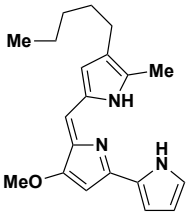
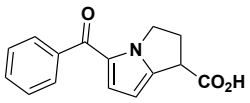
Wednesday, April 7th, 8:00 am PDT/ 11:00 am EST

Suggested studying music: Rachmaninoff, Symphony #1

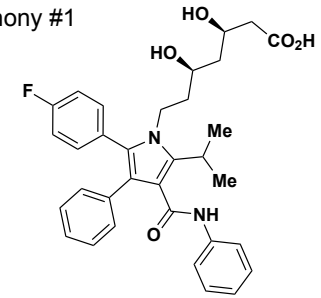
Syntheses discussed:



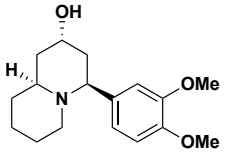
prodigiosin
Review: Fürstner, Angew. Chem. Int. Ed. **2003**, 42, 3582



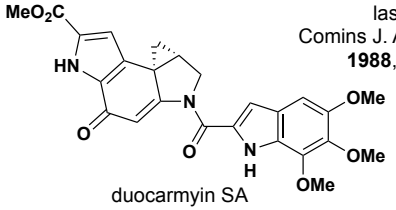
ketorolac
Review: Muchowski, *Adv. Med. Chem.* **1992**, *1*, 109



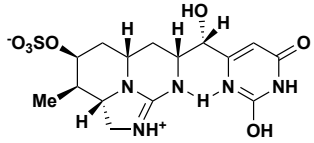
Lipitor
Roth *Tetrahedron Lett.* **1992**, 2279, 2283



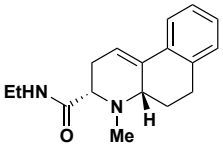
lasubine II
Comins J. Am. Chem. Soc. **1988**, *110*, 7445



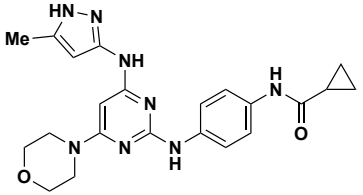
duocarmyin SA
Schmidt, *J. Org. Chem.* **2018**, *83*, 3928.



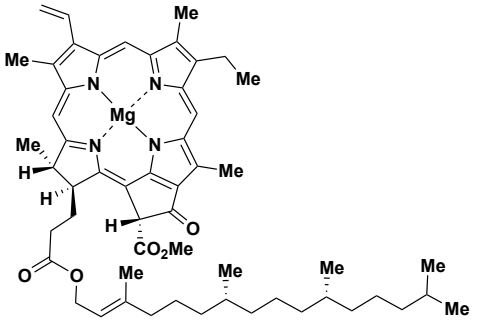
cylindrospermopsin
Snider J. Am. Chem. Soc. **2000**, *122*, 5017



Bayer cropscience pesticide
Smith, *Chem. Commun.* **2021**, *57*, 2693



tozadertib analogue
J. Med. Chem. **2018**, *61*, 1895.



chlorophyll
Woodward, *J. Am. Chem. Soc.,* **1960**, *82*, 3800.

Reading assignment: Joule & Mills: chapters 1-3
PCC: all "Substitution" sections

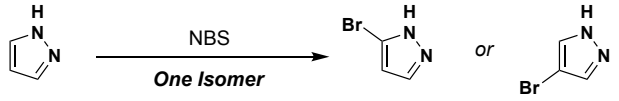
SPEED READ: PCC pg 49, 133, 241, 372

Partial list of concepts/transforms discussed:

Electrophilic substitution at ring carbon atoms
McFayden-Stevens reduction
Stetter reaction
Nucleophilic substitution at ring carbon atoms
Meisenheimer complex
Ziegler reaction
Chichibabin amination
Comins' pyridinium salt method for alkaloid synthesis
S_NEA (Substitution Nucleophilic Elimination Addition)
Vicarious nucleophilic substitution (VNS)
Bamberger cleavage
Reissert reaction
Zincke reaction

Problems of the day:

1



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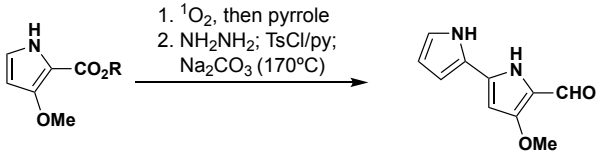

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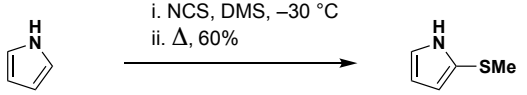
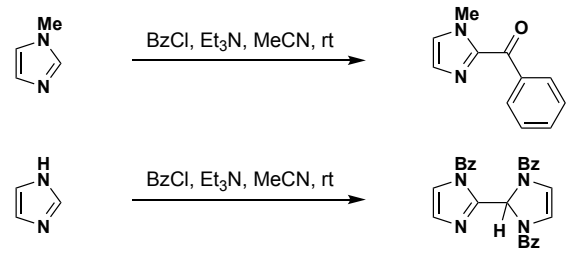
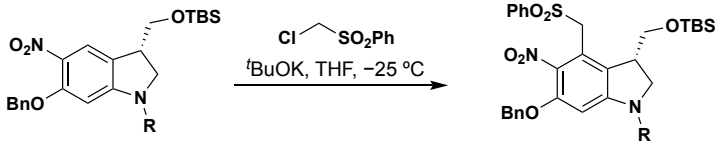


4

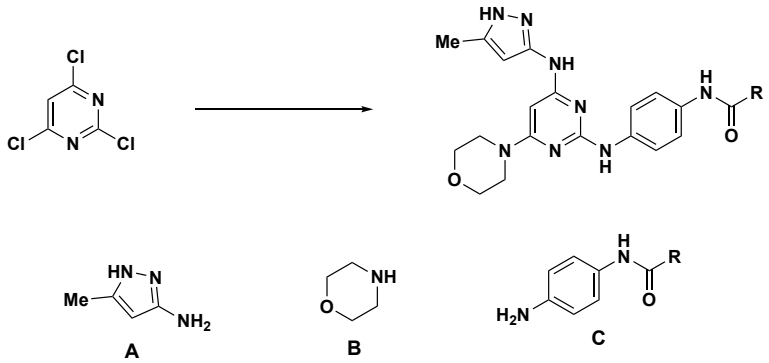


Explain

5



6 In what order would you add these three nucleophiles to access this molecule?



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