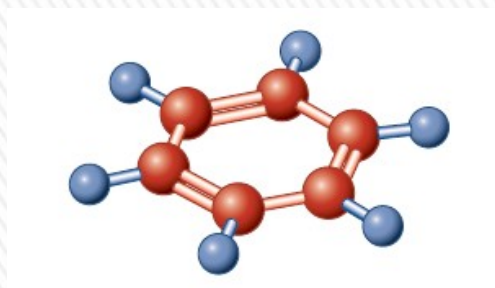


AROMATICKÉ SLOUČENINY

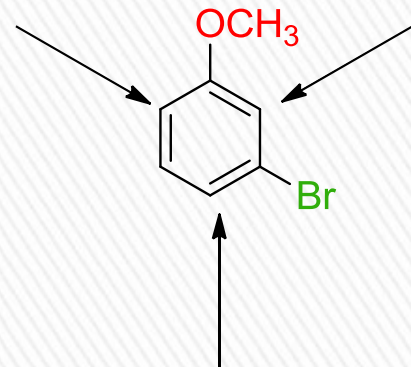
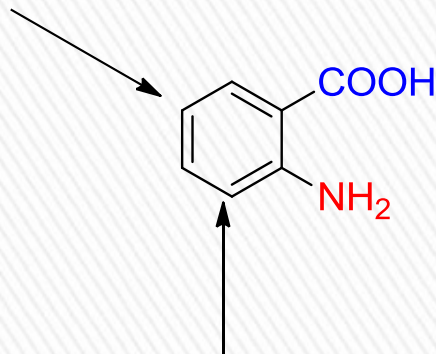
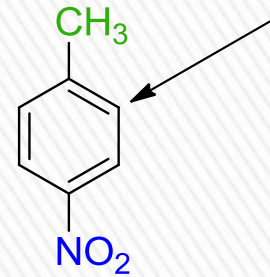
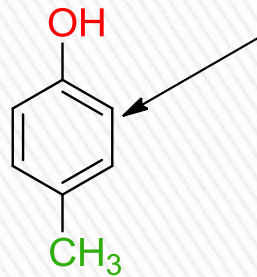


aktivní skupiny

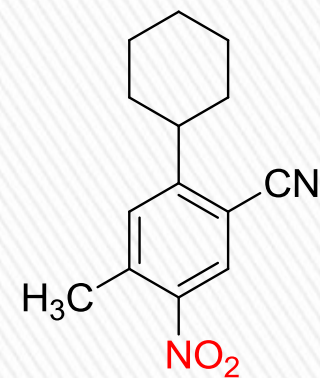
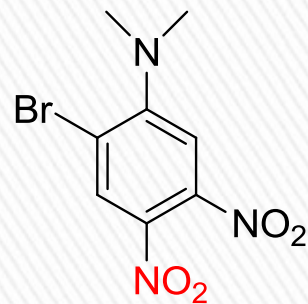
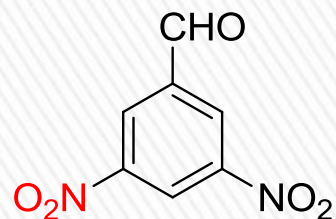
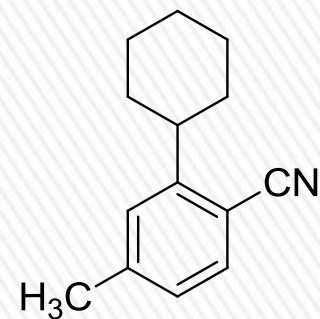
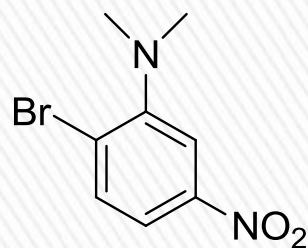
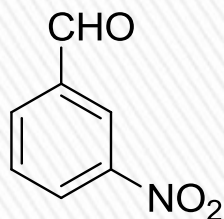
aktivní skupiny

deaktivní skupiny

halogeny, o-, p- dirigová
deaktivující



Předpovězte produkt mononitrační reakce



a) Nitrace

b) Sulfonace

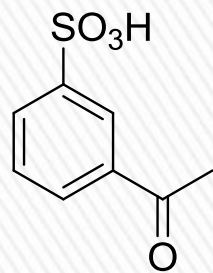
c) Halogenace

d) Friedl-Craftsova alkylace a acylace

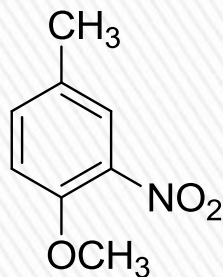
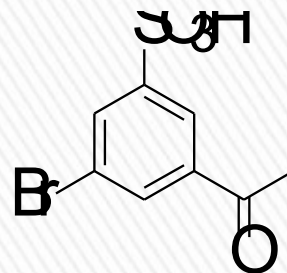
- 1) ne na aromátech se silnými akceptory (CN, NO₂)
- 2) nereagují aromatické halogenderiváty a vinylhalogenidy
- 3) problém vícenásobné substituce, protože zavedením alkyly je produkt pro další elektrofilní substituci reaktivnější
- 4) přesmyky karbokationtů
- 5) nelze provádět na substrátech s aminoskupinou, komplexace Lewisovy kyseliny na volný elektronový pár dusíku

e) Kopulace

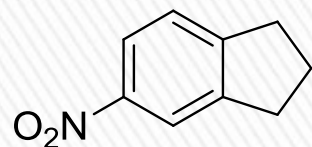
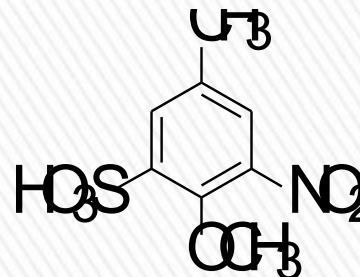




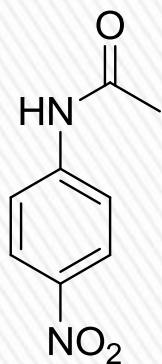
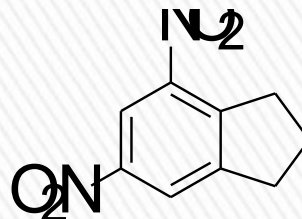
Br₂, FeBr₃



