Atomic Structure

Chronological Advancement

As scientists began to study the relationship between several physical phenomenon such as electricity and magnetism they began to develop different models about the atomic structure

1803 John Dalton : Proposed an "atomic theory" with spherical solid atoms based upon measurable properties of mass.

1832 Michael Faraday: Studied the effect of electricity on matter. developed laws of electrolysis

1869 Mendeleev : properties of elements were periodic functions of their atomic weights

1874 G.J. Stoney: proposed that electricity was made of discrete negative particles, he called them "electrons"

1895 Roentgen: CRT experiments, "X-ray"

1897 J.J. Thompson: first determine e/m. Studied "canal ray" and found they were associated with the H^+.

1909 R.A. Millikan: Oil drop experiment, determined charge ($e = 1.602 \times 10^{-19}$ coulomb) and the mass ($m = 9.11 \times 10^{-28}$ gm) of an electron

1911 Rutherford: Using α-particle scattering, established that the nucleus was very dense, very small and positively charged. He also assumed that the electrons were located outside the nucleus

1922 Bohr: In his atomic model atoms are built up of successive orbital shells of electrons.

1923 de Broglie: Wave-particle duality

1930: Schrödinger: Electronic path is not circular rather elliptical.

J.J Thomson- Atoms are uniform spheres of positively charged matter in which the electrons are embedded in such a way that the electrostatic repulsion among the electrons and electrostatic attraction between