Leitfaden der Gewebezuchtung

Von Dr. Jaroslav Řeřábek und Dr. Emmy Řeřábek. Pp. xiv+370. (Jena: Gustav Fischer Verlag, 1960.) 64·90 D.M.

IN this book the authors aim to give not only most techniques of tissue culture but also their application to various research problems, for example, virology, and methods for the evaluation of experimental results. The part dealing with methods of tissue culture can be recommended to the qualified worker who wants to add the method to his research tools. Most cell-culture techniques from the now largely superseded coverslip method to modern cloning techniques for avian, and normal and malignant mammalian cells, as well as techniques to grow amphibian, insect and plant tissues, are well covered. The organ culture method is, on the other hand, dealt with comparatively briefly. Instructions on how to build, equip and run a tissue culture laboratory, including the preparation of natural and chemically defined media, are given in great detail, as well as some histological techniques and some biochemical methods for metabolic studies of cell cultures. The part dealing with the application of the method is not on the same high level. It is often too cursory; for example, the paragraph on radiobiology is much too short, not up to date and would have been better omitted in its present form. Another drawback of the book is that the references are often incomplete. In spite of this it can be recommended for its detailed descriptions of culture techniques and also for the useful addendum dealing with statistical evaluation of results.

I. Lasnitzki

Progress in Inorganic Chemistry

Vol. 2. Edited by F. Albert Cotton. Pp. vii+399. (New York: Interscience Publishers, Inc.; London: Interscience Publishers, Ltd., 1960.) 79*s*.

IT is refreshing to see this volume largely devoted to conventional inorganic chemistry, although the statement on the cover: "Inorganic chemistry is the science of . . . all wholly or partially inorganic substances", may still leave some readers in doubt as to the meaning of this term.

George covers the broad topic of halides and oxyhalides of the elements of Group V*b* and VI*b* in a comprehensive review with 437 references. Points noted by me were the reference to $PCl_4^+ICl_2^-$ (*J. Amer. Chem. Soc.*, 74, 6151; 1952, would have been more appropriate) and omission of the interesting work by Kolditz and Hass on $^{36}Cl^- - PCl_5$ exchange. Fluorine compounds of the transition elements was written with regard to the earlier review by Sharpe and a discussion on experimental techniques is included. It is unfortunate that Hg(I) compounds are referred to as univalent. A valuable survey by Asprey and Cunningham on unusual oxidation states of some actinide and lanthanide elements is in the form of several short articles. A concise and interesting article on radioactivation analysis in inorganic geochemistry points out that most elements occur naturally with abundances below the sensitivity limit for detection by emission spectroscopy. Various methods of detection are discussed.

Metal alkoxides by Bradley forms a survey of a more organic nature and clearly indicates the need for structural work. There is also a rather long review by Diamond and Tuck on the extraction of inorganic compounds into organic solvents. Finally, a brief article by Ballhausen on intensities of spectral bands in transition metal complexes does not seem to fit happily into this series.

This volume is a valuable, well-referenced addition to the literature of inorganic chemistry, and the editor is to be complimented on the topics selected. The number of misprints appears to be greater than in Volume 1, but specific to certain articles. None of the misprints is likely to lead to confusion.

I. R. Beattie

Launching and Managing O and M

By G. E. Milward. Pp. xiv+94. (London: Macmillan and Co., Ltd.; New York: St. Martin's Press, Inc., 1961.) 15*s*. net.

THIS is a practical handbook for company directors and managers and is closely related to *Organisation and Methods* published about two years ago and edited by Mr. Milward. It tells its readers how to set up and manage an organization and methods department, and does this very well, probably because the experience of some fifty companies has been used as the basis for much of the advice given.

In a foreword, Mr. J. E. Wall, managing director of Electrical and Musical Industries, says "Organisation and Methods, like all management services, must be 'tailor-made' to the needs of the company". This is very true, but Mr. Milward's book will provide the basic pattern which determines much of the shape and size of the finished garment.

Reflections on the Motive Power of Fire

By Sadi Carnot. With papers on the "Second Law of Thermodynamics" by E. Clapeyron and R. Clausius. Pp. xxii+152. (New York: Dover Publications, Inc.; London: Constable and Co., Ltd., 1960.) 1.50 dollars.

EVERYONE is aware of the value of referring back to original papers in science but regrets that the rate of present-day activity leaves little time for doing so. If the difficulty of translation from a foreign language is added, the effort becomes intimidatingly large. We should therefore be grateful to those who first conceived the idea of this book and to the translators who have carried out their work so well.

The main part of the book consists of translations of four famous papers in thermodynamics, by Carnot, Clapeyron and Clausius. The first and most important—and incidentally the only one that Carnot wrote—contains his great idea of the thermodynamic cycle; no true physicist can fail to feel thrilled by meeting the first development of this idea, which has had so much influence on physics as a whole.

Carnot's paper was not written for the pure physicist; he pointed out that his conclusions would have to be tempered by engineering principles and by the economics of power production. The other papers are more academic and mathematical. Carnot in 1824 believed that heat was a fluid, but Clapeyron in 1834 and Clausius in 1850 had accepted it as a form of energy. Using Carnot's idea of the cycle, they introduced new forms of mathematical treatment of thermodynamics which now provide the basis for all our text-books.

This is definitely a teacher's book, and should be read by every university teacher of thermodynamics. But it should be kept out of the hands of all but the very best students.

H. Lipson