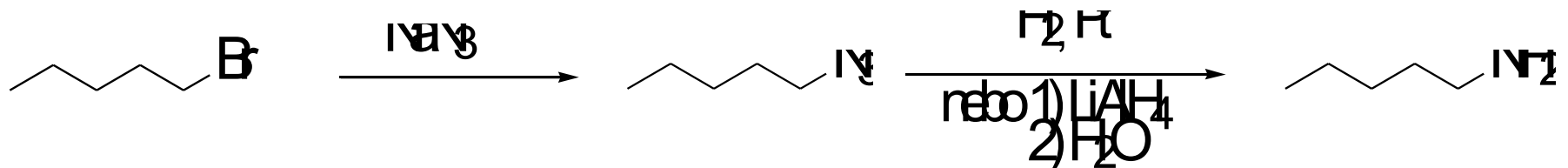
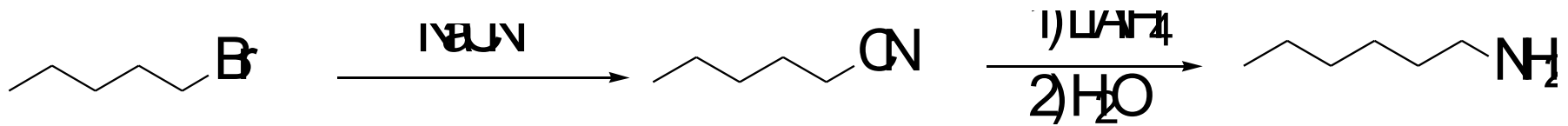




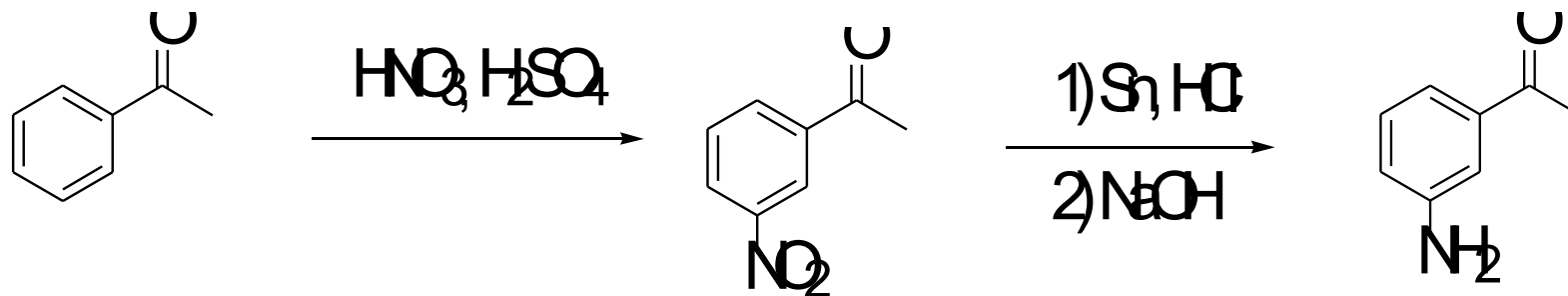
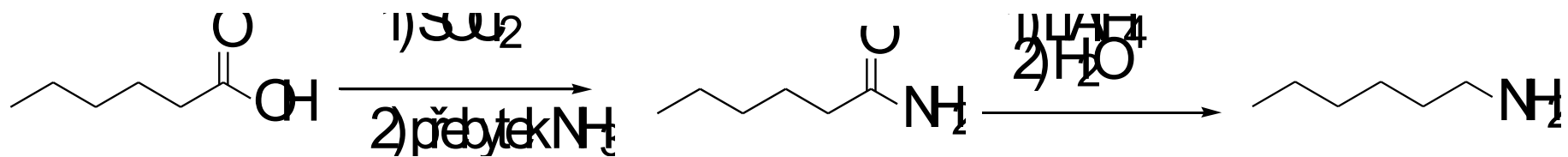
bariéra 20 – 30 kJ mol⁻¹



