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Periodic Properties: A Logical Chain

"Nucleus – Outer Electrons" INTERACTION

is determined by the values of

n (last level)
Z*

in the case of

n ↑ (high)
Z* ↓ (low)

which means that

the electrons are <u>LOOSELY</u> bound:
- farther to the nucleus
- the electrons "feel" less protons

that is, **<u>WEAKER</u>** nucleus-electron interaction

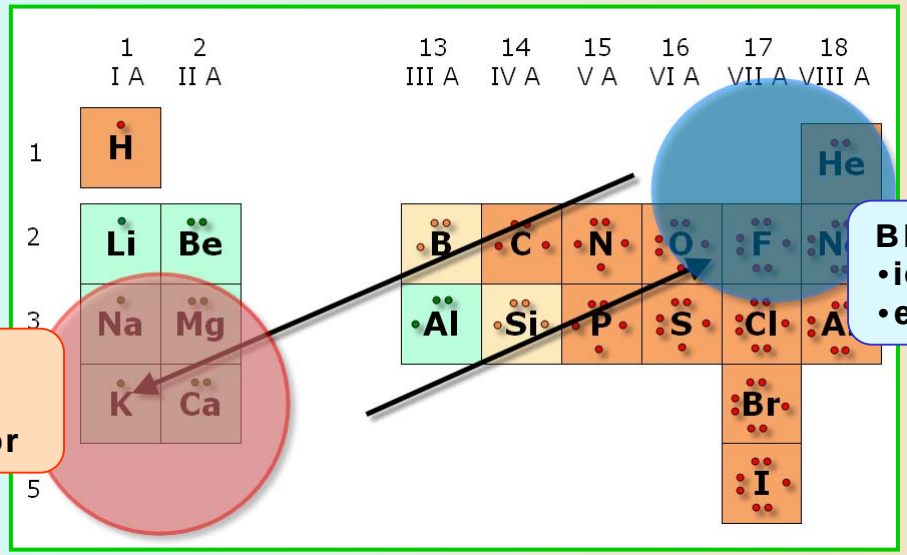
BIGGER
- atomic size
- metallic behavior

in the case of

n ↓ (low)
Z* ↑ (high)

which means that

the electrons are <u>TIGHTLY</u> bound:
- closer to the nucleus
- the electrons "feel" more protons

that is, **<u>STRONGER</u>** nucleus-electron interaction

BIGGER
- ionization energy
- electronegativity