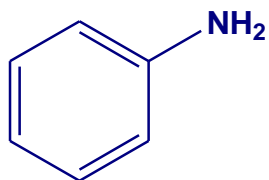
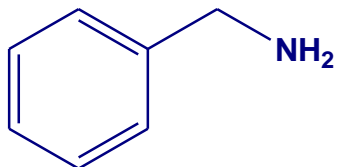


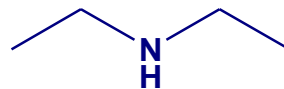
Aminy



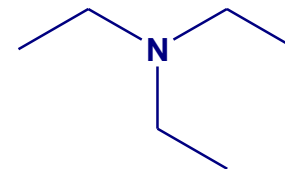
anilina 1°
aminobenzen
fenyloamina
fenyloazan



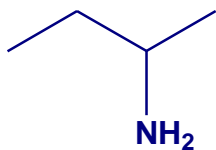
benzyloamina 1°
aminotoluen
toluenoamina
toluenoazan



dietyloamina 2°
dietyloazan

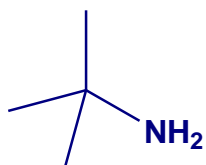


trietyloamina 3°
trietyloazan



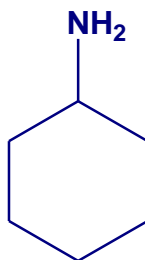
2-aminobutan
sec-butyloamina

1°



2-amino-2-metylopropan
tert-butyloamina

1°



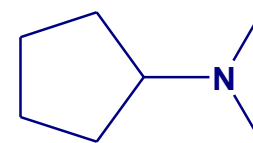
cykloheksyloamina

1°



azacykloheksan
piperydyna

2°

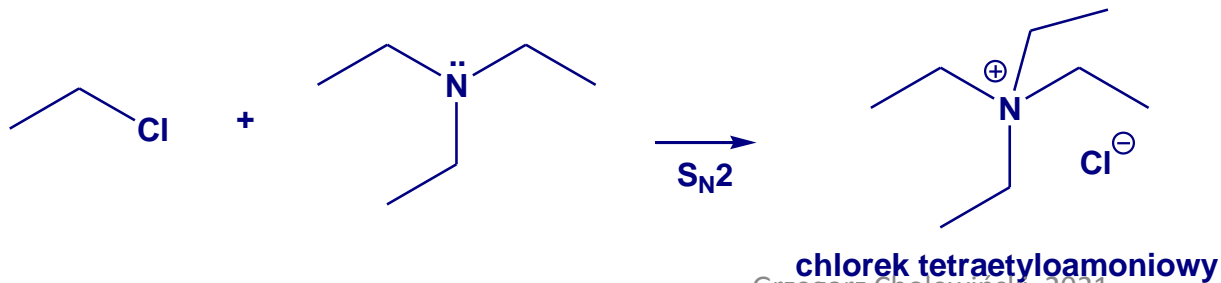
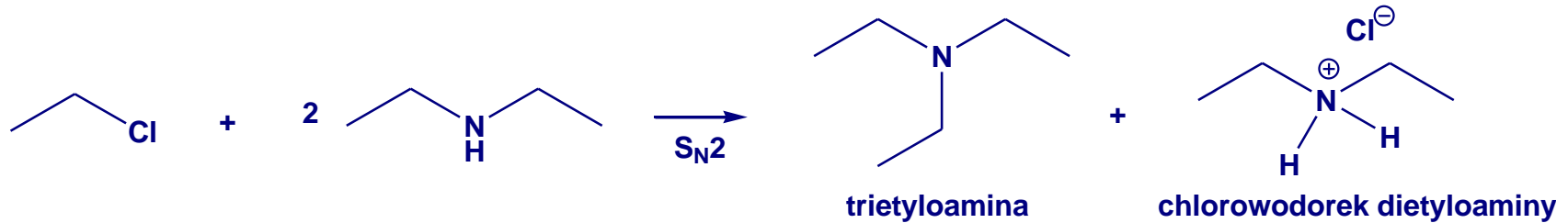
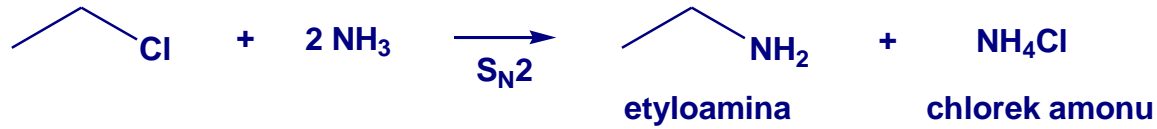