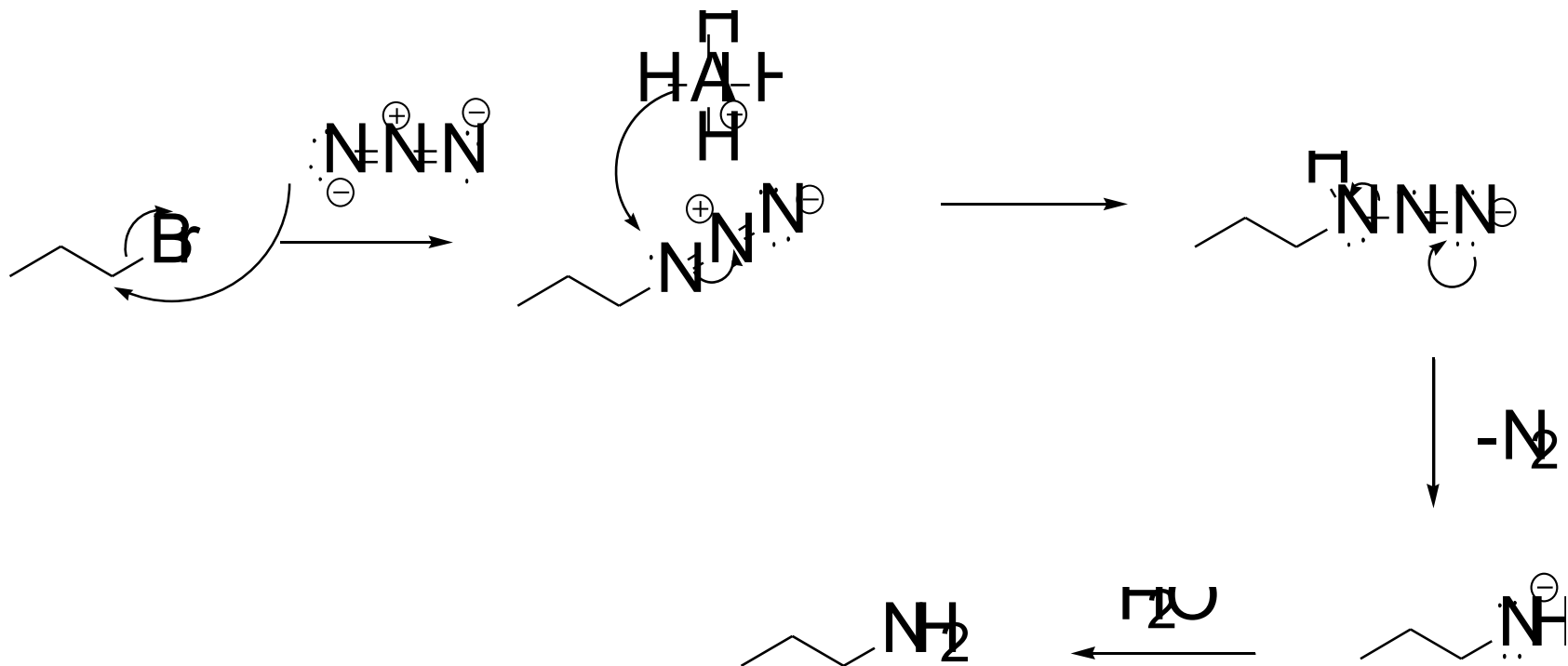
Doplňte hlavní produkty uvedených reakcí



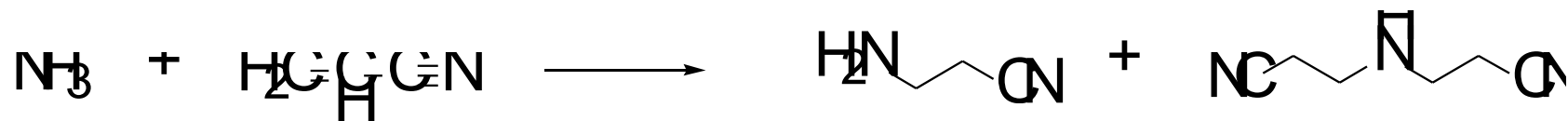
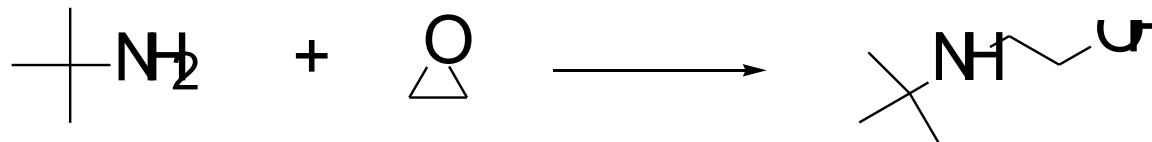
Doplňte hlavní produkty uvedených reakcí



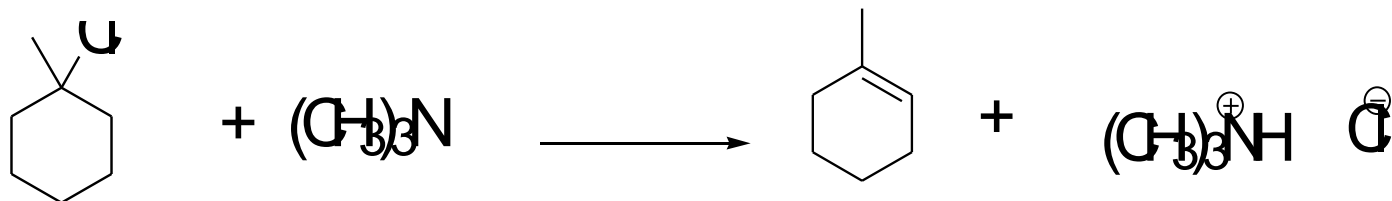
Pokuste se napsat mechanismus redukce azidu pomocí LiAlH_4



