language (object language) has been introduced, it can be criticized and improved by discussing it in the language of everyday speech (metalanguage). The distinction between metalanguage and object language is carefully maintained by some writers on symbolic logic; in this book it is never explicitly made. That seems to me a serious omission.

Farther on in the book, however, Mrs. Langer takes up the history of the subject, the various ways in which symbolic logic has been approached, the various ways in which it can be approached, and the attempt in *Principia Mathematica* to construct all mathematics on it as a foundation. This discussion is quite illuminating. I hope a third edition will include more of it at the expense of some of the metaphysics. In this edition I suggest reading selectively; then you can get from the book a good introductory idea of the content and applications of symbolic logic.

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A Bibliography on Meteorites. Edited by Harrison Brown, assisted by Gunnar Kullerud and Walter Nichiporuk. 686 pp. The University of Chicago Press, Chicago, Illinois, 1953. $10.00.

This book is exactly what the title states, a compendium of over 25 000 articles on meteorites. The articles are listed chronologically, starting in 1491 and going through 1950. Needless to say, approximately half the references are to articles published in the last thirty years. It is indeed a welcome sight to see such an excellent compendium. It has been this reviewer's experience that a great deal of time can be consumed in the library trying to locate what someone, whose name one knows, wrote at some time in some journal of whose name one is not quite sure. The book will certainly be an important time saver to any serious student of the subject.

The last pages of the book contain an author index, thus providing a cross reference by name. Also included is a list of abbreviations of the journals referred to. The introduction gives credit for assistance to many persons. The bibliography is competently put together, and is an important contribution to the subject. It is a scholarly and exceedingly useful piece of work, and belongs on the book shelves of all libraries and of all those seriously interested in the subject.

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Sulfur

Gmelin's Handbook of Inorganic Chemistry: *Schwefel, System No. 9,* Section A 2 of the eighth edition of *Gmelin's Handbuch der Anorganischen Chemie* is a modern review of the scientific literature (through 1949) on sulfur and its compounds in the style and with the thoroughness which has so long characterized the encyclopedic Gmelin Handbook. These comprise two of five sections devoted to sulfur and its compounds with hydrogen, oxygen, nitrogen, fluorine, chlorine, bromine, and iodine. Section A 1 which has already appeared covers the history of sulfur. Section A 3, covering the formation and preparation of sulfur and the sulfur system, will appear this year as will also Section B 2, covering the compounds of sulfur with nitrogen, fluorine, chlorine, bromine, and iodine.

Section A 2 contains a section on occurrence in the earth and outside of it, a section on the technology of dressing of sulfur ores and the derivation of sulfur compounds. Here no phase of the recorded technology is overlooked and special emphasis is placed on such things as physicochemical principles, new oxidation or reduction methods for sulfur derivation from H_2S and SO_2, and the purification and concentration of SO_2. This is followed by a chapter on colloidal sulfur and a concise treatment of the physiological hazards and problems in the handling of sulfur compounds.

Section B 1 treats the sulfur hydrites and oxides. The physical properties, chemical behavior, formation, combustion, reactions are given for hydrogen and deuterium sulfides, and the polysulfides. The radicals HS and DS, the hydrate of H_2S and its aqueous and nonaqueous solutions, and SO_2, SO_3 and the higher oxides of sulfur are treated similarly. Among the physical properties treated are: molecular structure, equations of state, critical constants, vapor pressures, thermodynamic and transport properties, optical, magnetic, and electrical properties. (Verlag Chemie, Weinheim, West Germany, 1952. Section A2, 450 pp., $35.30; Section B1, 372 pp., $29.40. Available through W. J. Johnson, Inc., 125 E. 23 St., or Stechert-Hafner, Inc., 31 E. 10 St., New York, N. Y.)

Progress in Physics

Reports on Progress in Physics, Vol. XVI (407 pp.; published by The Physical Society, London, 1953; nonfellows, £2, 10s; fellows, 27s. 6d.) contains the following articles: Neutron Diffraction by G. E. Bacon and K. Lonsdale; Physical Properties and Atomic Arrangements in Crystals by W. A. Wooster; Raman Effect in Solids by A. C. Menzies; Paramagnetic Resonance by B. Bleaney and K. W. H. Stevens; Semiconductor Circuit Elements by J. S. Blakemore, A. E. De Barr, and J. B. Gunn; Electrical Discharges by F. Llewellyn Jones; Fluctuation Theory in Physical Measurements by C. W. McCombie; Cosmology by W. H. McCrea; and The New Unstable Cosmic-Ray Particles by G. D. Rochester and C. C. Butler.

Dielectric Constants and Dipole Moments

The *Table of Dielectric Constants and Electric Dipole Moments of Substances in the Gaseous State,* by Arthur A. Maryott and Floyd Buckley, includes approximately 350 substances, and is prefaced by a brief discussion of the procedure used in its preparation. This 29-page booklet is the National Bureau of Standards Circular 537, and may be obtained for twenty cents from the U. S. Government Printing Office, Washington 25, D. C.