

Today

Aromaticity and  
Electrophilic Aromatic Substitution  
Section 18.11 - 18.15

EAS Bromination Lab

Next Class

Final

Please hand in reworked test 3.

Our Final is Scheduled for May 6 at 12:20.

Reworked test 1 and 2 will be available for pickup tomorrow.

Review Session Thursday, May 5 in Wilson 130 at 7:30.

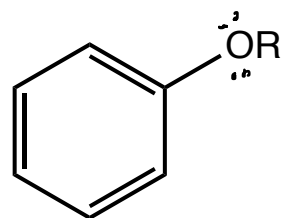
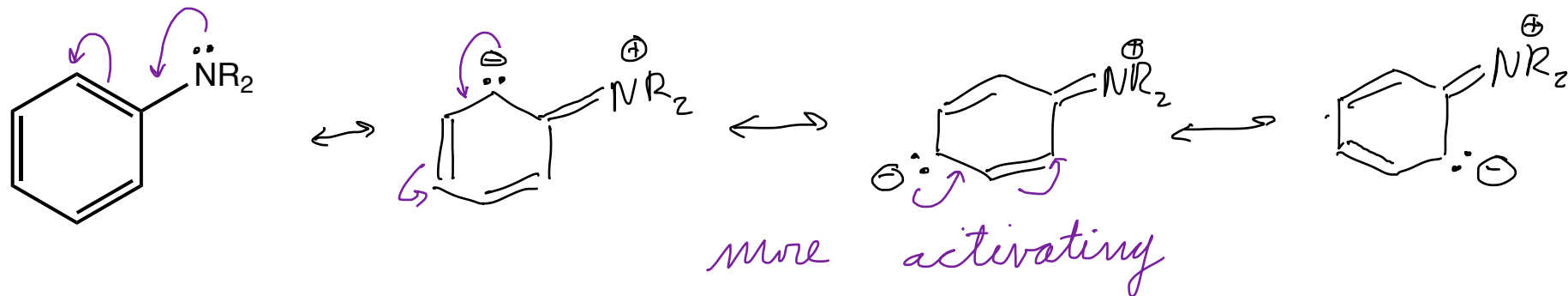
Full credit will be granted to Chap 18 Homework Questions that we haven't covered in class.

Graded Wednesday lab reports available for pick up.

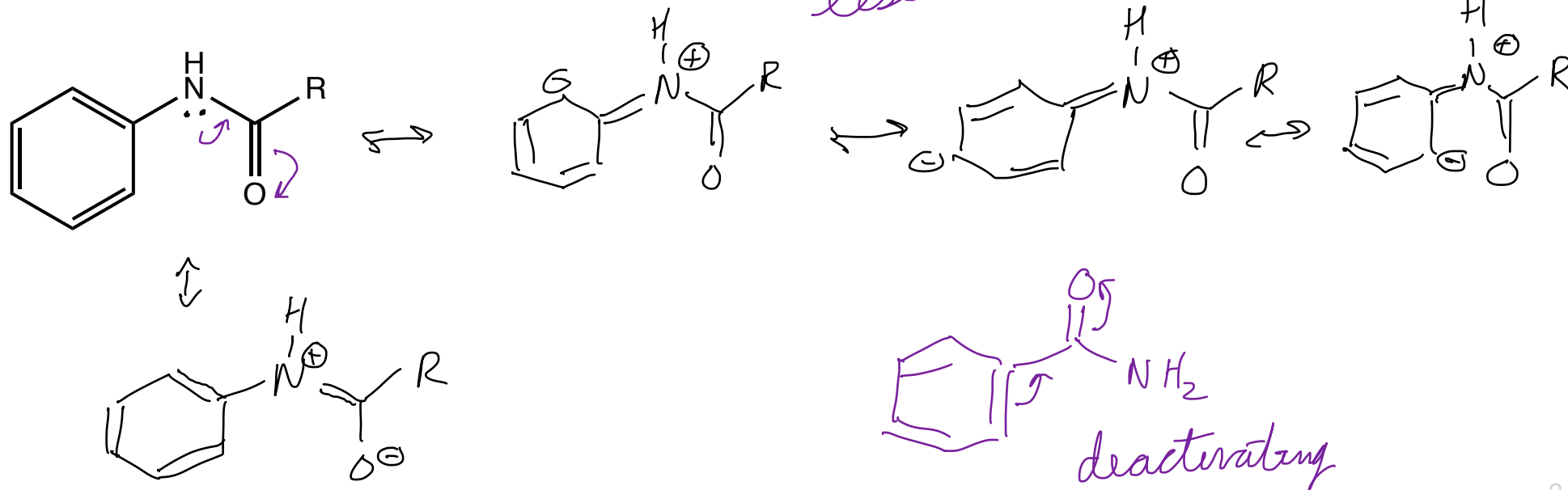
# Substituents that Are Activating towards Electrophilic Aromatic Substitution

