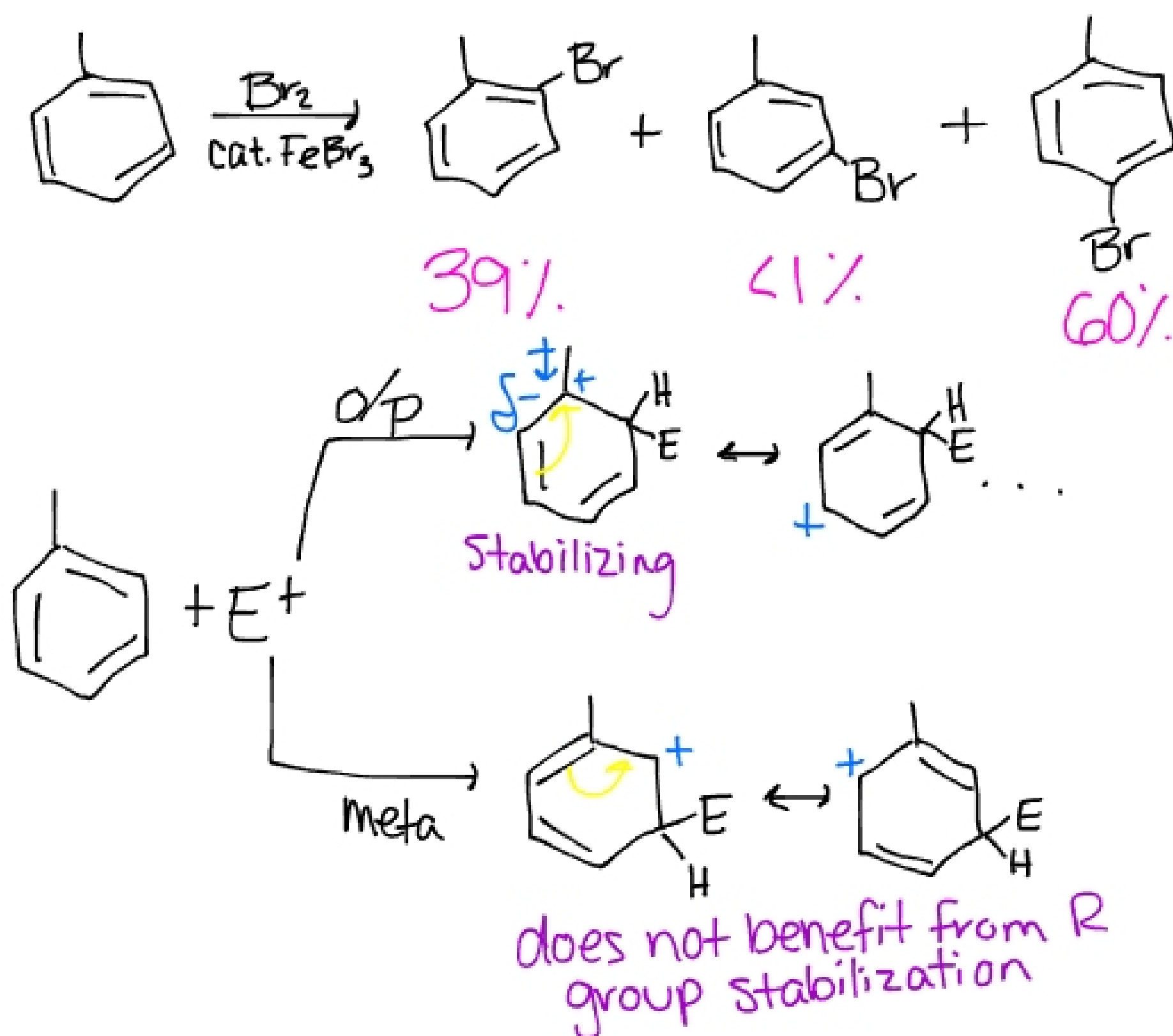


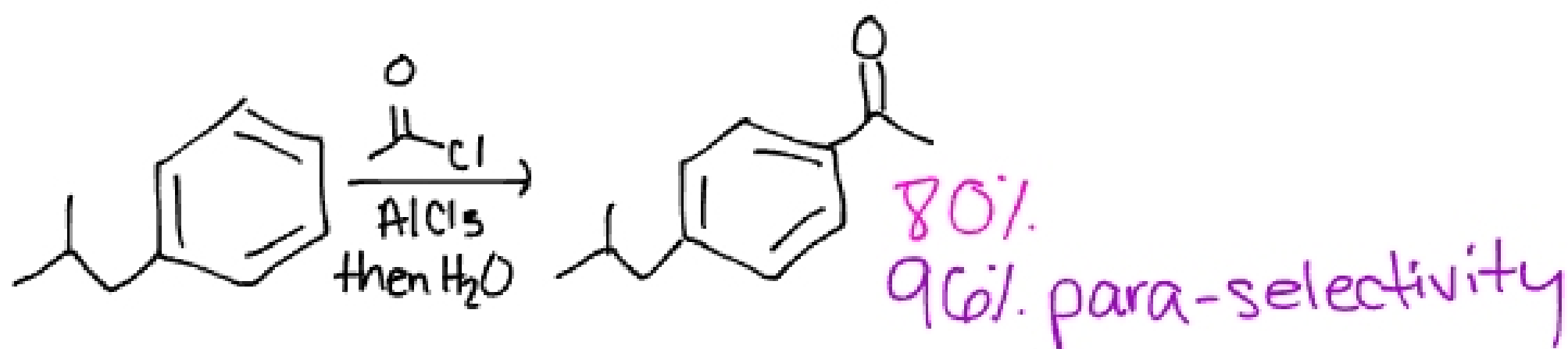
II. Directing Effects in benzene substituents

