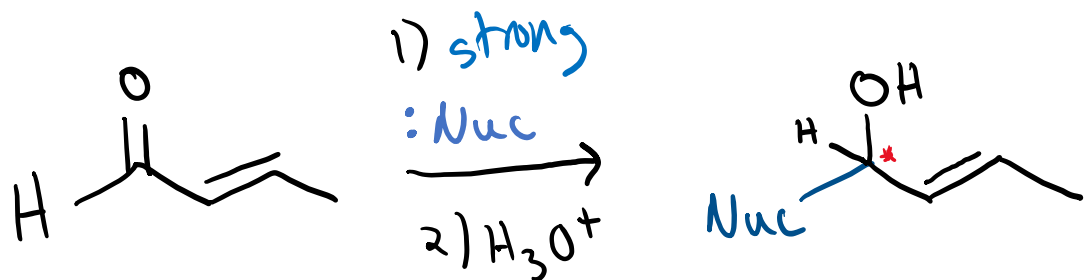


Conjugate Addition & Michael Addition

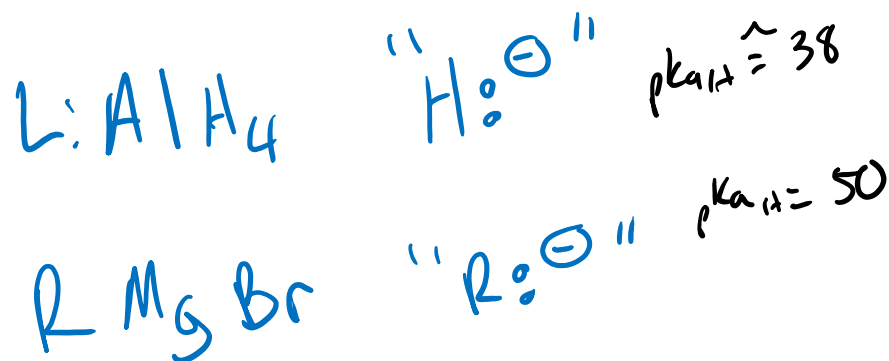
Diels Alder intro

4/3/2023

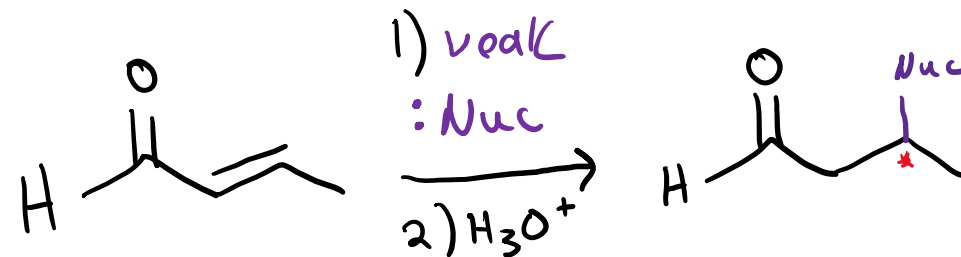
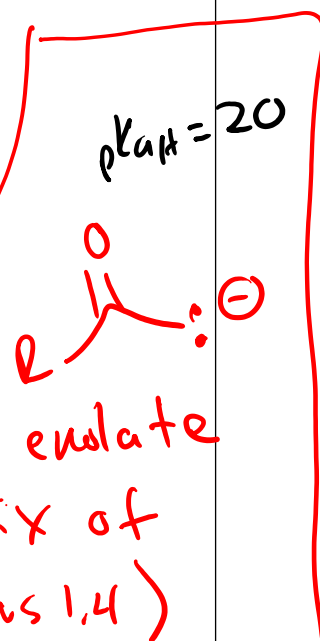
1,2- vs 1,4-addition: Strength of Nucleophiles and Regioselectivity



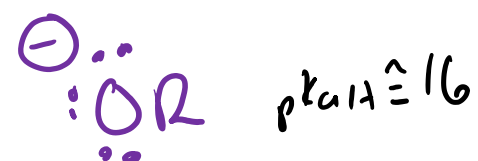
Strong nuc $\rightarrow$ 1,2-addition favored