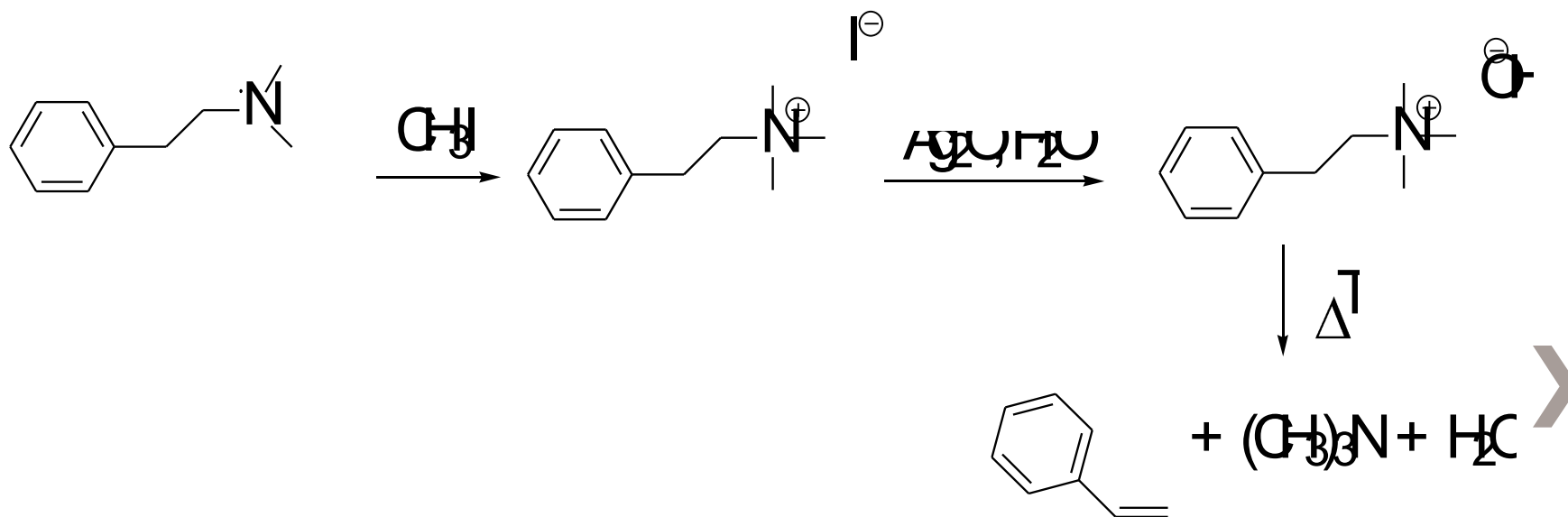
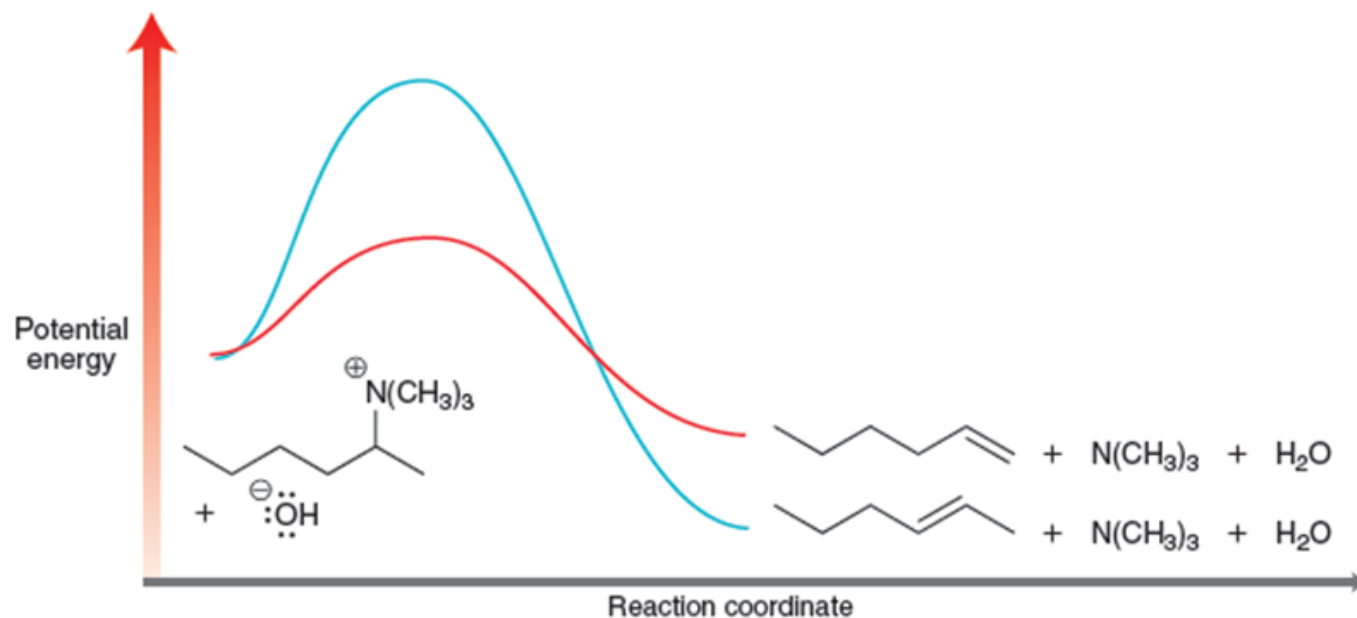
Doplňte hlavní produkty uvedených reakcí



Doplňte hlavní produkty uvedených reakcí

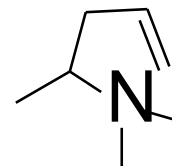
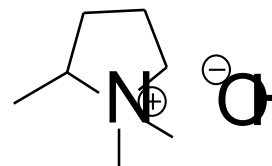
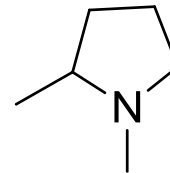
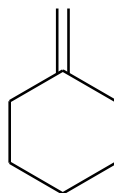
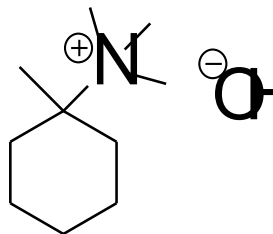
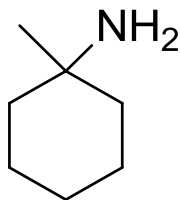
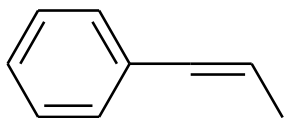
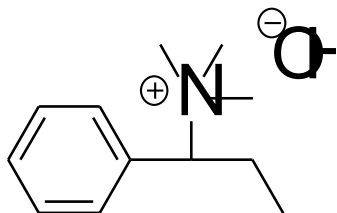
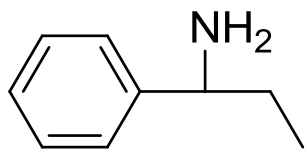


