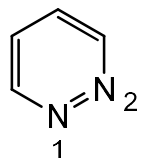
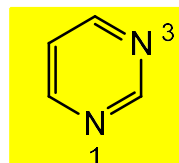


10. Pierścienie sześciocząłowe z dwoma lub trzema heteroatomami, pirymidyny

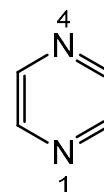
diazyny



pirydazyna

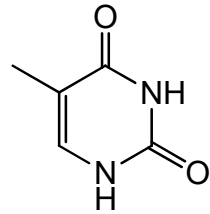
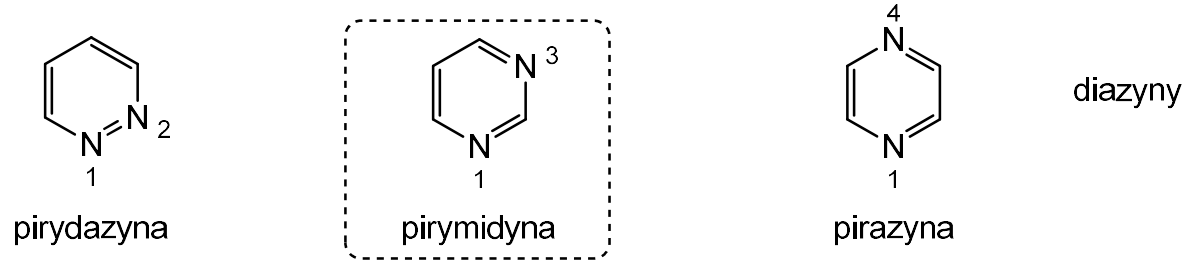


pirymidyna

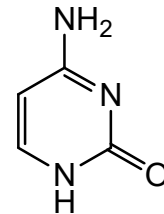


pirazyna

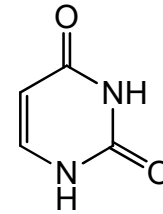
10.1. Pirymidyny – zasady nukleinowe



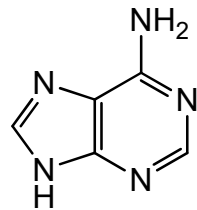
tymina



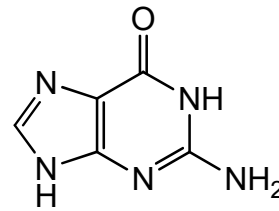
cytozyna
(DNA/RNA)



uracyl
(RNA)

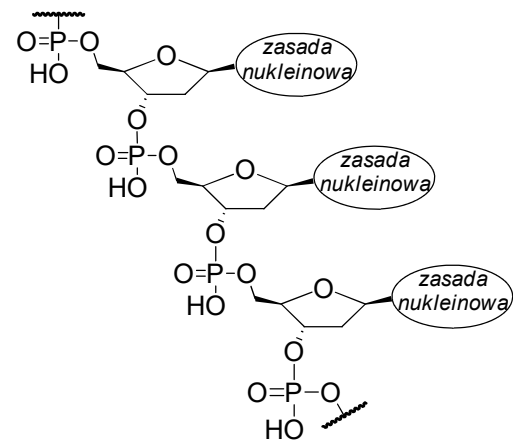
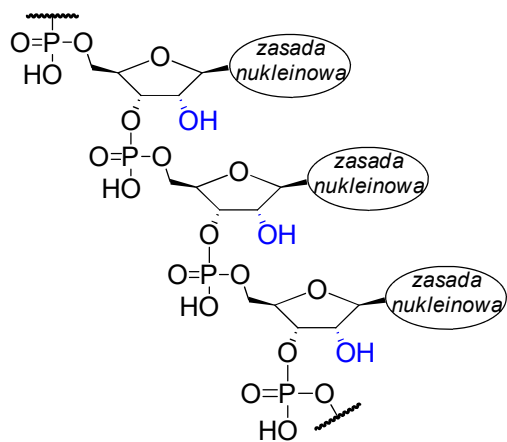
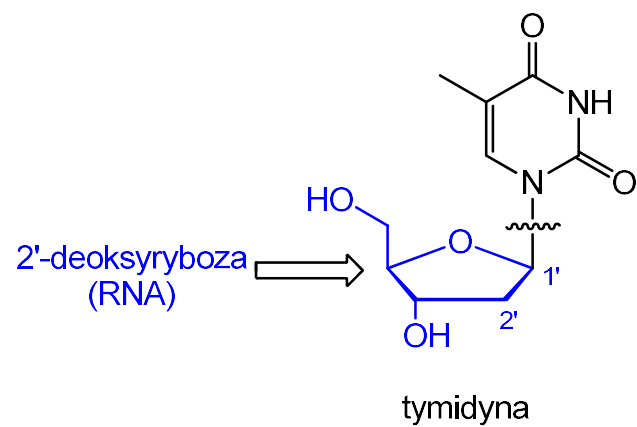
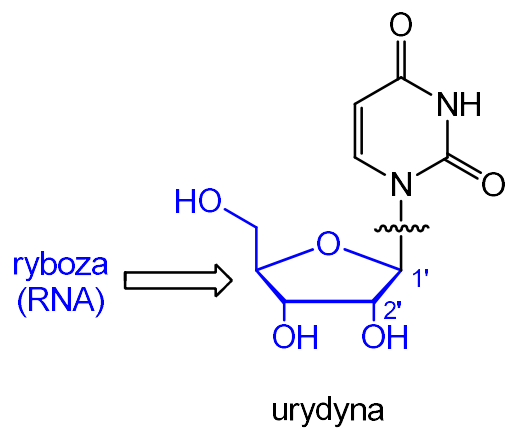


