

E · l · e · c · t · r · o · n · s

Quantum Theory - Electron Configurations

Notation:

n is Q# → n l $\#$

l is sublevel
(s, p, d, or f)

For an Atom:

- ▷ list of occupied sublevels
- ▷ shows # of electrons in each sublevel

number of electrons
in each sublevel.

* unpaired go first and identical spin.

Hunds Rule:

Lowest energy arrangement of electrons
is an unfilled sublevel is the one
that maximizes the # of electrons with
identical spin.

Types of Electrons

CORE

Tightly bound, inner e^s
Filled lower E levels
Unaffected by chem react.

VALENCE

Outermost e^s
Involved in chem bonding

The noble gas core electron configuration

Preview from Notesale.co.uk
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for Na is $[\text{Ne}] 3s^1$

CORE → $[\text{Ne}]$ VALENCE → $3s^1$

Valence Electrons: For main group elements: Outer most s electrons
and all electrons in partially filled sublevels.

For main group elements: pers & per p e^s

period # = n