CONTENTS

Contributors vii
Preface ix
Editor Profile xiii

1. Philosophical, Cognitive, and Sociological Roots for Connections in Chemistry Teaching and Learning 1
   Donald J. Wink

2. Chemistry and the Environment: A SENCER Model Course 27
   Amy M. Shachter

3. CORD’s Applications in Biology/Chemistry: Teaching Science in the Context of Major Life Issues 47
   Bonnie Rinard and Mark Whitney

4. The Science of Terrorism: An Interdisciplinary Course for Nonscience Majors 67
   Laura Post Eisen

5. Chemistry for the Twenty-First Century: Bringing the “Real World” into the Lab 87
   Gautam Bhattacharyya

6. Student-Centered, Active Learning Pedagogies in Chemistry Education 107
   Gail Marshall

7. Creating a Relevant, Learner-Centered Classroom for Allied Health Chemistry 127
   Laura DeLong Frost
8. Working with Chemistry: A Laboratory Inquiry Program
   Julie Ellefson
   145

9. Making Chemistry Relevant to Science and Engineering Majors
   Julie K. Bartley, Sharmistha Basu-Dutt, Victoria J. Geisler, Farooq A. Khan, and S. Swamy-Mruthinti
   169

10. The Center for Authentic Science Practice in Education: Integrating Science Research into the Undergraduate Laboratory Curriculum
    Cianán B. Russell, Anne K. Bentley, Donald J. Wink, and Gabriela C. Weaver
    193

11. Enriching the Chemistry Experience for All Students: Sensorial Experiments That Include Visually Challenged Students
    Maria Oliver-Hoyo
    207

12. Media in Chemistry Education
    William J. Donovan
    227

    Erik M. Epp and Gabriela C. Weaver
    251

14. Effective Use of Games and Puzzles in the Chemistry Classroom
    Thomas D. Crute III
    267

Index
283