change in the gross pathology has not only been clearly described but has also been illustrated by black-and-white photographs of a quality surpassing that of the average color photograph.

Siemens planned a new method of presentation of clinical dermatology, outlined the work in detail, and then carefully sought clinical material to illustrate each point. The continuous cooperation and contributions, over a 25-year period, of an excellent clinical photographer, J. J. van der Walle, made it possible to record photographically the necessary close-up detail from clinical material as it became available, rather than comb files later for the best existing photographs or borrow extensively from colleagues' collections. There are 398 photographs and 15 drawings that illustrate the detail in individual lesions and the grouping, nuances, and modifications of lesions during the course of disease.

Not only is Siemens' approach to diagnosis different because of his emphasis on detail but his handling of therapy is also unique, because of his emphasis on the need for reaching a maximal dosage in each case in order to guard against later recurrence. The application of this concept has previously been limited to anthralin and a few other medicaments. Combination of experimental method with the usual pragmatic approach is advocated by the author in handling each patient. He includes a finely detailed description of reactions to treatment.

Hermann Werner Siemens is professor of dermatology and venereology at the University of Leiden, Holland. His book has been ably translated into English by Kurt Wiener of Milwaukee, Wisconsin, at a time of reawakened interest in dermatological morphology.

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Gmelins Handbuch der Anorganischen Chemie. *Systematik der Sachverhalte,* 1957, $17.28; system No. 28: *Calcium,* pt. B, sec. 2, 1957, xvi + 391 pp., illus., $52.56; system No. 60: *Kupfer,* pt. B, sec. 1, 1958, xxvii + 624 pp., illus., $83.76. Verlag Chemie, Weinheim/Bergstrasse, Germany.

The *Systematik der Sachverhalte,* or systematic subject-matter index, in which the entries are given in both English and German, gives the basis underlying the arrangement of material in the *Gmelin Handbook.* The terms used were developed over a period of more than thirty years of working on the eighth edition of the *Handbook.*

The index serves as a classification guide to the scientific archives of the Gmelin Institute and contains all the subject headings used in classifying the material falling within the scope of the Gmelin literature coverage.

The volume on calcium contains the descriptions of compounds of calcium with hydrogen, deuterium, oxygen, nitrogen, fluorine, chlorine, bromine, and iodine and of compounds of those compounds with sulfur, up to the item dithionite. Detailed accounts are given of methods of preparation as well as data on chemical properties and behavior and various physical properties. The literature is covered to 1949.

The volume on copper is similar in nature to that on calcium. It considers the compounds of copper with the same combining elements but, in addition, includes compounds of copper with selenium and tellurium. The items go as far as copper tellurate. The literature is covered to 1949 and, in some cases, to 1954.

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Integral Equations. And their applications to certain problems in mechanics, mathematical physics and technology. S. G. Mikhlin. Translated from the Russian by A. H. Armstrong. Pergamon Press, New York and London, 1957. xii + 338 pp. $12.50.

The translator has done his best, and on the whole he has done it well. However one sympathizes with him when he asks the reader's indulgence for inadvertent errors in the translation, particularly for any misspelling of proper names, incorrectly transliterated back to their native alphabet. Such a confession of ignorance casts a poor reflection on the publishers of a series on pure and applied mathematics, who could surely have found someone to do the necessary checking. A good mathematical book, whatever its topic, is a work of art, not to be mutilated by poor spelling of mathematicians' names.

It is true that this book in no way attempts to be a work of art. It is strictly practical in its object and outlook, and it is for strictly practical reasons that the gaps in the intuitive theory of the first edition have been filled, so that this theory now has the standard L_2 background, although it makes no attempt to go beyond this. However, it is still a good book. Its heart lies in the applications, which constitute 60 percent of the subject matter and are extremely detailed. The author doubtless feels, and there is much to support this view, that the right way to study integral equations is to go in great detail into their applications—into the Dirichlet problem, potential theory, the biharmonic equation, and the like. This approach goes a long way in making up for the lack of fire in the somewhat uninspired and standardized treatment of the theory. It is a book, in brief, from which the reader is likely to gain very valuable insight into the connections with older problems of analysis and mathematical physics and which will make him want to study further the connections with newer trains of thought.

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Handbuch der Physik. vol. XVI, *Electric Fields and Waves.* S. Flügge, Ed. Springer, Berlin, 1958. vii + 753 pp. Illus. DM. 158.