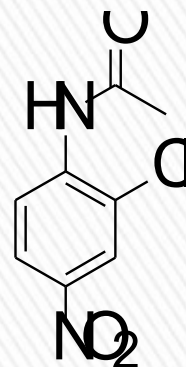
SO₃, H₂SO₄

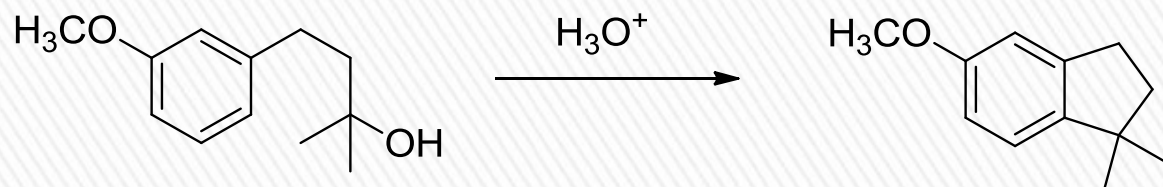
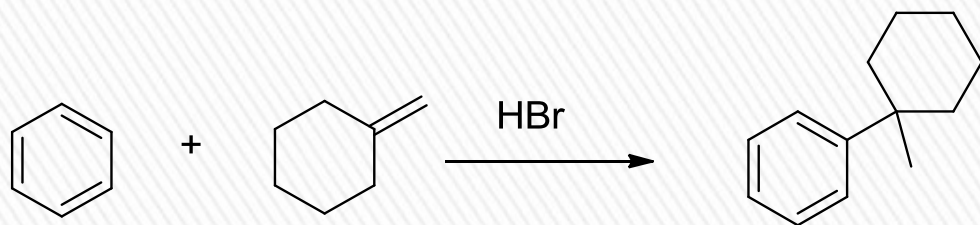
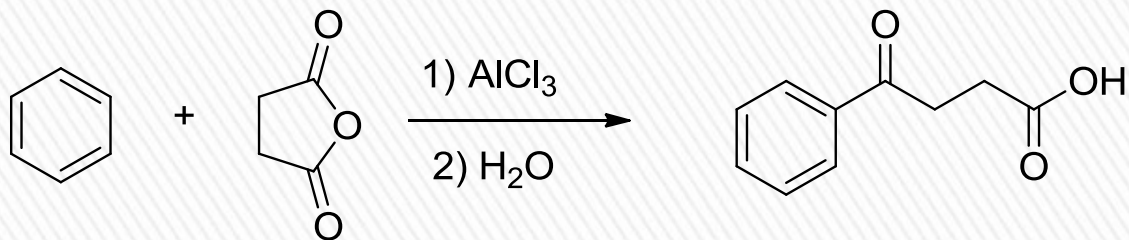
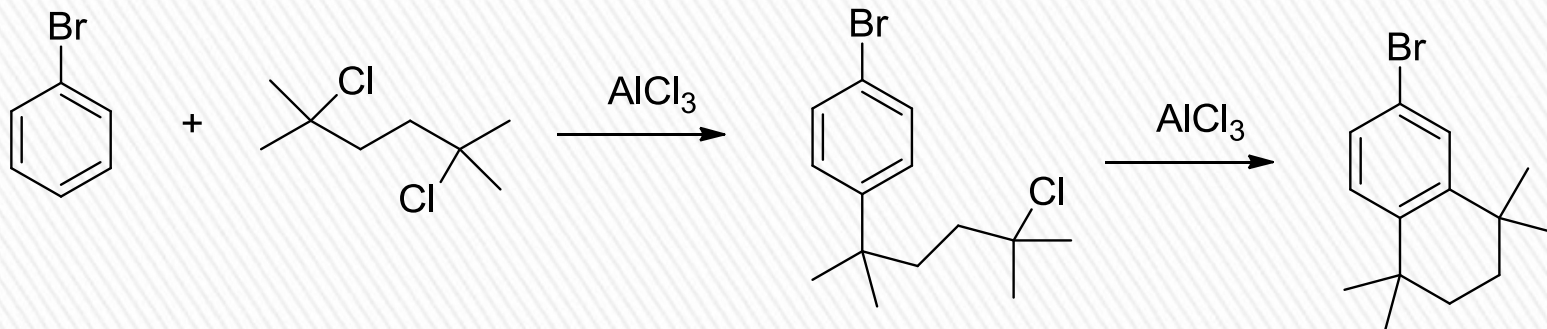


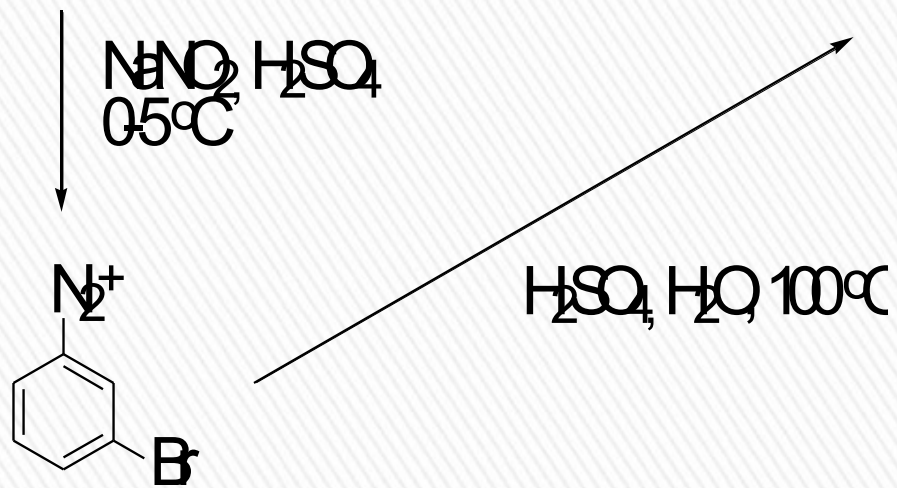
HNO₃, H₂SO₄

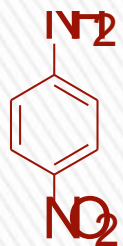


Cl₂, AlCl₃

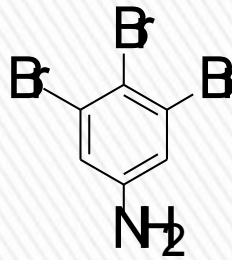
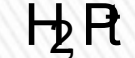
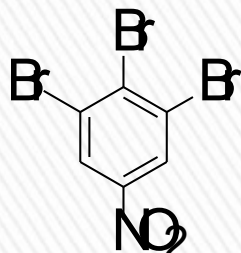
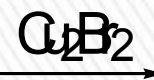
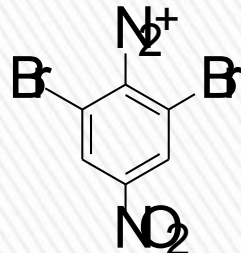
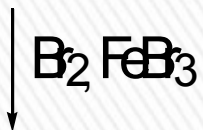
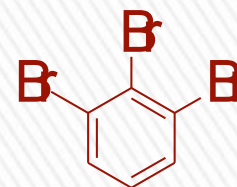


