Pauli exclusion principle

Orbital can hold 2 electrons

Spin in opposite directions (up and down)

Atoms 99% emptiness.

Energy of atoms

Shell 1 lowest, shell 4 highest energy.

Within same shell, s lowest, d highest

Filling up orbitals

Aufbau 'building-up' principal

Low-energy orbitals become filled with e- before high-energy orbitals.

Electron configurations

An atom is most stable if its e- have the lowest energy possible – locate themselves as doe to nucleus as they can.

Hund's rule:

Degene ate

Degenerate orbitals are partially filled before any orbital is completely filled.

Pauli exclusion principle:

An orbital contains no more than two electrons.

Moving between orbitals

Electrons only possess specific energies and occupy defined orbitals, but not restricted to always stay in a particular orbital.

Low energy given energy boost to vacant higher-energy orbitals.