adenina
(DNA/RNA)

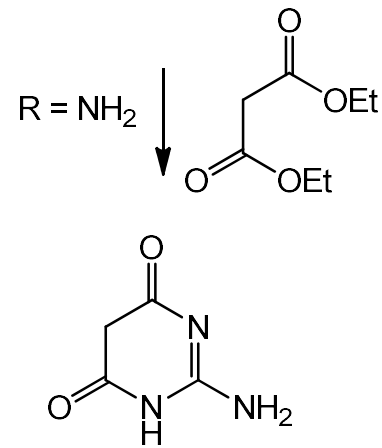
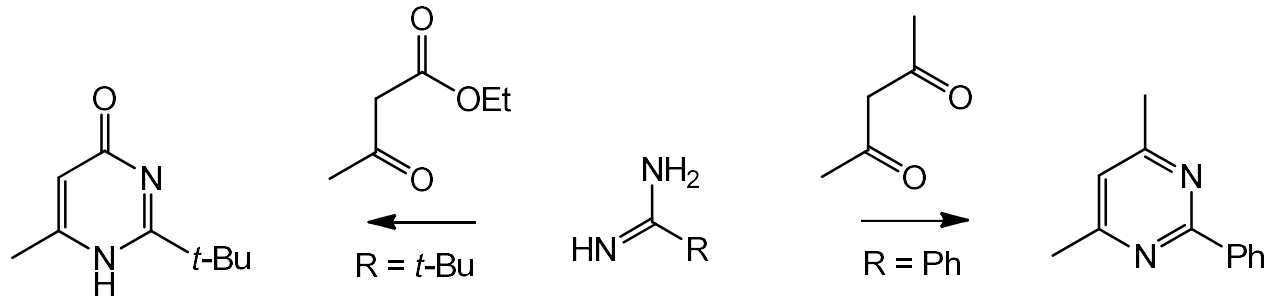
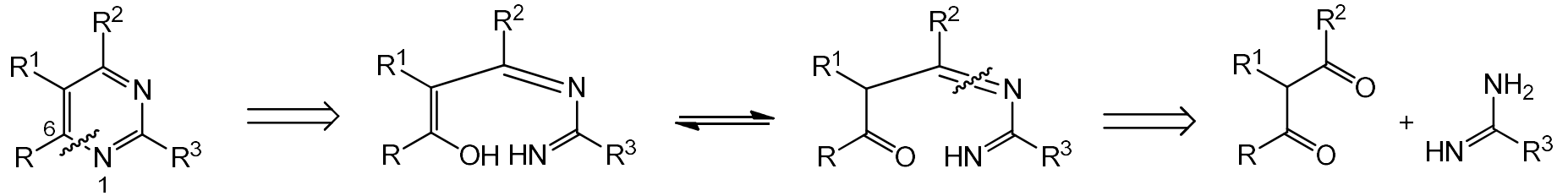


guanina
(DNA/RNA)

