scintillation counters, counting statistics and the use of monitors. Non-dispersive analysis and the use of multichannel pulse height analyzers are not taken up.

The fourth chapter on the resolution of X-rays into a spectrum contains descriptions of various geometries using crystal monochromators to disperse the spectrum in the region up to 20 Å. Table 4 lists crystal monochromators, *d*-spacings (some to 5 decimals for crystals such as gypsum and muscovite) and relative intensities which are not always in accord with other published observations (*e.g.* NaCl (200) = 120, quartz ($10\bar{1}1$) misprinted ($10\bar{1}0$) = 35 whereas in practice they are about equal). Other important monochromators such as silicon, KDP, ADP, the stearates, *etc.* are not listed. Only a few pages are devoted to the electron microprobe.

The fifth chapter on the treatment of experimental results takes up such diverse topics as the recording distortion caused by time constant and scanning speed, and the use of Fourier series to correct the observed profiles. Chapters IV to VIII describe the basis of qualitative and quantitative analysis, the use of internal and external standards and a short section on measuring the thickness of coatings. Very little is given on such important practical problems as preparing specimens and calibration standards and the multitude of technical details that the user must know to be a successful analyst. The last chapter describes absorption analysis.

The book is written from the viewpoint of a physicist and the serious reader will welcome the author's wide use of mathematical methods to provide a basic understanding of the descriptive matter. The reviewer found these descriptions to be interesting and helpful.

Perhaps the most serious criticism is that the book is out-of-date. The instrumentation and methods described were published before the mid-50's and a few supplemental references (up to 1960) were added after the main text was completed. Important key papers published in the 50's are not included while short relatively unimportant papers, often superseded by later publications of the same authors, are listed. For example, the widely-used X-ray fluorescence spectrograph with flat crystal and Soller slits developed by Friedman and Birks is illustrated by their first instrument published in 1948.

References to Russian publications are extensive. However, the practical chemical analyst will still have to search the literature to find the various methods which have been developed for specific types of analyses. The availability of such books as Liebhafsky *et al.* on absorption and emission methods (1960), Cosslett and Nixon on X-ray microscopy (1961), the extensive paper by Sandström in Vol. 30 of *Encyclopedia of Physics* (1957), the several books containing papers presented at international conferences edited by Cosslett, Engström and Pattee, the series of books on the annual proceedings of the Denver meetings entitled *Advances in X-ray Analysis, etc.* should be studied to obtain a good working background in the subject (these books should be considered for translation into Russian). The printing and illustrations are good, the price reasonable, relatively few misprints were found and the translation is good.

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Diffraction of X-rays by proteins, nucleic acids and viruses. By HERBERT R. WILSON. Pp. iv + 137. London: Edward Arnold (Publishers) Ltd, 1966. Price 30*s*.

Compressed between the covers of this little book are the fundamental concepts of molecular structures, the basic principles of X-ray diffraction techniques and a description of the current state of knowledge about biologically interesting structures. The author has, with reasonable success, presented a thorough survey of the application of X-ray diffraction methods to the study of the structures of proteins, nucleic acids, nucleoproteins, and viruses. The result is definitely a textbook to accompany a course of lectures. Understanding this book without concurrent instruction or additional reference material would probably prove difficult for a beginner.

Although the author has not fully related his discussions to the excellent illustrations, a good student should have no difficulty in comprehending their significance. A section of some 200 references is included. This volume which transmits much valuable information in a readable manner will certainly be of interest to all students of molecular biology.

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Thermoelectric properties of semiconductors. Édité par V. A. KUTASOV, traduit du russe par A. Tybulewicz, Pp. 109, 84 figures. New York: Consultants Bureau, 1964. Price $17.50.

Ce recueil contient 23 articles d'auteurs soviétiques. Quelques uns ont été présentés à la première conférence sur la thermoélectricité (1960) et la plupart l'ont été à la seconde (date non précisée). Ils ont été publiés en 1963 en russe.

Outre une mise au point sur le spectre d'énergie des porteurs dans les matériaux thermoélectriques, on trouve des travaux concernant la description de nouveaux matériaux, les problèmes d'élaboration pour assurer l'homogénéité et la stabilité des composés. L'utilisation pratique des méthodes de mesure de la résistivité et du pouvoir thermoélectrique est décrite et discutée. Enfin, plusieurs auteurs traitent de l'application des propriétés thermoélectriques à la production d'énergie électrique ou à des dispositifs de refroidissement divers.

Un index permet de repérer rapidement les sujets abordés.

Il ne s'agit évidemment pas d'un traité systématique sur les phénomènes thermoélectriques dans les semi-conducteurs. Mais ce recueil peut donner aux physiciens et aux ingénieurs d'utiles informations sur une variété de problèmes, principalement technologiques, récemment étudiés dans ce domaine.

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