

postdoctoral researchers. Chapter 5 covers purification and drying of some commonly used organic solvents, whereas Chapter 6 discusses preparation, purification, and handling of a variety of reagents. The latter chapter includes preparation and titration of simple organometallic reagents and diazomethane.

Chapter 9, which is the longest chapter (48 pp) of this book, is entitled "Carrying Out the Reactions" and discusses the reactions involving air- and moisture-sensitive reagents, low- and high-temperature reactions, and reaction monitoring. This is followed by a chapter on "Working up the Reaction," covering quenching of a reaction and isolation of the crude product. In Chapter 11, commonly used purification methods such as crystallization, distillation, sublimation, and chromatography (flash, preparative TLC, MPLC, preparative HPLC, etc.) are presented. This is followed by two chapters covering special techniques applicable to small- and large-scale reactions. Chapter 14 is dedicated to special procedures including catalytic hydrogenation, photolysis, ozonolysis, flash vacuum pyrolysis, and liquid ammonia reactions. A brief chapter on characterization covers the application of spectroscopic (NMR, IR, UV, MS) and other (mp, bp,  $[\alpha]_D$ , microanalysis) techniques for the characterization of synthetic organic compounds, as well as how to keep these data. Another important chapter is the one on the chemical literature, which explains how to find chemical information and some important paper-based and electronic-based sources of chemical information. Other chapters include those on gases, vacuum pumps, and trouble shooting.

Six appendices are provided at the end of the book in the form of tables covering properties of common solvents and common gases; approximate  $pK_a$  values for some common deprotonations compared to some common bases, lists of Lewis acids along with solvents compatible with them; common reducing agents along with typical solvents, temperature and functional groups reduced; and a similar table for common oxidizing agents.

Overall, this book has a great deal of merit as it emphasizes the most up-to-date techniques commonly used in an organic chemistry laboratory. Thus, it will be of value to all those practicing synthetic organic chemistry. Considering the affordable price tag, this reviewer recommends this book to all advanced undergraduate students, graduate students, and academic and industrial postdoctoral workers.

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**Stable Carbocation Chemistry.** Edited by G. K. Surya Prakash (University of Southern California, Los Angeles) and Paul v. R. Schleyer (University of Erlangen–Nürnberg). John Wiley and Sons, Inc., New York, 1997. xvi + 587 pp. 15.5 × 23.5 cm. \$79.95. ISBN 0-471-59462-8.

This book, dedicated to Professor George Olah, contains 17 chapters written by experts in carbocation chemistry. The book had its origin in a Loker Hydrocarbon Research Institute Symposium in 1992 on the occasion of George Olah's 65th birthday, and the first chapter is a personal retrospective by Dr. Olah of his search for long-lived carbocations. The remaining chapters present various aspects of carbocation chemistry, ranging from physical studies of carbocations by CPMA NMR or infrared spectroscopy to studies of carbocation rearrangements. Of particular interest to natural product scientists is a short (25 pp) chapter on "Natural Product Chemistry in Superacids" by Jean-Claude Jacquesy.

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**Phthalocyanines: Properties and Applications, Vol. 4.** Edited by C. C. Leznoff and A. B. P. Lever (York University, Canada). VCH Publishers, Inc., New York, NY, 1996. vi + 524 pp. 15.5 × 23 cm. \$150.00. ISBN 1-56081-916-2.

This book contains 13 chapters covering synthetic aspects of phthalocyanine chemistry (five chapters), fundamental work on acid–base reactions and molecular orbital analysis (two chapters), medical and biological aspects of metallophthalocyanine chemistry (three chapters), and applications of metallophthalocyanines in molecular electronics (three chapters).

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