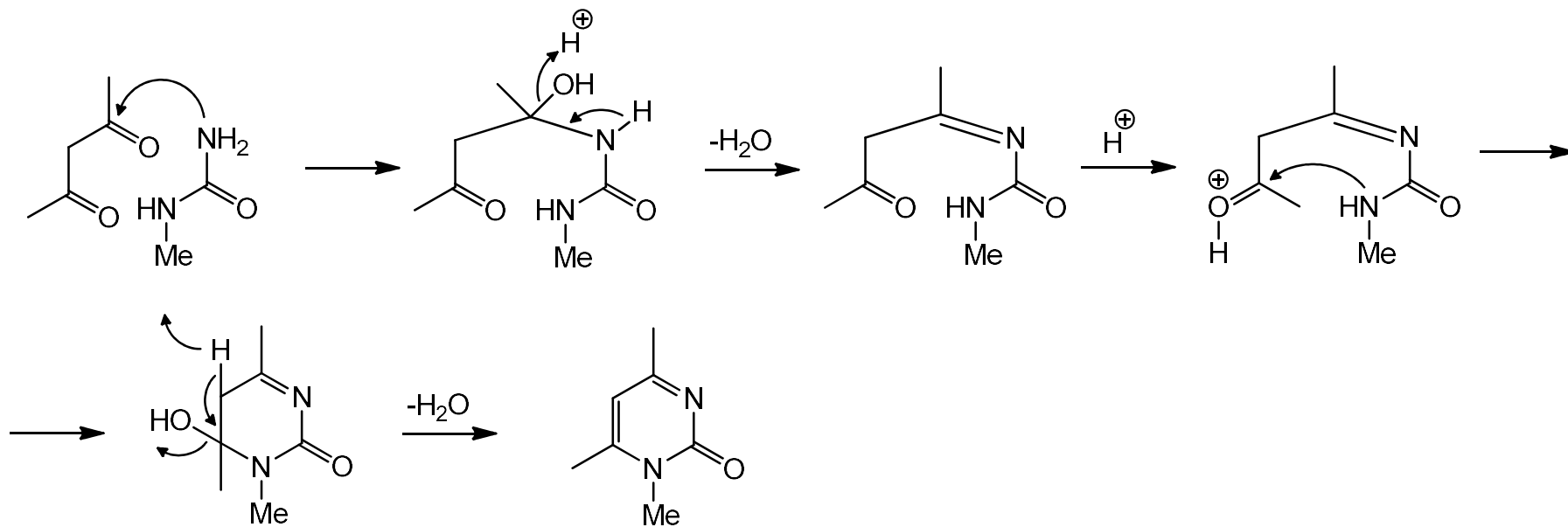
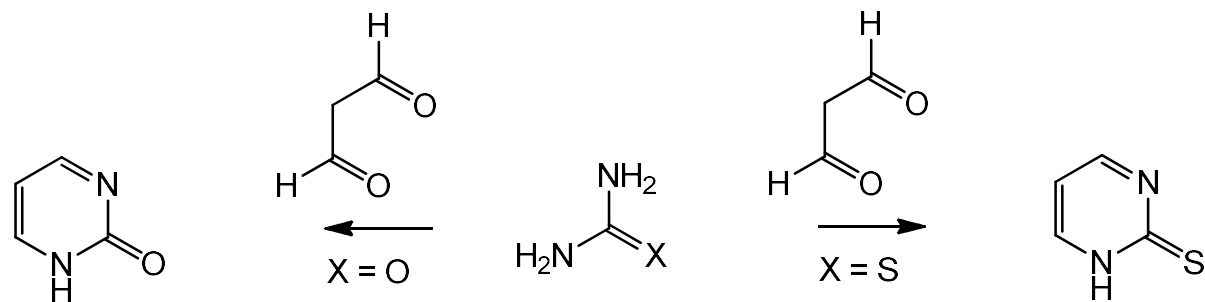
10.2. Pirymidyny - występowanie w kwasach nukleinowych, przykłady



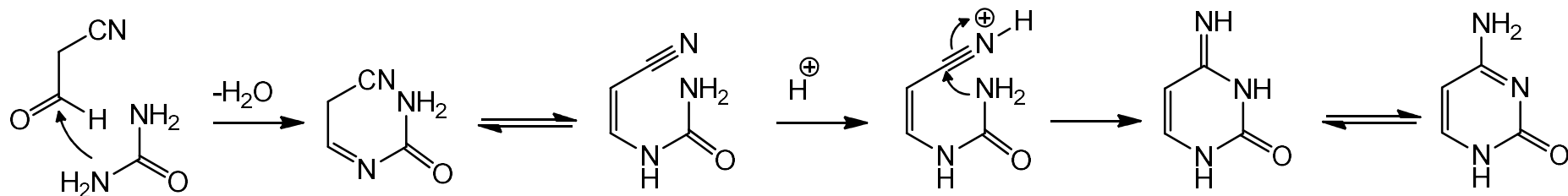
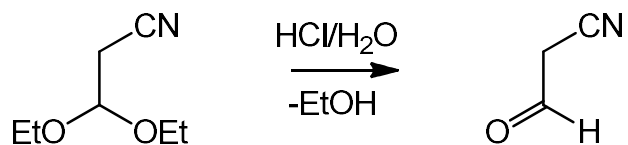
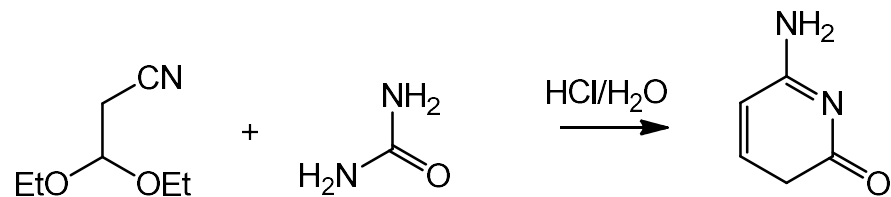
10.3. Pirymidyny - analiza dyskonekcyjna, przykłady wykorzystania



