

## Chemical Equilibrium

### I. Dynamic equilibrium

### II. The equilibrium constant

- equilibrium constant expression
- relationship between  $K_c$  and rate constants
- $K_p = K_c(RT)^{\Delta n}$
- relationship of  $K_c$  to the balanced equation

### III. Significance of the magnitude of $K$

- examples
- predicting direction of reaction – reaction quotient,  $Q$
- calculating equilibrium concentrations / pressures
- systems with small equilibrium constants

### IV. Altering equilibrium conditions – Le Chatelier's Principle

- changes in concentration
- changes in volume and pressure
- changes in temperature
- addition of a catalyst