

odology and usually a summary. An index of all authors cited is included with each chapter in addition to the alphabetical list of all authors at the end of the volume.

In summary, it may be said that this book, and hopefully the forthcoming volumes in the series, is a valuable contribution to the literature armamentarium of lipid methodology. In its present form it is perhaps of more value to specific industrial research laboratories than to research groups working on the role of fats in health or in the training of graduate students. It is my present impression that only three or four of the chapters would be recommended to graduate students for general reading. This is not intended to detract in any way from the value of certain of the chapters to highly specific research groups. As a matter of fact, it would perhaps have been better not to include so many spectra of interest in fat research in one volume. Thus, it would be difficult to secure a reviewer competent to critically evaluate all of these chapters, a task that I certainly am not attempting to do.

J. B. BROWN

*Department of Physiological Chemistry,  
Ohio State University*

## Weyl Colloquium

**Solutions Métal-Ammoniac.** Propriétés physicochimiques. G. Lepoutre and M. J. Sienko, Eds. Université Catholique, Lille, France, 1964 (order from Benjamin, New York). 320 pp. Illus. \$10.50.

This volume contains the papers presented at a colloquium held in June 1963, at Lille, France, to commemorate the 100th anniversary of Weyl's discovery of the solubility of alkali metals in liquid ammonia. Charles A. Kraus, who probably contributed more to the subject than any other single individual, provided a forward and M. C. R. Symons, an orienting introduction. The topics covered and the contributors are as follows.

"On the coexistence of liquid phases in metal-ammonia systems; and some surface tension studies on these solutions above their consolute points" (M. J. Sienko); "The mechanical properties of metal-ammonia solutions" (R. Catterall); "On the volume expansion

accompanying the formation of dilute solutions of sodium and potassium in liquid ammonia at  $-45^{\circ}\text{C}$ " (C. W. Orgeel, A. M. Filbert, and E. C. Evers); "Heat of solution and volume studies of metal-ammonia solutions" (S. R. Gunn); "Propriétés thermodynamiques des solutions métal-ammoniac" (C. Moreau); "Activités du sodium en solution dans l'ammoniac liquide" (J. L. Dye, G. Lepoutre, P. R. Marshall, and P. Pajot); "Activities and equilibria in alkali metal-ammonia solutions" (P. R. Marshall); "Electrical conductivities of sodium-ammonia solutions" (S. Naiditch); "Electrochemical properties of metal-ammonia solutions: e.m.f. and transference numbers" (J. L. Dye); "Electrochemical properties of metal-ammonia solutions: conductance and thermoelectric properties" (D. S. Berns); "Calculation of conductivity in sodium-liquid ammonia solutions" (E. Arnold and A. Patterson); "The reaction of adsorbed water with a dilute solution of sodium in liquid ammonia at  $-78^{\circ}\text{C}$ " (I. Warshawsky); "The absorption spectra of metal-ammonia solutions (with an addendum on the calcium-ammonia phase diagram)" (W. L. Jolly, C. J. Hallada, and M. Gold); "Spectres d'adsorption et cinétique de décomposition des solutions potassium-ammoniac à température ambiante" (J. Corset and G. Lepoutre); "Nuclear and electron resonance spectra and optical reflection spectra of metal-ammonia solutions" (K. S. Pitzer); "Cellule de conductance sans électrodes; cinétique de décomposition des solutions métal-ammoniac" (P. Pajot, A. Demortier, and G. Lepoutre); "Proton and nitrogen Knight shifts in sodium-ammonia solutions" (T. R. Hughes, Jr.); "Nuclear magnetic resonance of  $\text{Li}^7$ ,  $\text{Na}^{23}$ ,  $\text{Rb}^{87}$ ,  $\text{Cs}^{133}$ , and  $\text{N}^{14}$  in alkali metal ammonia solutions" (D. E. O'Reilly); "Theories and models of electron binding in solution" (J. Jortner, S. A. Rice, and E. G. Wilson); "The effect of added electrolytes on the electron spin resonance absorption of solutions of the alkali metals in liquid ammonia" (R. Catterall and M. C. R. Symons); "Electron trapping centers in metal-ammonia solutions" (E. Arnold and A. Patterson, Jr.); "Theory of a solvation model for the alkali metal-ammonia solutions" (L. Paoloni); "On the electron spin density distribution in the  $\text{Na-NH}_3$  system" (J. V. Acrivos); and "Transport proc-

esses in concentrated metal-ammonia solutions" (J. C. Thompson).

