NEW BOOKS

LABORATORY HANDBOOK OF CHROMATOGRAPHIC METHODS, edited by O. Mikes (Van Nostrand; 1961 Czech, 1966 English edition; 434 p.; $15).

This book written by a team of Czechoslovakian experts in chromatography contains an enormous amount of valuable information for those working with any of the chromatographic methods. It offers many practical pointers on how to proceed in the laboratory, gives the source of needed materials, collects in convenient tabular form much helpful data, and includes the experimental conditions for a wide variety of specific separations. The approach throughout is practical rather than theoretical.

Following an introduction to the chromatographic concepts and its historical development the chapters deal with partition chromatography, adsorption chromatography, thin-layer chromatography, ion-exchange chromatography, gel-filtration, mechanization and automation of column chromatography, and gas chromatography. Though not a chromatographic method, a chapter on electrophoresis is also included. The chapters contain many photographs and line drawings that complement the text well and conclude with an extensive group of references. In the appendix is given a list of books classified according to chromatographic method.

Paper chromatography is given fuller treatment by far than any of the other methods; almost one-third of the book is devoted to the subject. Here the authors detail in abundant fashion man's success in developing equipment and procedures for separating a wide variety of compounds.

If there is a place for disappointment in this volume, it would be in the comparatively small amount of space given to the more recently established chromatographic methods. For example, the consideration given to thin-layer and gas chromatography is not sufficient. Working procedures and applications in these two areas are very much incomplete. The latest reference cited after the discussion on gas chromatography is 1964.

However, in general the authors give a comprehensive survey of chromatography laboratory practice. The book can surely be recommended to any one working with the separation of individual components from mixtures and should prove useful to the expert chromatographer as well as the beginner.

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THE ROLE OF GRAIN BOUNDARIES AND SURFACES IN CERAMICS, edited by W. W. Kriegel and H. Palmour III (Plenum Press, New York, 631 p, 1966, $22.50).

This is Volume 3 of the Materials Science Research series and represents the proceedings of a conference held in November 1964 at North Carolina State University. The theme of the conference was to examine new findings, particularly those which advance the level of understanding of surfaces and grain boundaries in ceramic materials and lead toward modification and enhancement of the useful properties of such materials through control of boundaries and surfaces. With a theme as ambitious as this in an area where basic understanding is very thin it is not surprising that the book falls short of its promise.

In common with most conference proceedings, this book greatly lacks continuity. The reviewer does not consider this a failure on the part of the editors, but rather a reflection of the impossibility of molding 31 papers by 57 authors into a coherent manuscript; no amount of editing could change the fact that the book represents the results of 31 independent reseach projects. Accepted as such, this volume presents a wealth of current results which should prove of great value to people working in the field of ceramic grain boundaries, or to people outside the field who are willing to develop their background by consulting the references cited by each paper.

The book is divided into five parts, one dealing with kinetic processes, another with electromagnetic behavior, and the remaining three with mechanical properties associated with grain boundaries. Part I includes studies of oxygen diffusion by proton activation, surface diffusion, precipitation at grain boundaries, and phase boundary motion. Part II contains papers which cover the effect of surfaces and grain boundaries on electrical conductivity, charge storage, color center production, and optical transmission in ceramics. Part III deals with deformation as related to grain boundaries and includes several papers describing work on bicrystals with well-defined boundaries. Part IV is concerned with strength and thermomechanical behavior as related to grain boundaries and includes both theoretical and experimental papers. Part V considers the very important area of surface and environmental contributions to mechanical behavior. The six papers constituting this last part clearly demonstrate that the mechanical properties of a practical ceramic are as sensitive to the surface condition as they are to the intrinsic properties of the bulk.

As would be expected, the quality of the work represented by the 31 papers constituting this book varies greatly: some report on completed projects while others describe research in progress. Although much of the work presented in this book has also been published in various technical journals, a valid purpose is served in bringing these papers together under one cover. The extreme technological importance of the subject matter more than compensates for the various shortcomings, and the book is recommended for anyone interested in the physical properties of ceramic materials.

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Zettlemoyer Edits New Journal

A. C. ZETTLEMOYER (1948) vice president for research at Lehigh University, has been named as the only American among three editors of a new science journal. The quarterly, named "Advances in Colloid and Interface Science," is published by Elsevier Publishing Company, Amsterdam, The Netherlands. The other two editors, both from The Netherlands, are J. T. G. Overbeek and W. K. Prins.

Erratum

In the December 1966 *Journal*, the book review "Current Trends in the Alkaline Neutralization of Edible Oils," by P. J. Seip, listed the publisher incorrectly as the Rotterdam Press. The correct name and address for the company is Trio Hillegersberg, Rotterdam (7), Gustoweg 51, Holland.

The September *Journal*, page 448A, lists Eric Jungermann of Armour & Co., as chairman of the Pocono Detergent Short Course, June 25–27, 1967. The chairman for this AOCS Short Course was J. F. Gerecht, and our apologies are given here for this error in reporting a most successful AOCS endeavor.