Book Reviews

Neblette's Handbook of Photography and Reprography: Materials, Processes and Systems

(7th edition) Ed. John M. Sturge. Published (1977) by Van Nostrand Reinhold, 450 W. 33 St., New York, NY 10001. 620 pp. + index. 500 illus. 8½ × 11 in. Price $47.50.

C. B. Neblette's *Photography, Its Materials and Processes* has remained, for more than 50 years, an important reference book for those seriously concerned with the science of photography. Following publication of the 6th edition in 1962 [review by A. E. Alden in the April 1963 issue of the *Journal*], Professor Neblette continued to update the book for the next edition; following his untimely death in 1974, John M. Sturge assumed the editorship of the updated material.

The 7th edition is indeed a tribute to Neblette. Completely rewritten and redesigned and greatly expanded, it provides a most up-to-date source of information on photography and reprography, including all essential aspects of physics and chemistry as well as information on the preparation and manufacture of materials. As in the case of the previous editions, the 7th edition contains an accurate and comprehensive coverage of all aspects of photographic science from theory to practice.

Historians will be happy to see the expanded chapters on the history of photography and cameras — chapters which had been omitted from several previous editions.

Except for Neblette and W. West, the 24 chapters in the book were authored by 20 new contributors, each a leading specialist in his field. Included are such subjects as spectral sensitivity of emulsion; the manufacture of materials; electro-photographic processes; color systems; photochemical processes; cinematography; aerial photography; radio photography; micrographics; and many others. Each chapter is followed by an extensive list of reference material — invaluable for researchers and those requiring a complete coverage of the particular subject.

A departure from the previous editions is the deletion of a section on basic photographic optics and camera lens systems. This basic information was covered more completely in other standard reference works, so it was decided to omit the section, which has been replaced with a substantial amount of more pertinent data.

Two chapters in the book — Automated Processing, by A. F. Gallister, and Cinematography, by G. A. Chambers — contain information of special interest for motion-picture people. Although these two chapters do not attempt to cover all of the ground, they effectively cover the subjects of processing and the scientific aspects of cinematography.

This is an important book containing essential information for library, plant, laboratory and research personnel provided by established authorities (new to this edition). — *Alex E. Alden.*

The VNR Concise Encyclopedia of Mathematics

Ed. W. Gellert, H. Küstner, M. Hellwich. Published (1977) by Van Nostrand Reinhold, 450 W. 33 St., New York, NY 10001. 722 pp. + index + tables. 55 plates, numerous other illus. 9 × 6 in. Price $14.95.

The VNR Concise Encyclopedia of Mathematics is a highly recommendable book. It is a translation of the German original *Kleine Enzyklopädie der Mathematik* which was written by about 40 mathematical specialists, each an authority in his chosen field. To succeed in a translation of such a difficult subject as mathematics is no small achievement. The translators and editors of the English version certainly have done an excellent job. The language is clear and to the point and can easily be understood by anyone with a minimum of mathematical education.

This is also a "colorful" book in the literal sense of the word. The reader is greatly helped by the use of color not only in the numerous figures and illustrations, but also in the text itself. Important definitions and groups of formulas are printed on a yellow background within a frame, thus being very easy to find. Examples are printed on blue and theorems on red. Red arrows indicate the progress of a more complicated calculation and marginal "roadsigns" prevent the reader from making such mistakes as dividing by 0. This profuse application of color takes all the awe out of the gray subject of mathematics.

As Hans Reichard, one of the two scientific advisors of the book, says in his Introduction, "The great achievements of technology in all its forms, which deeply influence the life of every human being, have led to a widespread recognition of the importance of mathematics. Everybody knows, or at least believes, that without mathematics these achievements in their entirety could not have come about. Interest in mathematics has therefore grown steadily, and with it the need for information about this science."

Plenty of this information is contained in concise and clear form in this most useful book. Its 42 chapters are divided into three groups: Elementary Mathematics; Steps toward Higher Mathematics; and Brief Reports on Selected Topics. Accordingly, the interested reader can very quickly find information about fundamental operations on rational numbers, or any other elementary topic such as algebraic equations, solid geometry and many others. From there the reader may proceed (if he wishes to use the book for his own mathematical education) to calculus, set theory or whatever strikes his fancy in the field of higher mathematics. Under selected topics one can find a range from number theory to such subjects as measure theory, calculus of variations and finally arrive at the foundations of mathematics. Of course, there are many more subjects treated in this valuable book than the few examples mentioned.

The main, and certainly very welcome, function of this book is to serve as a very well organized reference work. As such it will be most helpful to anyone working in the fields of engineering and technology, and thus the book will amply comply with its stated purpose. — *Pablo Weinschenk-Tabernero.*

Creating Special Effects for TV and Films

By Bernard Wilkie. Published (1977) by Hastings House Publishers, 10 E. 40 St., New York, NY 10016. 158 pp. Illus. 5½ × 8½ in. Softbound. Price $8.95.

This is one of the *Media Manual* series, and it marks a departure from both the style and the content of the previous books on special effects. It is concerned with both film and videotape production, and it covers a very broad spectrum of effects in a very concise manner. A brief comparison with three earlier works — *Special Effects in Motion Pictures,* by Frank P. Clark (SMPTE, 1965), The *Technique of Special Effects Cinematography,* by Raymond Fielding (Hastings House, 1965), and *The Technique of Special Effects in TV,* by Bernard Wilkie (Hastings House), is in order.

The three earlier works are all much larger, more detailed, and are profusely illustrated with diagrams, photographs of the studio setups, and production stills showing the final effect on the screen. Each book has a different emphasis. Fielding devotes much space to laboratory work — camera mattes, opticals, travelling mattes, etc., while Clark concentrates on effects made in the camera and the manufacture and use of props, with a big section on pyrotechnics. None of these books cover television.

On the other hand, the present volume, despite its smaller size, has a much broader scope than the other two, and manages to pack in many subjects not covered in them. It is also more current, and reflects the present state of the art.

The book includes an extremely wide range of topics ranging from animation and stop-motion to electronic techniques such as chroma key. It also covers optical devices on the set; miniatures; vacuum-forming; manufacture and handling of many kinds of props; atmospheric effects; and a large variety of pyrotechnic and bullet-hit effects, among others. There are in fact 138 different headings, and each one covers several related procedures. The format limits each heading to one page of text, facing a page containing several pertinent diagrams. There are no photographs or production stills. This format strives for the essentials, and it establishes the fundamental principles and the general methods underlying the different effects, while omitting many specific operating details. For example, miniatures, models, and model ships in tanks, are covered under five different headings — but the formulas and calculations needed to determine the degree of overcranking of the camera required to make the motion appear normal are not given.

Mr. Wilkie's book is a valuable contribution for its encyclopedic scope and clarity of presentation. It contains many ingenious solutions to the problems of special effects and trick photography and should be in the library of every television, motion-picture and still photographer having any interest in these areas. — *Murray Duitz,* Consultant, Hofstra University, Hempstead, NY 11550.