

Chapter 4 Atomic Structure

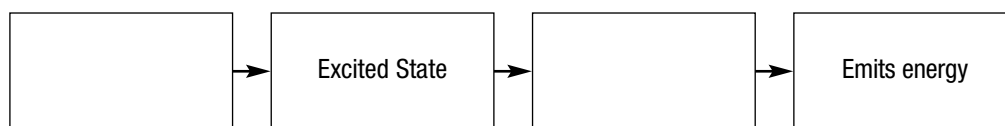
Section 4.3 Modern Atomic Theory

(pages 113–118)

This section focuses on the arrangement and behavior of electrons in atoms.

Reading Strategy (page 113)

Sequencing After you read, complete the description in the flow chart below of how the gain or loss of energy affects electrons in atoms. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.



Bohr's Model of the Atom (pages 113–116)

- Circle the letter of the sentence that tells how Bohr's model of the atom differed from Rutherford's model.
 - Bohr's model focused on the nucleus.
 - Bohr's model focused on the protons.
 - Bohr's model focused on the neutrons.
 - Bohr's model focused on the electrons.
- Is the following sentence true or false? In Bohr's model of the atom, electrons have a constant speed and move in fixed orbits around the nucleus. _____
- What can happen to an electron in an atom when the atom gains or loses energy? _____

- What evidence do scientists have that electrons can move from one energy level to another? _____

- Is the following sentence true or false? When electrons release energy, some of the energy may be released as visible light.

Electron Cloud Model (page 116)

- Is the following sentence true or false? Bohr's model was correct in assigning energy levels to electrons. _____
- When trying to predict the locations and motions of electrons in atoms, scientists must work with _____.
- What is an electron cloud? _____
