

# Chemistry 328N Spring 2019

## Homework #7 Corrected

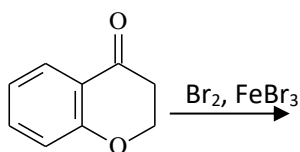
**Due:** in the box by 5PM on Monday, March 11<sup>th</sup>

**Read:** pages 966-969, 995-1016, 652-659, 670-676

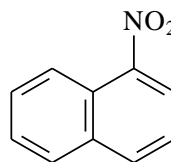
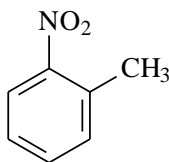
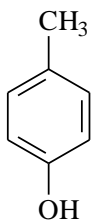
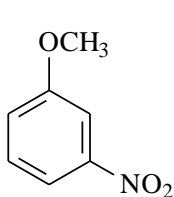
**Do:** 21.46, 22.4, 22.5, 22.7b and c, 22.9, 22.15, 22.19a, c and e, 22.20 a, e, g and h, 22.35a and e.

### Supplemental Problems:

1. The compound below reacts with bromine and ferric bromide to give primarily a single mono bromination substitution product. Please propose the structure of this compound and justify your answer with a mechanistic argument. I want to see curved arrows and resonance structures here to support your prediction. ...thanks.



2. Predict the major product or products from treatment of each compound with  $\text{HNO}_3/\text{H}_2\text{SO}_4$



3. Nitrobenzene undergoes electrophilic aromatic substitution slowly to give the meta isomer almost exclusively. Nitrosobenzene undergoes electrophilic substitution faster than benzene and gives a mixture of ortho and para isomers. Write the resonance structures for the products of attack at the para and the meta positions of each isomer and use the resonance structures to explain the difference in reactivity.