1. Standard Alkyl Groups (R groups) (16-2)

A. No resonance, weak activators (through induction) therefore ortho-para directors

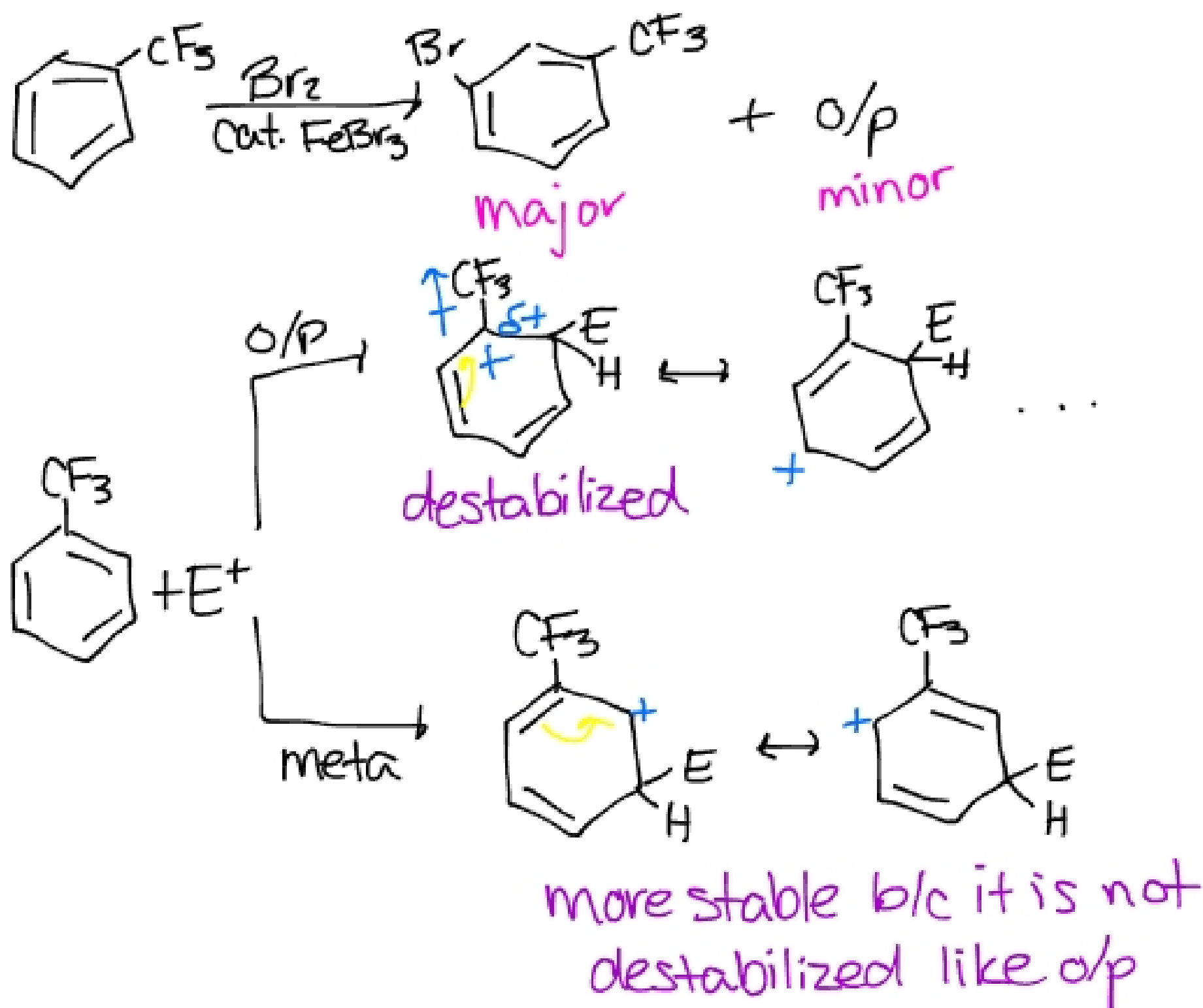


B. Sterics dictate o/p ratio



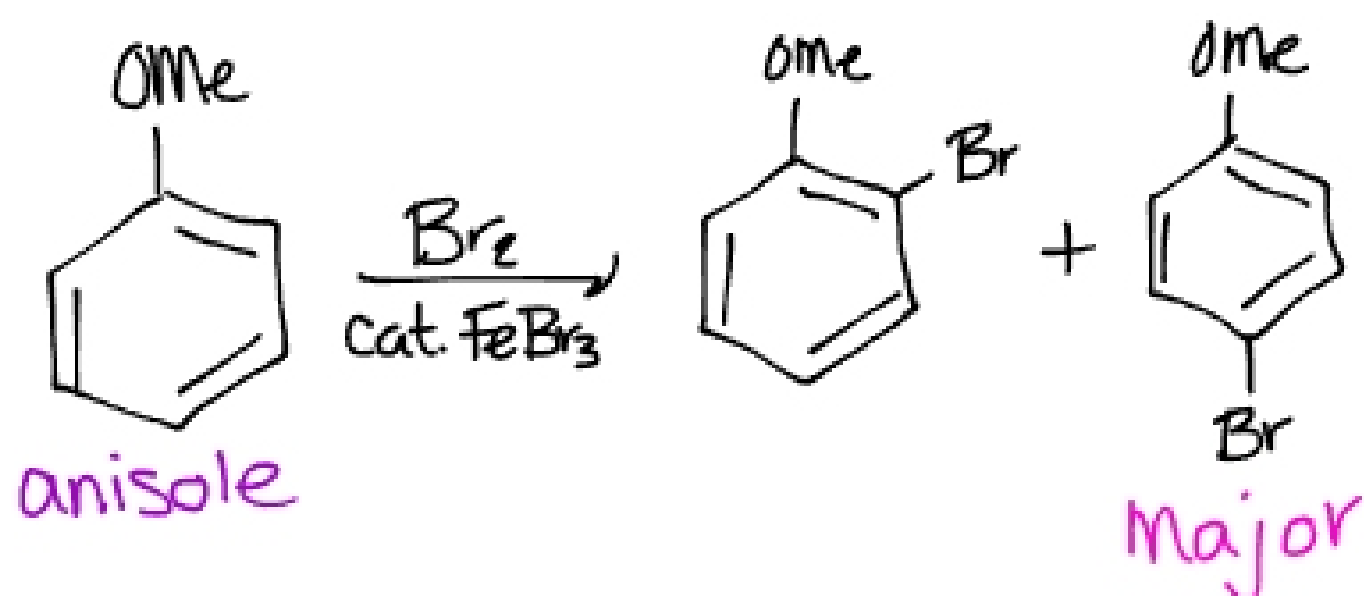
2. halogenated alkyl groups (-CF₃, etc...)