N,N-dimetylocyklopentyloamina

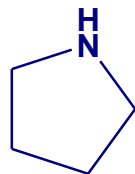
3°

Otrzymywanie amin

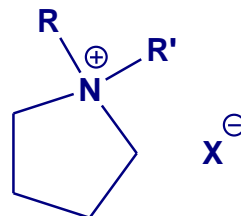
Alkilowanie amoniaku i jego pochodnych



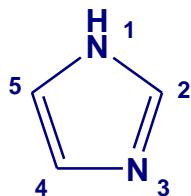
Przykłady cieczy jonowych



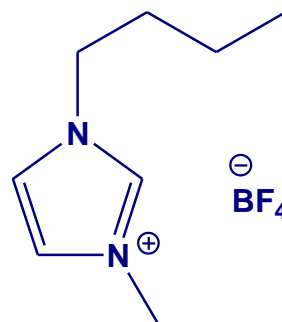
pirolidyna
azacyklopentan



sole pirolidyniowe



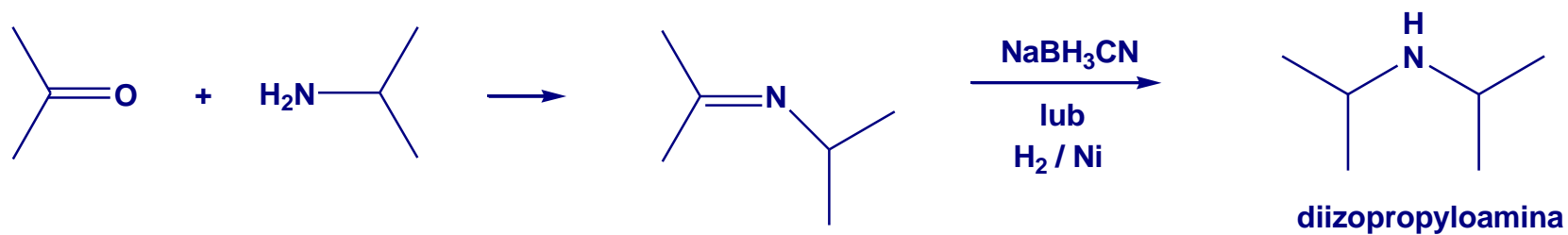
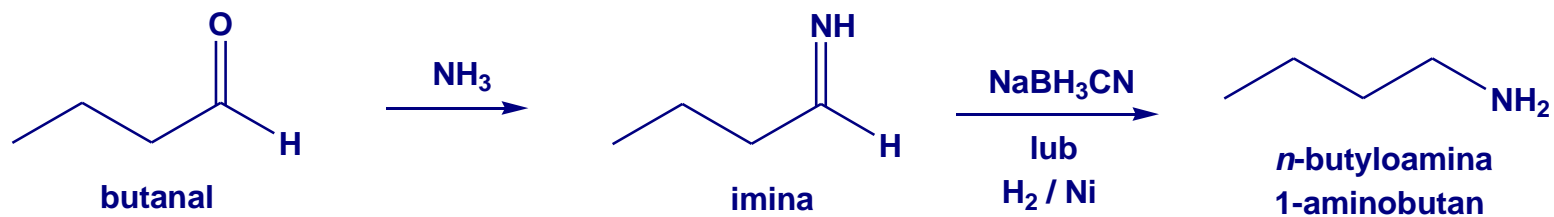
imidazol



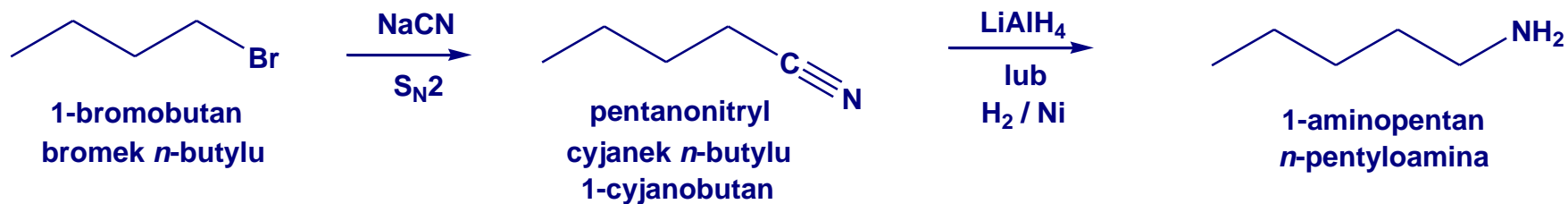
tetrafluoroboran 1-butylo-3-metyloimidazoliowy

Ttop - 80 °C

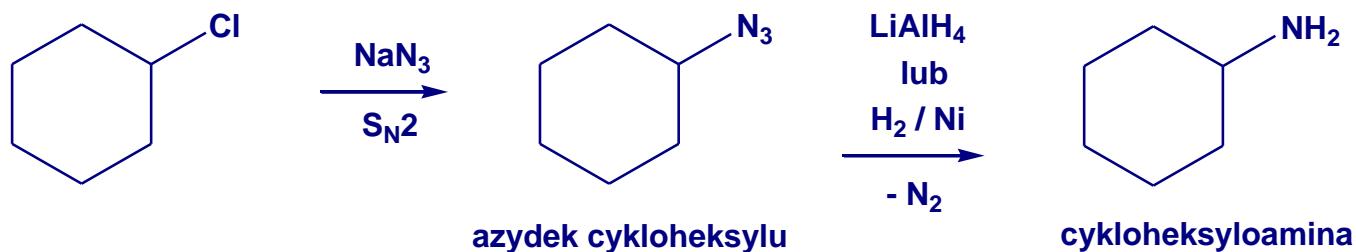
Redukcyjne aminowanie



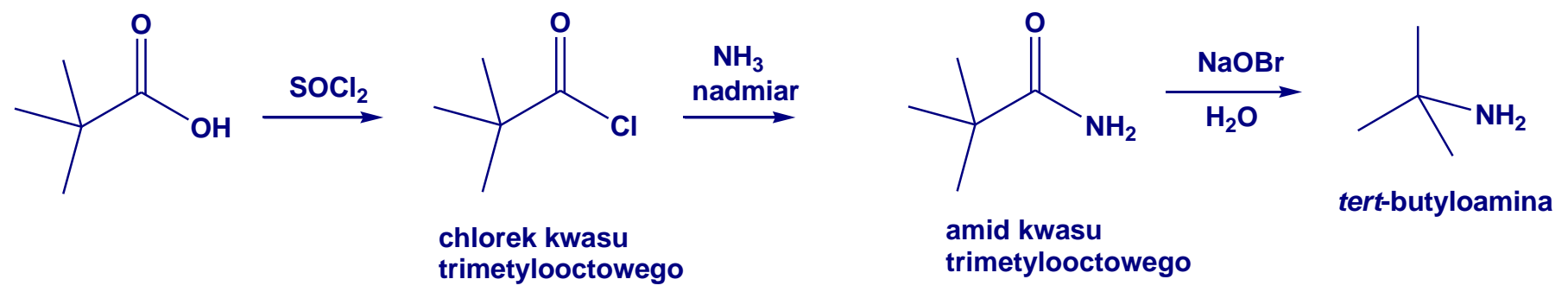
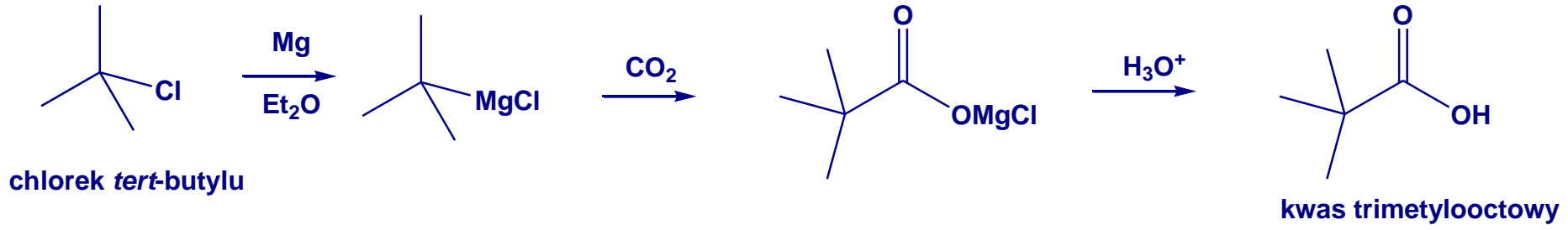
Redukcja nitryli