This volume contains five articles. The first one, "Static fields and stationary currents," by G. Wendt, treats the theory of electrostatic and magnetostatic fields of charges and currents. General theory as well as analytical, numerical, graphical, and experimental methods of solving field problems are covered. Many interesting and useful problems are solved, extensive use being made, for instance, of the Schwarz-Christoffel transformation.

The second article, "Quasi-stationary and non-stationary currents," by Ronald King, starts with the essentials of electromagnetic theory. Then follow coupled systems and transmission line and antenna theory. Many examples are worked out, including loop antennas, both shielded and unshielded.

The third article, "Electromagnetic wave guides and cavity resonators," by F. E. Borgnis and C. H. Papas, treats transmission line analogy, cylindrical and miscellaneous wave guides, slow wave and wave-guiding structures, wave-guide junctions, and cavity resonators. In the words of the authors, this was written for the reader who needs to acquire sufficient theoretical background to read pertinent research literature.

The fourth article, "The propagations of electromagnetic waves," by H. Bremmer, treats the propagation of electromagnetic waves through free space and includes an extensive treatment of antenna theory, including focusing of antenna radiation by lenses and mirrors, and the transmission of electromagnetic waves through curved atmospheres, with particular reference to transmission and diffraction phenomena in the earth's atmosphere.

The fifth article, "The dispersion and absorption of electromagnetic waves," by L. Hartshorn and J. A. Saxton, treats the experimental methods for the study of the behavior of matter under the action of electromagnetic waves of length greater than a few millimeters. This includes low- and high-frequency measure-

ments and free wave and wave-guide methods. The last section is devoted to actual experimental results for typical dielectric materials.

These articles have been written in such a way as to be clear and intelligible and, at the same time, contain as many of the important developments as possible. Extensive references and bibliography are given. This volume should be indispensable as a reference book in this field as well as valuable for anyone wishing to obtain quickly a knowledge of any of the subjects treated.

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New Books

The Strangest Things in the World. A book about extraordinary manifestations of nature. Thomas R. Henry. Public Affairs Press, Washington, D.C., 1958. 208 pp. $3.50.

Current Studies in Psychology. F. J. McGuigan and Allen D. Calvin. Appleton-Century-Crofts, New York, 1958, 226 pp. $2.65.

The Living Body. A text in human physiology. Charles Herbert Best and Norman Burke Taylor. Holt, New York, ed. 4, 1958. 767 pp. $6.95.

Introduction to Electromagnetic Engineering. Roger F. Harrington. McGraw-Hill, New York, 1958. 324 pp. $8.

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Directed Studies in Introductory College Geography. George T. Renner and Hugh C. Brooks. Appleton-Century-Crofts, New York, 1958. 167 pp. $2.36.

Elementary Practical Organic Chemistry. pt. III, *Quantitative Organic Analysis.* Arthur I. Vogel. Longmans, Green, New York, 1958. 240 pp. $4.50.

Essentials of College Geography. C. Langdon White, George T. Renner, Robert T. Novak. Appleton-Century-Crofts, New York, 1958. 588 pp. $6.

Glaucoma. Transactions of the second conference 3–5 Dec. 1956, Princeton, N.J. Frank W. Newall, Ed. Josiah Macy, Jr. Foundation, New York, 1958. 245 pp. $4.95.

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The Exploration of Space by Radio. R. Hanbury Brown and A. C. B. Lovell. Wiley, New York, 1958. 219 pp. $6.50.

Chemical Publications, Their Nature and Use. M. G. Mellon. McGraw-Hill, New York, ed. 3, 1958. 337 pp. $7.

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The Garden of Chaparral. Plants of the lower Rio Grande Valley. Elizabeth M. Riess. Vantage, New York, 1958. 158 pp. $3.

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Applied Mathematics for Engineers and Physicists. Louis A. Pipes. McGraw-Hill, New York, ed. 2, 1958. 734 pp. $8.75.

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Carbon Dioxide Therapy. A neurophysiological treatment of nervous disorders. L. J. Meduna, Ed. Thomas, Springfield, Ill., ed. 2, 1958. 553 pp.

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(Inquiries concerning these publications should be addressed, not to Science, *but to the publisher or agency sponsoring the publication.)*

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