

# Lecture 6

## Spectrochemical Methods

### Classification

Methods	Quantity measured	Examples
Emission		
Absorption		
Luminescence		
Scattering		
Indirect		

## **Emission methods**

### **Boltzmann distribution**

$n$  is the number density of atoms or molecules per  $\text{cm}^3$  (also see supp. 4)

$$k = 1.38 \times 10^{-23} \text{ J/K} = 8.62 \times 10^{-5} \text{ eV/K}$$

$T$  = temperature, K

$g$  = statistical weight, 1, 2, 3, ...

### **Partition function**

## **Absorption methods**

### **Beer's law**

Absorbance

Transmittance

Absorptivity

## **Luminescence spectroscopy**