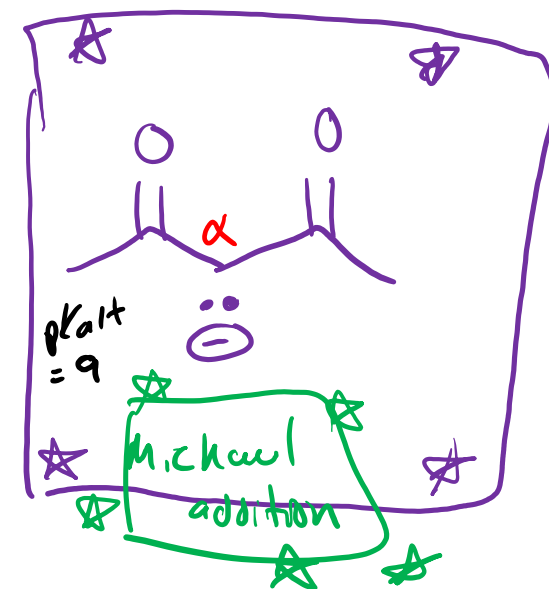
moderate



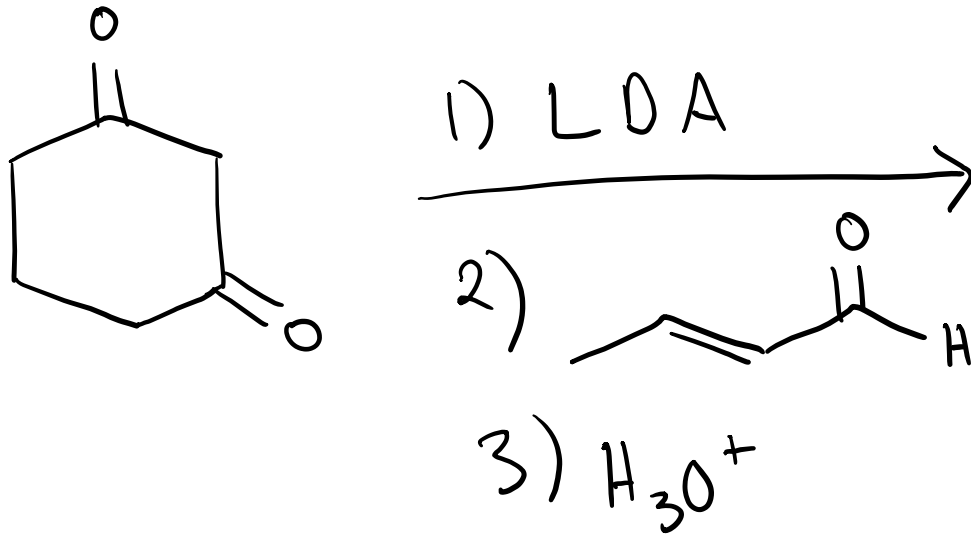
Weak nuc $\rightarrow$ 1,4 addition



$\rightarrow$ weaker $C:^-$ nuc. than Grignard



Michael Addition

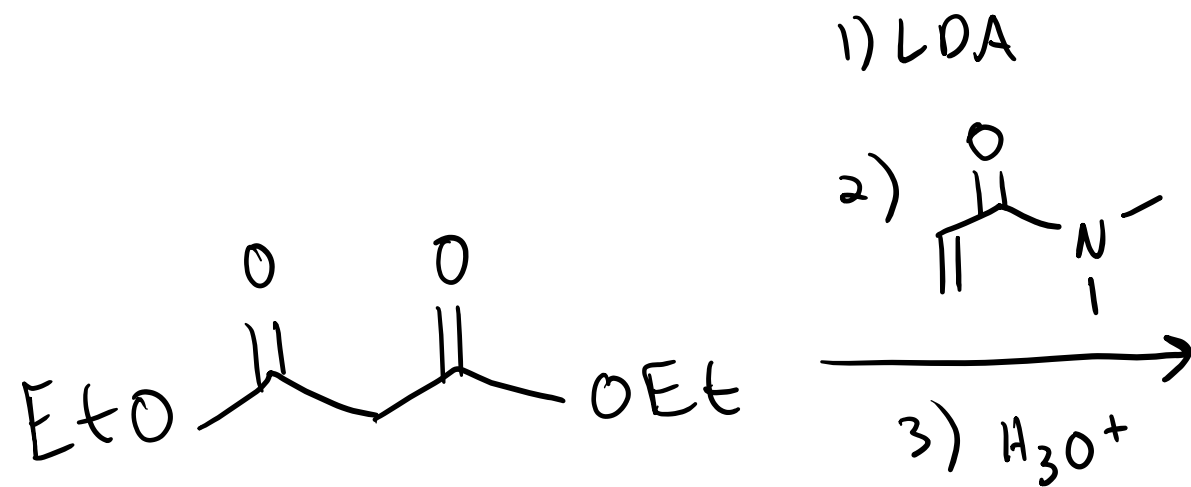


Michael Donors and Acceptors

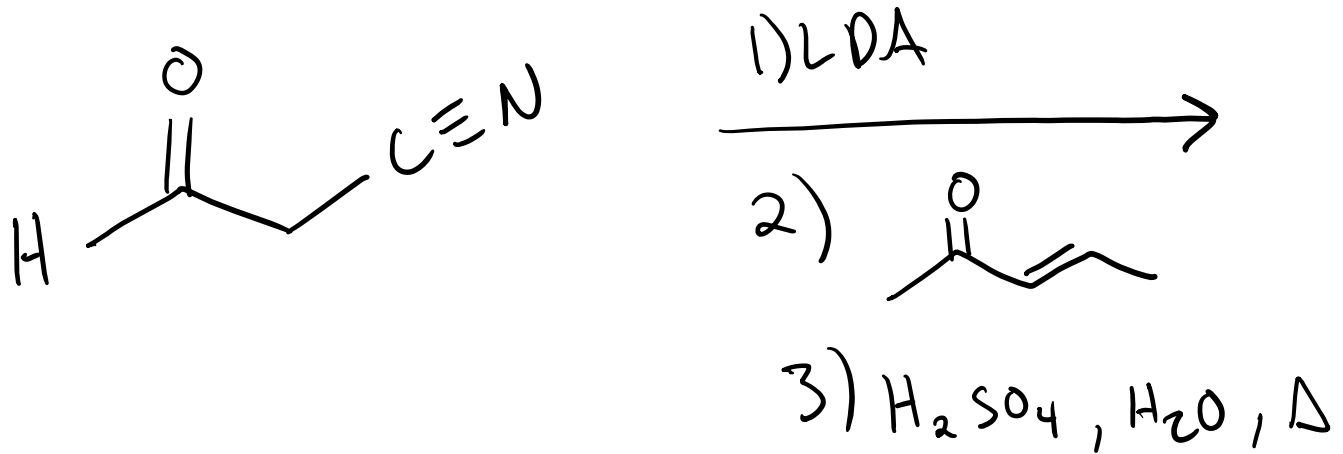
Michael Donors