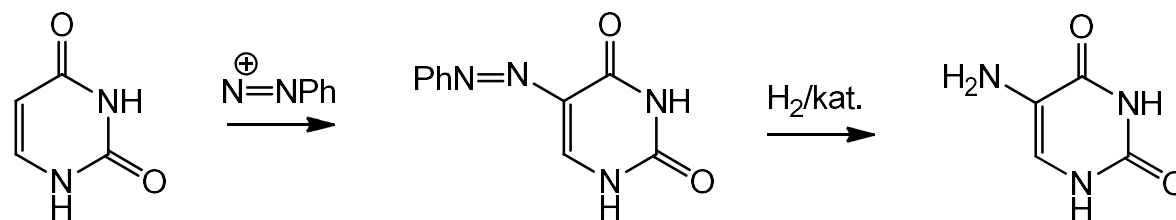
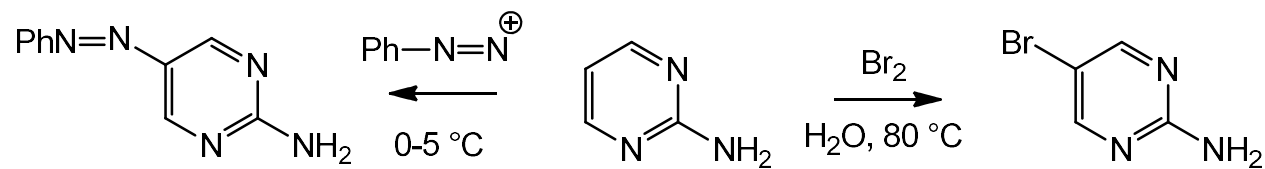
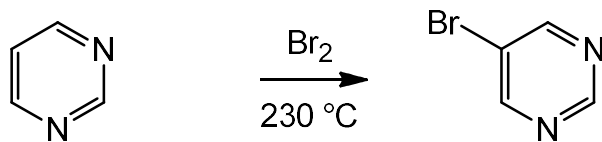
10.4. Pirymidyny – otrzymywanie przez cyklocondensację



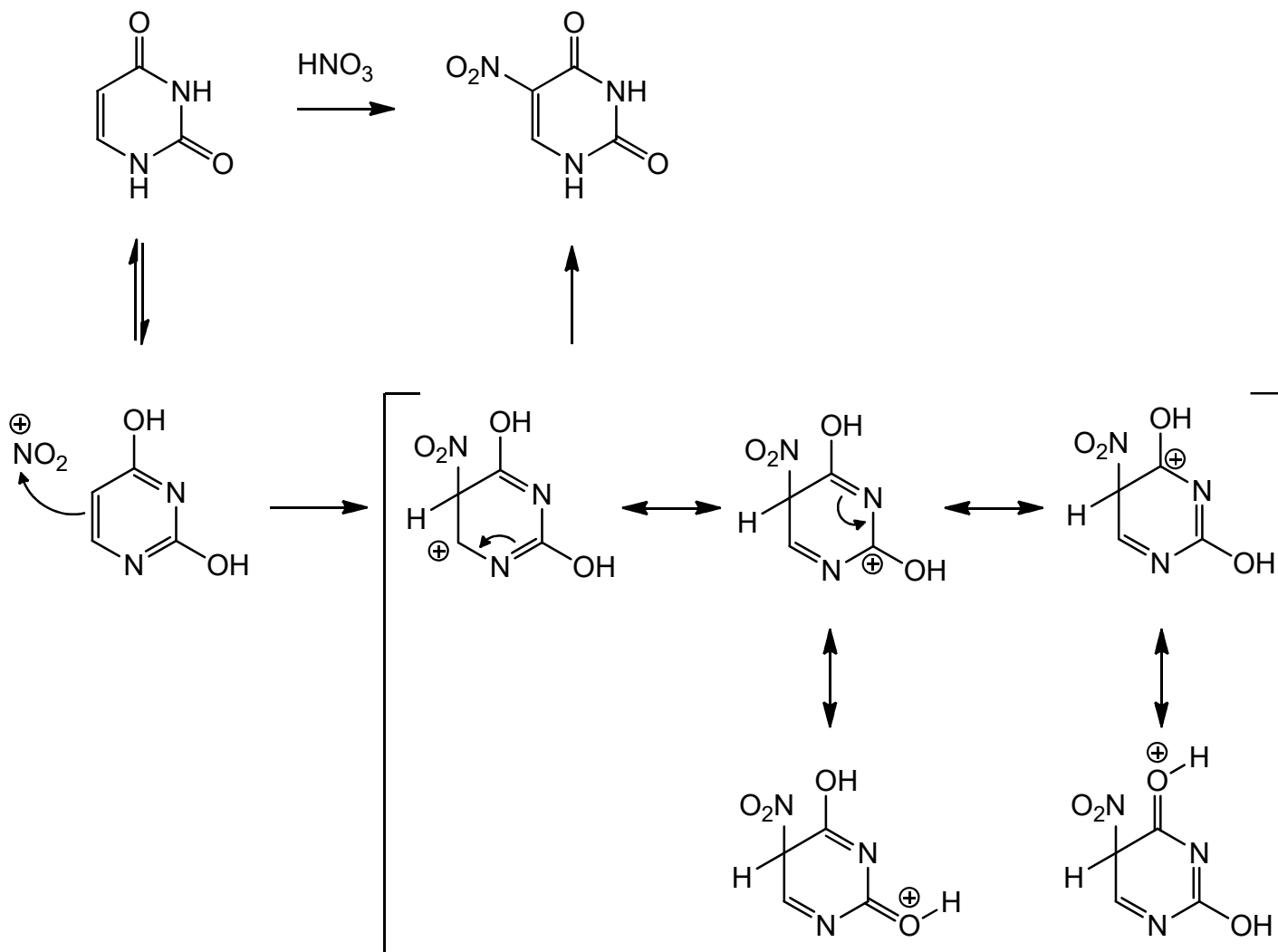
10.4.1. Pirymidyny – otrzymywanie przez cyklocondensację, cytozyna



