

naciens

 $2(n^2) \rightarrow n = principal #$

1, 3, 8, 18

chance in finding an

electron

Noble gas l condenseq configuration

- Get the nearest noble gas (lower) - If it lost/gained electrons and is a noble gas go even lower (write d^6)

Ca > 15252204352301452 S [AI] 452

voilence electronie configuration

Write the outer most principal quantum shell 4s goes out b4 3d

1N 4 [He] 2522p3 -> 2522p3

Isoptope:

Atoms of the same element with the same number of protons but a different number of neutrons

Aufbau Principle

: Energy levels

l=2 l=3

Orbital box/ schematic diagram

1s' -> subshell

1) Aufbau principal

- In ground state, electrons fill the lower energy orbitals before the higher

15, 25, 20... (does not apply for excited state)

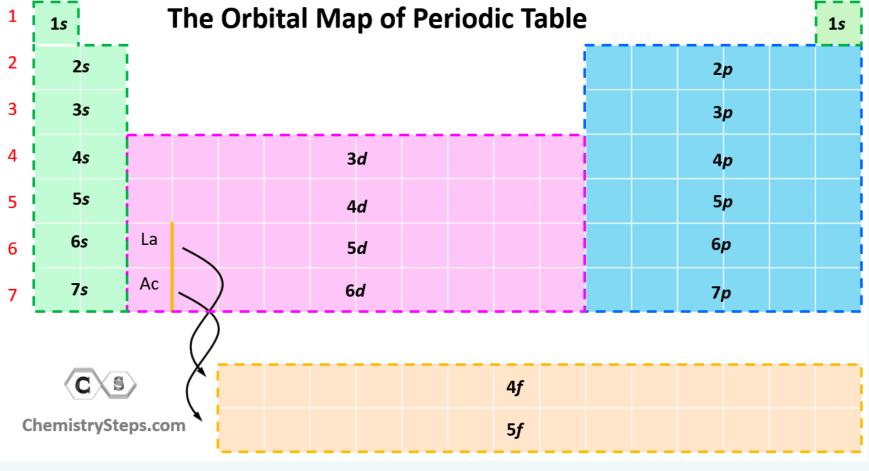
4s leaves before 3d when losing electrons

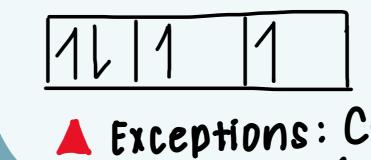
2) Pauli's Exclusion Principal

- All orbitals have max 2 electrons (with opposite spins)

3) Hund's rule

- For orbitals in the same energy level, in ground state, each degenerate orbital has to be filled with 1 electron before any can take the 2nd





y approx. av distance of orbitals from

nucleus

"3 principal quantum shells filled" => 1s2s + any of 3s,3p, 3d,3f

Element period

number indicates number indicates to principal Rtm shells

Exceptions: Cu, Cr (45')