Michael Acceptors

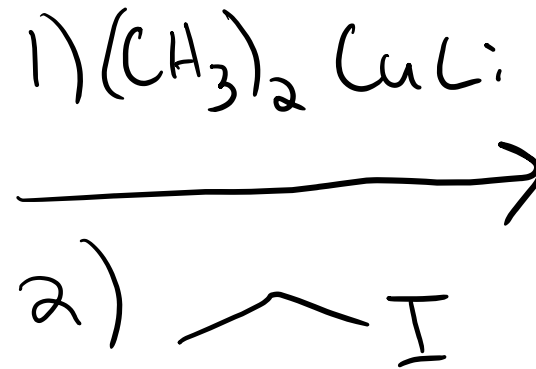
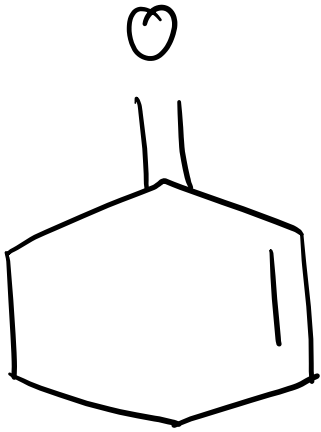
Michael Addition: Examples



Michael Addition: Examples



Michael Addition: Examples



Diels-Alder Reaction

(16.7)



Requirements of the Diene

① The diene must be



② The diene must be in the

conformation

Special Cases:

