

## Chapter 08

# Chemical

# Bonding

### Introduction:

Matter around us exist in different forms like elements, compounds etc. All this different types of matter are composed of 115 elements. Out of these, few elements exist as individual atom and few exist as molecules.

- In the molecules, few are composed of same type of atoms, few other molecules are composed of different types of elements.
- Earlier scientists have given the idea, there always exist an electrostatic force of attraction between the atoms, which binds the atoms together.
- In every atom, at centre we have nucleus and around the nucleus electrons will be revolving in circular orbits.
- When such two atoms comes closer, there will be two types of forces working between the two atoms.
  - (i) The attractive forces between, nucleus of one atom and electrons of another atom.
  - (ii) The repulsive forces between the electrons of two atoms.
- If attractive forces dominate repulsive forces, the two atoms combine together and exist as a molecule.
- If repulsive forces dominate, the atoms do not combine.
- Scientists regarded the bond between the atoms as purely electrostatic force of attraction, which arises due to attractions between the bonding atoms.

- The approach of electronic force of attraction is not able to answer clearly. Hence, later other theories has been proposed.
- The first approach and explanations towards bonding of atoms is given by Lewis and also known as Kossel – Lewis approach.

