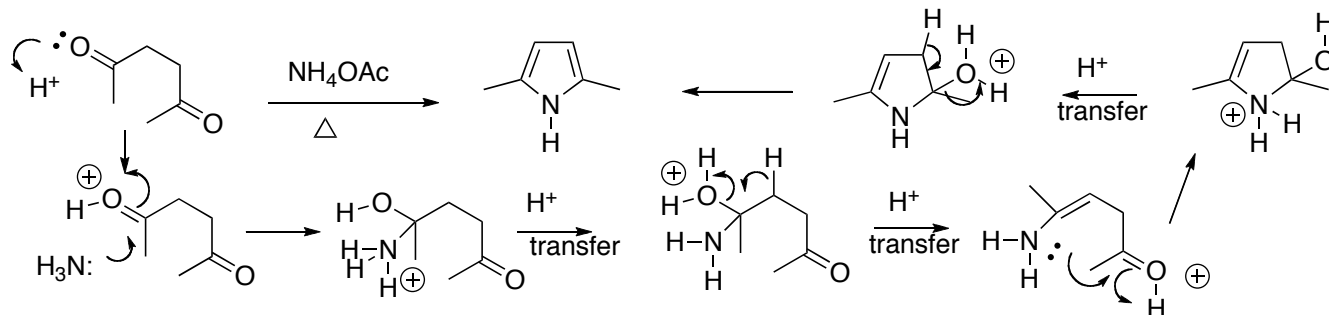
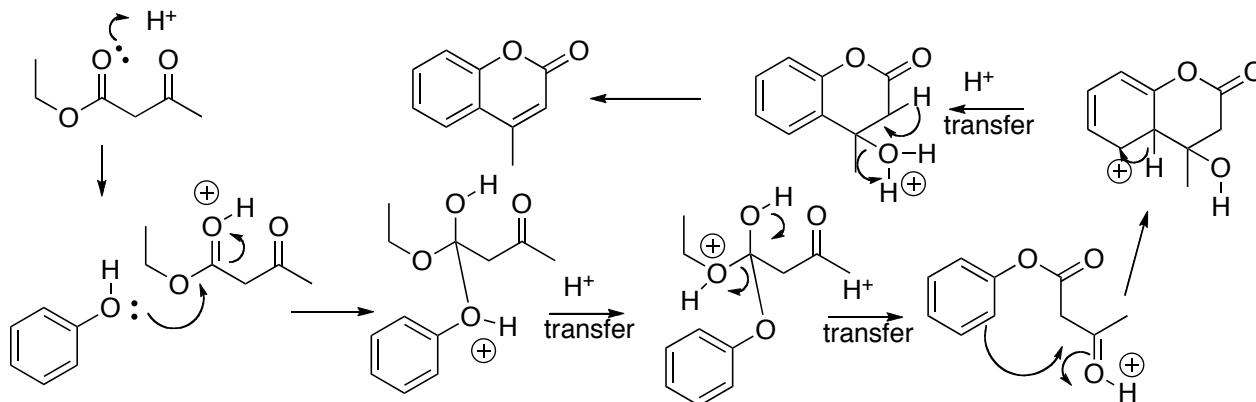


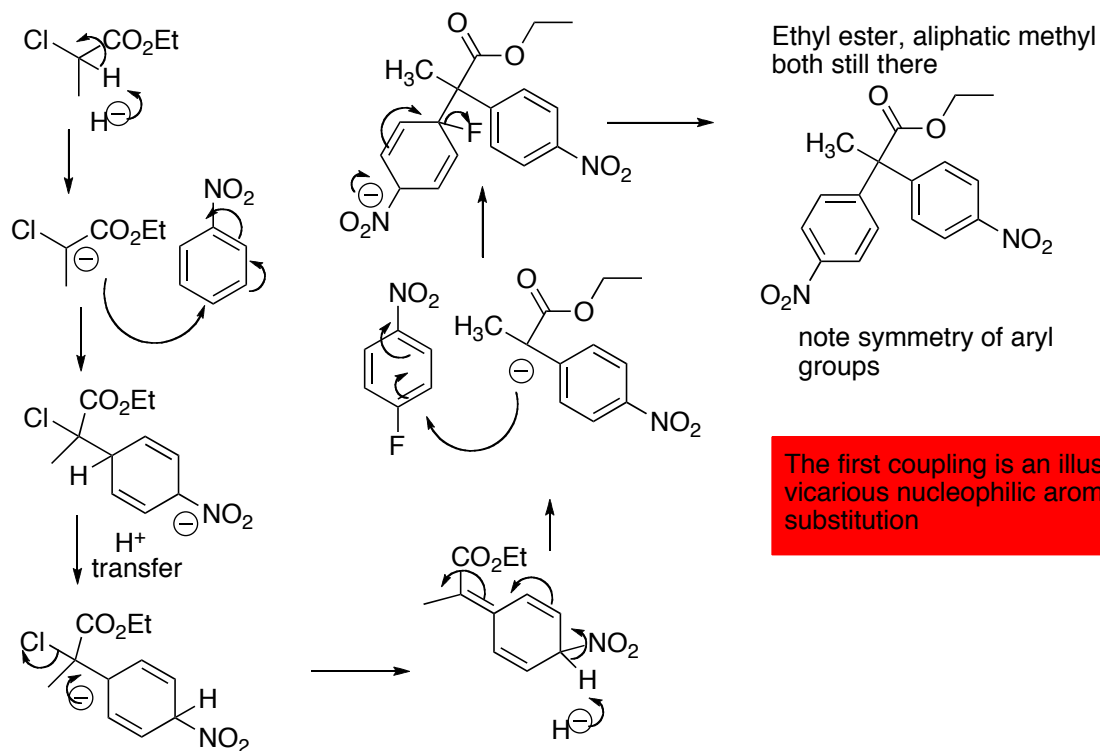
1. (10 points) Draw an arrow-pushing mechanisms for the following transformation.



2. (10 points) Draw an arrow-pushing mechanisms for the following transformation.



3. (10 points) Deduce the structure of **E**, and draw an arrow-pushing mechanism for its formation. Be careful with the IHD - we are now dealing with nitro groups - NO_2 counts as halogen!



The first coupling is an illustration of vicarious nucleophilic aromatic substitution