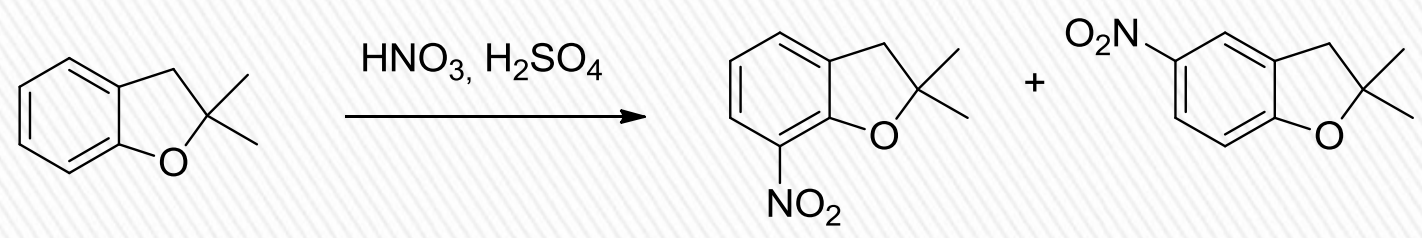
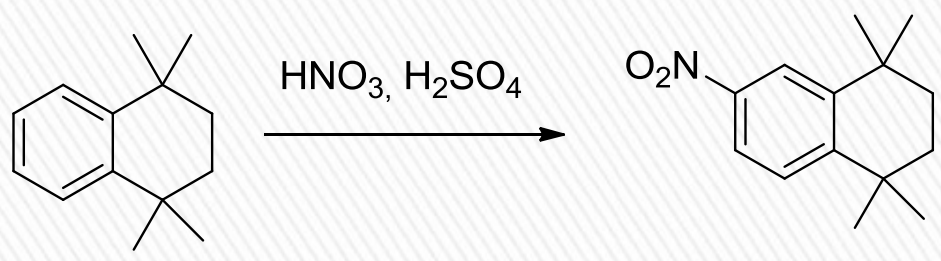
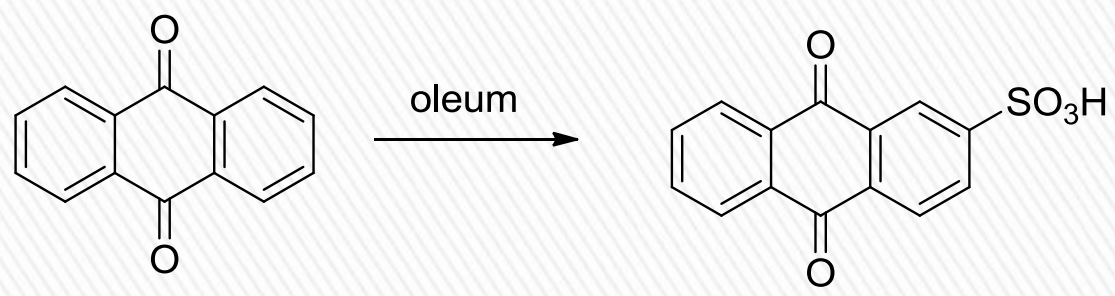
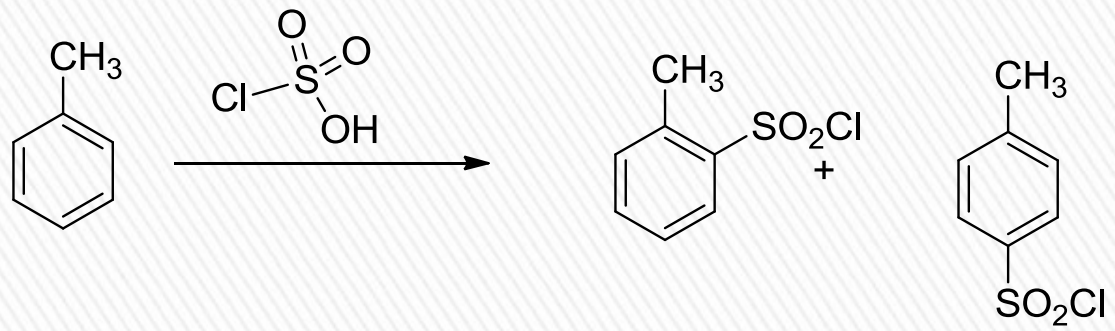




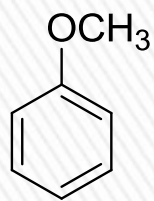


?





Navrhněte syntézu uvedené sloučeniny



?

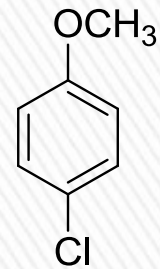
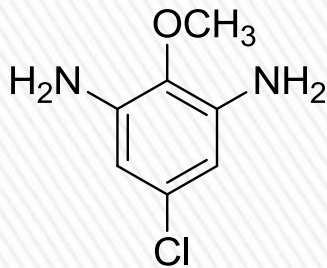
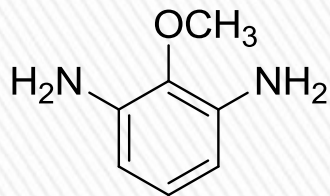