as compared to H

*This is  $\pi$   $e^-$  donation*

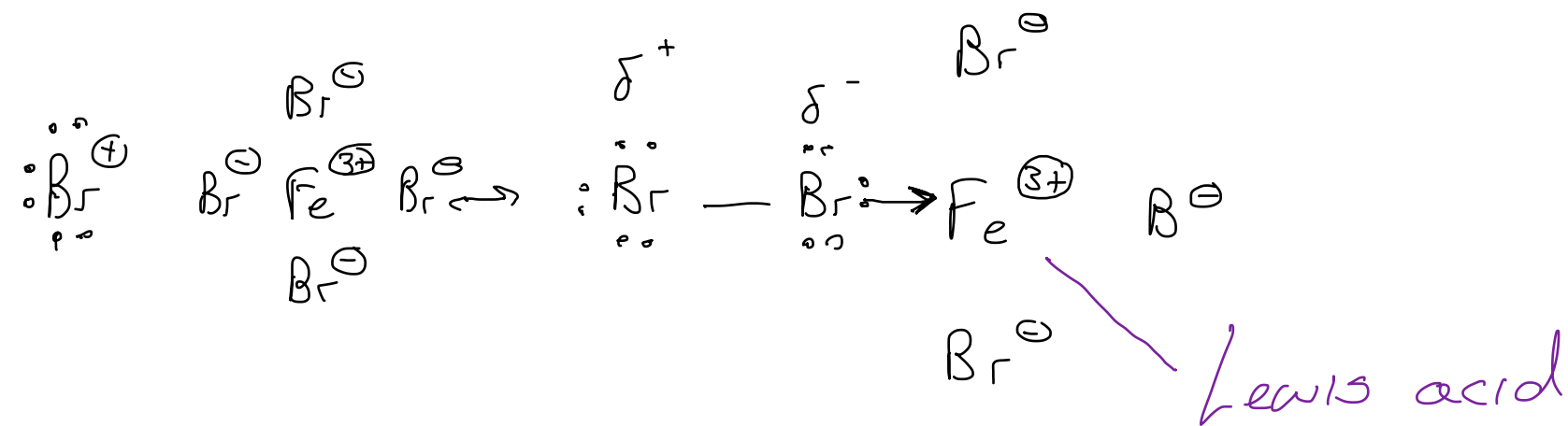
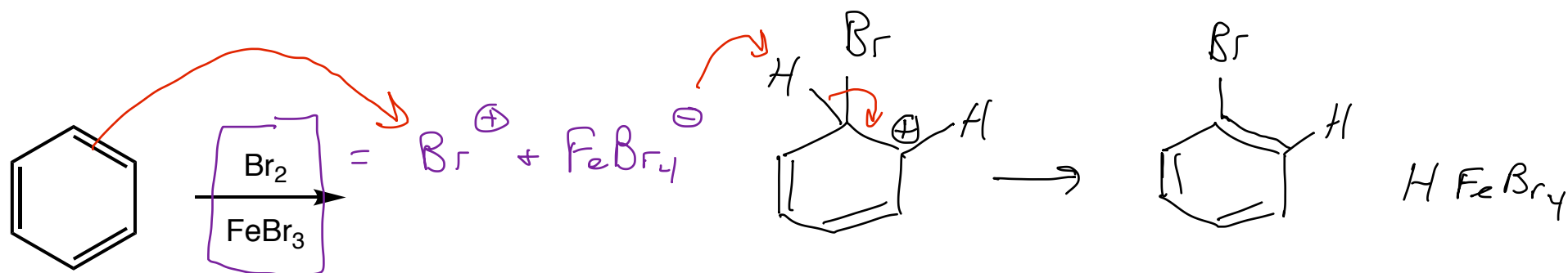
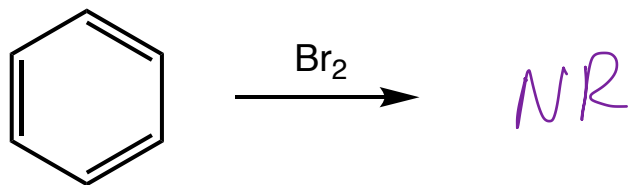


