The following typographical errors should also be corrected. The pH of run 1 in Table I should be 5.39 (not 5.93). The third line of footnote 15 should read: "plus 0.01 *M* sulfite...." (not 0.1 *M*). The page number of ref 23 should be 300 (not 30). The sulfate species at the bottom of the first column on p 3386 should have one more negative charge on oxygen; that is, it should be $H_3SO_5^-$.

Mean Activity Coefficient of Polyelectrolytes in the Ternary System Water–Sodium Polyacrylate–Sodium Chloride [*J. Am. Chem. Soc.*, **89,** 3697 (1967)]. By TSUNEO OKUBO, NORIO ISE, and FUMIO MATSUI. Department of Polymer Chemistry, Kyoto University, Kyoto, Japan.

On page 3702, in the caption of Figure 9, the clause, "×, osmometrically observed by Takahashi, *et al.*[19]" should be deleted. The figure "3" on the ordinate of Figure 7 should be deleted.

The Analysis of AA′BB′ Nuclear Magnetic Resonance Spectra by Weak Double Irradiation. Application to Two Isomeric Cyclobutane Derivatives [*J. Am. Chem. Soc.*, **89,** 3953 (1967)]. By E. LUSTIG, E. P. RAGELIS, N. DUY, and J. A. FERETTI. The Food and Drug Administration, Washington, D. C. 20204.

In Table III, *cis*, column *d*, the third number from the top should read "(−19.19)," rather than "(+19.19)."

The Role of Neighboring Groups in Replacement Reactions. XXVII. 5-Methoxyl Participation in Some Solvolysis Reactions [*J. Am. Chem. Soc.*, **89,** 3991 (1967)]. By EVAN L. ALLRED and S. WINSTEIN. Department of Chemistry, University of California, Los Angeles, California, and Department of Chemistry, University of Utah, Salt Lake City, Utah.

In this and the following papers in this series (pages 3998, 4008, and 4012), the term "5-Methoxyl" in the title ("6-Methoxyl" in the paper on page 4012) should be replaced by the expression "MeO-5" ("MeO-6"). The MeO-5 and MeO-6 symbols follow previous usage, where the 5 and 6 indicate the size of the ring formed.

Book Reviews

Thermodynamics and Statistical Mechanics. By A. H. WILSON, F.R.S. Cambridge University Press, 32 East 57 St., New York, N. Y. 1966. xv + 495 pp. 12 × 23 cm. $2.95.

Professor Wilson's monograph first appeared in a hard-covered edition about 10 years ago. During the intervening time it has enjoyed a splendid career. In keeping with a growing trend to reissue older but still useful books at lower prices, it has now reappeared in a paperback edition at about one-third of the original price. Although the quality of the paper is somewhat less than in the original edition, it is still quite satisfactory; the excellent format is unchanged from the earlier printing, the original plates having been used.

The book begins with three chapters on thermodynamics, developed along classical lines. Next follows a chapter on the axiomatic approach, following the lines of Carathéodory. Chapter 5 introduces statistical mechanics, beginning at once with a formulation in terms of stationary quantum states, and arriving at classical statistical mechanics only later *via* a limiting process. Chapter 6 considers several elementary applications of statistical mechanics. Chapter 7 deals with the third law of thermodynamics, the discussion leaning heavily upon statistical mechanics. The remaining chapters may be classed as applications. The subjects discussed include (not in order) heterogenous equilibria, gas mixtures and chemical reactions, solutions, electrolyte solutions, electrochemical systems, imperfect gases, solids, and electric and magnetic phenomena.

The book was written primarily from the point of view of the theoretical physicist. Because of this, the interplay between statistical mechanics and thermodynamics is quite strong. In addition, the assumption is made that the reader at least conceptually understands some areas best known by physicists. As an example of this, the development of statistical mechanics presupposes a knowledge of the concepts of quantum mechanics. As another example, the chapter on electric and magnetic phenomena presupposes a knowledge of some areas of electromagnetism.

This book is pitched at a rather sophisticated level, and as such is not useful for a first introduction to the material. For the graduate student of theoretical physics, the presuppositions stated above will afford no difficulty, since he generally already will have studied the subjects mentioned when he reaches the level of Professor Wilson's book, or at any rate he will be studying them simultaneously.

For the graduate physical chemist undergoing modern training, this remark usually should also apply with respect to quantum mechanics, although possibly not to electromagnetism and some other less crucial material. Except for a few chapters on applications, such lack of knowledge should not be a problem. For other chemists and for chemical engineers, the situation would probably be more difficult, and this book would be less likely to be the ideal choice for them.

The greatest use for this book probably is as a reference. All of us from time to time find it necessary to reintroduce ourselves to material previously known but somewhat forgotten as a result of disuse. Within the fields that it covers, it provides convenient, clear, detailed, and analytic discussions of the material. With this in mind, it well can take a useful position on the bookshelves of many people. These remarks are particularly valid for the theoretical physicist and physical chemist, but are also not without application to others. In particular, the last seven chapters, on applications, contain a wealth of information on the subjects discussed, always presented in a well-written manner. With few exceptions, the validity of this material has not changed in the decade since it was written. At the current low price, it is certainly well worth owning.

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