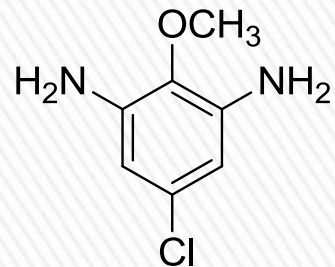


Schéma 1

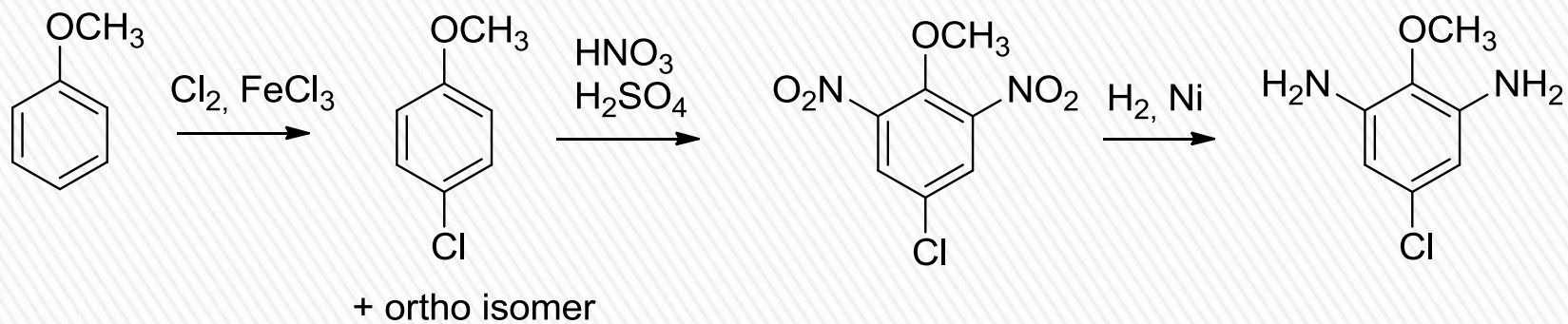
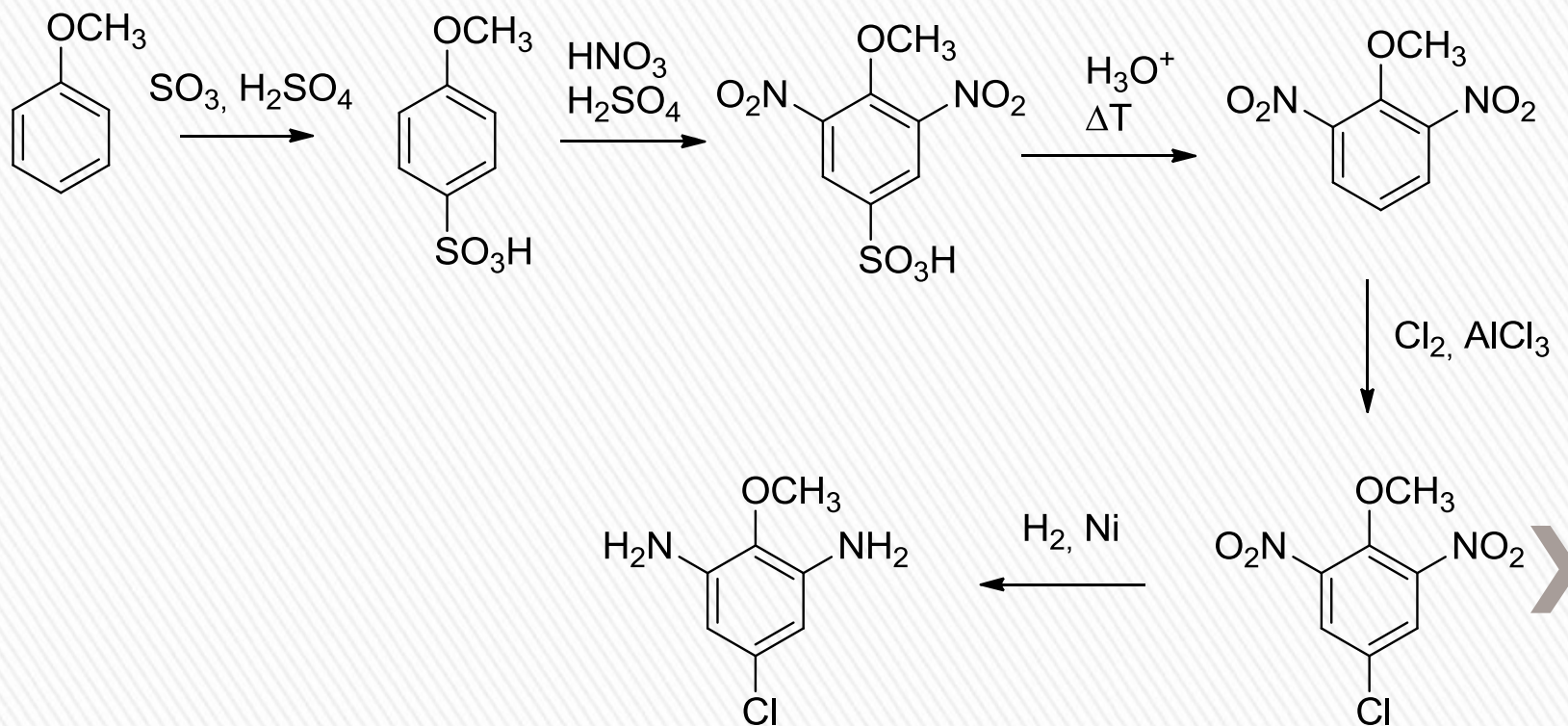
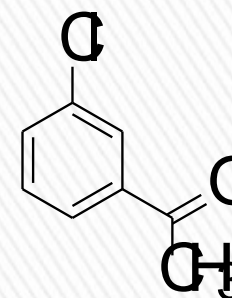
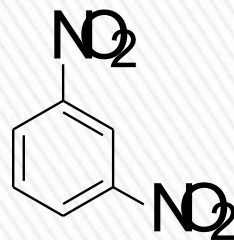
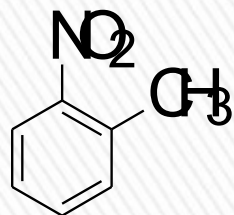
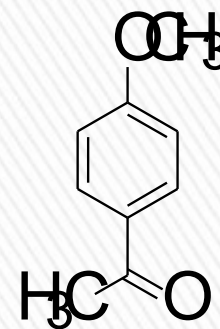
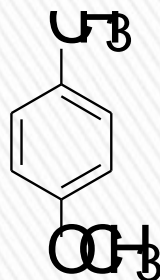
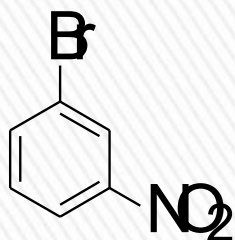