*less activating*



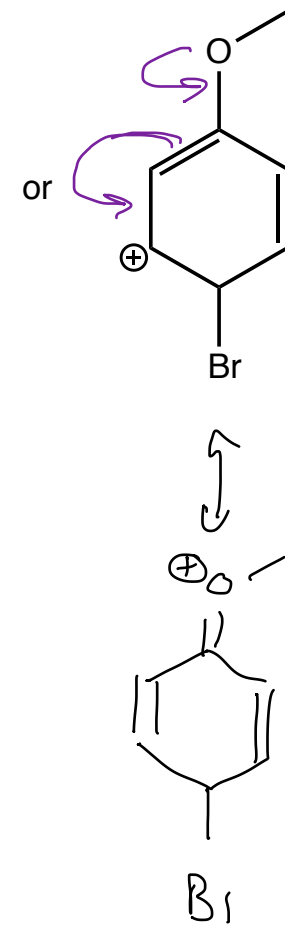
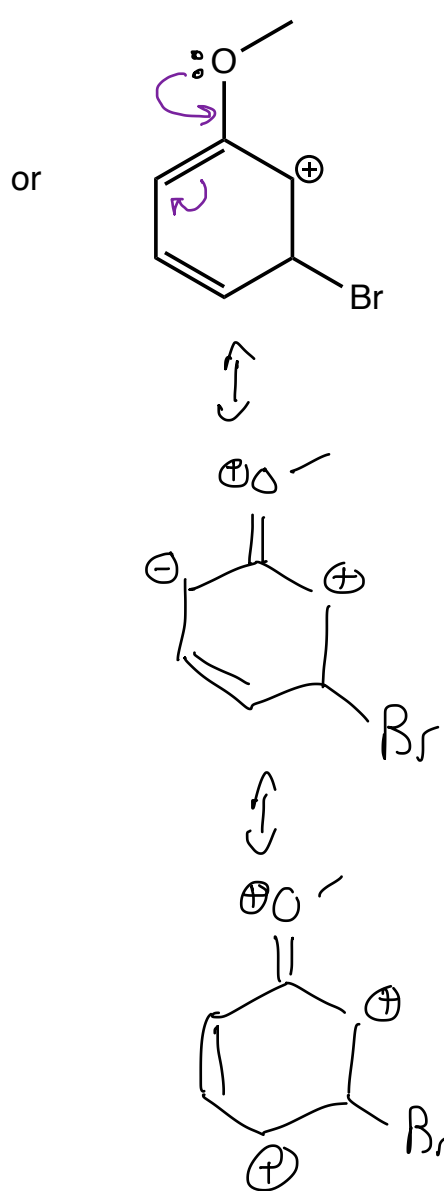
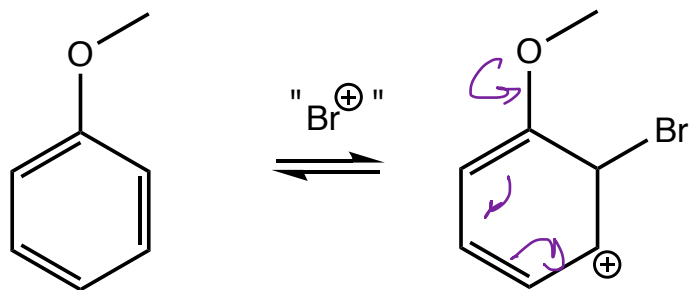
# Bromination