Hofmannova eliminace



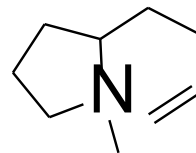
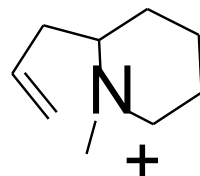
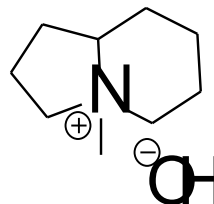
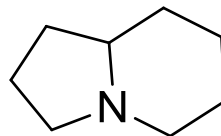
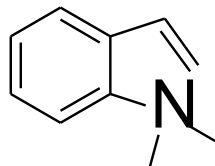
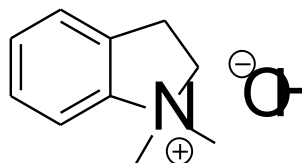
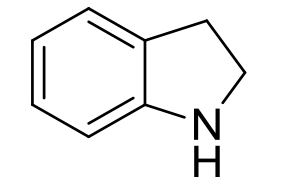
Hofmannova eliminace

doplňte produkty

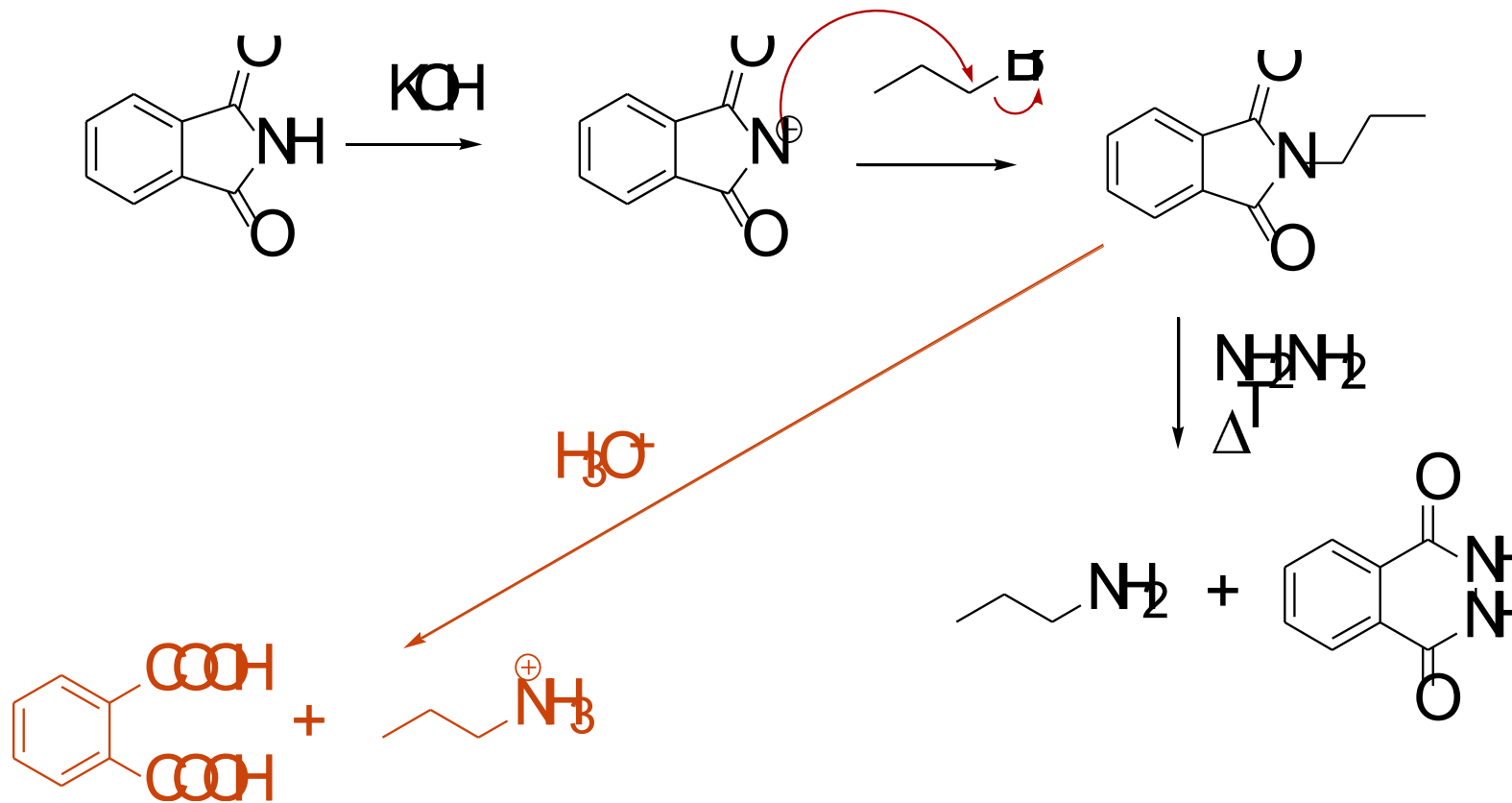


Hofmannova eliminace

doplňte produkty