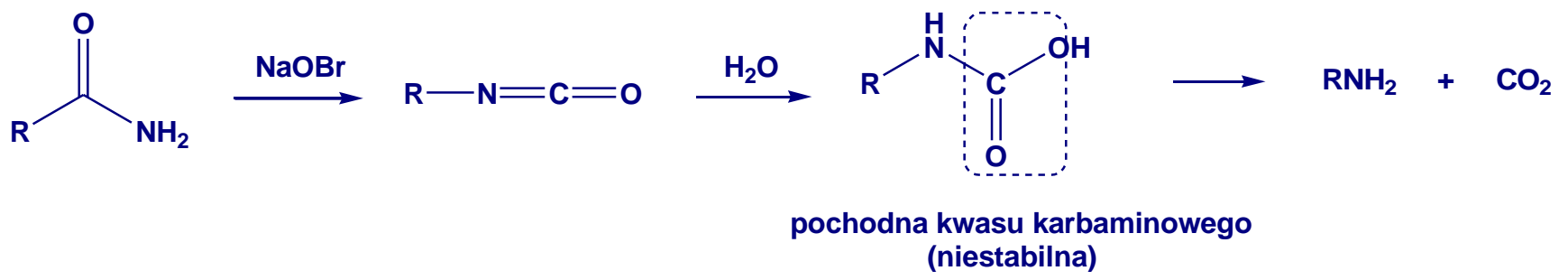
Reakcja podstawienia nukleofilowego z azydkiem



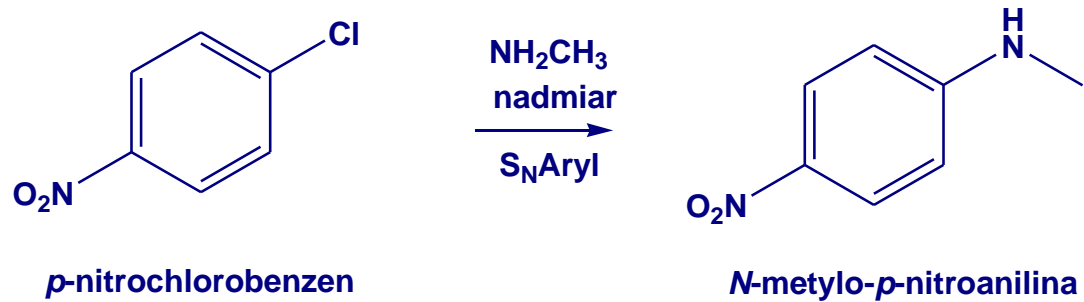
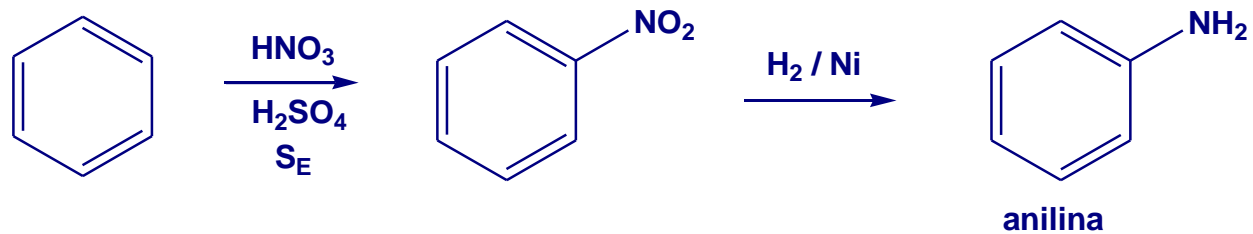
Reakcja drugorzędowego halogenku alkilu z amoniakiem przebiega ze znacznym udziałem konkurencyjnej eliminacji E2.