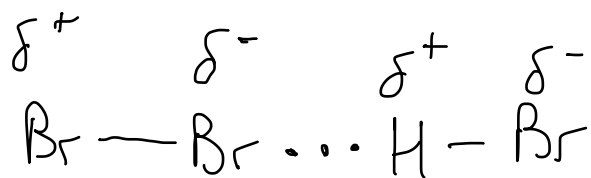
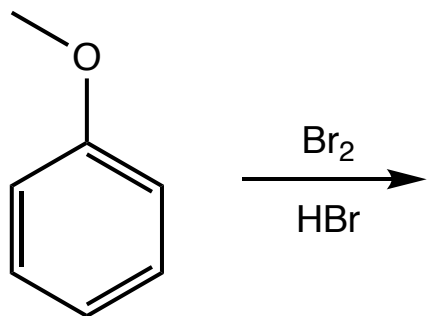
# Section 18.3



# o and p Directors

# Section 18.13

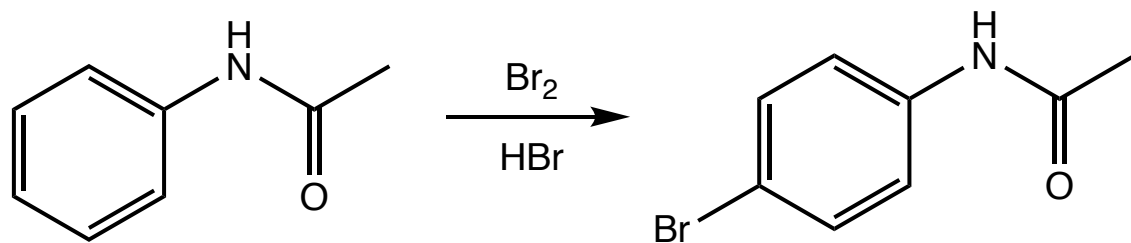
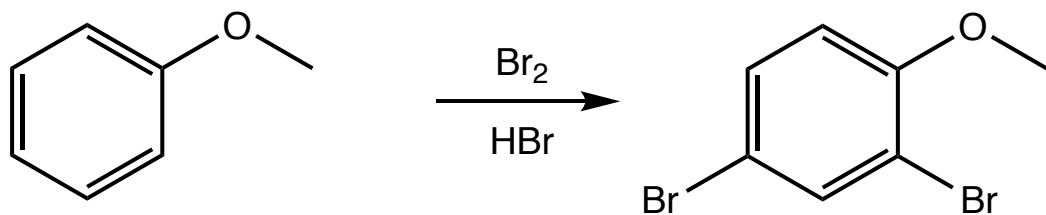
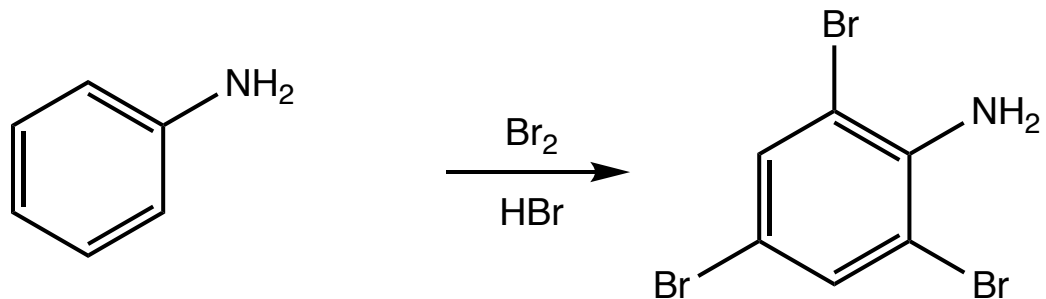