In general, these reviews are authoritative, comprehensive, and adequately documented. Accordingly, this volume is and will continue to be a valuable source of information for both the specialist and the uninitiated. Either directly or by inference, all of the various models that have been proposed to account for the unusual properties of metal-ammonia solutions are examined critically.

The Weyl Colloquium was deliberately restricted to consideration of physical properties of metal-ammonia solutions; perhaps this was a wise decision. It seems noteworthy that the vast amount of effort devoted to the study of the physical properties of these systems has resulted in little that is useful in interpreting the chemical reactions in which these solutions participate.

The many typographical errors in this volume are unlikely to be a source of satisfaction to either the editors or the publisher.

GEORGE W. WATT

*Department of Chemistry,  
University of Texas*

## Chemical Technology

**The Cyanine Dyes and Related Compounds.** Frances M. Hamer. Interscience (Wiley), New York, 1964. xxxiv + 790 pp. Illus. \$45.

Frances M. Hamer, the author of this specialized treatise, has long been recognized as an authority in the field of cyanine dyes, and much of the work that he describes here is his own work or is work based on his developments. Hamer's work provides a bridge between the early work of Pope and Mills (1917) and the work today in the photographic industries.

The principal use of cyanine dyes has been in the selective color sensitization of photosensitive materials. One is, of course, concerned with the wavelength limits of sensitization and the selective absorption of the dye itself. Booker and others have published extensive data on the absorption spectra of these dyes, and it therefore seems strange to find only two figures with a total of six spectra in the book. Not only are absorption spectra omit-

ted, but, all too often, the wavelength of maximum absorption and the color of the "dye" (in a solid, a solution, or an absorbed state) are also omitted. Of course these dyes are mainly used in photography, but little attempt is made to cover the subject in a quantitative manner; one could not, with certainty, identify the commercially important sensitizers or the methods available for identifying and characterizing cyanine dyes used in such applications.

Essentially the book is a compilation of known cyanine dye compounds that have been synthesized; for some areas, the methods of synthesis are described. The major portion of the text (some 650 of about 750 pages) is devoted to a statistical tabulation of the cyanine dyes that have been synthesized, and most of these are derived from the patent literature.

Only two chapters (50 pages) are devoted to color and chemical constitution and to photographic sensitization and other applications. Considering the amount of available information in these fields, this is very little more than a brief, abstract summation of published data. The data are well documented with references, but many important research papers receive only a single sentence in abstract form. Because many of the references are to patents, the research worker may have some difficulty in extracting general information.

WALLACE R. BRODE

3900 Connecticut Avenue, NW,  
Washington, D.C. 20008

## Catalog of Avifauna

**Birds of the New York Area.** John Bull. Harper and Row, New York, 1964. xiv + 540 pp. Illus. \$8.95.

The New York City area is one of the best known American localities with respect to its bird life. Not only is the available documentation exceedingly detailed and thorough, but the span of recorded data is much longer than that in almost any other region. The present book is the fourth work covering the avifauna of the area to be published since 1906; the only reason for a new volume is that even the latest of the previously published volumes (Cruickshank, 1942) has been rendered incomplete and out-of-date by the never ceasing flood of new

observations and data and by the changes, largely man-made, in the area with the consequent changes in local bird distribution.

John Bull's *Birds of the New York Area* is expressly intended to provide complete current information, and this it does very well. It is not intended for use as a field manual, and it contains neither keys for identifying birds nor illustrations of birds. The accounts are given by species, but where more than one subspecies occur—for example, as migrants or as winter visitors—a paragraph is devoted to a detailed summation of the status of each and, where needed, the actual records of occurrence are given. The work appears to have been done with much care, and it should serve its intended public very well indeed.

HERBERT FRIEDMANN

Los Angeles County Museum,  
Los Angeles, California

## New Books

### Economics and the Social Sciences

**Delinquency and Drift.** David Matza. Wiley, New York, 1964. 211 pp. \$4.50.

**The Dynamics of Research and Development.** Edward B. Roberts. Harper and Row, New York, 1964. 374 pp. Illus. \$10.95.

**The Early Growth of Logic in the Child.** Classification and seriation. Bärbel Inhelder and Jean Piaget. Translated from the French by E. A. Lunzer and D. Papert. Harper and Row, New York, 1964. 328 pp. Illus. \$6.

**Economic Growth in the West.** Comparative experience in Europe and North America. Angus Maddison. Twentieth Century Fund, New York, 1964. 246 pp. \$4.50.