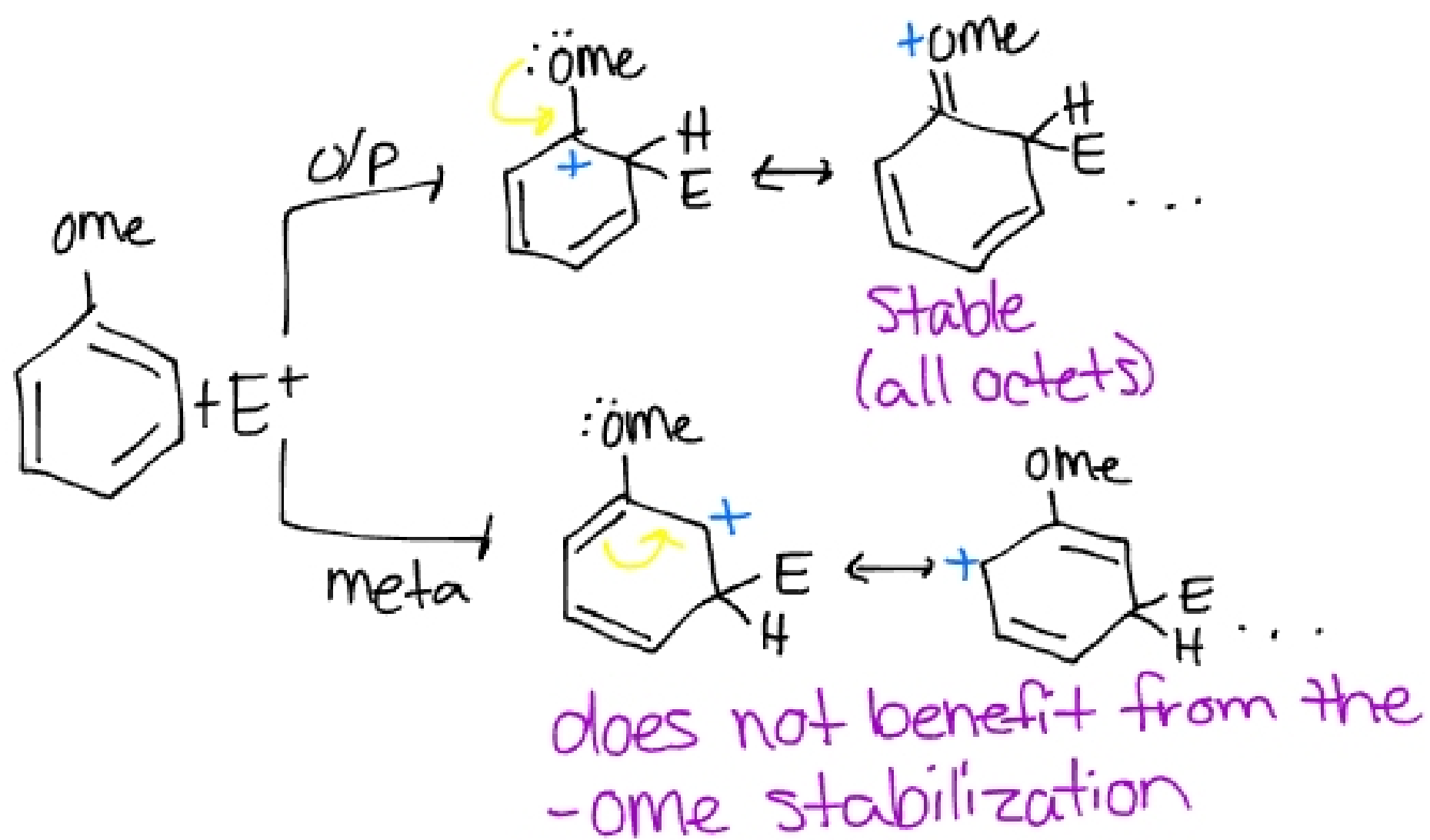
A. No resonance, weak/strong deactivators (induction) meta directors



3. Strong electron donors (resonance) (16-3)

A. Strong activation through resonance, weak deactivation through induction, o/p directors





c. Aniline and phenol are superactivated

