

### 9. *Crystallographic computing*

Edited by F. R. Ahmed (Ottawa, Canada). This book is the Proceedings of the International Summer School on Crystallographic Computing which was held in Ottawa (August 1969) under the auspices of IUCr. It was published by Munksgaard, International Publishers Ltd., Copenhagen, Denmark.

### 10. *Early papers on diffraction of X-rays by crystals*

Edited by J. M. Bijvoet (Utrecht), W. G. Burgers (Delft) and G. Hägg (Uppsala). The book was published for the IUCr by Oosthoek, Domstraat 11, Utrecht, Netherlands.

### 11. *Travaux pratiques de cristallographie*

By P. Perio, Université de Paris XI, France. A series of experiments, each requiring about eight hours and making

use of standard equipment, has been set up for students in X-ray crystallography and thoroughly tried. All enquiries should be sent to Professor P. Perio, Cristallographie et Physique Matériaux, Bât. 493, Université Paris XI, 91 Orsay, France.

### Supplement to *Acta Crystallographica*, Section A

The Abstracts of the Communications to the Ninth International Congress of Crystallography to be held in Japan in August/September 1972 were published as part S3 of *Acta Crystallographica*, Section A in May 1972, and are being distributed free of charge not only to subscribers to Section A, but also to those subscribers to Section B and to the *Journal of Applied Crystallography* who do not subscribe to Section A.

## Book Reviews

*Works intended for notice in this column should be sent direct to the Book-Review Editor (M. M. Woolfson, Physics Department, University of York, Heslington, York YO1 5DD, England). As far as practicable books will be reviewed in a country different from that of publication.*

### Preparation and properties of solid state material. Vol. 1.

Edited by ROBERT A. LEFEVER. Pp.v+284. New York: Marcel Dekker, 1971. Price \$18.50

This book is intended to be the first of a series of volumes about different aspects of solid state materials, such as ceramics, metals, composites both in single crystal and polycrystalline form. It is not a general handbook but treats only three very special aspects of crystal growth each written by a specialist. These chapters are:

1. *A Review of the Preparation of Single Crystals by Fused Melt Electrolysis and Some General Properties.* By W. KUNNMANN. Pp. 32.

After an introduction about the experimental methods, a review of the preparation of sodium and potassium tungsten bronzes, of vanadium spinels, some metal borides, carbides and silicides, phosphides, sulphides and arsenides is given. 72 references are listed.

2. *The Role of Mass Transfer in Crystallization Processes.* By W. R. WILCOX. Pp. 99.

This is a more general chapter dealing with the mechanism and theory of different processes under the subject:

growth from solution and vapour. The diffusion coefficients of many substances in solution are given as well as the surface diffusion coefficients of metals on different substrates. Phenomena such as constitutional undercooling and dendritic growth are briefly treated. (516 references).

3. *Exploratory Flux Crystal Growth.* By A. B. CHASE. Pp. 79.

This section deals with growing techniques in fluxes melting between 500 and 800°C. Detailed data of e.g. an Al<sub>2</sub>O<sub>3</sub> crystal growth are given. Again some growth phenomena are mentioned, e.g. spiral growth from screw dislocations, striations and habit modifications. It is emphasized that the theory is far from complete. (46 references).

The book is intended for both beginners and experienced crystal growers, material scientists and solid state physicists. The beginner in general would do better to read a textbook; this book will only be useful to him and his experienced colleague if he is interested in the specific methods and materials mentioned. Especially in the last two chapters, most of the theories on crystal growth are assumed known. One should take the volume for what it is: a collection of

three good review papers of rather specific nature.

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**Physics of thin films. Volume 6.** Edited by M. H. FRANCOMBE and R. W. HOFFMANN. Pp. xiv + 370. London: Academic Press, 1971. Price £9.10, \$19.50.

This is the sixth volume of a set of reviews of various aspects and applications of thin solid films. It contains reviews on Anodic Oxide Films by C. J. Dell'Oca, D. L. Pulfrey and L. Young; Size Dependent Electrical Conduction in Thin Metal Films and Wires by D. C. Larsen; Optical Properties of Metallic Films by F. Abelès; Interactions in Multilayer Magnetic Films by A. Yelon and Diffusion in Metallic Films by C. Weaver. This is a mixture of subjects so distributed that any particular reader is unlikely to be interested in more than one or two. Thus, this book is more likely to be found on the shelf of a large library than in a private collection.

The longest review is that by Yelon who describes the theory and experimental study of various forms of coup-