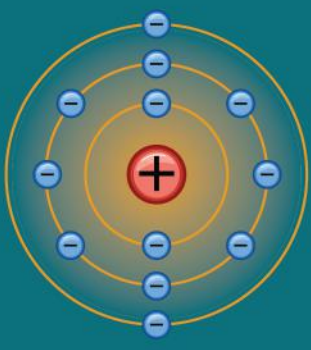


# ATOMIC MODELS

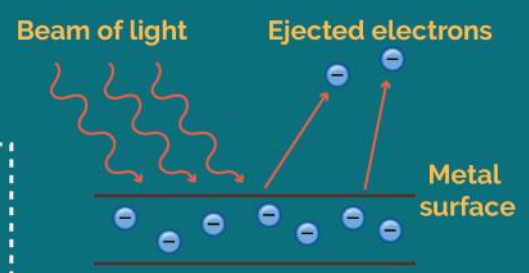
## Bohr's Atomic Model

A small positively charged nucleus is surrounded by revolving negatively charged electrons in fixed orbits



## Development leading to Bohr's Model of Atom

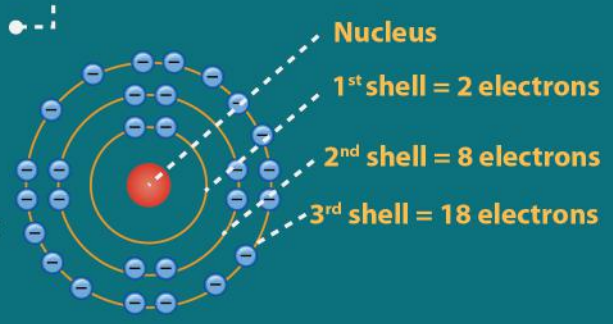
- Dual nature of electromagnetic radiation
- Black Body Radiation
- Photoelectric Effect



## Planck's Quantum Theory

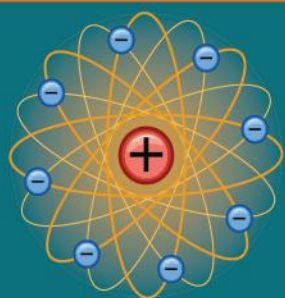
## Bohr Bury Scheme

Distribution of electrons in orbits is called electronic configuration



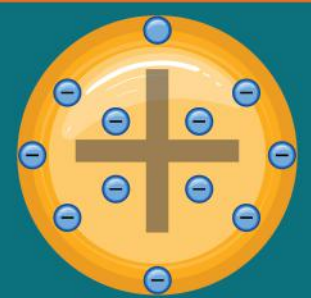
## Rutherford's Atomic Model

An atom is composed of empty space mostly with electrons orbiting in a set, predictable paths around fixed positively charged nucleus

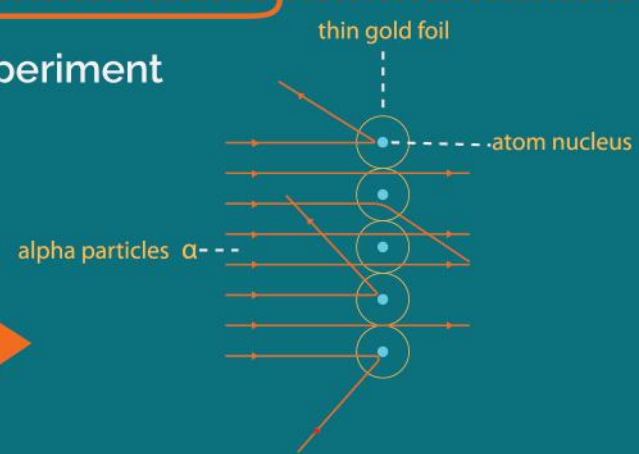
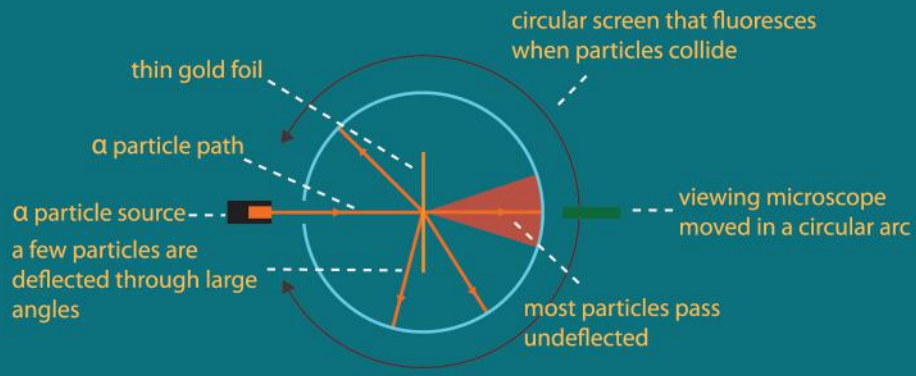


## Thomson's Atomic Model

An atom resembles a sphere of positive charge with electrons present inside the sphere

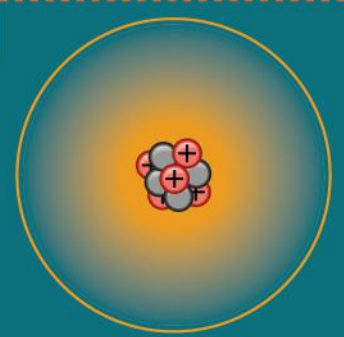


## Alpha particle scattering experiment



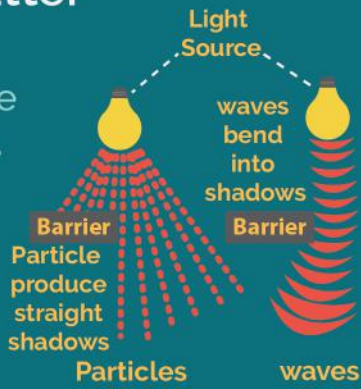
## Quantum Mechanical Model of Atom

Based on quantum theory, which says matter also has properties associated with waves



## Dual Behaviour of Matter

Radiation show dual behaviour i.e. both wave-like and particle-like properties. This means that just like photons, electrons should also have a wavelength as well as momentum



## Heisenberg Uncertainty Principle

It is impossible to determine exact position and momentum simultaneously of an electron