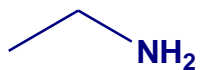
Degradacja amidów Hofmanna



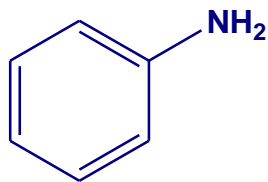
Otrzymywanie amin aromatycznych



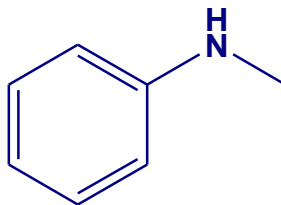
Zasadowość amin



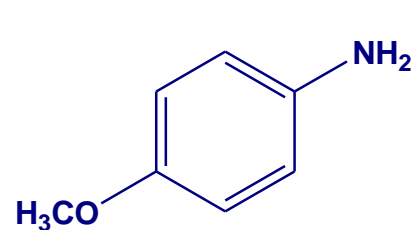
etyloamina
pK_b 3,36



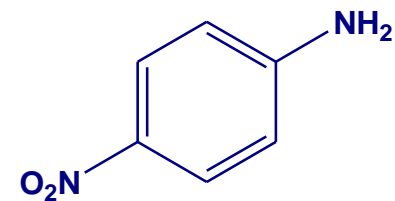
anilina
pK_b 9,37



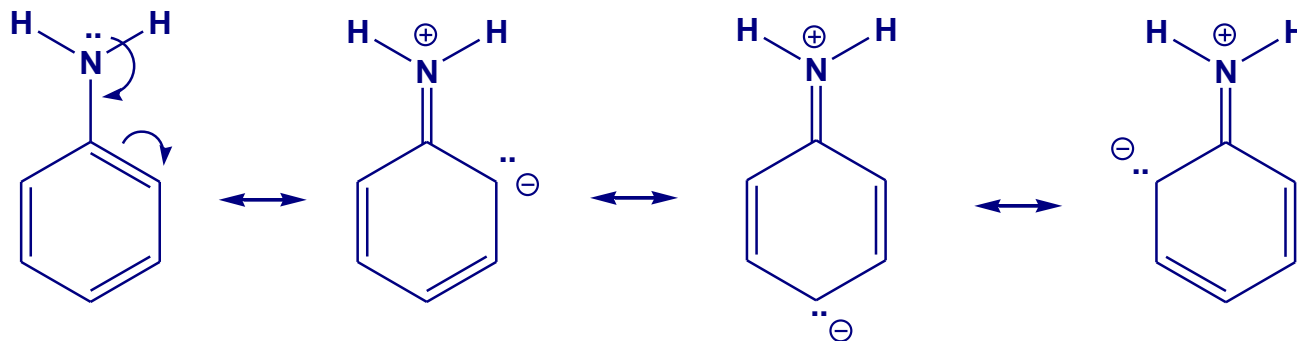
N-metyloanilina
pK_b 9,21



p-metoksyanilina
pK_b 8,7

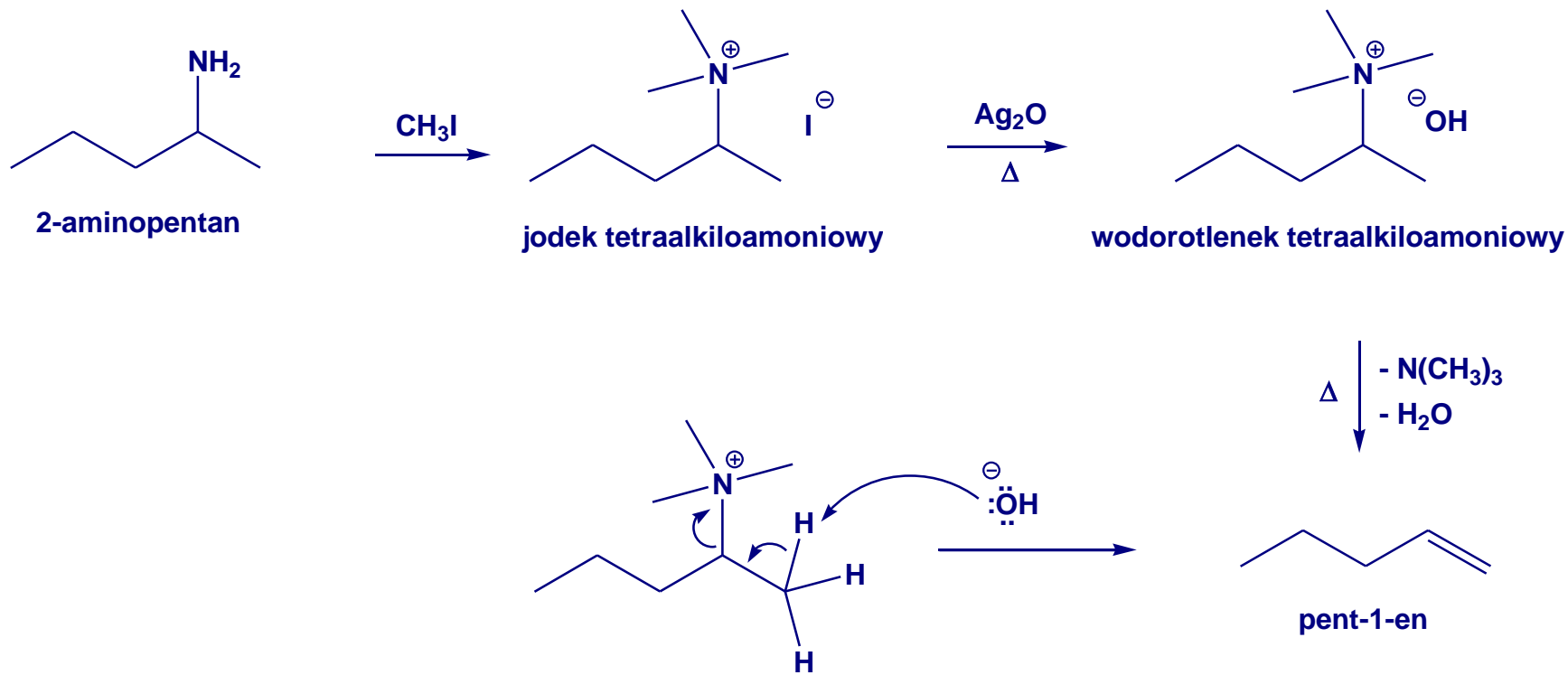


p-nitroanilina
pK_b 13,0

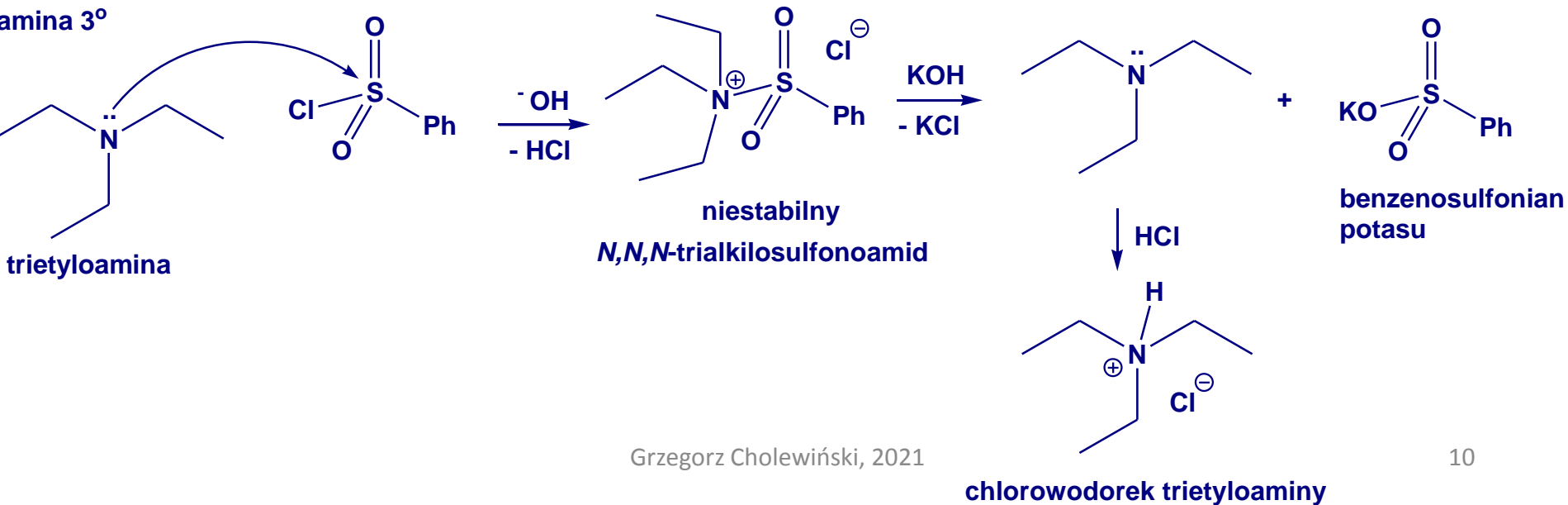
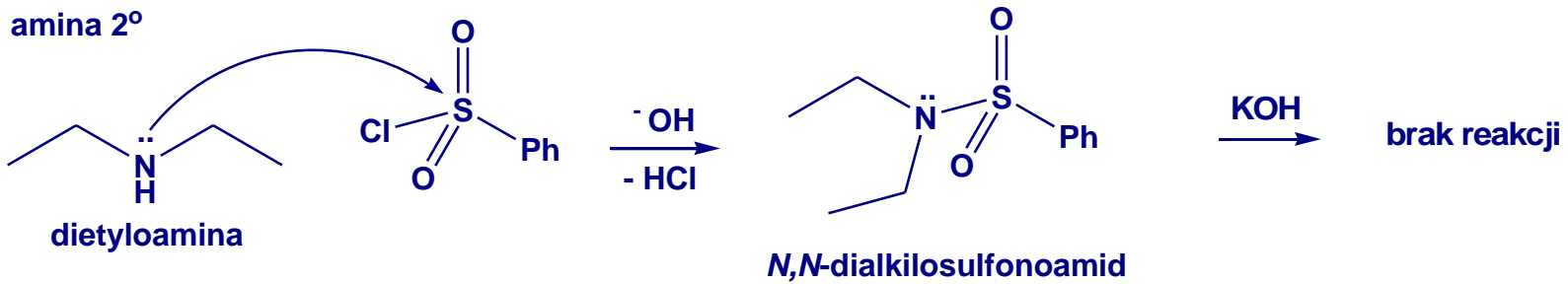
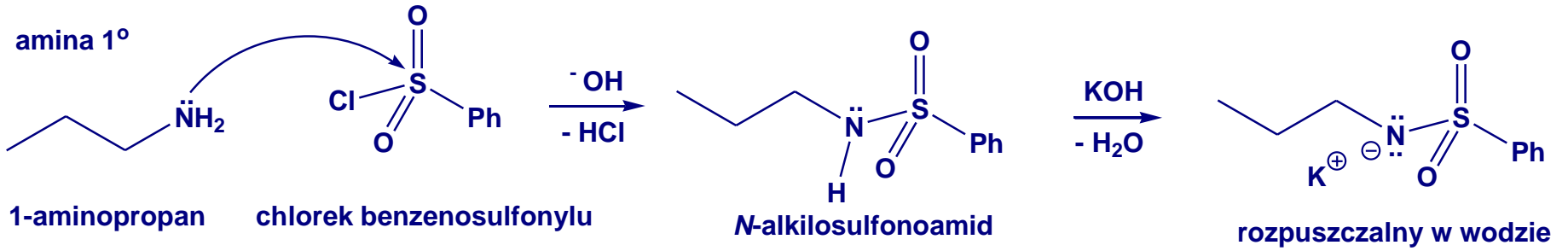


