and will make a useful contribution to the literature in this exciting area of research.

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**Medicinal and Aromatic Plants—Industrial Profiles. Vol. 2. Perilla—The Genus *Perilla***. Edited by He-Ci Yu (Hankintatukku Natural Products Company, Helsinki, Finland); Kenichi Kosuna and Megumi Haga (Amino Up Chemical Company, Sapporo, Japan). Harwood Academic Publishers, Amsterdam, The Netherlands. 1997. xi + 191 pp. 17 × 24.5 cm. $89.0. ISBN 90-5702-171-4.

This is the second volume of a series of books each devoted to a particular plant species or a genus. The aim of the series according to Roland Hardman, its editor-in-chief, is to give an in-depth look at one plant genus, about which an area specialist has assembled information ranging from the production of the plant to market trends and quality control.

Perilla is a plant with a very long history in Chinese traditional medicine and is used in most Asian countries as a medicine, garnish, food, and food pigment. The plant is relatively unknown in Europe and in the United States. Thus, it is not surprising that 12 of the 14 chapters of the present book have been written by Asian scientists, mainly from Japan but also from Korea and Taiwan. The short introductive chapter by He-Ci Yu is well-written and is a stimulant to discover more about Perilla and an incitement to read the other chapters. Two of them deal with cultivation and cell and tissue cultures of Perilla. More interesting, at least for the author of the present review, are chapters 4−8 which describe the use of the plant in ancient times until the development of modern drugs. These descriptions range from *in vitro* and *in vivo* studies of extracts for their anti-inflammatory and anti-allergic activities to serious clinical studies in the treatment of allergy and atopic dermatitis. The other chapters of the book deal mainly with phytochemical investigations of the plant, ranging from the composition of its essential oil to the chemistry of flavonoids and anthocyanins. The excellent chapter by Kumi Yoshida et al. is of great interest for all scientists involved in anthocyanin chemistry and illustrates the use of modern NMR techniques for the structure elucidation of these plant pigments.

So far, most publications on Perilla have been in Chinese, Japanese, and Korean. Since this Asian plant is receiving increasing attention all over the world due to its potential for the treatment of allergy, one of the most widespread immunological disorders in humans, the present book has the merit of making this important plant comprehensible to a wide scientific community. Perilla will certainly become in the near future a plant of interest for pharmaceutical companies and academia in the West. Thus, this well-referenced book has a place in the library of any institutions involved in the manufacturing of drugs of plant origin and in academic institutions interested in plants used in traditional medicine.

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**Organic Synthesis: The Science Behind the Art**. By W. A. Smit (Zelinsky Institute of Organic Chemistry, Moscow, Russia), A. F. Bochkov (Institute of Biochemical Physics, Moscow, Russia), and R. Caple (University of Minnesota, Duluth, MN) The Royal Society of Chemistry, Cambridge, UK. 1998. xix + 477 pp. 15.5 × 23 cm. $52.95. ISBN: 0-85404-544-9.

*Organic Synthesis* is presented in five chapters: 1, Goals of an Organic Synthesis; 2, Tactics of Synthesis; 3, Strategy of Synthesis; 4, Molecular Design; and 5, Instead of Conclusion.

Chapter one is an introduction as to why synthesis is important and essentially presents a target-oriented vs an exploration-based rationale. Chapter two is the largest chapter, roughly half of the book, and it is presented in seven parts. In order, the chapter discusses general physical organic concepts vital to synthesis. General methods of making C−C bonds are discussed, followed by functional group exchange reactions. Controlling selectivity is presented next, followed by a very short account of reagents, equivalents, and synthons. Methods for constructing cyclic molecules are presented next, and the chapter concludes with bond cleavage and rearrangement reactions.

In chapter two, several named reactions are incorporated but many are only mentioned in passing. Many very important reactions are mentioned in several places but are not discussed in depth, such as the aldol condensation, whereas others, such as the Diels−Alder reaction, are discussed at great length. Modern reactions, such as the Heck reaction, other important reactions involving organopalladium chemistry, and modern methods of catalysis are either ignored altogether or mentioned only briefly. The important roles of diastereoselective and enantioselective reactions are also given little mention in terms of strategy. The important Sharpless asymmetric epoxidation is mentioned in chapter two (Part III) under functional group exchanges, but not at all in Part IV, which deals with selectivity. Other asymmetric epoxidation reactions are not even mentioned, and asymmetric dihydroxylation is also not mentioned.

The goal of chapter two seems to be an introduction to construction methodology, but the organization is difficult to follow. Part V, for example, deals with synthons and reagents, but it is presented *after* a discussion of making C−C bonds and functional group transformations. Since most methods for making C−C bonds rely on functional group transformations to "set them up," and synthons are an integral part of planning C−C bond-forming reactions, this order of presentation is peculiar.

Chapter three is focused on a retrosynthetic analysis strategy. Chapter four discusses target selection based on structural peculiarities as well as target function. Strategies for preparing crown ethers, enzyme mimics, and ligands for various reactions are presented in this context. Chapter five is a very brief summary of the role of synthesis in general organic chemistry.