# Atoms Structure



Niels Bohr proposed that the electrons in an atom circle the nucleus in different obits, similar to the way planets orbit the sun in our solar system.

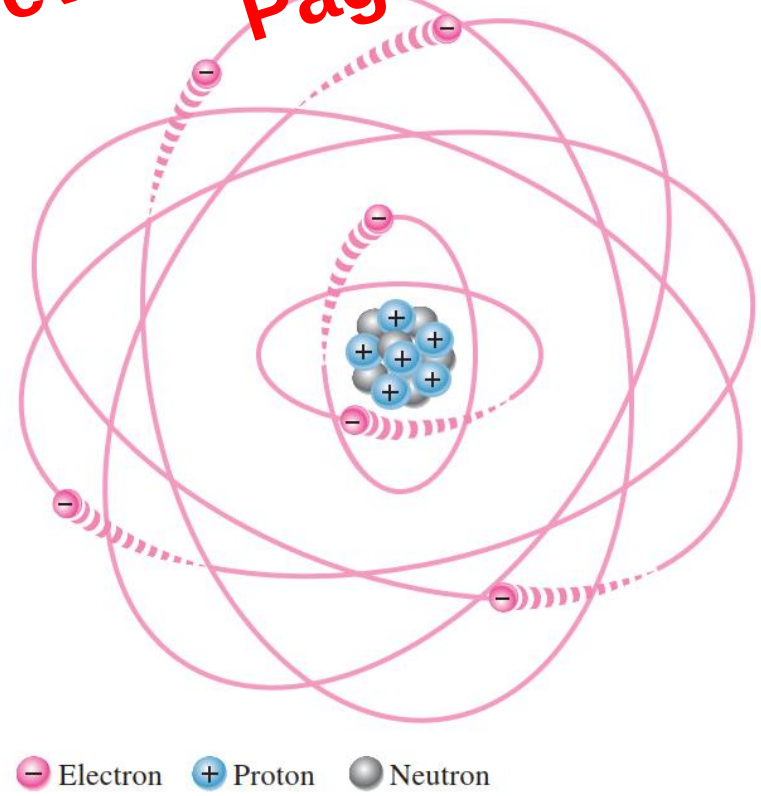
The **Bohr model** is often referred to as the planetary model.

Another view of the atom called the **quantum model** is considered a more accurate representation, but it is difficult to visualize.

**For most practical purposes in electronics, the Bohr model suffices and is commonly used because it is easy to visualize.**

# The Bohr Model






- According to the classical Bohr model, atoms have a planetary type of structure that consists of a central nucleus surrounded by orbiting electrons.
- The nucleus consists of positively charged particles called protons and uncharged particles called neutrons. The basic particles of negative charge are called electrons.
- Each type of atom has a certain number of electrons and protons that distinguishes it from the atoms of all other elements.

# Ionization



- When an atom absorbs energy, the valence electrons can easily jump to higher energy shells.
- If a valence electron acquires a sufficient amount of energy, called ionization energy, it can actually escape from the outer shell and the atom's influence.
- The departure of a valence electron leaves a previously neutral atom with an excess of positive charge (more protons than electrons).
- The process of losing a valence electron is known as ionization, and the resulting positively charged atom is called a positive ion.