Reaktywność amin

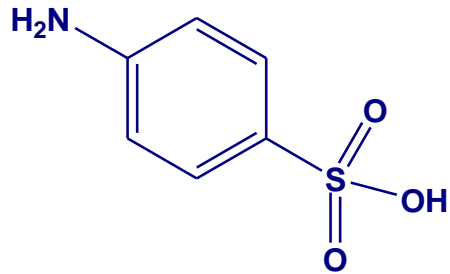
Eliminacja Hofmanna



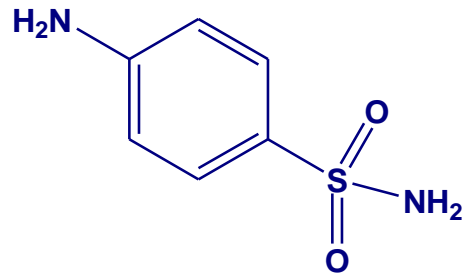
Próba Hinsberga



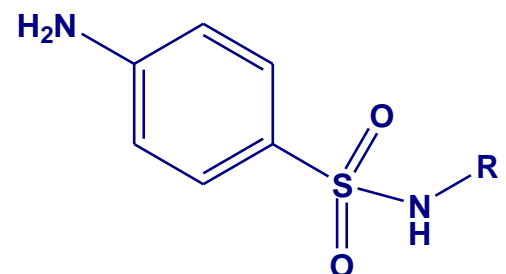
Leki sulfamidowe



kwas sulfanilowy



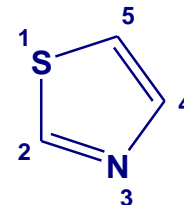
sulfanilamid



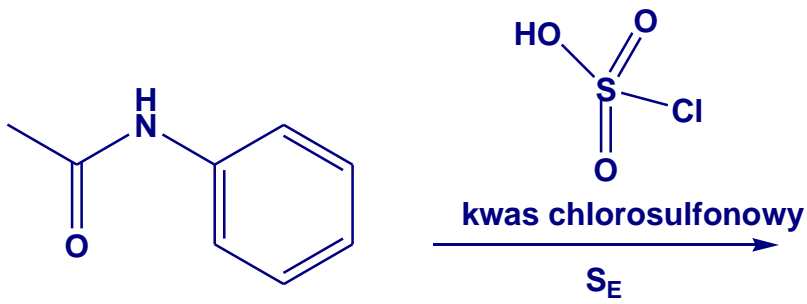
sulfanoamidy
bakteriostatyki



sulfatiazol
bakteriostatyk



tiazol

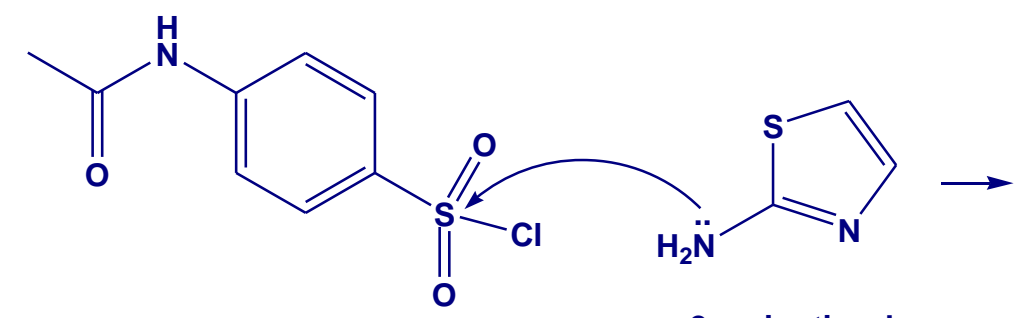


acetanilid

kwas chlorosulfonowy

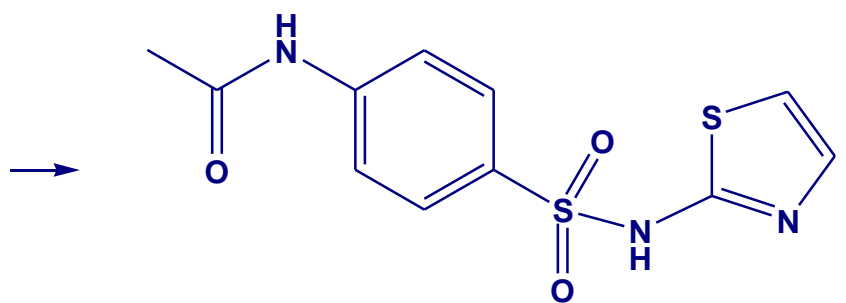
S_E

chlorosulfonowanie

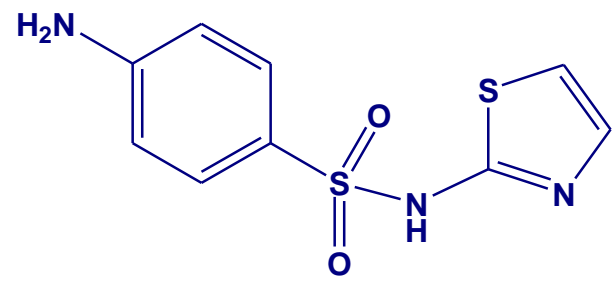
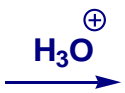


chlorek kwasu *N*-acetylosulfanilowego

2-aminotiazol

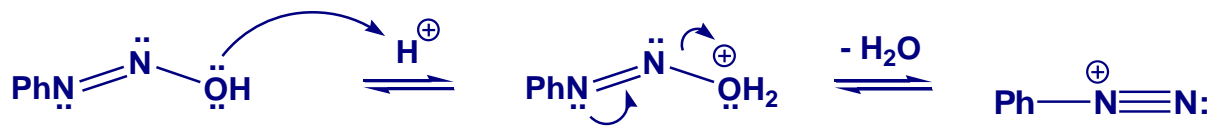
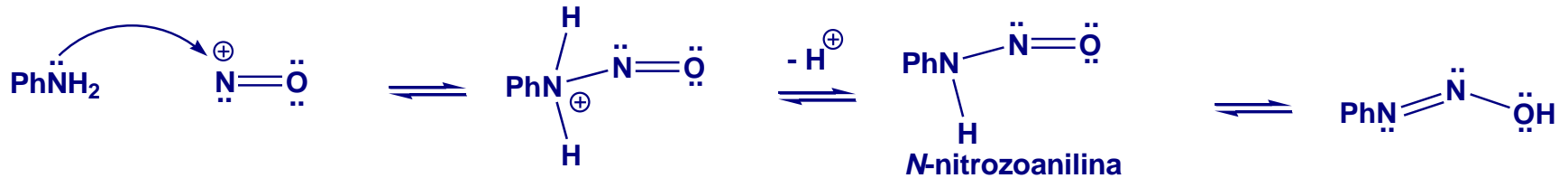
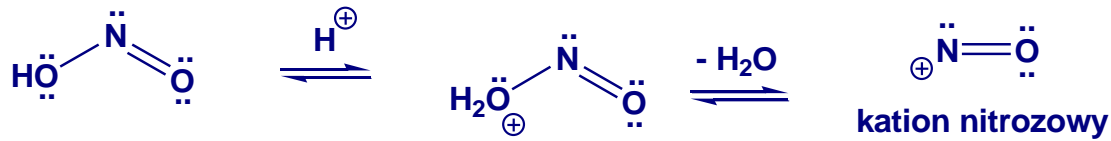
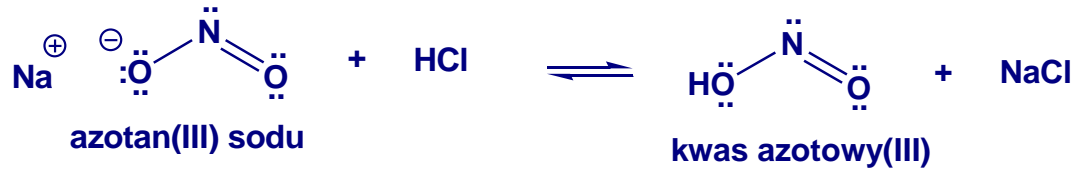


