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Transition Elements
Session 1-2

Migma Tshering

Learning Objectives

- **Electronic Configuration Using $2n^2$ Rule**
- **Electronic Configuration Using spdf Notation**
  - *Subshell (spdf) & its Electron Holding Capacity*
  - *Aufbau's Principle*

Electronic Configuration Using $2n^2$ Rule

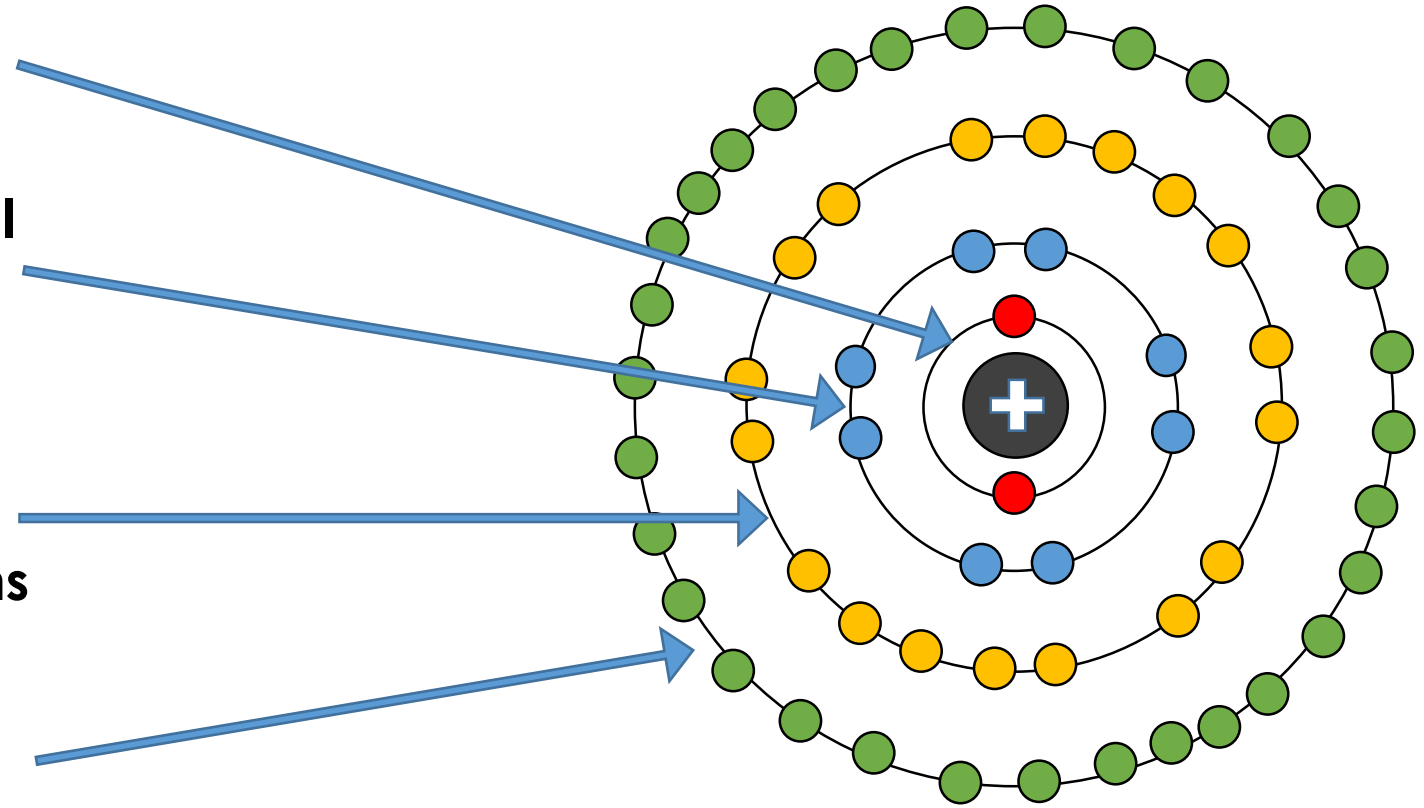
Electronic Configuration Using $2n^2$ Rule

