Additions and Corrections

Scandium Trifluoromethanesulfonate as an Extremely Active Acylation Catalyst [*J. Am. Chem. Soc.* **1995**, *117*, 4413–4414]. K. ISHIHARA, M. KUBOTA, H. KURIHARA, AND H. YAMAMOTO*

Just before this paper was published, we discovered that we had inadvertently omitted references to two important earlier papers published by the T. Mukaiyama group [Shiina, I.; Miyoshi, S.; Miyashita, M.; Mukaiyama, T. *Chem. Lett.* **1994**, 515–518; Shiina, I.; Mukaiyama, T. *Chem. Lett.* **1994**, 677–680], who developed a useful method for carboxylic esters from free carboxylic acids and alcohols by the combined use of 4-(trifluoromethyl)benzoic anhydride and a catalytic amount of active titanium(IV) salt together with chlorotrimethylsilane and applied the method to macrolactonization of ω-hydroxycarboxylic acids. Also, they very recently developed an efficient esterification between free carboxylic acids and alcohols by the combined use of octamethylcyclotetrasiloxane and a catalytic amount of titanium(IV) chloride tris(trifluoromethanesulfonate) [Izumi, J.; Shiina, I.; Mukaiyama, T. *Chem. Lett.* **1995**, 141–142]. We were well aware of the contribution made by Mukaiyama et al. and we apologize for our failure to review it.

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Book Reviews

Carbon-13 NMR Chemical Shifts and Stereochemical Analysis. By Kalevi Pihlaja (University of Turku, Finland) and Erich Kleinpeter (Universitat Potsdam, Germany). VCH: New York. 1994. xiii + 379. $85.00. ISBN 0-89573-332-3.

How many times have I sat down at my desk, following the isolation of a newly unidentified compound, wondering which NMR experiments would give me the information I needed to reveal its structure. At a time like this, a book such as the one I am reviewing here would be most valuable.

This work is by no means exhaustive in its treatment of the subject nor does it purport to be. In fact, this is probably why this book is liable to be picked up and often referred to by many organic chemists. In its first chapter it covers a reasonable survey of some of the more generally used, modern ^{13}C NMR methods (1D and 2D) for elaborating structures of various molecules. This is the kind of information that the casual NMR-oriented chemist is most likely to find useful in his or her search for a successful approach to elucidating a chemical structure.

The ensuing chapters (Chapters 2–4) on substituent effects do a reasonably good job in presenting a theoretical and semitheoretical approach to calculating ^{13}C chemical shifts for solving new structures. This section gives the reader a very excellent grasp for the value of this approach. The references are well selected and by in large relate to the current literature, some as late as 1993. Unfortunately, I cannot say that for all the citations in some of the other chapters. Conformational and configurational analysis is thoroughly covered in Chapter 4A–C.

The diversity of structures discussed throughout the book should give the work broad appeal among chemists. The authors make it a point to examine the use of ^{13}C NMR as a structure-determining tool for heteronuclear substituted compounds, carbohydrates, and natural products, as well as various acyclics and aromatics.

Chapter 8 is a particularly useful one in that it shows how one can use other NMR parameters in combination with ^{13}C NMR chemical shifts and conformational and configurational analyses to solve structure problems. Strategies which make use of ^{1}H shifts and coupling parameters in conjunction with $^{13}C-^{1}H$ couplings and shift correlations clearly show how one can go about unraveling structure. References to established strategies, e.g., 1D, 2D, and 3D techniques and molecular modeling and how they are to be implemented in a step by step manner, provide the reader with a sound approach to solving the problem.

In conclusion, I am very high on this book because of (1) its clarity, (2) its readability for the nonspectroscopist, and (3) its richness as a repository of useful NMR methods, particularly for the organic chemist. I also appreciated the fact that the material is presented in an unpretentious manner, making it simple for the reader to digest the information and apply it readily to the problems at hand.

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The Aqueous Behavior of Surfactants. By Robert G. Laughlin (Procter & Gamble). Academic Press: London. 1994. xxi + 558 pp. $70.00. ISBN 0-12-437745-9.

This monograph is based on the author's life-long experience working with surfactants in aqueous solutions. From the point of view of a chemical engineer doing university research on the potential uses of surfactants as separation agents, this book contains a wealth of information presented in an easy to read form. This work is certainly not intended to be a text for undergraduate or graduate courses, as clearly indicated by the author, but it constitutes an invaluable source of practical information for any researcher or practitioner working in the field.

The book is divided in four uneven parts followed by four useful appendixes. Part I contains two short chapters giving an overview of the field of study and of the book. Like the rest of the book, Part I is written in a clear and concise form. The author makes his point from the beginning and starts with the presentation of the phase diagram of the sodium chloride–water system. Although there is no discussion of surfactants at this point, by using a familiar example, the author shows the usefulness of phase diagrams in conveying experimental information.

Part II discusses the physical chemistry of surfactants in five chapters. Chapters 3 and 4 review basic concepts of thermodynamics, phase diagrams, and the phase rule. Chapter 5, which is the central chapter of this part, gives a complete an elegant description of the phase behavior of surfactants. The personal observations of the author noting where information (or proof of existence) is missing is particularly motivating for research-oriented readers. Chapters 6 and 7 are short