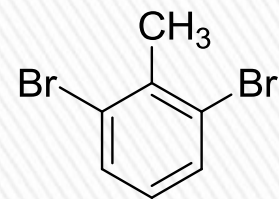
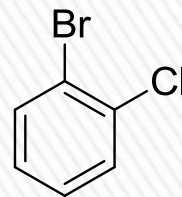
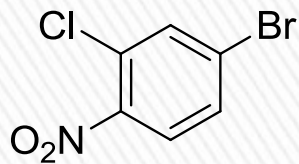
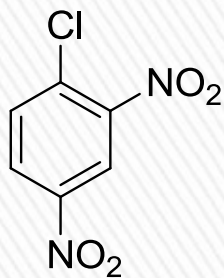
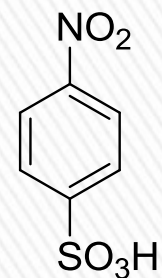
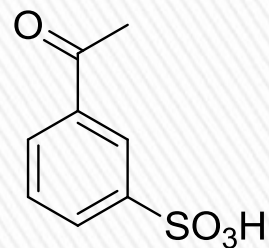
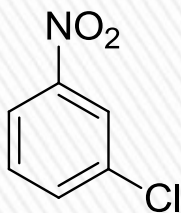
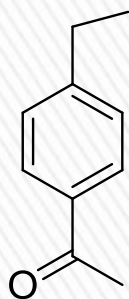
Schéma 2



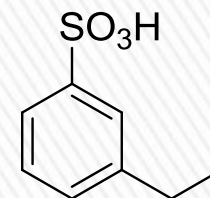
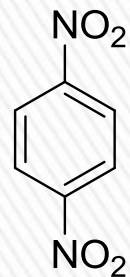
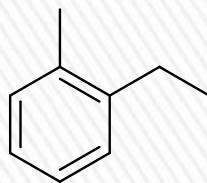
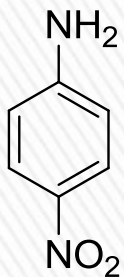
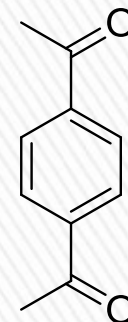
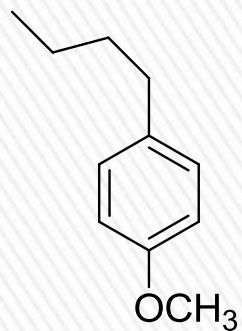
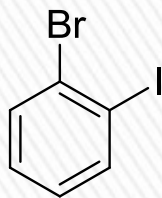
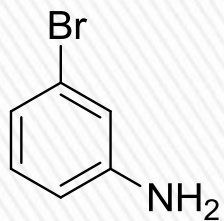
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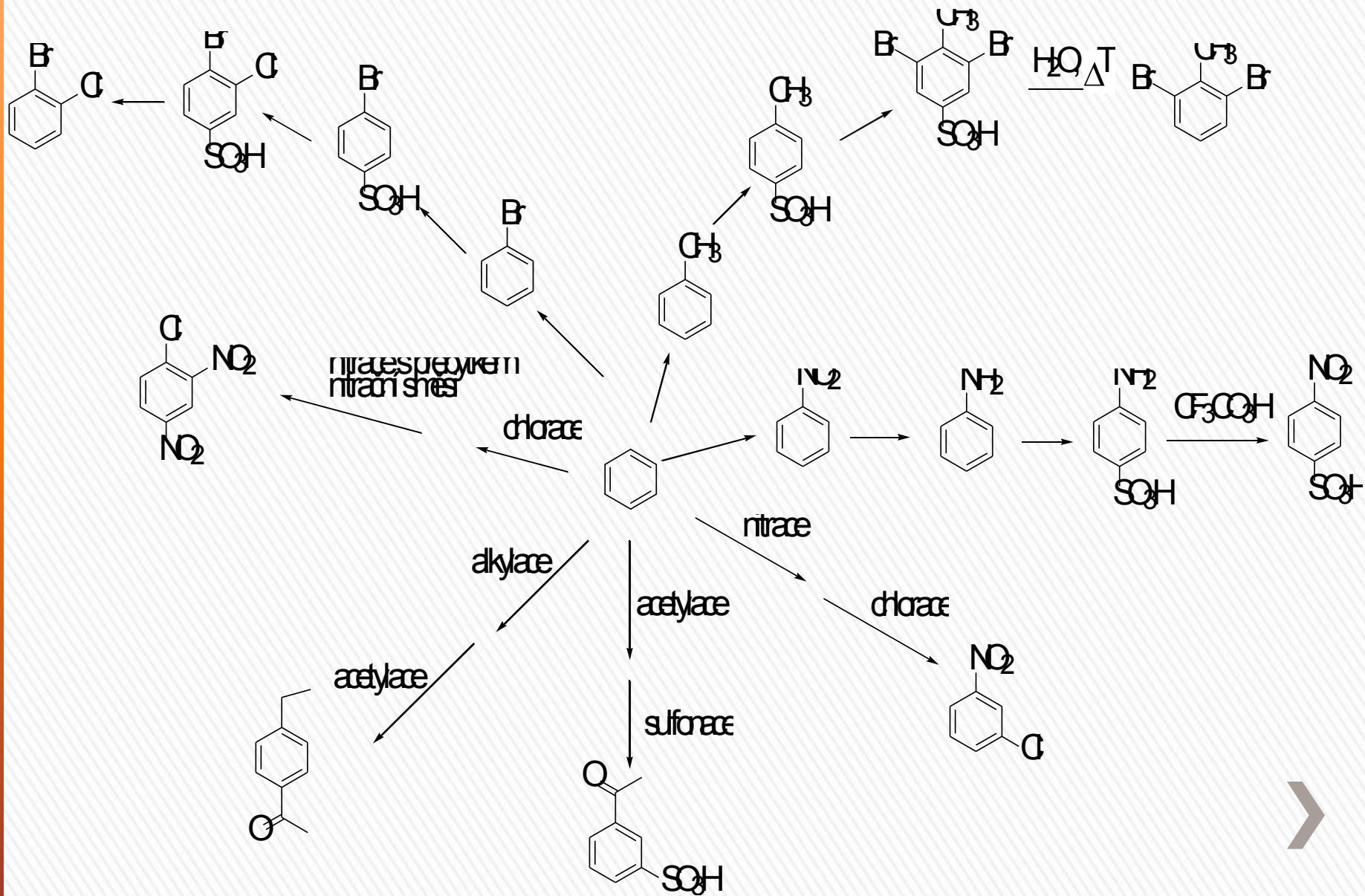


