# 6 Reactions in Aqueous Solutions

Ionic Compound

Ions in Solution

 $Na^+$   $Cl^-$ 

## Solubility Rules for Some Common Salts in Water

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double displacement reactions

AB + XY AY + XB

А

X B

Y

## 6.2 Acids and Bases

• H<sup>+</sup> • OH<sup>-</sup>

HCl, HBr, HI, HNO $_3$ , H $_2$ SO $_4$ , and HClO $_4$ 

#### 6.2.1 Dissociation of Acids

\_\_\_\_ H<sup>+</sup>

 $H_2SO4$  (aq)  $H^+$  (aq) + HSO

### 6.3 Oxidation Reduction Reactions

 $\begin{array}{cccc} 2 \text{ Na } (s) \ + \ Cl_2 \ (g) & 2 \text{ NaCl } (s) \\ \text{Na} & Cl & \\ & \text{Na}^+ & Cl^- \end{array}$ 

Na Na<sup>+</sup> +  $e^{-}$ Cl +  $e^{-}$  Cl<sup>-</sup>

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Oxidation

Reduction

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#### 6.4.2 Synthesis Reactions

#### 6.4.3 Decomposition Reactions

decomposition reactions