

### Common Strong Acids and Bases

Strong Acids	Strong Bases
Binary Halogen Acids: HCl, HBr, HI (but not HF)	Group I-A Hydroxides: LiOH, NaOH, KOH, RbOH, CsOH
Polyatomic Oxoacids: HClO <sub>3</sub> , HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HClO <sub>4</sub>	Group II-A Hydroxides: Ca(OH) <sub>2</sub> , Sr(OH) <sub>2</sub> , Ba(OH) <sub>2</sub>

### Acid-Base Reactions That Create Gaseous Products

Ionic Reactant	Gas	Net Ionic Equation
CO <sub>3</sub> <sup>-2</sup> (aq)	CO <sub>2</sub> (g)	CO <sub>3</sub> <sup>-2</sup> (aq) + 2H <sup>+1</sup> (aq) → H <sub>2</sub> O(L) + CO <sub>2</sub> (g)
SO <sub>3</sub> <sup>-2</sup> (aq)	SO <sub>2</sub> (g)	SO <sub>3</sub> <sup>-2</sup> (aq) + 2H <sup>+1</sup> (aq) → H <sub>2</sub> O(L) + SO <sub>2</sub> (g)
S <sup>-2</sup> (aq)	H <sub>2</sub> S(g)	S <sup>-2</sup> (aq) + 2H <sup>+1</sup> (aq) → H <sub>2</sub> S(g)
NH <sub>4</sub> <sup>+1</sup> (aq)	NH <sub>3</sub> (g)	NH <sub>4</sub> <sup>+1</sup> (aq) + OH <sup>-1</sup> (aq) → H <sub>2</sub> O(L) + NH <sub>3</sub> (g)