Chapter 7

Quantum Theory and the Electronic Structure of Atoms

Wave properties and equations

(λ, υ, E)

$c = \lambda \times \nu$

$E = hc/\lambda$

Calculate the Energy of the electron in principal energy level

$$E_n = -R_H\left(\frac{1}{n^2}\right)$$

Calculate the Energy emitted or absorbed

$$\Delta E = R_H\left[\frac{1}{n^2_i} - \frac{1}{n^2_f}\right]$$

Quantum Numbers

(n, l, m_l, m_s)

Electron Configuration:

Aufbau Principle

Hund's Rule

Pauli Exclusion Principal