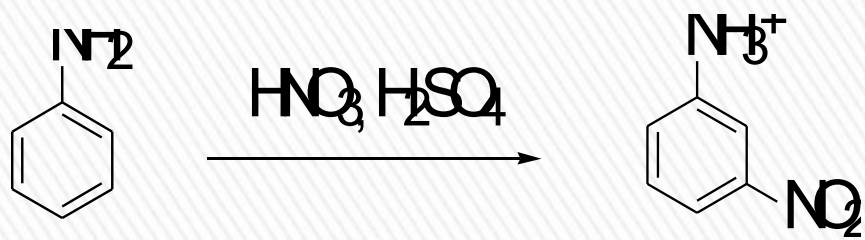
Navrhněte syntézu uvedených sloučenin

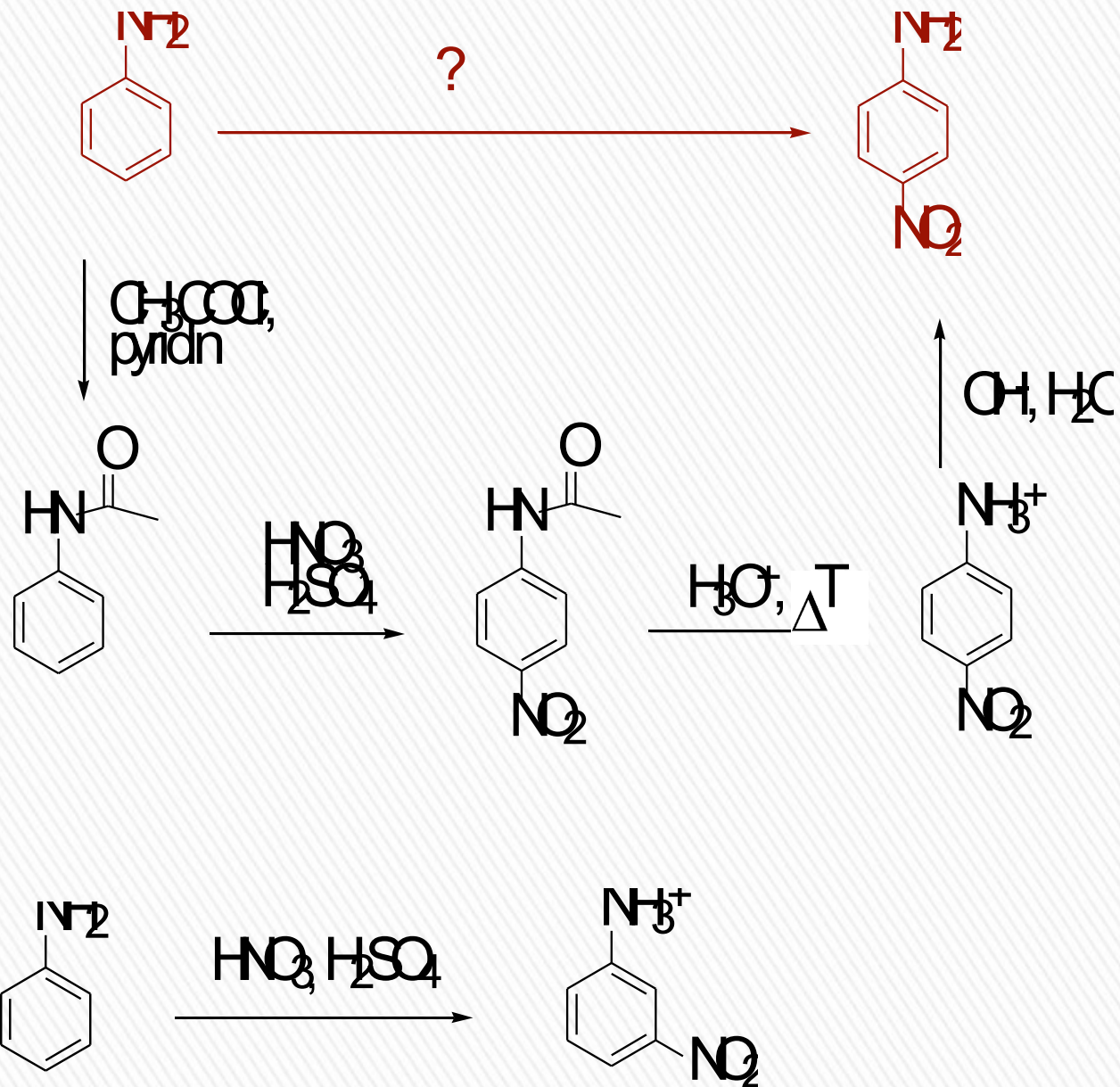


Navrhněte syntézu uvedených sloučenin

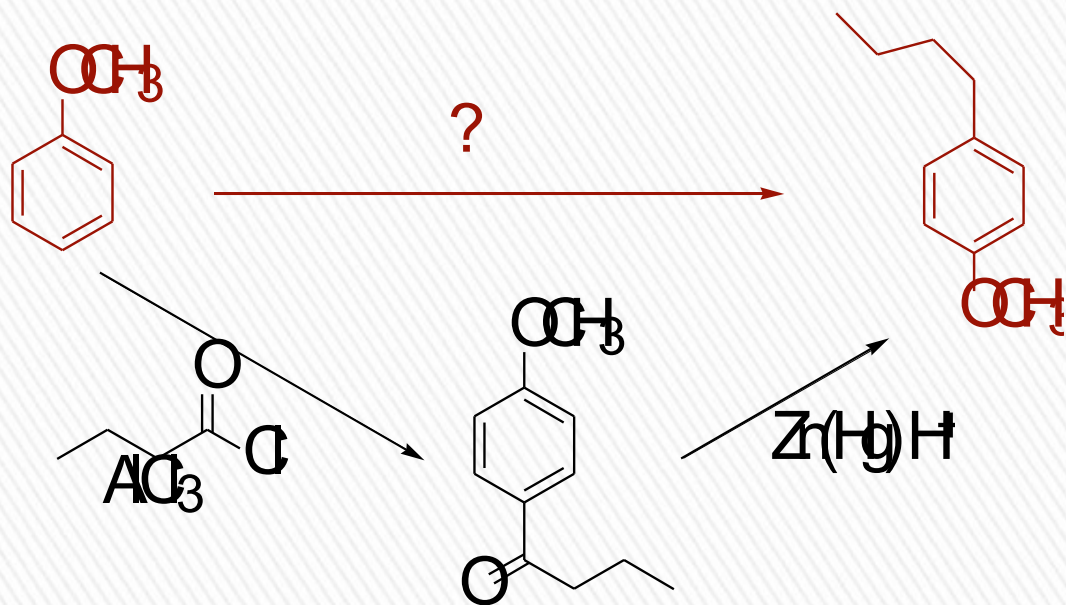
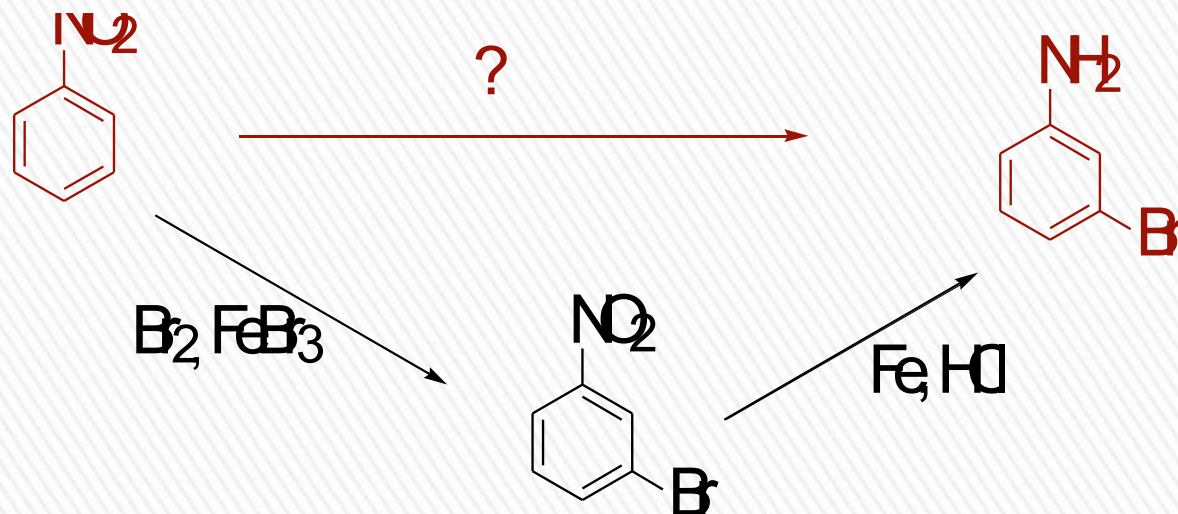