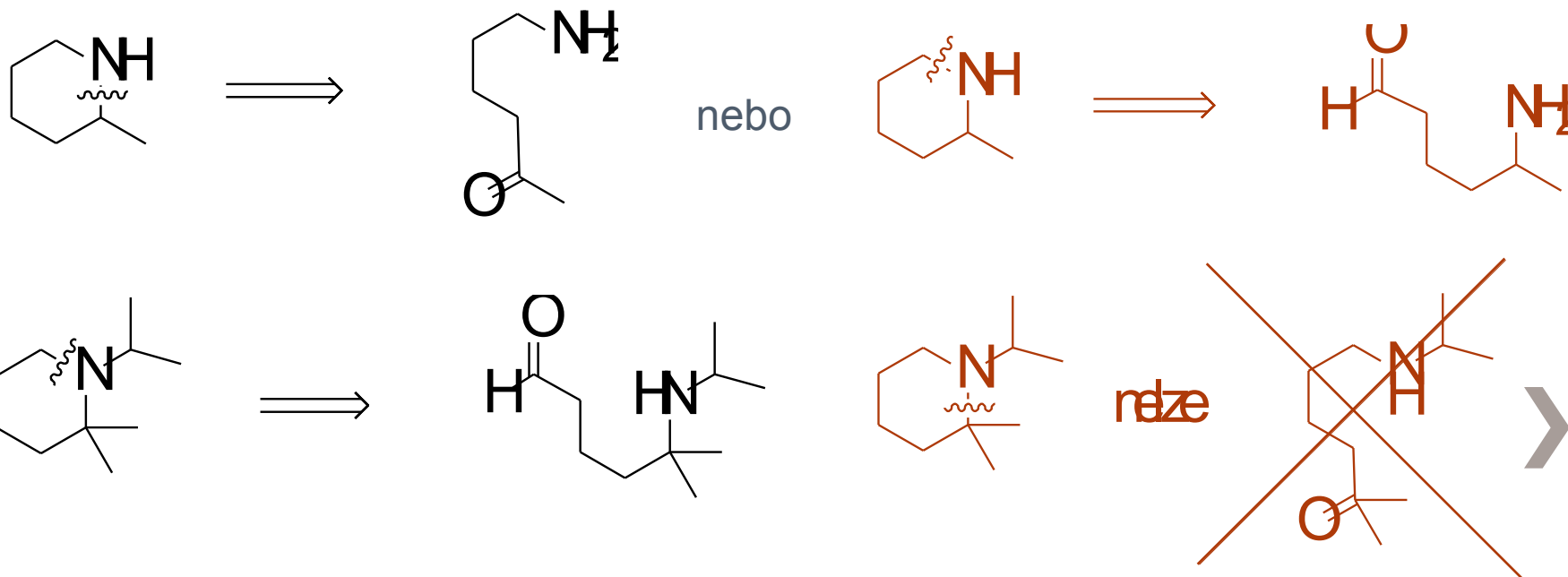
Gabrielova syntéza primárních aminů



Reduktivní aminace

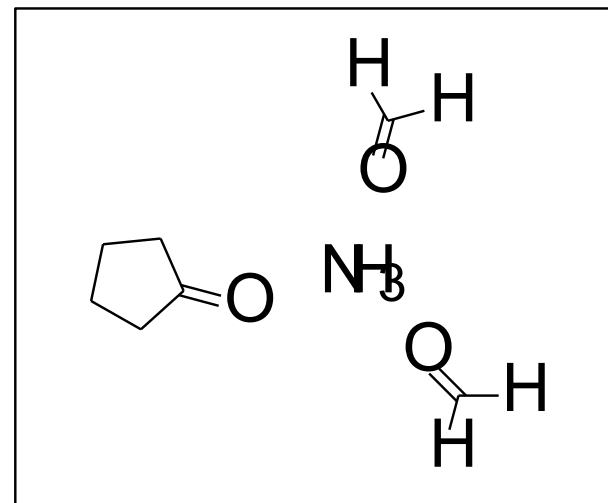
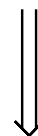
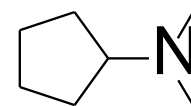
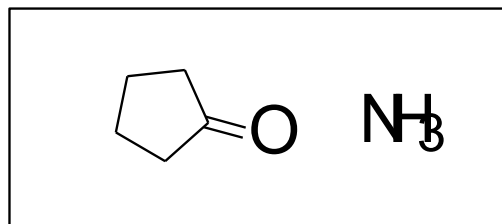
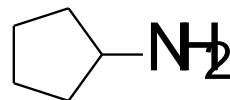
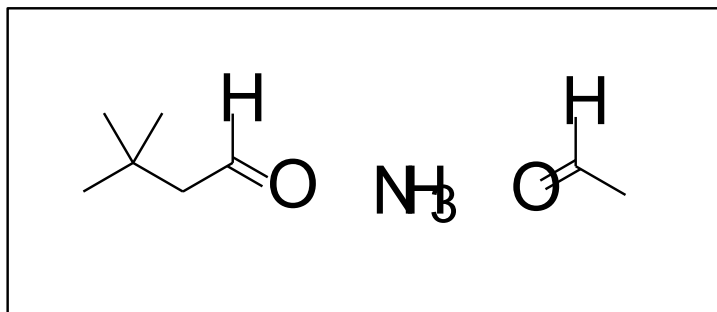
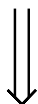
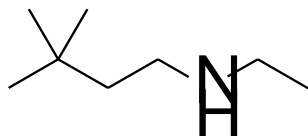
karbonylová sloučenina + amin, pH = 4-6

redukce: H_2 , Pd
 $NaBH(OAc)_3$
 $NaBH_3CN$

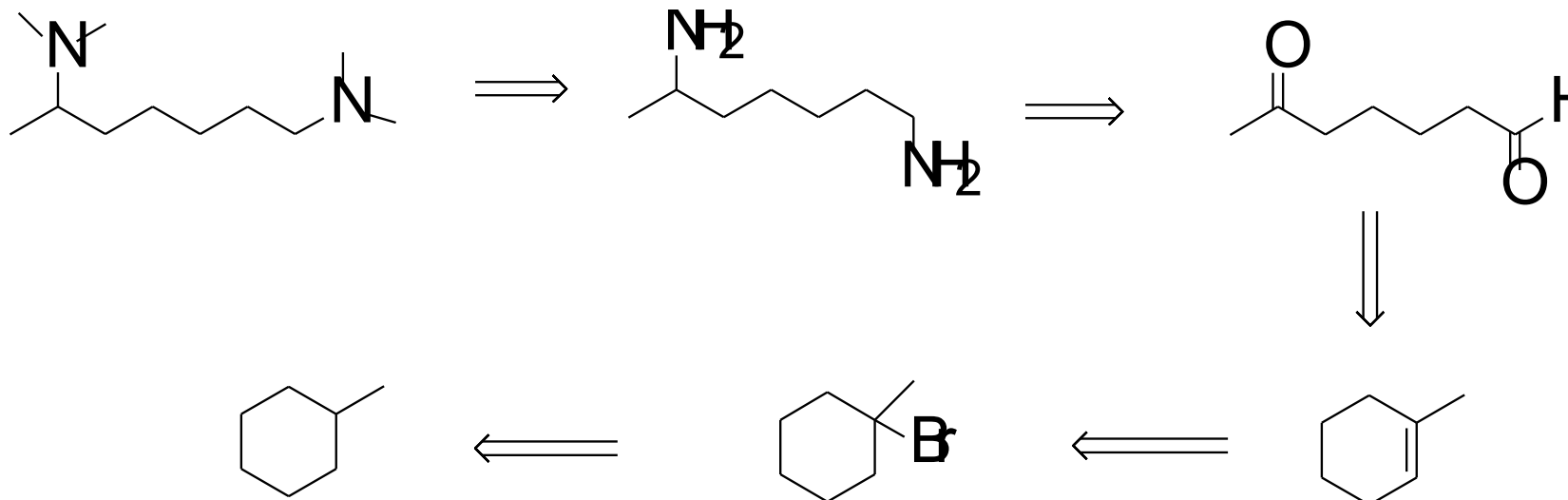
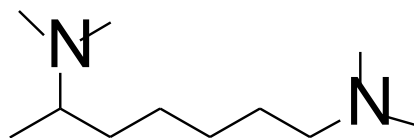


Reduktivní aminace

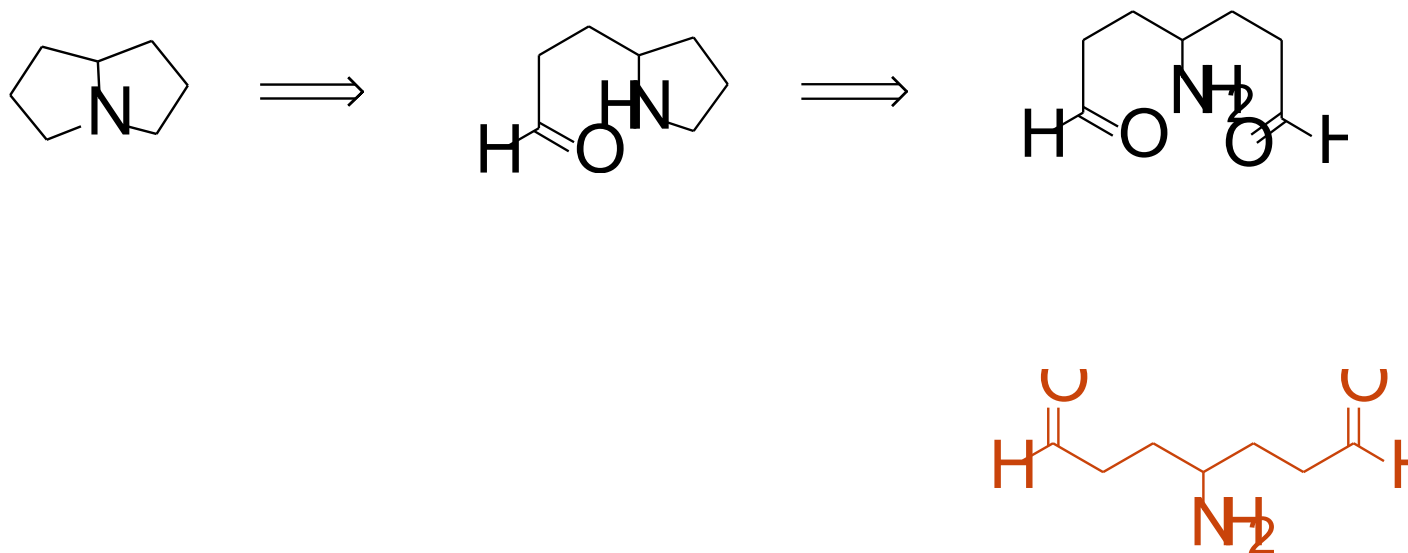
navrhněte syntézu uvedených sloučenin a jako zdroj dusíku využijte amoniak



Navrhňte syntézu uvedené sloučeniny z methylcyklohexanu



Navrhněte prekurzory pro syntézu následující sloučeniny reductivní aminací



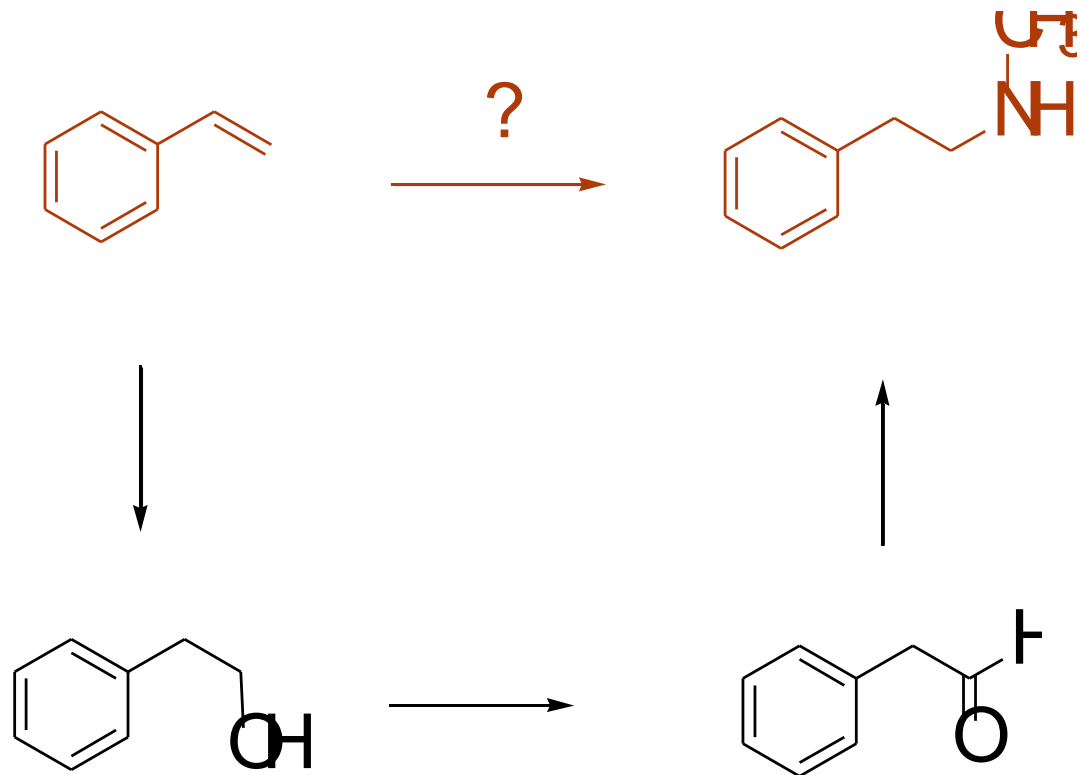
Navrhněte podmínky pro následující přeměny



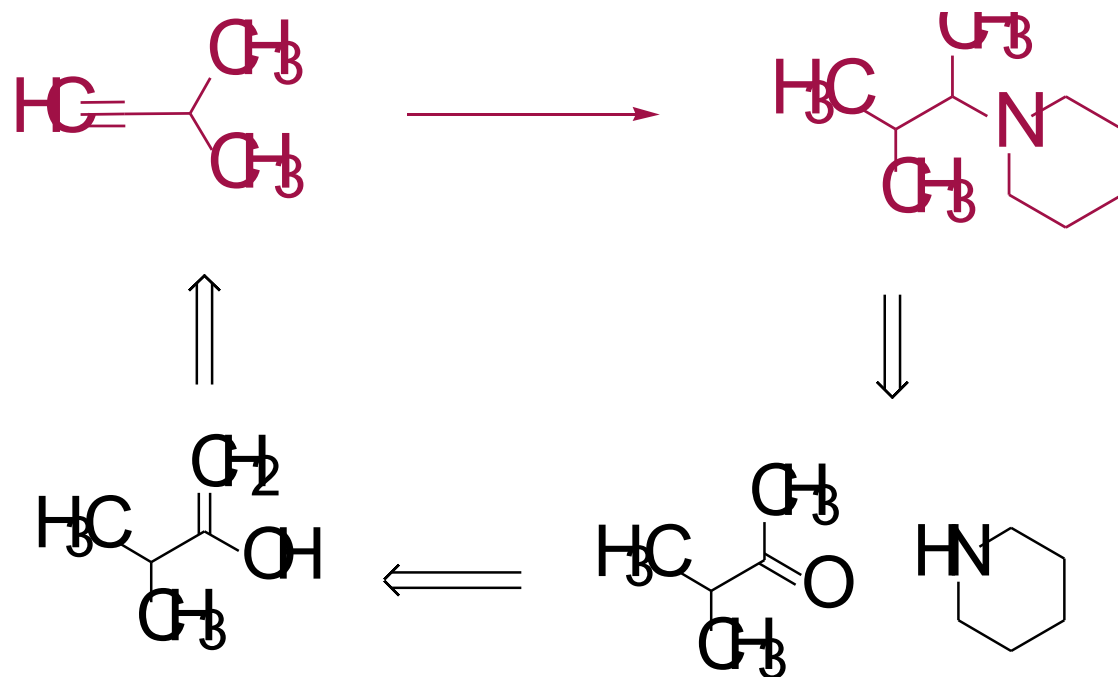
- 1) radikálová halogenace
- 2) E2, *t*-BuOK
- 3) HBr, *h* ν
- 4) Gabrielova syntéza



Navrhněte podmínky pro následující přeměny



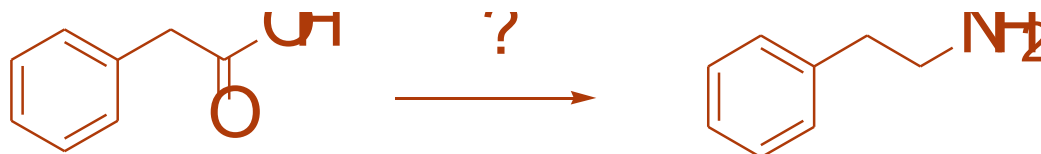
Navrhněte podmínky pro následující přeměny



