Acid/Base Review

Acidity of C-H Bonds

3/13/2023

Acid-Base Reactions

(Ch. 3)

$$NH_3 + CH_3OH_2 \stackrel{\bigoplus}{\longleftarrow} NH_4 + CH_3OH$$

Which side is favored at equilibrium?

Two ways to approach...

Qualitative:

Quantitative:

Quantifying Acid Strength

How to use pKa values (to predict an acid-base reaction)

$$NH_3 + CH_3OH_2 \stackrel{\oplus}{=} NH_4 + CH_3OH$$

Comparing Acidity: Qualitatively

1. Charge of molecule

2. Atom bound to H

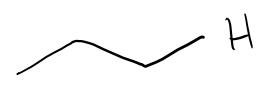
Comparing Acidity: Qualitatively

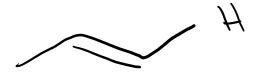
3. Resonance

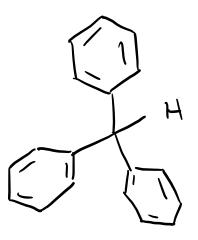
4. Induction (e<sup>-</sup> donating/withdrawing effects of nearby groups)

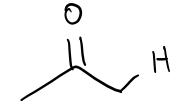
What a pKa can tell you

## Acidity of C-H bonds









Ch 21: "Alpha Carbon" Chemistry

