Additions and Corrections

Porous Crystal Formation from Polyoxometalate Building Blocks: Single-Crystal Structure of $[AlO_4Al_{12}(OH)_{12}(H_2O)_{24}]$-$[Al(OH)_6Mo_6O_{18}]_2((OH)\cdot 29.5H_2O$ [*J. Am. Chem. Soc.* **2000**, *122*, 7432−7433]. JUNG-HO SON, HYUK CHOI, AND YOUNG-UK KWON*

The chemical formula of the title compound was incorrect throughout the paper. The correct formula is $[AlO_4Al_{12}(OH)_{24}$-$(H_2O)_{12}][Al(OH)_6Mo_6O_{18}]_2(OH)\cdot 29.5H_2O$.

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Book Reviews

RSC Food Analysis Monographs. Mass Spectrometry of Natural Substances in Food. By Fred A. Mellon (Institute of Food Research, Norwich, UK), R. Self (University of East Anglia, Norwich), and James R. Martin (Central Science Laboratory, Sand Hutton, York), with Peter S. Belton (Institute of Food Research, Norwich) Series Editor. Royal Society of Chemistry: Cambridge. 2000. xii + 299 pp. $129.00. ISBN 0-85404-571-6

This book is intended to provide a background on mass spectrometry and a basic understanding of the technique to food scientists; it also demonstrates the application of mass spectrometry to the characterization of many types of food-related substances.

The reader is first introduced to the principles and practice of mass spectrometry, including a very interesting introduction on the history of the technique. This opening chapter describes most ionization techniques currently available and reviews different types of *m*/*z* analyzers and detectors. Ionization methods are described very briefly, with just enough information to interest the nonspecialist. In most cases, no direct references are given to learn more about ionization processes, which would have been useful. The quality of the figures in the chapter is questionable, e.g., Figure 1.3. A lengthy section on metastable ions, although excellent in its execution, provides too much detail on the different types of instruments/modes of scanning available to analyze metastable ions. Moreover, magnetic/electrostatic analyzers are discussed at some length, whereas there is only one short paragraph describing triple quadrupole instruments, which are among the most widely used in industry and academia today.

Chapter 2, on interpretation of organic mass spectrometric data, concentrates mainly on electron ionization processes, such as fragmentation mechanisms. It also covers the general notions of resolution, accurate vs nominal *m*/*z* measurements, and the nitrogen rule. Here again, figures could be of better quality, e.g., Figure 2.1. This chapter, although containing mainly information relative to electron ionization (EI), is very well structured and useful even for a more experienced reader. The many topics covered have been very nicely summarized, with important points clearly highlighted.

Most of the rest of the book (Chapters 3−10) focuses on applications of mass spectrometry to the analysis of food flavoring and taints, bioreactive non-nutrients, amino acids/peptides/proteins, lipids, carbohydrates, inorganic nutrients, vitamins, and organic macronutrients. Chapter 11 is on the use of pyrolysis mass spectrometry in food analysis. Each of these chapters is in itself a complete and very useful review with an independent set of references. Toward the end of each chapter, the authors express their opinion on choice of method and make practical suggestions. This approach is extremely useful, given the authors' experience as food scientists. Reference lists are quite complete up to ca. 1996; however, only a few references appear from 1997−1999.

Overall, this is a very well-written and useful monograph. It is recommended to all food scientists learning mass spectrometric analysis. As for mass spectrometrists working in different areas, this book will provide an important source of knowledge about food science.

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Organofluorine Compounds: Chemistry and Applications. By Tamejiro Hiyama (Kyoto University), with contributions from Kiyoshi Kanie, Tetsuo Kusumoto, Yoshitomi Morizawa, and Masaki Shimizu. Springer-Verlag: Berlin, Heidelberg, and New York. 2000. xii + 272 pp. $109. ISBN 3-540-66689-3.

This book presents an overview of organofluorine chemistry with the stated focus of presenting information of interest to synthetic chemists who wish to work with or prepare organofluorine compounds. The authors succeed admirably in achieving this goal, and this relatively modestly sized book should be of interest and benefit to both novices and experienced workers in the field of organofluorine chemistry.

After the obligatory introductory chapter discussing the unique reactivity and properties of fluorine-containing compounds, two excellent chapters follow that introduce aspects of the two primary methods of introducing fluorine into organic compounds, namely the use of fluorinating reagents to carry out functional group transformations and of organofluorine building blocks. Although the coverage of these methodologies cannot be comprehensive in a book of this length, the chapters provide an excellent introduction to fluoroorganic synthesis, and an ample number of leading references is provided. Safety precautions for the use of fluorinating reagents are inserted where appropriate.

The fourth chapter is a brief but interesting review of the chemistry of the C−F bond, from reactions of monofluorocompounds involving fluorine as a leaving group, to metal complex-induced C−F activation reactions of perfluoro compounds. The next two chapters provide excellent introductory surveys of the two major areas of the application of organofluorine compounds, namely biologically active organofluorine compounds and fluorine-containing materials. The book concludes with two short chapters—one on the use of fluorous media to facilitate separation/purification procedures, an area that has recently generated considerable interest in the synthetic community, and the other on an important auxiliary field in which fluorinated reagents and solvents are utilized in the synthesis of *non*-fluorinated compounds.

The chapters are generally well referenced, with citations included as late as 1999. Although the book does not provide comprehensive coverage of such a broad and complex field as organofluorine chemistry, it nevertheless can be highly recommended as an introduction to the field of synthetic organofluorine chemistry. Because it presents a good, up-to-date perspective of the field, even more experienced workers will find the book to be a useful addition to their personal libraries.

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