

Chapter 05

Periodic Classification of Elements

Modern Periodic Table:

Henry Moseley showed that atomic number is a more fundamental property than, its atomic mass. He has modified Mendeleev's periodic law and proposed modern periodic law. It states "Physical and Chemical properties of elements are periodic functions of their atomic number".

Based on above periodic table modern periodic table is prepared.

- Modern periodic table contains 18 groups and 7 periods.
- The elements present in same vertical column (group) horizontal rows periods possess same properties.
- All elements places in same group contains same number of valence electrons.
- All elements places in same period contains same number of valence shells.
- Each period starts with filling of electrons into a new shell.

Ex. In 1st period 'K' shell is filled.

L - Shell starts getting filled in 2nd period.

M - Shell starts getting filled in 3rd period so on.

- Lanthanides and Actinides were separately placed at the bottom of the periodic table.
- Metals, non - metals and metalloids are placed separately.

