

# Brønsted-Lowry Acids and Bases

strength of acid related to **stability** of conjugate base

conjugate bases carry **negative** charges

stabilized by: polarizability related to size (LDF)

electronegativity

inductive effect

resonance

$\text{HI} \rightarrow \text{H}^+ + \text{I}^-$        $5p$  orbital      largest orbital

$\text{HBr} \rightarrow \text{H}^+ + \text{Br}^-$        $4p$  orbital      most stable

$\text{HCl} \rightarrow \text{H}^+ + \text{Cl}^-$        $3p$  orbital      strongest acid

$\text{HF} \rightarrow \text{H}^+ + \text{F}^-$        $2p$  orbital