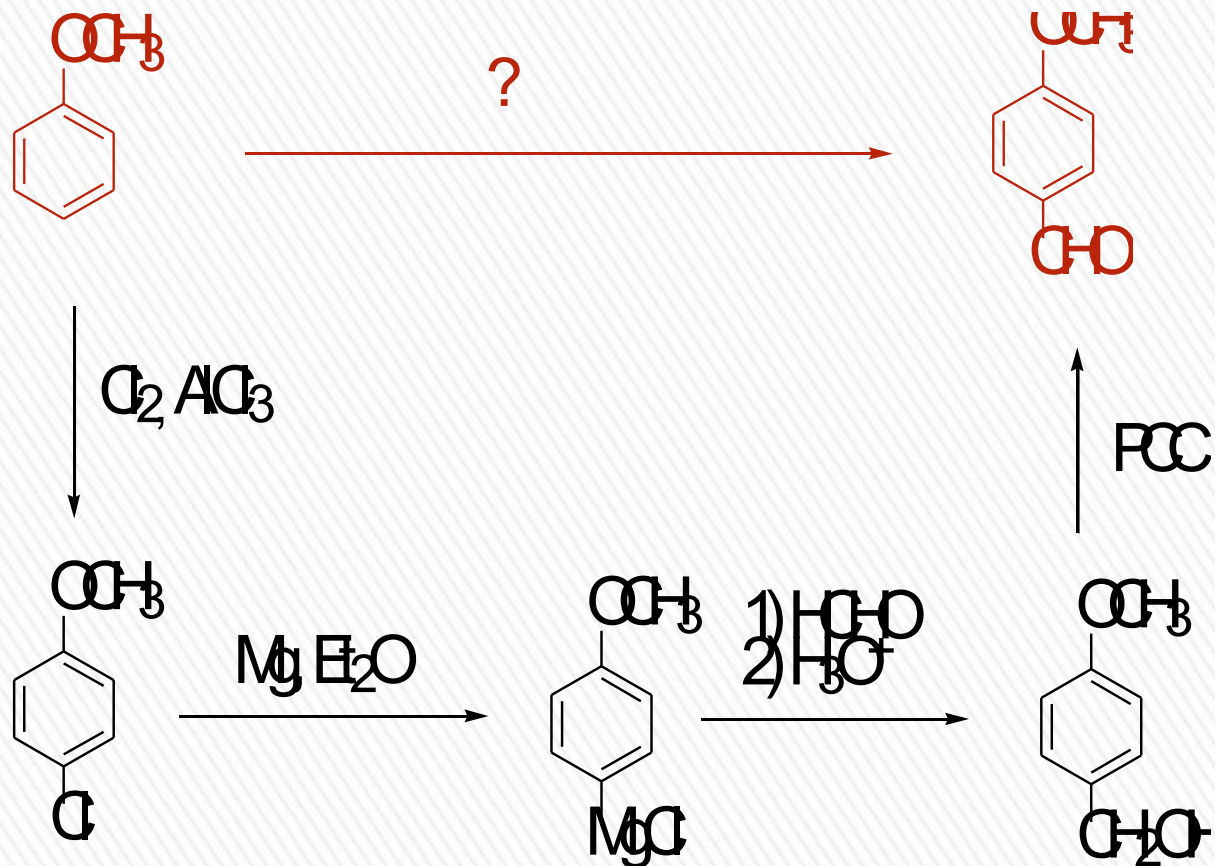


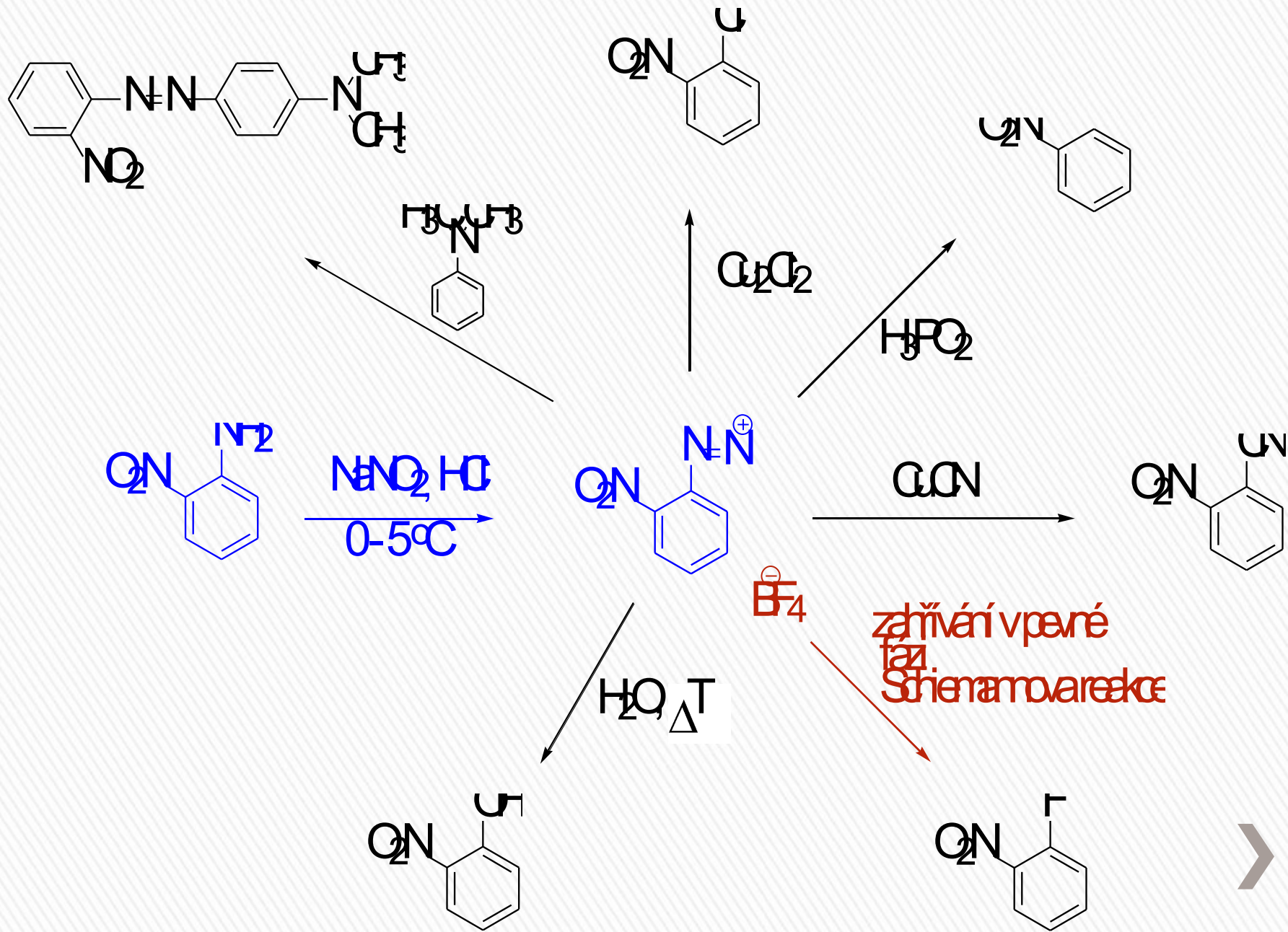


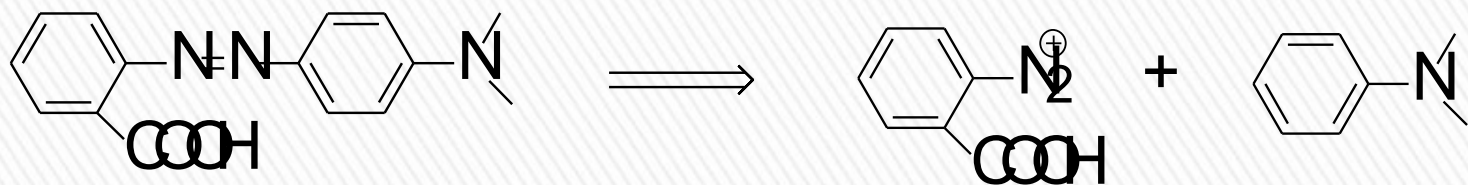


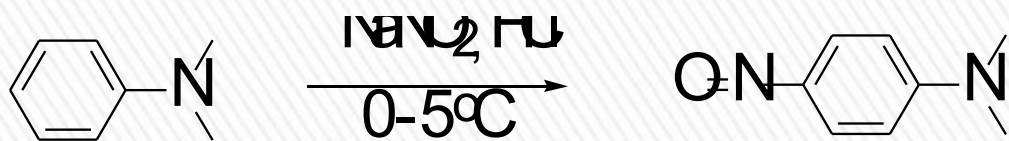
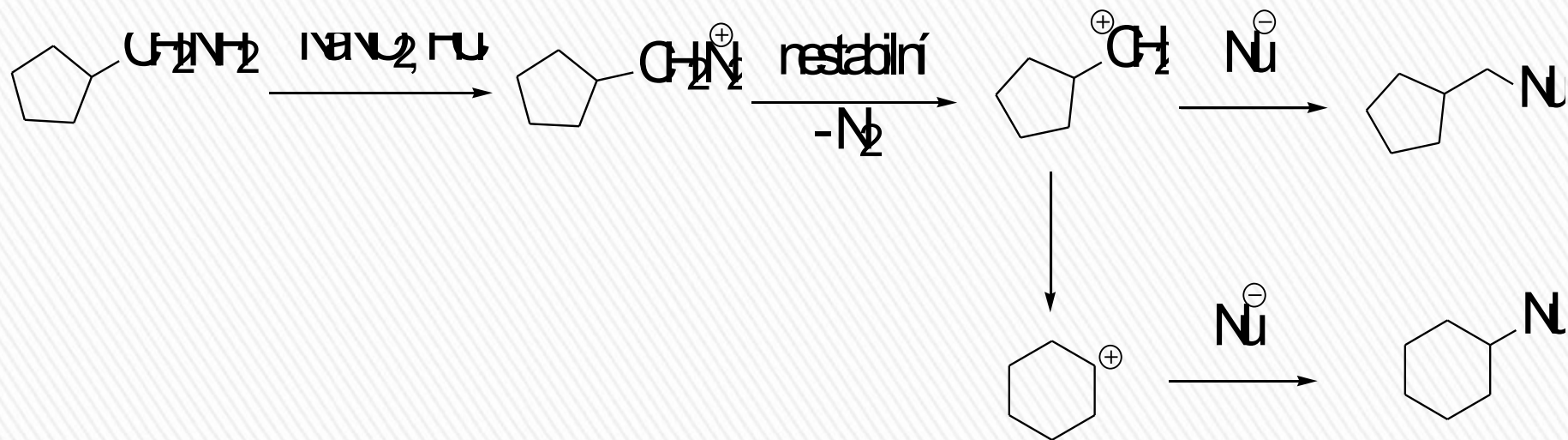
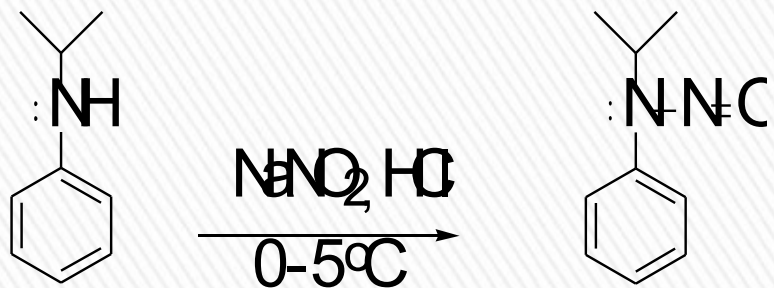
Pozor! přímou nitrací anilinu nepřipravíte *o*-nitroanilin a *p*-nitroanilin