**The Education and Guidance of the Ablest.** John Curtis Gowan and George D. Demos. Thomas, Springfield, Ill., 1964. 525 pp. \$14.50.

**Experiments in Operant Behavior.** Ellen P. Reese. Appleton-Century-Crofts (Meredit), New York, 1964. 233 pp. Illus. Paper, \$3.95.

**The Geography of Modern Africa.** William A. Hance. Columbia Univ. Press, New York, 1964. 667 pp. Illus. \$12.

**An Index of Rorschach Responses.** Studies on the psychological characteristics of medical students, 1. Caroline Bedell Thomas, Donald C. Ross, and Ellen S. Freed. Johns Hopkins Press, Baltimore, Md., 1964. 787 pp. \$15.

**Life in a Turkish Village.** Joe E. Pierce. Holt, Rinehart, and Winston, New York, 1964. 113 pp. Illus. Paper, \$1.50.

**Mexican-Americans of South Texas.** William Madsen. Holt, Rinehart, and Winston, New York, 1964. 130 pp. Illus. Paper, \$1.50.

**Monopoly Power and Economic Per-**

**formance.** The problem of industrial concentration. Edwin Mansfield, Ed. Norton, New York, 1964. 188 pp. \$4.

**The New Europe and Its Economic Future.** Arnold B. Barach. Macmillan, New York, 1964. 154 pp. Illus. Paper, \$1.95.

**On Culture and Social Change.** Selected papers. William F. Ogburn. Otis Dudley Duncan, Ed. Univ. of Chicago Press, Chicago, 1964. 382 pp. Illus. \$7.50.

**Physical Anthropology 1953-1961.** Gabriel W. Lasker, Ed. Published for the American Assoc. of Physical Anthropologists by Instituto de Investigaciones Historicas, Universidad Nacional Autonoma de Mexico and Instituto Nacional de Antropología e Historia, 1964 (available from Instituto Nacional de Antropología e Historia, Córdoba 45, Mexico 7, D.F.). 330 pp. Illus. Paper, \$4.50.

**Population: The Vital Revolution.** Ronald Freedman, Ed. Doubleday, Garden City, N.Y., 1964. 280 pp. Paper, \$1.25.

**Positive Disintegration.** Kazimierz Dabrowski. Jason Aronson, Ed. Little, Brown, Boston, 1964. 162 pp. \$4.50.

**A Preface to Psychology.** Cameron Fincher. Harper and Row, New York, 1964. 127 pp. Paper, \$2.25.

**Private Practice in Social Casework.** A profession's changing pattern. Sidney Levenstein. Columbia Univ. Press, New York, 1964. 248 pp. \$6.75.

**The Psychology of Aging.** James E. Birren. Prentice-Hall, Englewood Cliffs, N.J., 1964. 315 pp. Illus. \$6.95.

**Ranjana: A Village in West Bengal.** Gouranga Chattopadhyay. Bookland, Calcutta, India, 1964. 280 pp. Illus. Rs. 20.

**Recent Research on Creative Approaches to Environmental Stress.** Proceedings, Fourth Institute (Iowa City, Iowa), April 1963. Ralph H. Ojemann, Ed. Preventive Psychiatry Research Program, Inst. of Child Behavior and Development, Iowa City, Iowa, 1964. 189 pp. Illus. Paper, \$2; cloth, \$3.

**Review of Child Development Research.** vol. 1. Martin L. Hoffman and Lois Wladis Hoffman, Eds. Russell Sage Foundation, New York, 1964. 557 pp. \$8.

**River Basin Surveys Papers.** Interagency Archeological Salvage Program (Bureau of American Ethnology, *Bulletin No. 189*). Frank H. H. Roberts, Jr., Ed. Smithsonian Institution, Washington, D.C., 1964 (order from Superintendent of Documents, Washington, D.C.). 419 pp. Illus. \$3.75.

**Savage New Guinea.** Jens Bjerre. Hill and Wang, New York, 1964. 165 pp. Illus. \$5.

**Science and Technology for Development.** Report on the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas (Geneva, Switzerland), February 1963. vol. 3, *Agriculture*. United Nations, New York, 1963. 317 pp. Paper, \$5.50; cloth, \$8.

**Scientific Creativity: Its Recognition and Development.** Selected papers from the Proceedings of the First, Second, and Third Univ. of Utah Conferences on *The Identification of Creative Scientific Talent*. Calvin W. Taylor and Frank Barron, Eds. Wiley, New York, 1964. 443 pp. Illus. \$7.95. Thirty-one papers.