**Electron Configuration**

* **Easier and more concise method of representing the energy of the electrons in an atom/ion**
* **Depicts the electrons of an atom/ion by type of electron in increasing energy levels**
* **Example – oxygen**

**1s22s22p4**

**Shorthand Electron Configuration**

* **Represent the core electrons by the symbol of the last Noble gas in square brackets then continue with the outer (valence) electrons**
* **Example – oxygen**

**[He]2s2p4**

**Ionic Charges of Multivalent Metals**

* **Electron’s in the highest main energy levels are lost first**
* **Example – lead**

**[Xe] 6s2 4f14 5d10 6p2**

**The 2+ ion will lose the 6p2 electrons**

**The 4+ ion will lose both 6p2 and the 6s2 electrons**

**Anomalous Electron Configurations**

* **The predicted configurations of some atoms are not the same as the results found experimentally**
* **The stability of the half-full shell is greater than the only partially-filled shell**
* **Example – chromium**

**Predicted –**

 **[Ar] 4s2 3d4 (subshell s – full, d – partially full)**

**Actual –**

**[Ar] 4s1 3d5 (subshells s & d – both half full)**