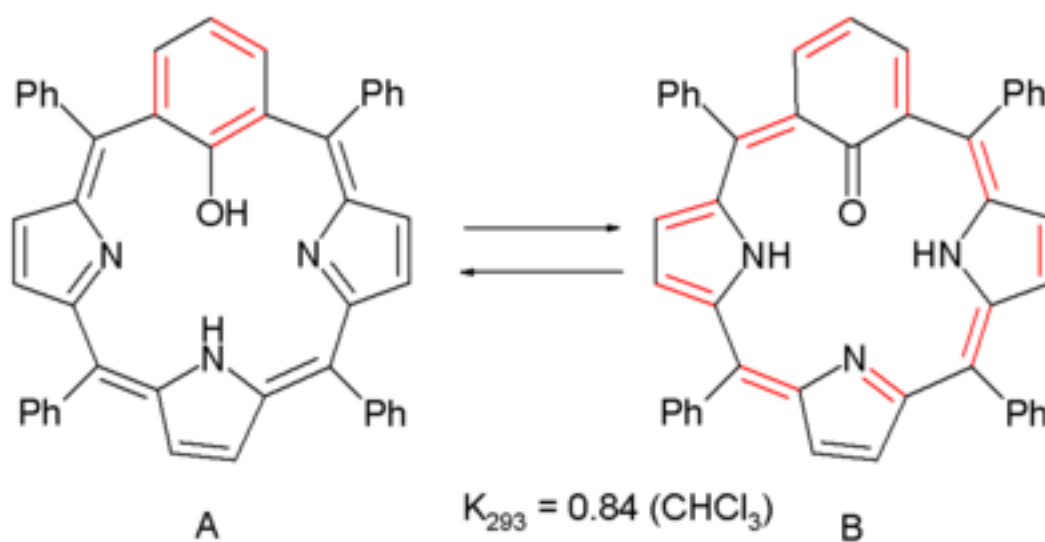


Chemical Equilibrium



Some examples

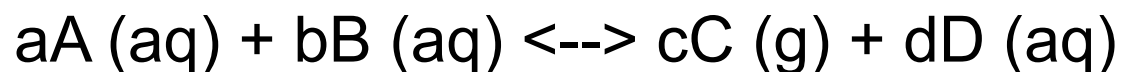
Equilibrium

equilibrium II

Gases & solutions

- Only gases and solutions are influenced by equilibrium. Think Molarity!!
- Liquid and solids can't be expressed in terms of Molarity
- Coefficients become subscripts

Chemical equilibrium applies to reactions that can occur in both directions.



$$K_c = \frac{[C]^c [D]^d}{[A]^a [B]^b}$$

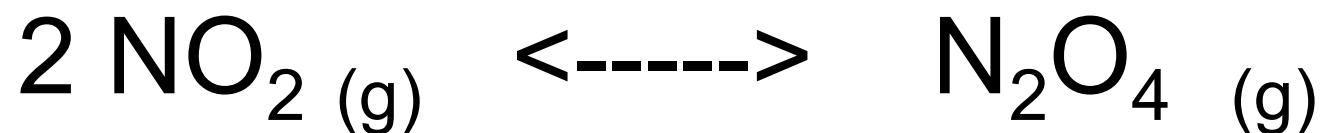
Writing equilibrium equations

Mass Action



$$\frac{[\text{CO}][\text{Cl}_2]}{[\text{COCl}_2]} = K_{\text{eq}}$$

Write the mass action
expression



$$\frac{[\text{N}_2\text{O}_4]}{[\text{NO}_2]^2} = K \text{ eq}$$

What K_{eq} means??

If K_{eq} is greater than one the products are favored

$$K_{eq} > 1$$

If K_{eq} is less than one the reactants are favored

$$K_{eq} < 1$$

Calculating equilibrium

Equilibrium review