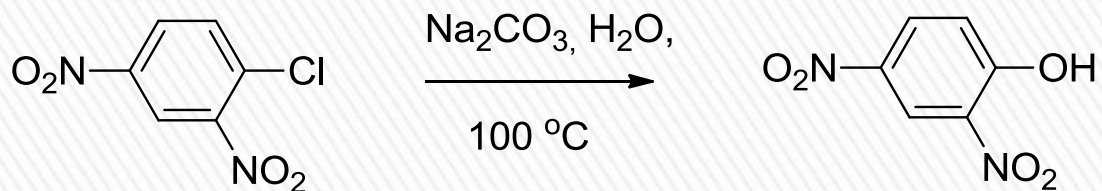
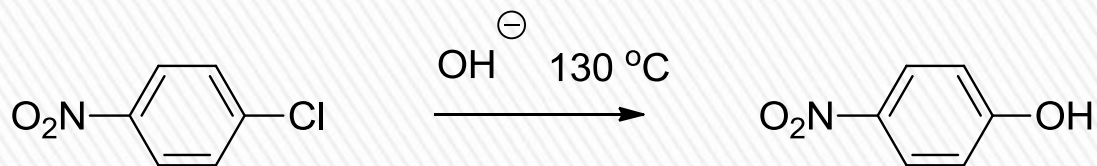
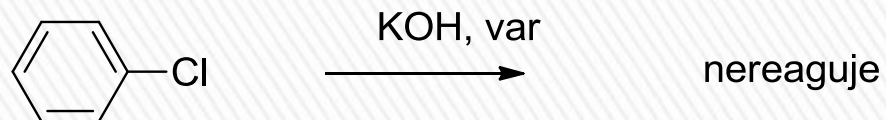


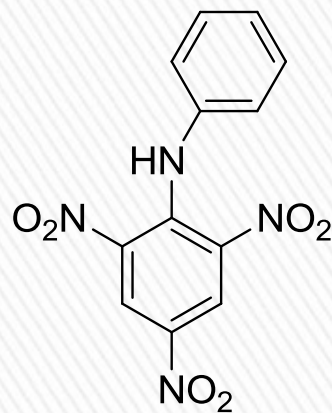
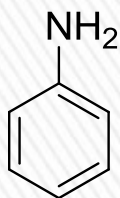
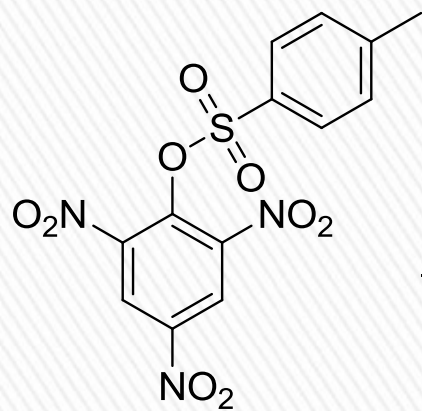
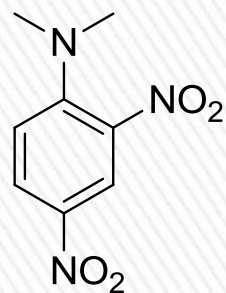
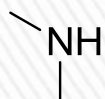
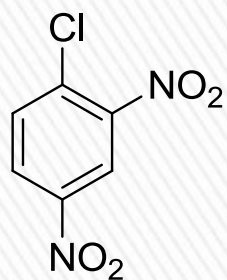




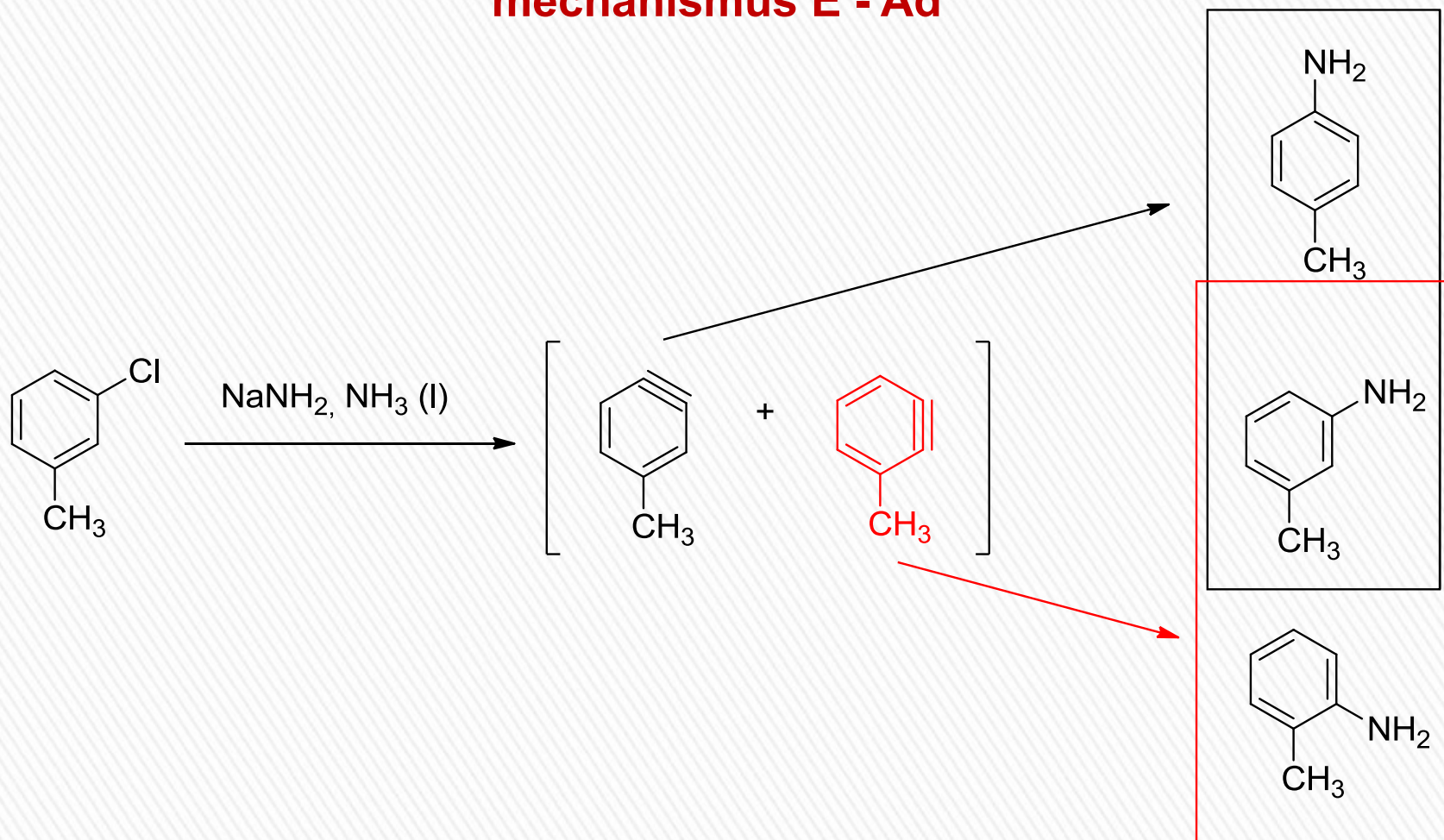


Nukleofilní aromatická substituce mechanismus Ad - E





Nukleofilní aromatická substituce mechanismus E - Ad



Uved'te produkt uvedené reakce a vysvětlete reaktivitu

