



# Introductory Chemistry: A Foundation

**Ninth Edition, ©2019**  
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Zumdahl and DeCoste's best-selling *INTRODUCTORY CHEMISTRY: A FOUNDATION*, combines enhanced problem-solving structure with substantial pedagogy to enable students to become strong, independent problem solvers. Capturing student interest through early coverage of chemical reactions, accessible explanations and visualizations, and an emphasis on everyday applications, the authors explain chemical concepts starting with the basics and conclude by encouraging students to test their own understanding of the solution. "Critical Thinking" questions useful for generating class discussion emphasize the importance of conceptual learning. OWLv2 provides a robust learning platform specially designed for Chemistry courses with an interactive eBook, adaptive study and homework solutions, and powerful gradebook and analytics to keep students on the path to mastery and to inform teach instruction.

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## What's New in this Edition

- A modified and updated full-color art program now better serves visual learners. In addition, the art has been reconfigured for better clarity, glassware illustrations have been updated, and the orbital art has been redesigned. Many new photos provide a contemporary look and increase the book's relevance.
- Significant revisions and improvements to the end-of-chapter questions.
- The treatment of stoichiometry now includes "BCA" (Before-Change-After) tables to give students another method to conceptually understand the role coefficients play in a balanced chemical reaction. Students are shown three methods to select a limiting reactant: comparing the amounts of reactant present, calculating the amounts of products that can be formed by complete consumption of each reactant, and using a BCA table. By thinking about a problem from various perspectives, students are encouraged to think about the fundamental conceptual aspects.
- New Adaptive Learning Activities available online in OWLv2 are designed to deliver continuous, personalized support in manageable chunks throughout the learning process.

## Technology CENGAGE | OWLv2

Developed by teaching chemists, OWLv2 is the world's most widely used online chemistry solution. OWLv2 changes repeated problems—the chemicals, numbers and wording of questions—to ensure concept mastery and improve problem-solving skills. Tutorials, interactive simulations, visualization exercises, an interactive eBook, and more address different learning styles.