



Cycle 5 Chemistry 1 Lesson 4

Electron Configuration using the Aufbau Principal

Notes: Aufbau Principal
Abbreviating Electron Configurations

Classwork: Electron Configuration Worksheet

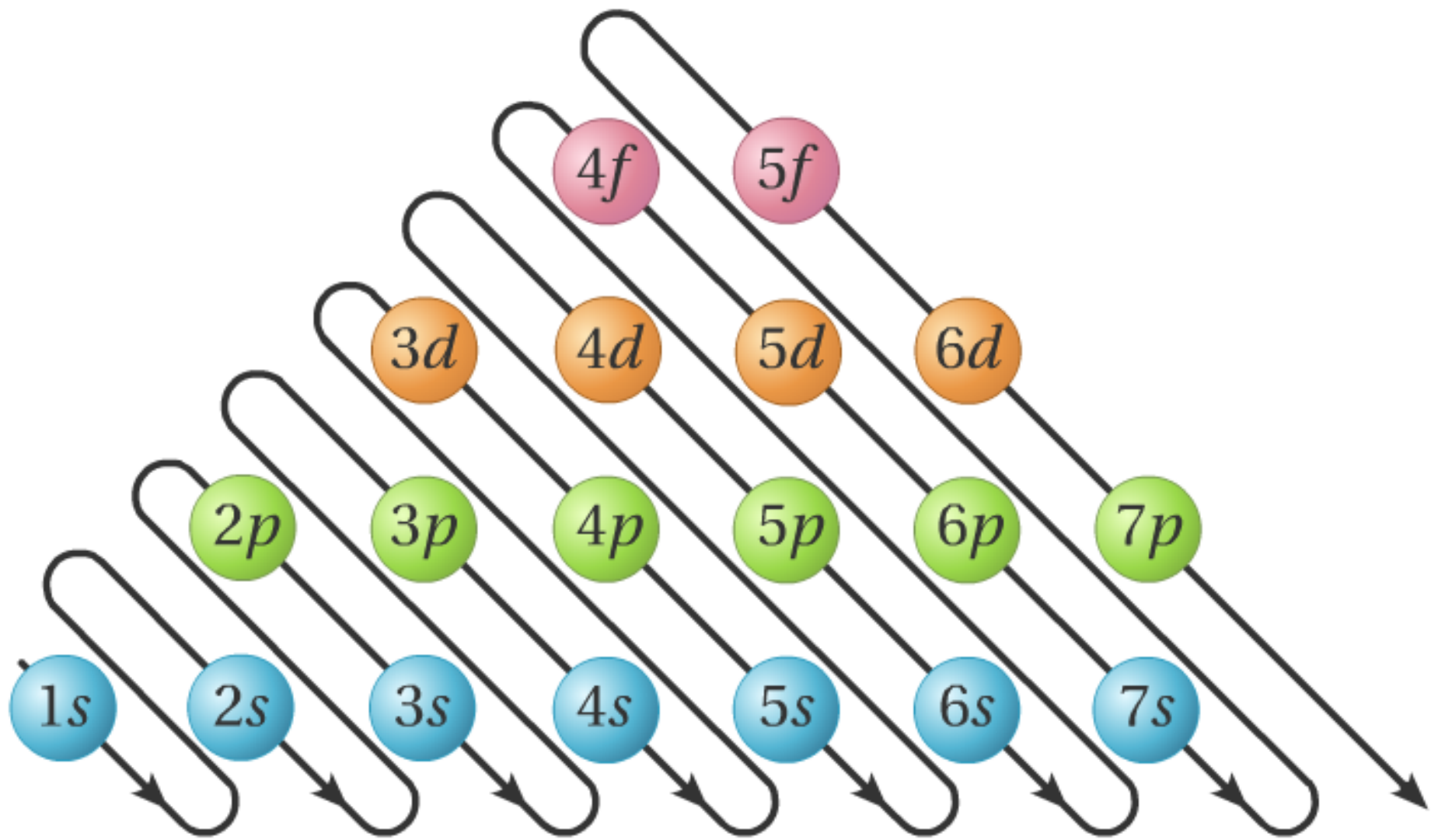


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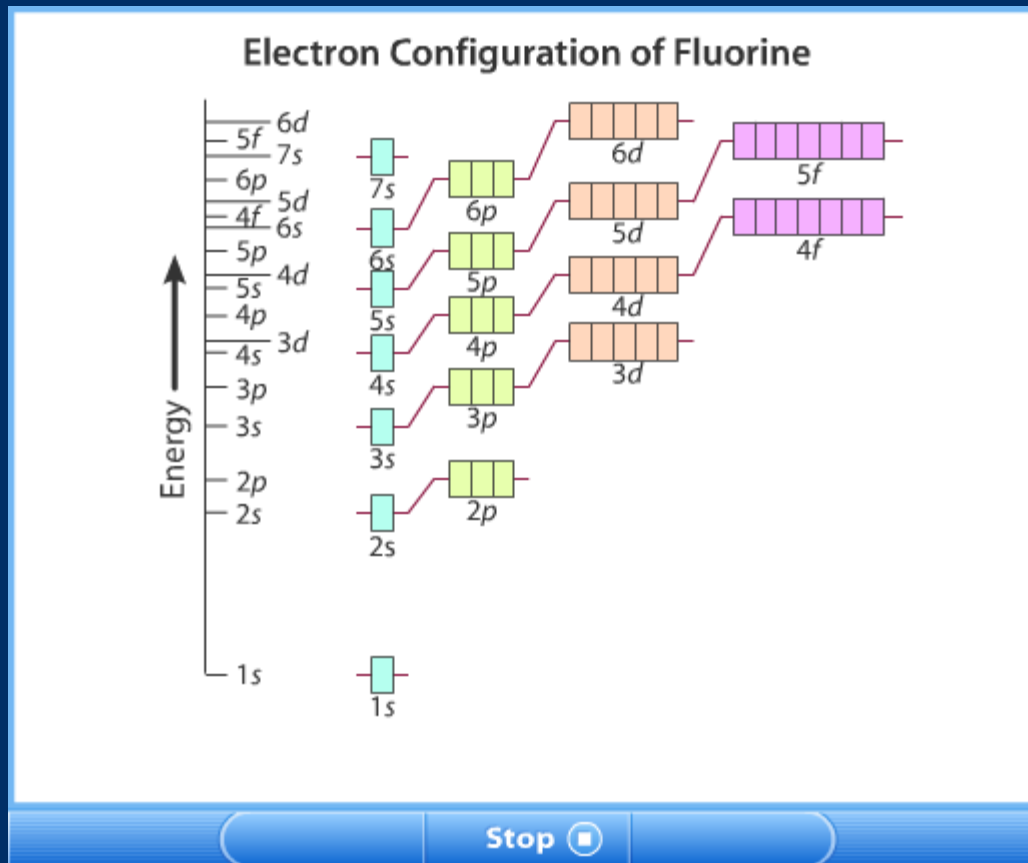


Aufbau Order: 1s, 2s, 2p, 3s, 3p, 4s, 3d, 4p, 5s, 4d ...
Take note of this diagram





Aufbau Principle



End
Of
Slide



Shorthand Notation for Electron Configurations

- To save space, one can write an electron configuration by using the configuration of the last noble gas as a 'core'.

- Example: Sulfur's full electron configuration is



- The neon atom's configuration is $1s^2 2s^2 2p^6$, so the abbreviated electron configuration of sulfur is



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Quantum Atomic Model

- According to the current model of an atom, electrons are found in **orbitals**.
- An **orbital** is a probability wave which determines where an electron is likely to be found in an atom. We can just think of an orbital as a thing that holds 2 electrons. (Remember Lewis structures?)
- Shells are made of Subshells, which are made of Orbitals. An S subshell has one s orbital. A P subshell has 3 p orbitals. A D subshell has 5 d orbitals. And so on.



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