- If n=1, First Shell
- $2 \times 1^2 = 2$ electrons

- If n=2, Second Shell
- $2 \times 2^2 = 8$ electrons

- If n=3, Third Shell
- $2 \times 3^2 = 18$ electrons

- If n=4, Fourth Shell
- $2 \times 4^2 = 32$ electrons



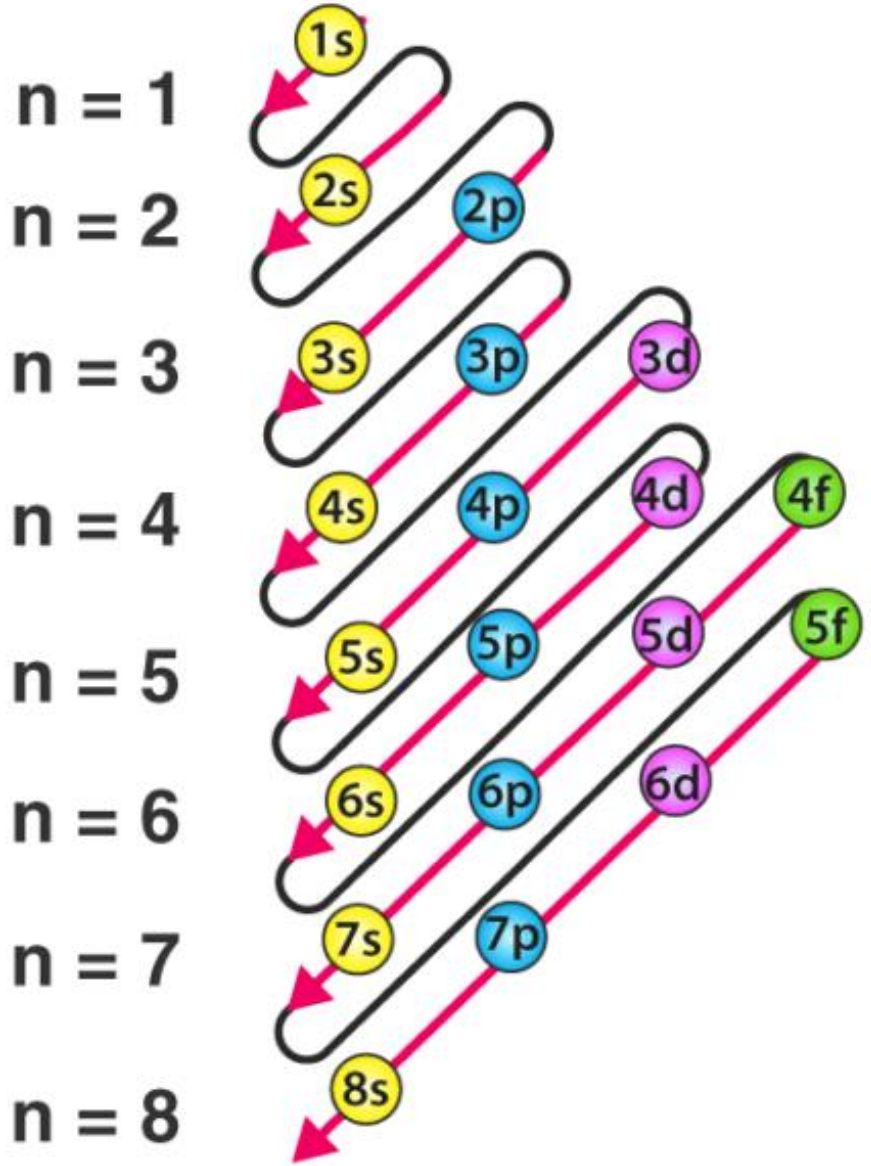
Electronic Configuration Using spdf Notation

Subshell (spdf) & its Electron Holding Capacity

➢ ***Shells within the shell:*** **Subshell (Orbital)**

- ✓ **Electron holding capacity:**
  - ✓ **s-subshell: 2 electrons**
  - ✓ **p-subshell: 6 electrons**
  - ✓ **d-subshell: 10 electrons**
  - ✓ **f-subshell: 14 electrons**

Aufbau's Principle



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