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Dalton, David R.: Foundations of Organic Chemistry: Unity and Diversity of Structures, Pathways & Reactions (Book Review)

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they have been directly responsible for the extinction of 103 species, according to one count. Other invaders—including cats, foxes, weasels, and pigs—have been just as deadly, all introduced by humans, all over the globe. Journalist/writer Stolzenburg focuses on the efforts to eliminate rat populations on islands around New Zealand and in the Aleutians, where the largest eradications have taken place. He interviewed many of the key players, and documents the struggle to convince scientists and politicians alike of the validity of the extreme (and expensive) measures applied by conservationists in largely successful efforts. Stolzenburg's book flows smoothly and will interest all conservation-minded readers. **Summing Up:** Highly recommended. ★★★ All levels/libraries.—*J. Nabe, Southern Illinois University Carbondale*

Chemistry

49-3263 QD415 MARC
Chemical biology of the tropics: an interdisciplinary approach, ed. by Jorge M. Vivanco and Tiffany Weir. Springer, 2011. 115p bibl index afp ISBN 9783642190797, \$139.00; ISBN 9783642190803 e-book, contact publisher for price

This recent work in Springer's "Signaling and Communication in Plants" series originated with an expedition of laboratory scientists to Peru's Tambopata National Reserve. This was the first foray into the tropical rain forest for many of those scientists. The result is a mixture of general review articles together with some firsthand descriptions of the pleasures and perils of tropical research. The introductory article reviews the concept of biodiversity and its biogeography and conservation, followed by an introduction to chemical ecology, two papers on insect chemical defenses, and a review of the role of microbes in tropical ecosystems. The book concludes with a short paper on doing research in the canopy and an excellent introduction to the rewards and demands of tropical research, including practical suggestions about selecting study sites, getting funding, and organizing a research expedition to the tropics. The latter paper should be required reading for graduate students in tropical biology. At a little over a dollar per page, only the larger university and research libraries will be able to afford this slender volume, which is unfortunate—these well-written papers deserve a larger audience. **Summing Up:** Highly recommended. ★★★ Upper-division undergraduates, graduate students, and researchers/faculty.—*B. E. Fleury, Tulane University*

49-3264 QD257 2010-17181 CIP
Cooper, Caroline. **Organic chemist's desk reference**. 2nd ed. Taylor & Francis, 2011. 268p index afp ISBN 1439811644 pbk, \$79.95; ISBN 9781439811641 pbk, \$79.95

This "desk reference" continues to evolve in its second edition (1st ed., 1995, by P. Rhodes and R. Purchase) to serve the changing disciplinary breadth of organic chemistry and the expanding knowledge base that students must assimilate. Conveniently organized by topic, this volume collects a wide range of experimental and chemical literature details that are often difficult to reference or retrieve, and consolidates them into a rich resource. The first two-thirds of this edition emphasizes fundamental concepts such as nomenclature (including ring systems) and literature competency; then the content changes to tabulated data covering spectroscopy, chemical properties, and compatibilities. The brief text that accompanies each topic is accessible to both undergraduate students and

practitioners of overlapping scientific fields. This extensively updated new work supplants the first edition and should be in scientific reference collections. **Summing Up:** Highly recommended. ★★★ Academic and professional audiences, all levels.—*G. A. Slough, Kalamazoo College*

49-3265 QD251 2010-43290 CIP
Dalton, David R. **Foundations of organic chemistry: unity and diversity of structures, pathways, and reactions**. Wiley, 2011. 1,414p bibl index ISBN 0470479086, \$149.95; ISBN 9780470479087, \$149.95

This textbook is unusual in that it is designed for sophomore organic chemistry students but appears to be above the level of a typical organic chemistry student. The lack of color or glitzy inset boxes to "engage" students is also unusual. The text is full of black-and-white diagrams, mostly reaction coordinate diagrams, reaction mechanisms, or reaction schemes. This is organic chemistry in its rawest form. Dalton (Temple Univ.) moves very rapidly from basic chemical bonding into kinetics and thermodynamics and then into the meat of organic chemistry. At first glance, the text appears somewhat small, but it belies the large amount of material covered. The paradox is solved when readers realize that Dalton does not dwell on material and quickly moves on. Chapters contain very few problems and no worked examples. Mechanisms are ubiquitous but often abbreviated. The book bridges the gap between more typical sophomore texts and the advanced organic texts by Jerry March or Francis Carey and Richard Sundberg. Well suited for an honors-level course or an "intermediate" course for students who have not seen organic in a while and need a stepping-stone to an advanced course; also valuable for practicing organic chemists needing to brush up on basic topics. **Summing Up:** Highly recommended. ★★★ Upper-division undergraduates and above.—*J. H. Glans, Sacred Heart University*

49-3266 QD20 MARC
European women in chemistry, ed. by Jan Apotheker and Livia Simon Sarkadi. Wiley-VCH Verlag GmbH & Co. KGaA, 2011. 239p bibl index afp ISBN 3527329560 pbk, \$29.95; ISBN 9783527329564 pbk, \$29.95

This book contains short biographical essays written by a variety of authors and, as demonstrated by other compilations about women in science, shows that although each story is unique, the tenacity, steadfastness, and determination of the women are recurring characteristics. These women inspired generations of students to study scientific principles, yet in many cases their accomplishments went largely unnoticed during their lifetimes, and only a few achieved high honors such as the Nobel Prize. The essays are organized chronologically and start with contributions to chemistry (or alchemy) by women who lived from the first to third centuries and continue to the present. The more recent essays are naturally more detailed and particularly poignant when the contributors describe the sacrifices these individuals made in order to study chemistry. They serve as a reminder that the quest for knowledge is a driving force that permeates politics, economics, and society. These remarkable women achieved success and the loving admiration of their students; books like this allow their sacrifices and contributions to be made known to a new generation of young scientists. **Summing Up:** Highly recommended. ★★★ All readership levels.—*M. Rossi, Vassar College*

49-3267 TP200 2010-33575 CIP
Pollak, Peter. **Fine chemicals: the industry and the business**. 2nd ed. Wiley, 2011. 280p bibl index ISBN 0470627670, \$125.00; ISBN 9780470627679, \$125.00