accumulate because acceptance of the higher figure led to justifiable termination of pregnancy.) Study of the 1957 epidemic of Asian influenza emphasized the high mortality among pregnant women. Other investigations were concerned with the potency of vaccine preparations and with the preventive effect of gamma globulin on various infections.

An additional value is the presentation of plans and protocols that are models of honesty and clarity. Greenberg's outlines of the practice and theory of epidemiology were intended primarily for education and to improve the practitioner's outlook. He also provided stimulating instruction to students of epidemiology at Columbia University. The many examples of sound philosophy and of well-conceived productive effort make this book a valuable asset for the student of epidemiologic methodology. It contains much valuable information as well.

Forewords contain tributes from three commissioners under whom Greenberg served. They express an appreciation that can be shared by those who become acquainted with Morris Greenberg through his selected works.

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Electrochemistry

Electrochemistry. Proceedings of the First Australian Conference (Sydney and Hobart), February 1963. J. A. Friend and F. Gutmann, Eds. Pergamon, New York, 1965. xvi + 954 pp. Illus. $30.

As a record of a very successful conference on electrochemistry this book is a valuable contribution to the literature. It is especially noteworthy as a compendium of recent electrochemical work done by the scientists down under and by those scientists who traveled there to discuss problems of mutual interest. The individual contributions are grouped in 12 sections that correspond to the 12 conference sessions: Solid-State Chemistry (7 papers); Thermodynamics of Electrolytes (6 papers); Corrosion (4 papers); Theory of Double Layers (4 papers); Electroanalytical Methods (7 papers); Applications—Electroplating, Anodizing (8 papers); Non-aqueous Electrolytes (5 papers); Molten Salts (6 papers); Fuel Cells (6 papers); Electrode Processes (7 papers); Electrochemical Processes (5 papers); and Electrowinning and Electrorefining (8 papers). In general, the scope of the sections is broader than the titles indicate. Three papers in the section on nonaqueous electrolytes deal with electrode processes in nonaqueous media rather than nonaqueous electrolytes per se. The section on thermodynamics of electrolytes contains a paper on electrode potentials and one on electrode phenomena in addition to four papers that deal strictly with electrolytes. In the section on solid-state chemistry there is a paper on the solid-aqueous interface of germanium with a discussion of the liquid phase. These examples emphasize the fact that the book covers a wider range of topics than is indicated by the section titles. There is also some overlapping of subject matter between sections, but this adds to rather than detracts from the overall presentation.

Theory constitutes about 65 percent of the book; the remaining 35 percent is devoted to applications of electrochemical principles to electrolytic extractions, corrosion control, chemical analysis, energy production, metal deposition, and thin-film formation. The technology and fundamentals of fuel cells and the intrinsic properties of molten salts, topics that are currently of much interest, are given good coverage. Polarography and potentiometric titrations are emphasized in the section on electroanalytical methods.

The papers, with three exceptions, are of nearly equal length (12 pp.). The longer papers are concerned with the theory of the double-layer equilibrium (49 pp.), the structure of charged interfaces (32 pp.), and the mechanism of hydrogen evolution at metal surfaces (30 pp.) Accordingly, a large portion of the book deals with the electrode-solution interface; in fact, the book begins with a discussion of solid-state chemistry which has an important bearing on an understanding of the fundamentals of electrode processes.

With few exceptions, the papers are of high quality and carefully edited. This fine book belongs in the library of all who have a serious interest in electrochemistry.

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Ultrasonic Studies

Physical Acoustics: Principles and Methods. vol. 2, pt. A, *Properties of Gases, Liquids, and Solutions*. Warren P. Mason, Ed. Academic Press, New York, 1965. xviii + 476 pp. Illus. $17.

Ultrasonic studies can give detailed information on molecular processes in gases and liquids, and in particular on relaxation phenomena associated with the rate of energy exchange and of structural changes in fluids. Although this subject was rather neglected in books on ultrasonics published prior to 1959, three treatments have since appeared: *Absorption and Dispersion of Ultrasonic Waves* by Herzfeld and Litovitz (1959); *Dispersion and Absorption of Sound by Molecular Processes* (Proceedings of the International School of Physics "Enrico Fermi") edited by D. Sette (1963); and now part A of the second volume of the comprehensive series on physical acoustics being edited by W. P. Mason of Bell Telephone Laboratories.

The first three chapters of the present volume deal with the application of ultrasonics to understanding the properties of gases. All three are expanded versions of brief treatments given by the same authors in the "Enrico Fermi" volume. M. Greenspan, in his treatment of transmission of sound waves in gases at very low pressures, reviews the theories of translational dispersion and absorption in gases, with only a brief discussion of experimental methods and results, the latter restricted to monatomic gases. Utilizing the methods of thermodynamics of irreversible processes, H.-J. Bauer treats in detail the phenomenological theory of relaxation phenomena in gases, with emphasis on multiple relaxation processes. Comparison of this theory with experiments on polyatomic molecules is presented in a chapter by H. O. Kneser. This latter chapter in particular is outstanding for its clarity and succinctness of presentation; the nonexpert should read it first, rather than last, of the three chapters on gases.

The final three chapters deal primarily with relaxation effects in liquids. J. Lamb treats of thermal relaxation accompanying the propagation of a compressional wave through a liquid; his brief theoretical discussion is followed by an interpretation of the ex-