graphs is provided. However, failure to reference the material in the individual chapters is a serious omission.

This book may serve as a quick reference for chemical structures and chemotherapeutic properties of a large number of antibiotics. However, the handbook approach used to present the material makes this book unsuitable as a text.

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Solid-State Chemistry of Drugs. By STEPHEN R. BYRN. Academic Press, 111 Fifth Avenue, New York, NY 10003. 1982. 346 pp. 15 × 23 cm. Price $55.00.

The literature on solid-state chemistry is not abundant, and the topic of solid-state chemistry of drugs *per se* has not been treated previously in book form. (Granted, chapters in books and reviews in journals have appeared.) Dr. Byrn's book hence fills a void. It is refreshing to note, at the onset, that it does this very well.

The book is, first of all, self-contained. It commences with morphological descriptions and definitions, followed by a broad overview of what actually happens in a solid when the molecules contained in it (or some of them) undergo chemical change. It then gives examples of the various types of solid-state reactions documented in the literature (and of pharmaceutical interest).

A chapter is devoted to methods of analysis, in a somewhat different way than the casual reader might expect. The tools of trade in this field, if mechanistic understanding is the goal, are X-ray, spectroscopy, and thermal methods. In other words, the analysis section is not cluttered with specific assay methods, but rather with the specific tools. It might have been instructive to have a section dealing with high-vacuum techniques of gas analysis, since these are frequently used in solid-state kinetics in isothermal studies of gas-producing reactions.

The chapter on solid-state kinetics is excellent and covers all essential principles. Particularly useful is Table I, where one particular reaction is treated by a large number of different mechanistic models, leading to the conclusion (not surprisingly) that simply fitting the data to a model will not, in itself, serve as a selection criterion. That philosophy is true in general, but is well stated.

A large chapter is devoted to polymorphism, an important aspect not often thought of as "chemistry" (as implied in the title of the book). But, it certainly belongs in the book and should be of great usefulness to those working in this particular field.

The book contains a wealth of examples. It is written in a very pleasant style. A must for the pharmaceutical scientist involved in solid dosage forms.

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Dermatological Formulations: Percutaneous Absorption. By BRIAN W. BARRY. Marcel Dekker, 270 Madison Avenue, New York, NY 10016. 1983. 479 pp. 16 × 23.5 cm. Price $55.00 (20% higher outside the U.S. and Canada).

This is a concise, single-authored overview of percutaneous penetration as it relates to dermatological formulations. Demonstrating the breadth and depth of his personal reading and experience, Dr. Barry singlehandedly tackles many different areas. He starts with a brief overview of the structure, function, diseases, and topical treatment of human skin. The second chapter is a classical review of the principles of diffusion through membranes. He next discusses the facts and theory related to skin transport and properties influencing percutaneous absorption. Following a brief review of methods for quantitating absorption, he ends with two strong chapters on formulation and rheology of dermatological vehicles.

This book is heartily recommended for the novitiate as well as the expert. Being a personal statement, you will enjoy the author's strengths and weaknesses in terms of understanding the field. The index is unique in that it allows you to find the primary places where each author is mentioned throughout the book. In the short time that I have had it, I easily justified the cost of the book by rapidly finding author references.

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Alkaloids, Volume 1: Chemical and Biological Perspectives. Edited by S. WILLIAM PELLETIER. Wiley-Interscience, 605 Third Avenue, New York, NY 10158. 1983. 398 pp. 16 × 24 cm. Price $60.00.

Alkaloids never seem to cease attracting the interest of chemists. Since the turn of the century, numerous books and series have been published on the subject. This is another ambitious, comprehensive treatise intending to add new perspectives to the subject. The series takes a new topic-oriented approach, departing from the traditional descriptive system based on the class of compounds.

The first volume begins with the nature and definition of an alkaloid by the editor and includes such mixed topics as "Arthropod Alkaloids: Distribution, Functions, and Chemistry," by T. H. Jones and M. S. Blum; "Biosynthesis and Metabolism of the Tobacco Alkaloids," by E. Leete; "The Toxicology and Pharmacology of Diterpenoid Alkaloids," by M. H. Benn and J. M. Jacyno; and "A Chemotaxonomic Investigation of the Plant Families of Apocynaceae, Loganiaceae, and Rubiaceae by Their Indole Alkaloid Content," by M. V. Kisakurek, A. J. M. Leeuwenberg, and M. Hesse. All were written by unquestionable experts in their particular field and provide not only first-hand information by researchers themselves, but also deep insights into the individual subjects.

Dr. Pelletier's devotion to the chemistry of alkaloids, especially diterpenoid alkaloids, is widely known, and his ability to cover this broad topic is also well-proven by his earlier publication in *The Royal Society of Chemistry—Specialist Periodical Reports* on alkaloids. In the first volume he has certainly exercised his knowledge of the topics and taken advantage of his close acquaintance with top researchers in the individual fields. However, it remains to be seen in future volumes how successful the series will be in raising the interest of interdisciplinary readers in such diversified areas as medicinal chemistry, natural products chemistry, pharmacology, pharmacognosy, biochemistry, phytochemistry, plant taxonomy, oncology, forensic science, and medicine as originally intended. At any rate, in conjunction with recent research interest in natural products chemistry, books taking the multidisciplinary approach as, for example, a series on marine natural products with the same subtitle (*Marine Natural Products: Chemical and Biological Perspectives*, P. J. Scheuer, Ed., Academic Press, Volumes I–V), are seen more and more on the bookshelves.

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Annual Review of Pharmacology and Toxicology, Volume 23. Edited by ROBERT GEORGE, RONALD OKUN, and ARTHUR K. CHO. Annual Reviews Inc., 4139 El Camino Way, Palo Alto, CA 94306. 1983. 713 pp. 15 × 22 cm. Price $27.00.

This review of pharmacology and toxicology continues a successful series of monographs in these areas. The book contains 27 different reviews and a review of the reviews. Each of the reviews is written by a person familiar with the area of research. The reviews are normally concise and well referenced; important tables and figures are included in many of the reviews. The initial review by Leslie Iversen on "Nonopioid Neuropeptides in Mammalian CNS" provides some insight into the re-