

If we try to write down the electronic configuration of potassium (Kalium) (K, $Z=19$) according to above trend, the last electron must go to the 3d subshell, i.e. $K19 = [Ne] 3s^2 3p^6 3d^1$ or $[Ar] 3d^1$ but this electron is said to enter the 4s-subshell according to lower(n+l) rule of Aufbau principle

Sc ($Z = 21$) $[Ar] 4s^2 3d^1$

Ti ($Z = 22$) $[Ar] 4s^2 3d^2$

V ($Z = 23$) $[Ar] 4s^2 3d^3$

Cr ($Z = 24$) $[Ar] 4s^1 3d^5$

Mn ($Z = 25$) $[Ar] 4s^2 3d^5$

Fe ($Z = 26$) $[Ar] 4s^2 3d^6$

Co ($Z = 27$) $[Ar] 4s^2 3d^7$

Ni ($Z = 28$) $[Ar] 4s^2 3d^8$

Cu ($Z = 29$) $[Ar] 4s^2 3d^{10}$

Zn ($Z = 30$) $[Ar] 4s^2 3d^{10}$

The next six elements, that is, Ga³¹ to Kr³⁶ belong to p-block and the last electron enters the 4p – subshell of the atoms of these elements. The electronic configurations of these elements are as follows:

Gallium Ga ($Z = 31$) $[Ar] 4s^2 3d^{10} 4p^1$

Germanium Ge ($Z = 32$) $[Ar] 4s^2 3d^{10} 4p^2$

Arsenic As ($Z = 33$) $[Ar] 4s^2 3d^{10} 4p^3$

Selenium Se ($Z = 34$) $[Ar] 4s^2 3d^{10} 4p^4$

Bromine Br ($Z = 35$) $[Ar] 4s^2 3d^{10} 4p^5$

Krypton Kr ($Z = 36$) $[Ar] 4s^2 3d^{10} 4p^6$ or $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6$

In next two elements of 5th period, the last electron goes to 5s- subshell. (s-block):

Rubidium Rb ($Z = 37$) $[Kr] 5s^1$

Strontium Sr ($Z = 38$) $[Kr] 5s^2$