

Exercises KJ 5220

November 16, 2009

“Left-overs” from last week?

New exercises:

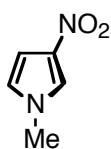
1.

(a) Why do pyrrole react with electrophiles preferably in the 2 / 5 position and indole in the 3-position? (Show mechanisms for a general reaction)

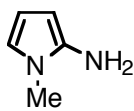
(b) Why will quinoline react with electrophiles in the benzene ring and indole in the heterocyclic ring? (Show mechanisms for a general reaction)

2.

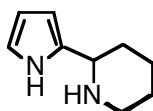
Suggest synthesis of the following compounds, starting from pyrrole



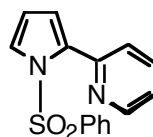
A



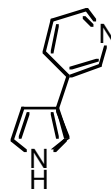
B



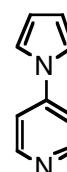
C



D



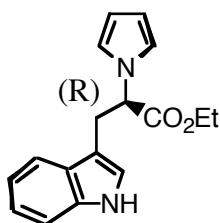
E



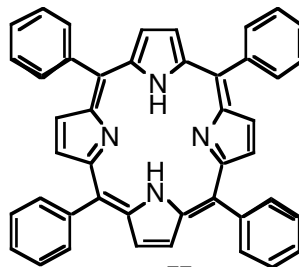
F

3.

Suggest syntheses of the following compounds



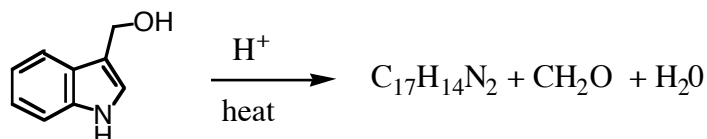
G



H

4.

Explain the reaction below



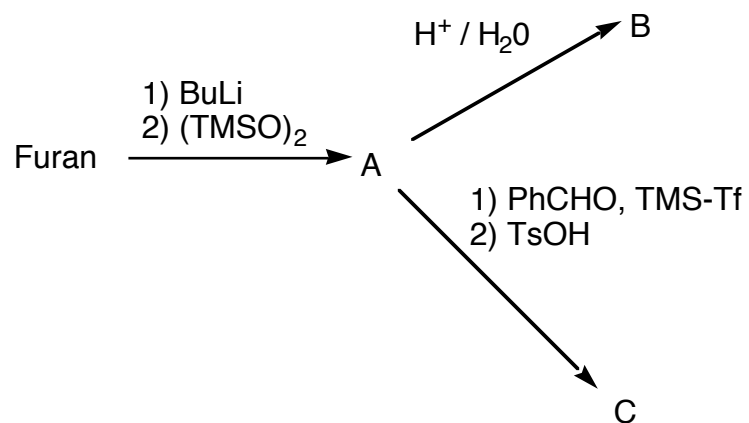
5. Which products would you expect when furan is treated with Br_2

a) in THF

b) in ethanol

6. Complete the reaction sequences

a)



b)

