

## BOOK REVIEWS

X-RAY DIFFRACTION TABLES BY J. H. FANG AND F. DONALD BLOSS. Southern Illinois University Press, Carbondale, 1966. \$12.75.

The previously available tables of interplanar spacings as a function of  $2\theta$  for various wavelengths were somewhat lacking in convenience. Some interpolation and reference to other listings was frequently necessary and this was more than a little inconvenient when a rapid and accurate interpretation of results was desired.

These new tables are set up so that  $d$ -values are available in increments of 0.01 of  $2\theta$ , with an individual page covering a spread of 0.50 of  $2\theta$ , and with pages headed by the range of  $2\theta$  covered, rather than by page number. For a given value of  $2\theta$ , interplanar spacings are listed for Cu, Fe, Mo, and Cr radiations with separate values for  $K\alpha_1$ ,  $K\alpha_2$ , and  $K\beta$ . In addition the spacing for  $L\alpha_1$  for W radiation and the value of  $\sin^2 \theta$  for the calculation of  $Q$  values are listed.

The listed values generally eliminate the necessity for interpolation, and in addition provide interplanar spacings for a given value of  $2\theta$  for several wavelengths at the same reference point. We have found the tables to be very useful. Their added convenience should make this book a standard laboratory reference where similar tables have not been independently prepared.

DONALD R. PEACOR  
*University of Michigan*

X-RAY ANALYSIS PAPERS EDITED BY WILLIAM PARRISH. Centrex Publishing Company, Eindhoven, 1965, xi+310 pages. \$7.00.

This book is a collection of some twenty-four of the papers published from the Philips Laboratories, largely on aspects of X-ray diffraction related to instrumentation. It represents an expansion over the fifteen papers originally in "Advances in X-ray Diffractometry and X-ray Spectrography", with the exception of some deletions. The papers in this work are separated under the headings X-ray Powder Diffractometry (11 papers, with two added relative to the earlier version), X-ray Spectroscopy (7 papers, with 4 additions) and Counter Detectors (6 papers, with 4 additions).

The papers in this volume were chosen for readings in the Philips X-ray Schools. *X-ray Analysis* is meant to be the companion volume to *Mathematical Theory of X-ray Powder Diffractometry* by A. J. C. Wilson, however. As mentioned in the preface of the latter text, the combined subject matter of these works is designed to give a unified coverage of X-ray diffractometry, with *X-ray Analyses* concerned with the more practical experimental aspects, and A. J. C. Wilson's book covering the theoretical background material.

Information relating to counting statistics, counter tubes, diffractometer instrumentation design, monochromatization and a host of other problems relating to diffractometry is in large part scattered through the literature, and a unified description of this material is needed. In that the published work of the Philips Laboratories has been largely definitive in this field, the collection of papers in *X-ray Analysis* provides such an integrated approach. It does not do this, however, in that other literature is not included except through the usual references. The separate papers were not designed to mesh in a comprehensive way, and some of the descriptions of equipment and methods have been superseded by more recent work.

Although an integrated textbook approach to the subject-matter would be desirable, this apparently was not the aim of the editor, and in no way detracts from the primary usefulness of the book in bringing together that selected literature of the Philips Labora-

ories covering so many definitive aspects of x-ray diffractometry. This book is valuable in that it does bring this reference material under one cover.

DONALD R. PEACOR  
*University of Michigan*

AN INTRODUCTION TO THE ROCK FORMING MINERALS BY W. A. DEER, R. A. HOWIE, AND J. ZUSSMAN. John Wiley & Sons, Inc., New York, 1966, xii+528 pages, \$11.00.

Mineralogists are familiar with the five-volume work (1962) by these authors on *The Rock Forming Minerals*. Students will be happy to find this condensation available, but must not depend upon it too heavily, for much important data that they need on some of the minerals has been cut.

The book was produced specifically to serve as a textbook for university students, and it certainly constitutes the basis for a good course, as it is a good condensation of the five-volume work; curiously, about a dozen minerals either briefly mentioned or actually omitted from the larger work are to be found here treated in independent sections. These include spurrite, eudialyte, lavenite, aenigmatite, etc., and their inclusion is a surprise that rather emphasizes the rapid changes taking place in mineralogy.

Typical sections under the description of a single mineral are a general paragraph, structure, chemistry, optical and physical properties, distinguishing features, paragenesis and references—the same as in the larger work. Chemistry and references are the sections that have been most reduced, with serpentine, seven and four pages, respectively, in the 1962 work, but two pages and eleven lines respectively, in the present one. The result is good provided that the student is aware that more details exist in a readily available reference.

Condensation has changed the emphasis away from the physical chemistry and thermodynamics of the 1962 work to a more conventional descriptive mineralogy textbook in the abridgement, making the shorter book definitely less useful at the level of graduate students' instruction, and quite unsuitable for research. The change is likely to produce mixed reactions with those who may use both works but will probably be welcomed heartily by the lower-level students who are not prepared to use the larger work.

HORACE WINCHELL  
*Yale University*