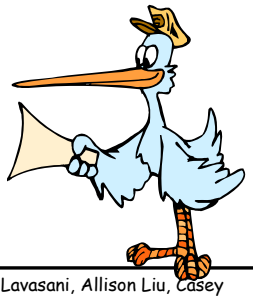
Enol and Enolate Chemistry
March 9, 2020

- Acetoacetic and Malonic ester synthesis
- The Stork enamine synthesis.



110b Teaching Fellows: Felipe Becerril, Christina Beck, Isabelle Cheng, Junha Gu, Nathalie Hong, Shy Lavasani, Allison Liu, Casey Morrison, Jerusalem Nerayo, Eric Tang, Baili Zhong, Martín Acosta Parra.

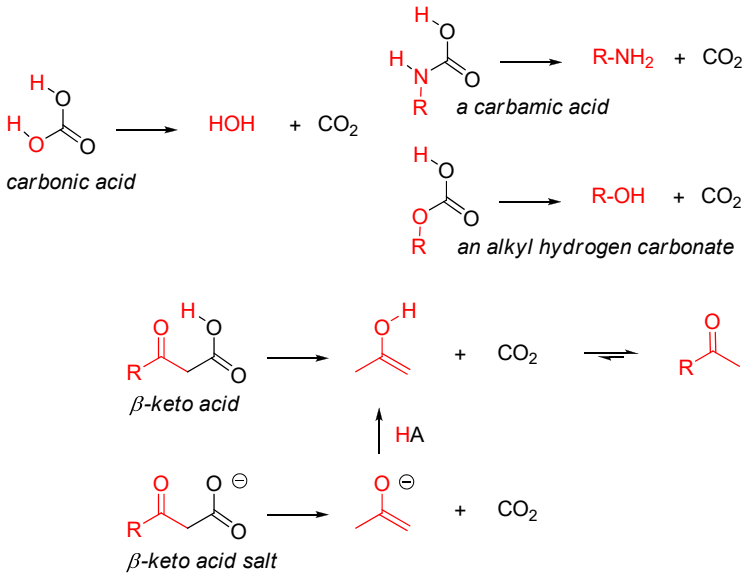
Chemistry Seminar! Professor Moh El-Naggar, USC, "topic TBA but works with microbial fuel cells and bioenergy applications." Tuesday, March 10, 11:00 AM, Gailileo Pryne Auditorium, HMC.

O'Leary office hours: T/Th 9:30-10:00 am, SN 208.

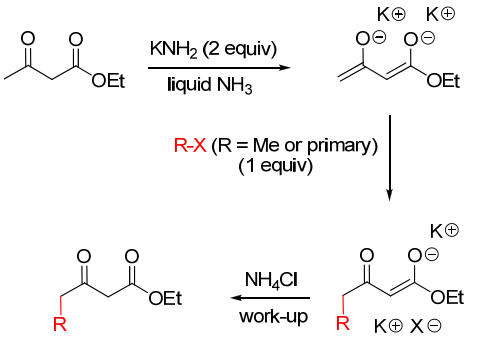
O'Leary's evening review session: Wednesdays 7:00 PM, SN Aud. **Course website**: http://pages.pomona.edu/~djo04747/110/

Suggested Problems for Exam 3. 10E/11E Chapter 18 problems: 15, 16, 20, 21, 26, 27, 29, 30, 32, 34.

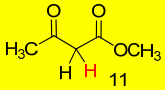
Famous Decarboxylation Reactions

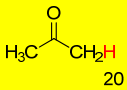


Chemistry of the Acetoacetic Ester Dianion

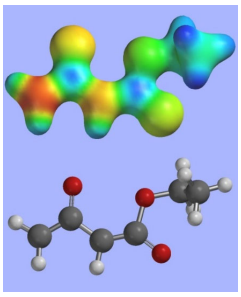


Reference pKa's:



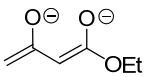


NH2H 38

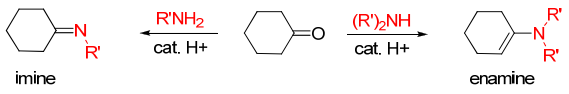


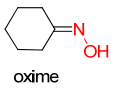
Spartan images of the dianion

most nucleophilic carbon

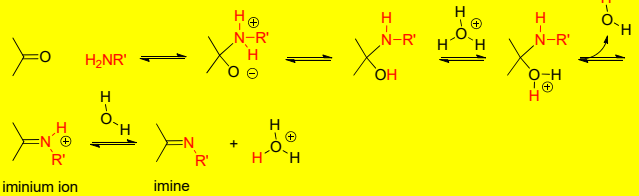


Addition of Primary and Secondary Amines to Aldehydes & Ketones: Imines & Enamines

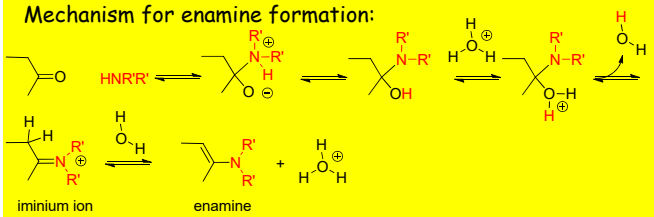




Mechanism for imine formation:

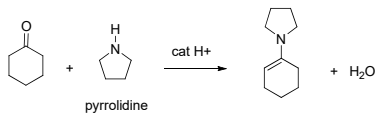


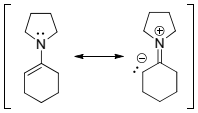
Mechanism for enamine formation:



The Stork Enamine Synthesis

Preparation of tertiary enamines:

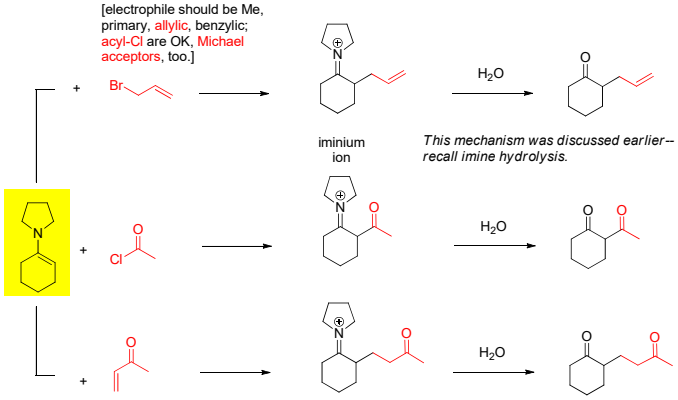




This mechanism was discussed earlier--recall imine & enamine preparations.

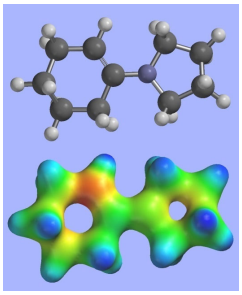
Reaction of tertiary enamines:

[electrophile should be Me, primary, allylic, benzylic; acyl-Cl are OK, Michael acceptors, too.]



This mechanism was discussed earlier--recall imine hydrolysis.

this last reaction category--the Michael reaction--is discussed in Chapter 19 of 10E.



Spartan views of an enamine