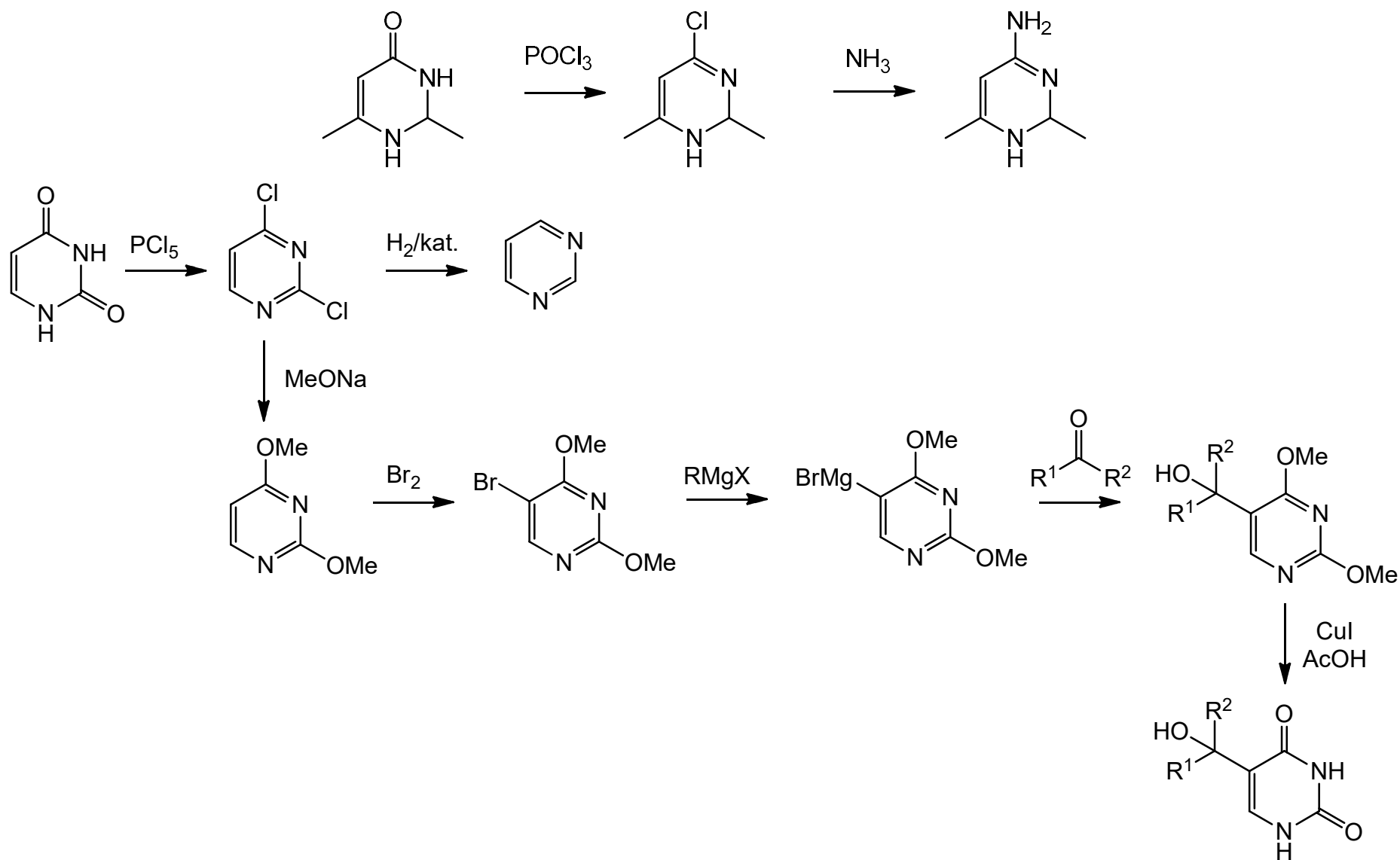
10.5. Pirymidyny - substytucja elektrofilowa, bromowanie, sprzężanie z ArN_2^+



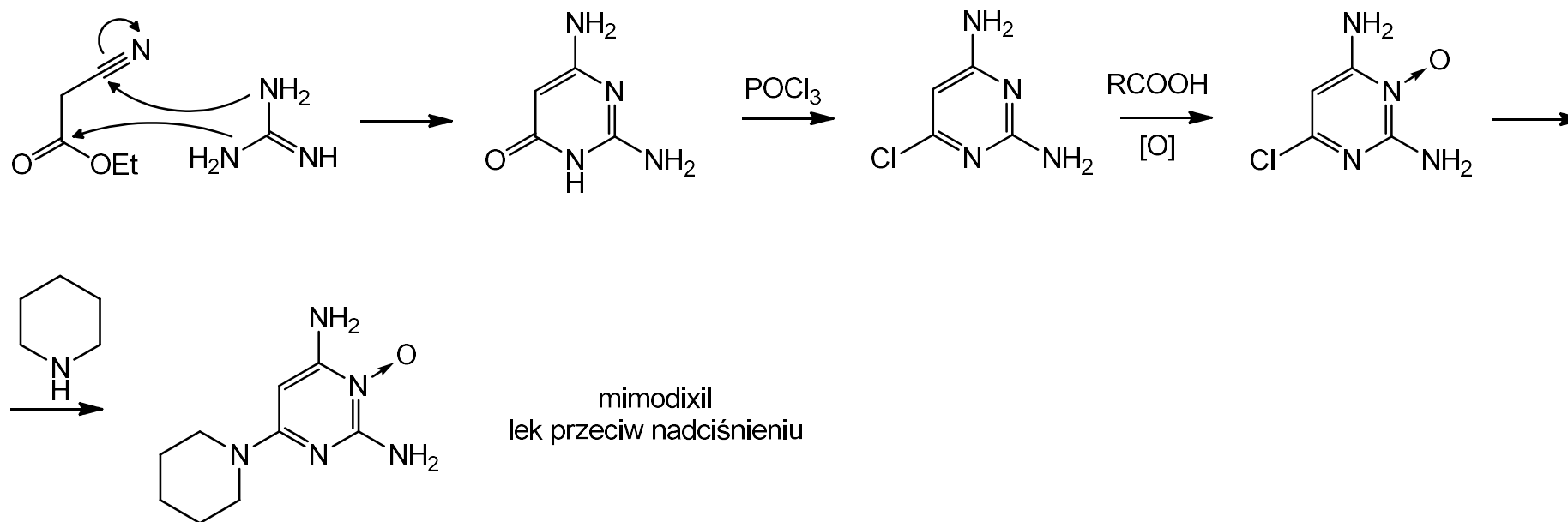
10.6. Pirymidyny - substytucja elektrofilowa, nitrowanie



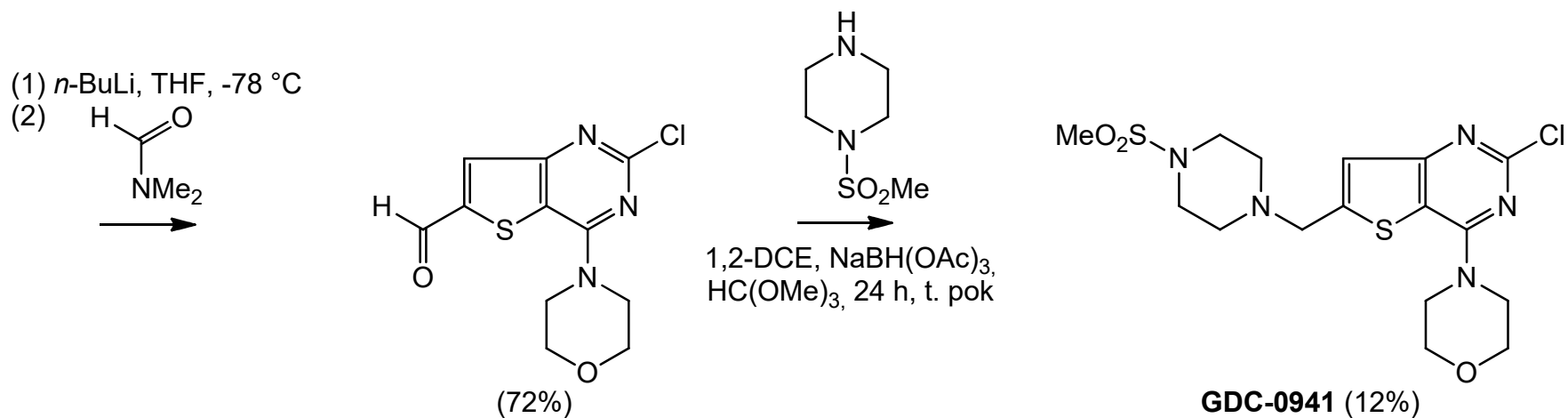
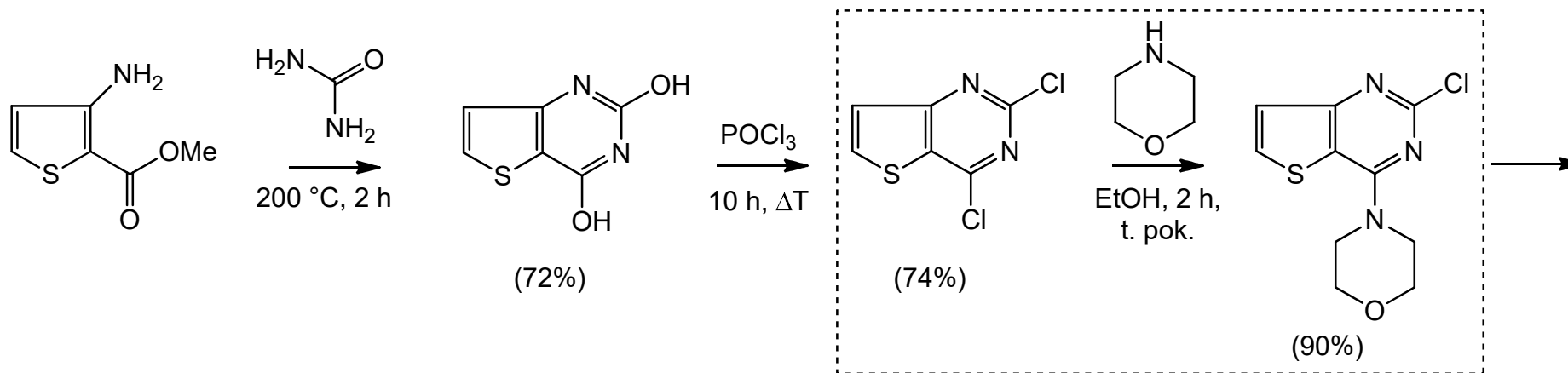
10.6. Pirymidyny - substytucja nukleofilowa w chloropirymidynach, wykorzystanie w syntezie organicznej, przykład (1)



10.7. Pirymidyny - substytucja nukleofilowa w chloropirymidynach, wykorzystanie w syntezie organicznej, przykład (2)

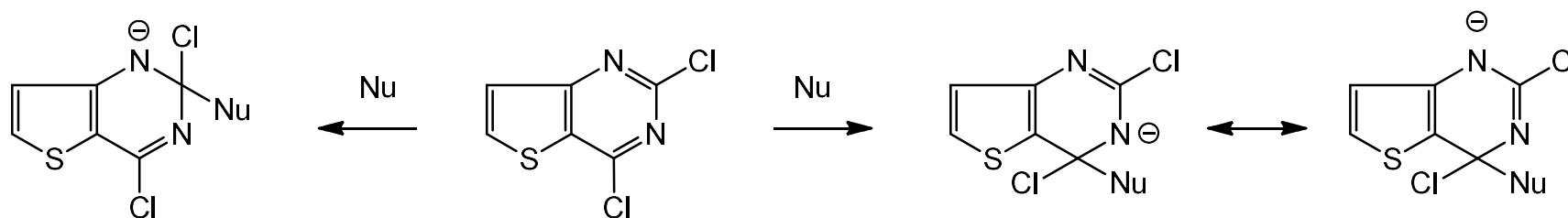
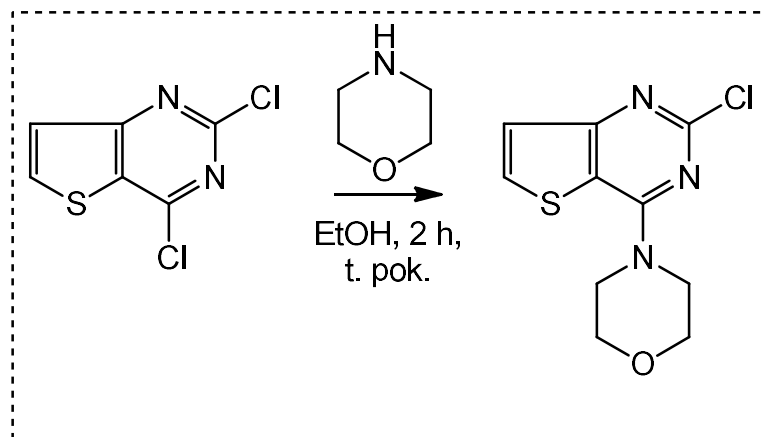


10.8. Pirymidyny - substytucja nukleofilowa w chloropirymidynach, wykorzystanie w syntezie organicznej, przykład (3)

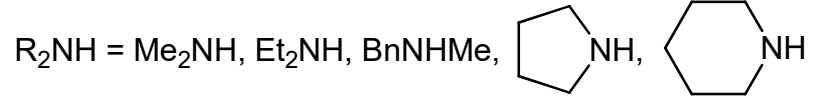
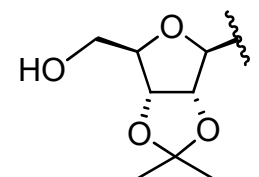
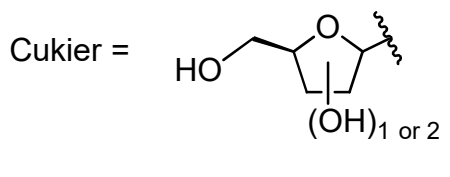
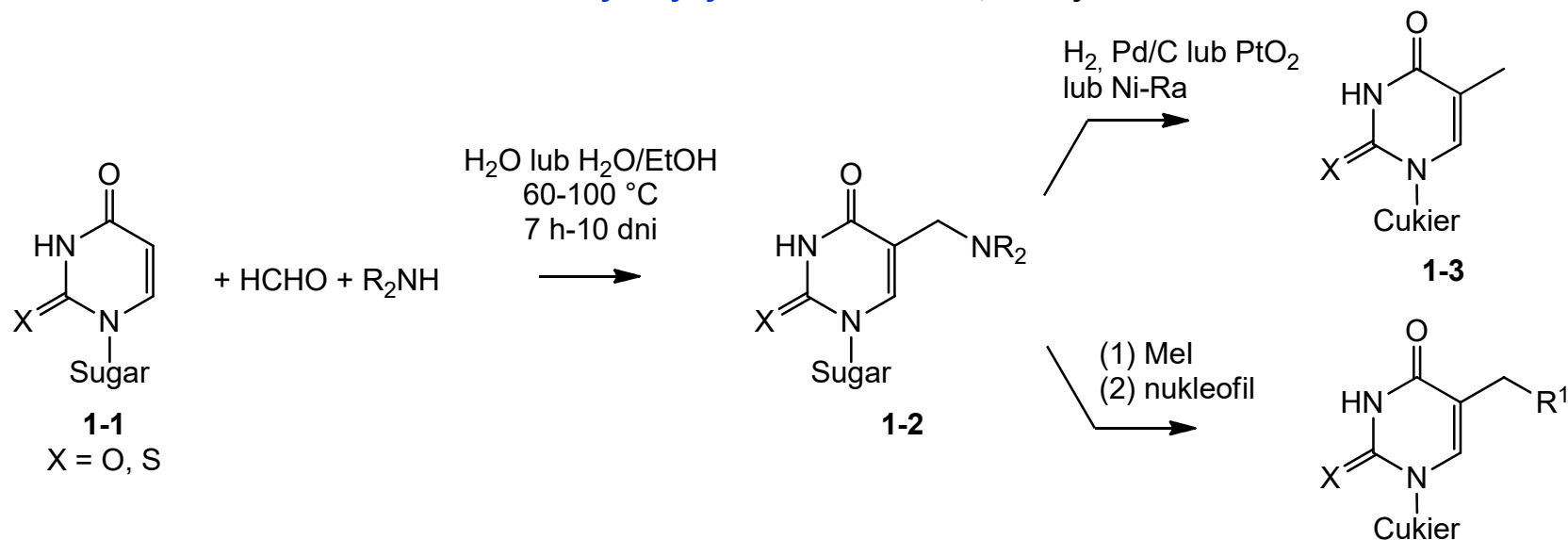


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10.9. Pirymidyny - substytucja nukleofilowa w chloropirymidynach, wykorzystanie w syntezie organicznej, przykład (4)



10.10. Pirymidyny - w roli nukleofila, reakcja Mannicha



Nukleofil	KCN	NaN ₃	CH ₃ NO ₂					NBu_4^{\oplus}
R¹								

M. Koszytkowska-Stawińska, W. Buchowicz *Beilstein J. Org. Chem.* **2014**, *10*, 1706–1732. (przegląd)