

a Conference on Accuracy in X-ray Analysis, to be held in London on 12 and 13 November 1964. There will be sessions on accuracy of structure-factor determination, accuracy requirements in structure analysis, and accuracy in powder techniques. In addition to invited papers, there will be an opportunity for presenting short contributed papers.

Further details and application forms may be obtained from the Administration Assistant, The Institute of Physics and The Physical Society, 47 Belgrave Square, London, S.W. 1, England.

### Quadratic Functions for Copper and Iron Radiations

G.V. Gibbs and R. M. Lewis have prepared tables of  $4 \sin^2 \theta / \lambda^2$  for Cu  $K\alpha$ , Cu  $K\alpha_1$ , Fe  $K\alpha$ , and Fe  $K\alpha_1$  radiations at intervals of  $0.01^\circ 2\theta$ . These tables are available free of charge from the United States Bureau of Mines, 4800 Forbes Avenue, Pittsburgh, Pennsylvania 15231, U.S.A., under reference numbers IC8071 and IC8072. The tables give six decimal places, and are reproduced photographically from the computer output.

### Books Received

*The undermentioned works have been received by the Editors. Mention here does not preclude review at a later date.*

#### Recovery and recrystallization of metals.

Edited by L. HIMMEL. Pp. x+389. New York: Wiley, 1963. Price 150/-.

This book contains eight papers presented at a Conference on the Recovery and Recrystallization of Metals held in New York on 20 and 21 February 1962. The papers deal with point defects in deformed face-centred cubic metals; internal energy associated with recovery and recrystallization; grain-boundary migration (two papers); recovery, recrystallization and grain growth in aluminum (two papers); annealing of high-purity iron; and annealing of silicon-iron single crystals. There are many micrographs (both light and electron), and some use is made of X-ray diffraction and X-ray reflexion microscopy.

The book is published under the sponsorship of the American Institute of Mining, Metallurgical and Petroleum Engineers. It is well printed, well illustrated, and contains an extensive subject index. The discussion following the papers is reported for seven of them, and the whole book forms a valuable review of recent progress in its field. This is particularly true of the papers on the first three topics mentioned.

#### Précis de métallographie appliquée. By A. ROOS.

Pp. xx+456. Paris: Dunod, 1963. Price 68 F.

The object of this book, now in its second edition, is to provide an essential understanding of the properties of metals in terms of the simpler concepts of crystal structure, chemistry and physics, as well as providing a practical manual for the study of metals. The first chapter progresses rapidly through the typical metal structures; glide, cold-work, recovery and recrystallization, deformations; and ionic, covalent, and metallic bonding; to end with discussions of solid solutions, electronic theory of metals, interstitial structures, and atomic radii. The second chapter applies the notions of

entropy, free energy, dislocations, and activation energy to problems of precipitation and ageing. These two chapters would appear to be useful to students preparing for an examination, but contain little of fundamental importance.

The remaining ten chapters are concerned with more practical metallurgical properties, including micrography and mechanical testing, non-destructive testing, and the use of radioisotopes. The treatment of iron-carbon alloys is particularly extensive.

#### Einführung in die Kristalloptik. By EBERHARD BUCHWALD. Pp. 128. Berlin: Walter de Gruyter, 1963. (Sammlung Göschen, volume 619/619a.) Price DM 5.80.

The fifth edition of a very useful book for students. The four parts deal respectively with double refraction and polarization; interference phenomena in polarized light; crystals exhibiting optical activity and absorption; and lattice optics of the visible spectrum.

#### Stratigraphy and sedimentation. By W. C.

KRUMBEIN and L. L. SLOSS. Pp. xvi+660. San Francisco and London: Freeman, 1963. Price 65/-.

The first edition of this book was published in 1951. The structure and emphasis of the first edition have been retained, but many of the chapters are completely rewritten, and two have been added. The topics include stratigraphic procedures, paleontology, relationships, maps, and analysis; and sedimentary rocks, processes, environments, and tectonics. The application of automatic data processing by electronic computer is touched on in Chapter 12.

The book will be of interest to geologists rather than to crystallographers.