



Introductory Chemistry: An Atoms First Approach, 2nd edition

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New to This Edition:

Chapter 1 New graphics were added to illustrate the use of atomic number and mass number; and to elucidate the concept of average atomic mass. The importance of different isotopes is now illustrated with an environmental example.

Chapter 2 New graphics illustrate the process of determining and writing electron configurations, and new arrows and highlights in the text make it easier for students to understand the process. Improvements to Figure 2.1 clarify the relationship between frequency and wavelength.

Chapter 3 Changes to Figure 3.6 further clarify the process by which sodium and chlorine react to form sodium chloride.

Chapter 4 A new section of text and a new graphic help students understand how Greek prefixes are used to tailor units to the magnitude of a measurement; and a new set of Sample and Practice Problems gives them the opportunity to practice. The coverage of significant figures has been augmented with new highlighting and arrows to clarify the concept—and the unit-conversion section has been expanded

to highlight the conversion of units that are raised to powers. A new Profiles in Science box features the work of astronomer Henrietta Swan Leavitt.

Chapter 5 New Sample and Practice Problems help students visualize the ratios of combination expressed by chemical formulas, and clarify the process of calculating formula masses. A new Profiles in Science box features the work of physicist and science educator Derek Muller.

Chapter 6 Arrows and highlighting have been added to the text to further clarify the process of drawing Lewis structures, and new text has been added to the table of electron-group geometries and molecular shapes.

Chapter 8 Sample Problem 8.1 has been expanded to highlight conversion factors that are derived from the different units of pressure, and how they are used to convert between the units. A new Profiles in Science box features the work of inventor Amanda Jones.

Chapter 9 Section 9.1 has been redesigned to illustrate the concepts of solubility, saturation, and supersaturation. A new sequence of photos illustrates the formation and resolution of a supersaturated solution.

Chapter 10 New highlighting and arrows help to clarify the processes of writing molecular, complete ionic, and net ionic equations. A new Student Note helps students understand what is actually oxidized and reduced in a redox reaction.

Chapter 11 New figures along with Sample and Practice Problems, including new molecular art, have been added to enhance the introduction to limiting reactants and percent yield.

Chapter 12 New graphics have been added to clarify the steps in calculations involving molarity; and a new Thinking Outside the Box feature has been added to illustrate the use of millimoles to simplify calculations.

Chapter 13 A new color scheme has been used in the molecular art that introduces equilibrium in order to enhance students' conceptual understanding.

Chapter 14 A new Profiles in Science box features the work of chemist Percy Julian.

Chapter 15 A new Profiles in Science box features the work of chemist Marie Maynard Daly.

Chapter 16 A new Profiles in Science box features the work of physicist Lise Meitner.