activated benzene  
rings don't require  
as strong an acid

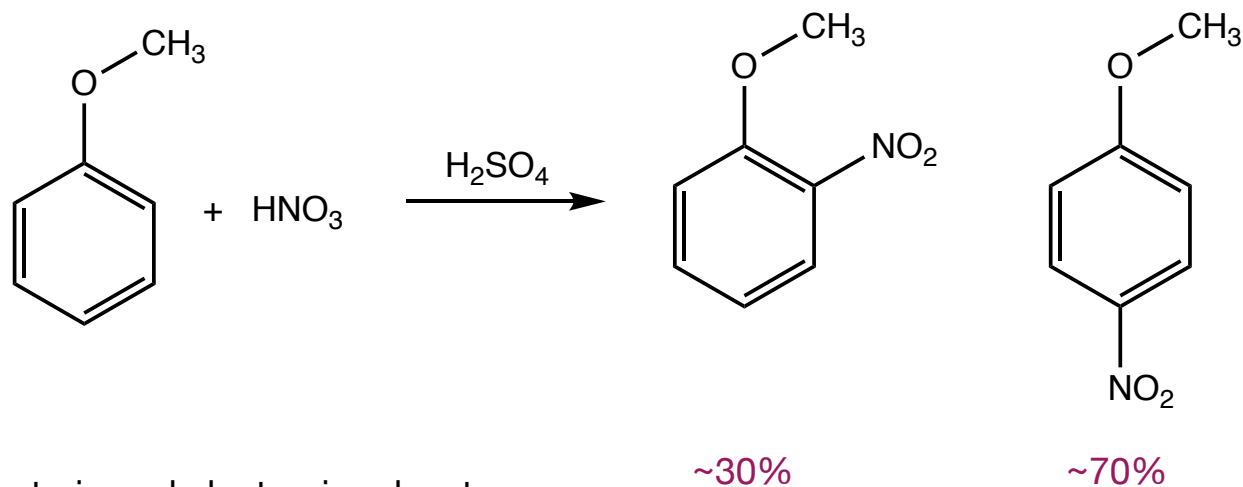
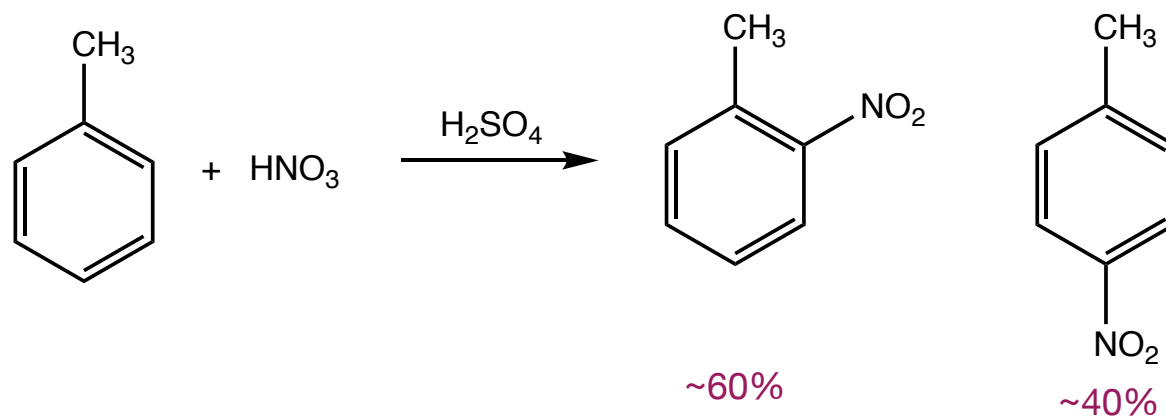
## How Activating Are the Substituents?

Adding a Br deactivates the benzene ring



## *o*:*p* Ratios (Summary)

Section 18:14



The *para* position has steric and electronic advantages

The *ortho* position has a statistical advantage

Mixtures of *o* and *p* isomers typically result