- 1) adice vody
- 2) reduktivní aminace



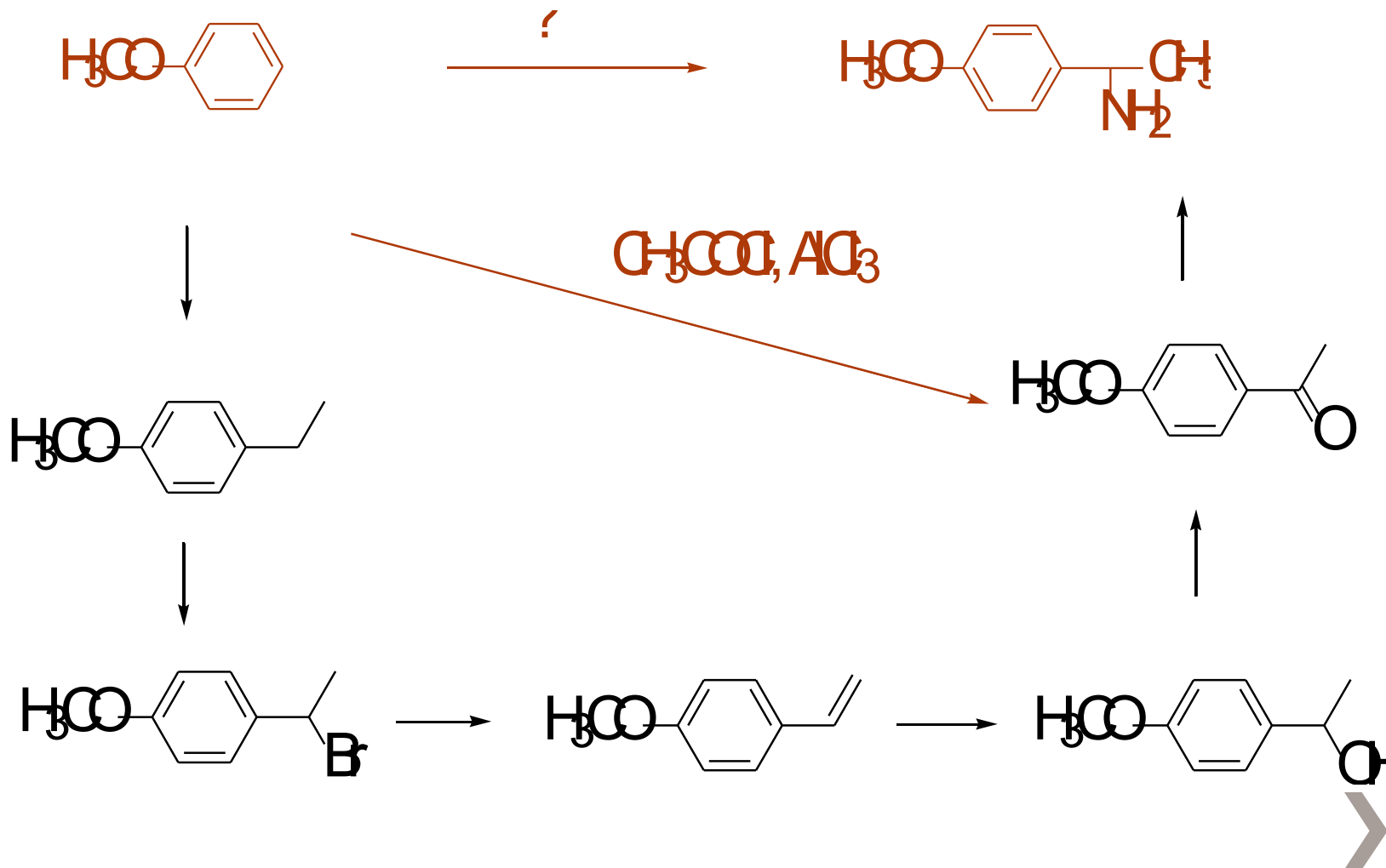
Navrhněte podmínky pro následující přeměny



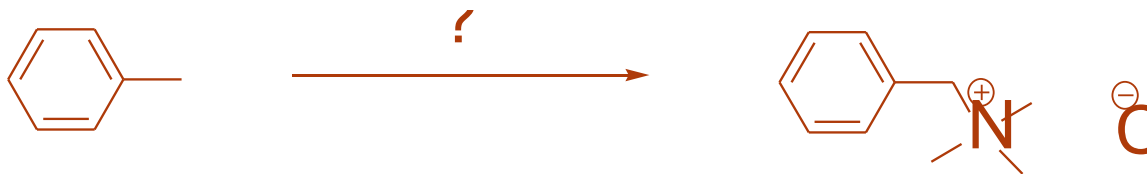
- 1) redukce na alkohol ($LiAlH_4$, poté H_2O)
- 2) PBr_3
- 3) Gabrielova syntéza



Navrhněte podmínky pro následující přeměny



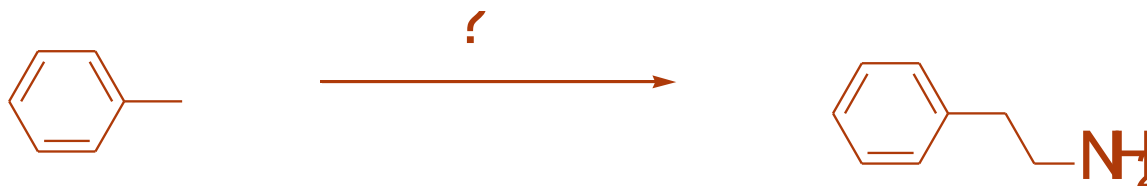
Navrhněte podmínky pro následující přeměny



- 1) halogenace v bočním řetězci
- 2) reakce s *terc*-aminem



Navrhněte podmínky pro následující přeměny



- 1) halogenace
- 2) výměna halogenu za CN skupinu
- 3) redukce LiAlH₄



Navrhněte podmínky pro následující přeměny



- 1) oxidace na aldehyd
- 2) reduktivní aminace



Navrhněte podmínky pro následující přeměny

