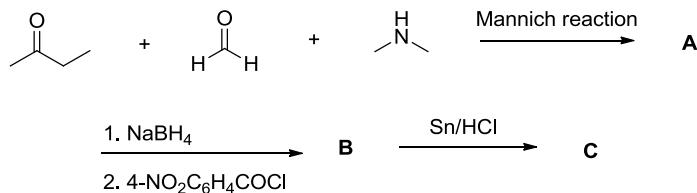


Problems - Set 10: Carbonyl compounds (Part IV)

Problem 1

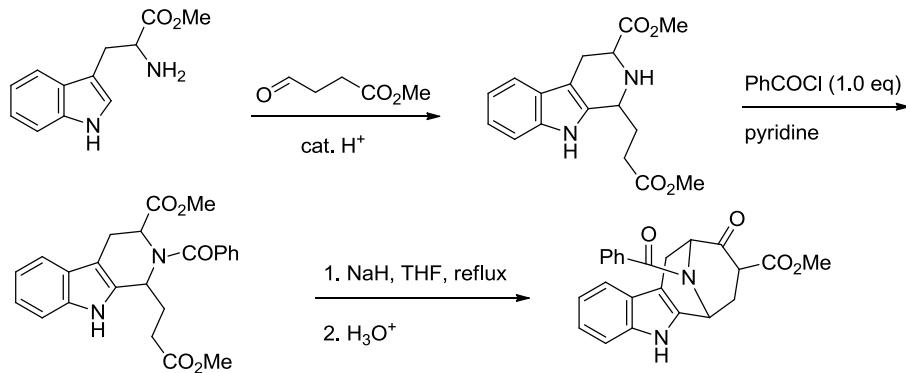
Find the missing compounds to complete the following transformations and give the mechanisms:



Note: NO_2 groups can be reduced to NH_2 in acidic conditions under the presence of metals such as Fe , Sn or SnCl_2 , FeCl_2 ...

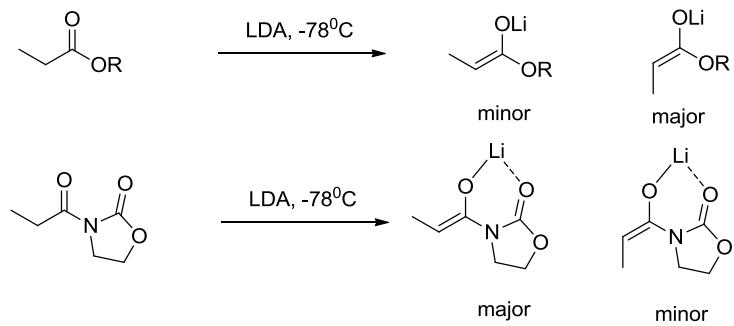
Problem 2

Suggest the mechanisms and try to justify the selectivity issues.

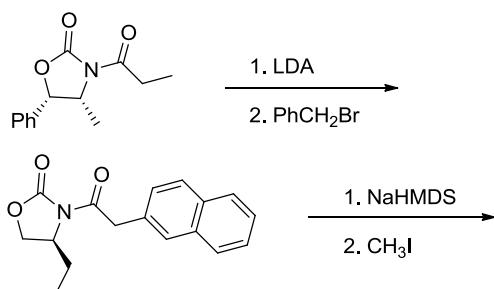


Problem 3

Explain these observations.

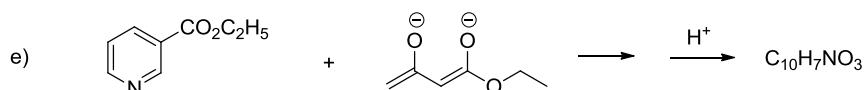
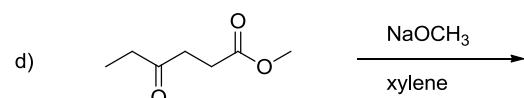
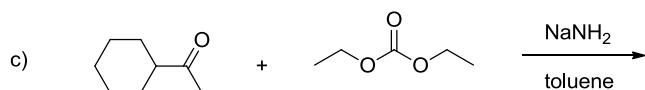
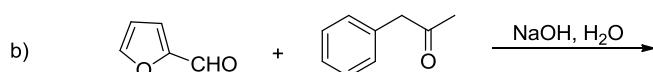
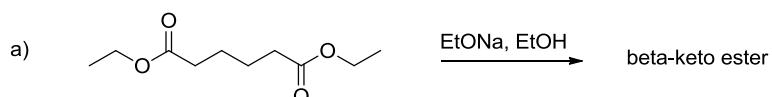


Apply these observations to find the structure of the products (with the absolute configurations!) of the following reactions:



Problem 4

Predict the product formed in each of the following reactions.



Problem 5

Indicate reaction conditions or a sequence of reactions that could form the products.