N-acetylosulfatiazol

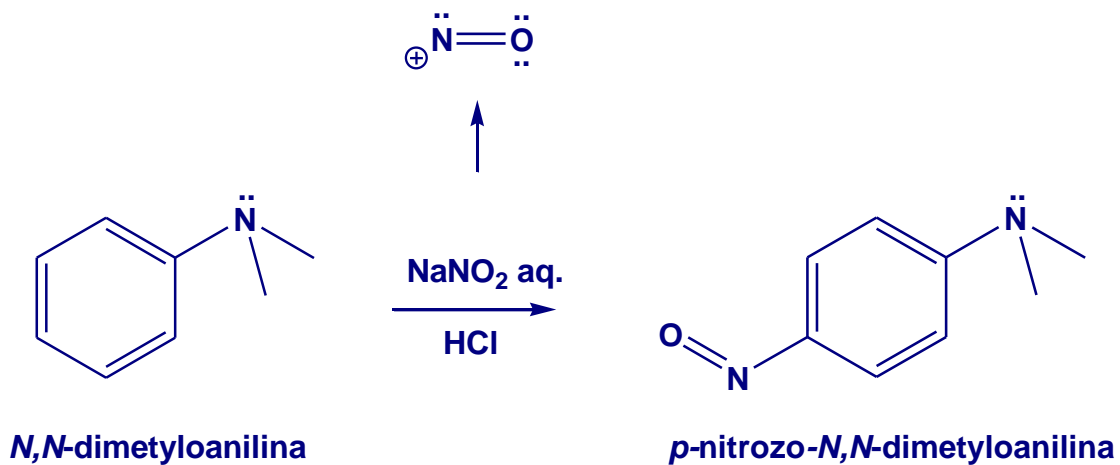
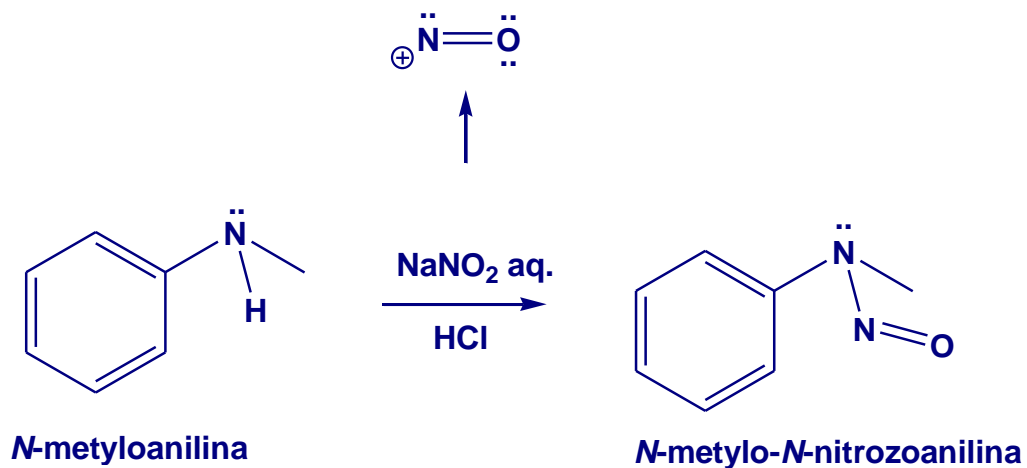


sulfatiazol

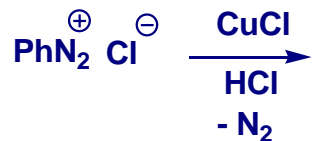
Reakcja amin aromatycznych z kwasem azotowym(III)



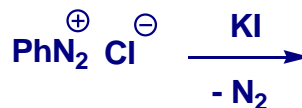
Reakcja *N*-podstawionych amin aromatycznych z kwasem azotowym(III)



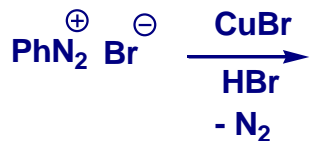
Reaktywność soli diazoniowych



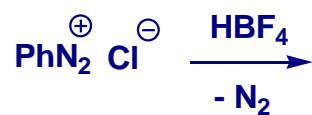
PhCl
chlorobenzen



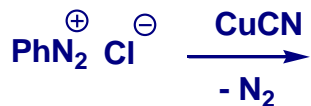
PhI
jodobenzen



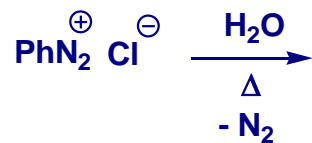
PhBr
bromobenzen



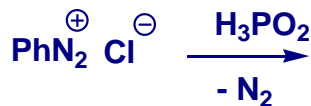
PhF
fluorobenzen



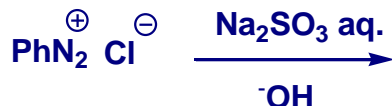
PhCN
cyjanek fenylu



PhOH
fenol

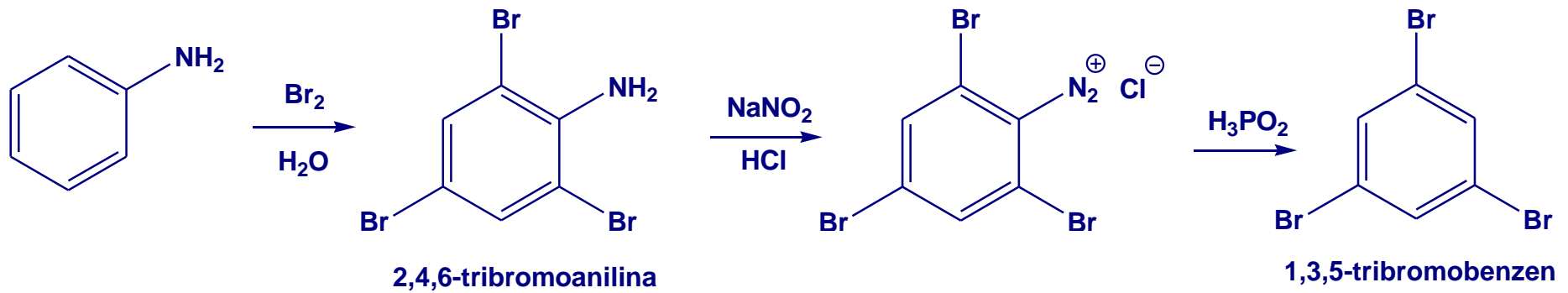
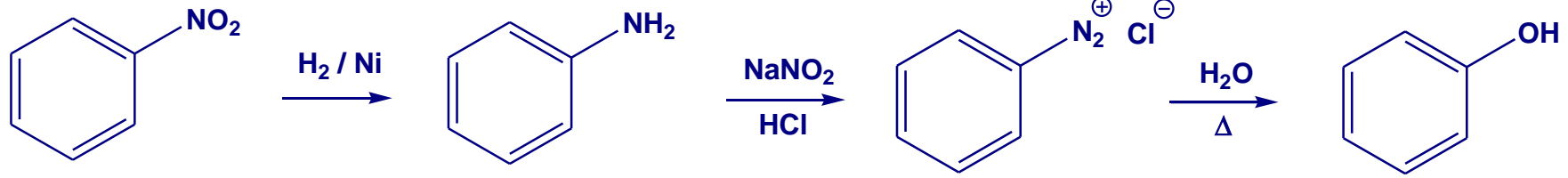


