

# Organic Chemistry

SEVENTH EDITION

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SANTA BARBARA

PEARSON

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New material on how to draw Lewis structures and how to predict bond angles and the orbitals used in bonding.

New chapter on Acid/Base Chemistry reinforces fundamental concepts.

New tutorial on Acid/Base Chemistry provides students with opportunities to self assess and develop foundational skills needed for future topics in organic chemistry.

Enhanced by **MasteringChemistry**<sup>®</sup>

- Acids and Bases: Equilibrium Basics
- Acids and Bases: Factors Influencing Acid Strength
- Acids and Bases: pH Influence on Acid and Base Structure

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Enhanced by **MasteringChemistry**®

- Using Molecular Models: Basics of Model Building
- Using Molecular Models: Interpret Chiral Models
- Using Molecular Models: Interpret Cyclic Models

The coverage of stereoisomers now precedes the coverage of the reactions of alkenes.

Two new tutorials reinforce student understanding and visualization of structure.

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- Interconverting Structural Representations: Interpreting Fischer Projections
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Introduces a new feature, "Organizing What We Know," which highlights how all organic compounds can be divided into families and all members of a family react in the *same way*. Furthermore, each family can be put into one of four groups and all the families in a group react in *similar ways*.

New tutorial gives students practice drawing curved arrows.

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- An Exercise in Drawing Curved Arrows: Basics of Pushing Electrons
- An Exercise in Drawing Curved Arrows: Predicting Electron Movement
- An Exercise in Drawing Curved Arrows: Interpreting Electron Movement

Alkoxymercuration was removed since it is now rarely used because of toxicity concerns. Ozonolysis has been added as using 9-BBN for hydroboration and MCPBA for epoxidation.

Discussion of reactivity has been reorganized and clarified. The mechanism for keto-enol interconversion has been added.

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Rewritten to incorporate the new finding that secondary alkyl halides do not undergo  $S_N1$  reactions.

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- Drawing Resonance Contributors: Moving  $\pi$  Electrons
- Drawing Resonance Contributors: Predicting Contributor Structure
- Drawing Resonance Contributors: Substituted Benzene Compounds

Rewritten to incorporate the new finding that secondary alkyl halides do not undergo E1 reactions.

Hypochlorous acid introduced as an alternative to toxic-chromium-containing compounds.

Discussion of palladium-catalyzed coupling reactions and their mechanisms has been expanded. Solved problems and problem-solving strategies were added to facilitate understanding.

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- Curved Arrows in Radical Systems: Interpreting Electron Movement
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**New tutorial on synthesis and retrosynthetic analysis including two examples of a multistep synthesis from the literature.**

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- Synthesis and Retrosynthetic Analysis: Functional Groups
- Synthesis and Retrosynthetic Analysis: Carbon Chain
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