Ph-H
benzen



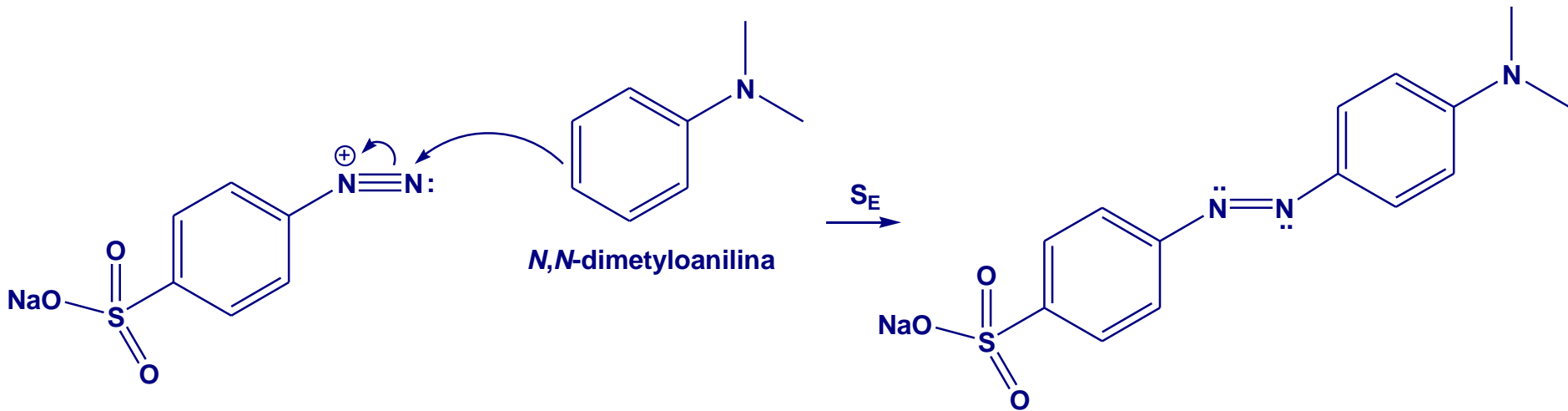
PhNHNH₂
fenylohydrazyna

Przykłady zastosowania

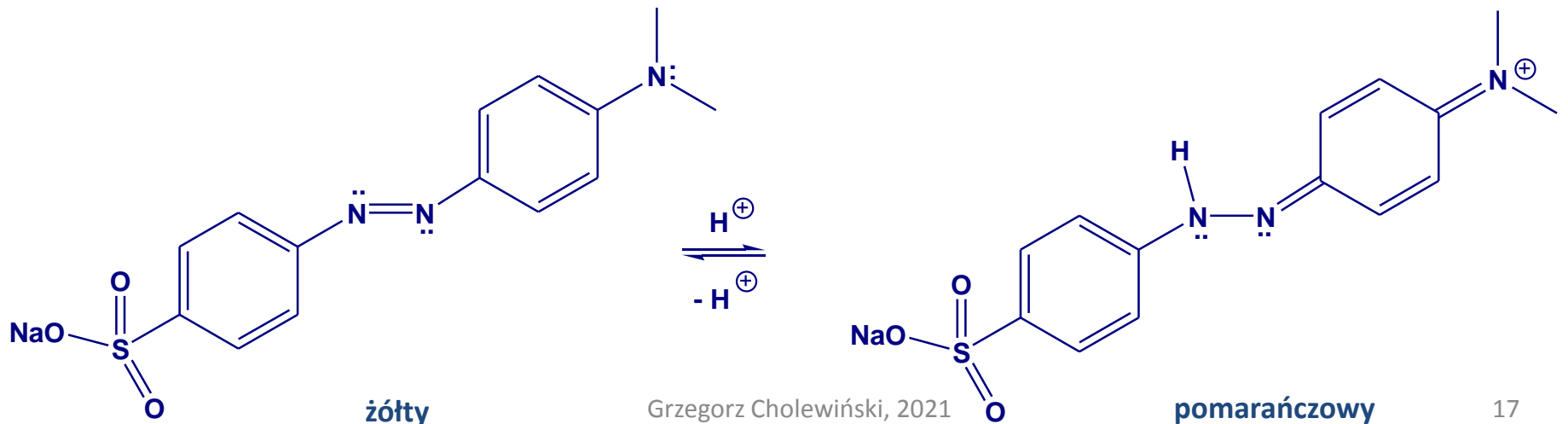


Sprzężenie soli diazoniowych

Sprzężenie soli diazoniowych zachodzi z pochodnymi aromatycznymi posiadającymi podstawniki silnie elektronoakceptorowe (np. aminy aromatyczne, fenole).



oranż metylowy – barwnik azowy,
wskaźnik kwasowo - zasadowy



żółty

Grzegorz Cholewiński, 2021

pomarańczowy

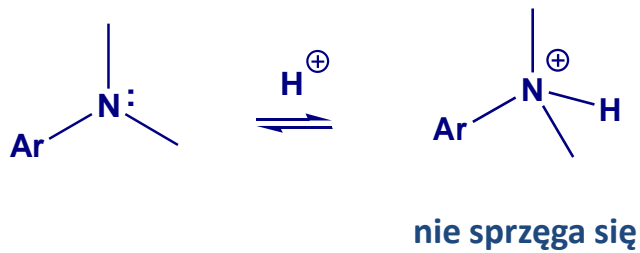
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Wpływ pH na sprzężenie soli diazoniowych

Zbyt wysokie pH



Zbyt niskie pH



Stabilność soli diazoniowych

