

scriptions of high energy scattering processes in a final chapter. Decay correlations are touched on, but density matrix methods are not discussed in detail.

Granted that any treatise of reasonable size on high energy scattering must have its limitations, the author has given an interesting overall picture of the field.

V. BARGER

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Coordination Chemistry

Mechanisms of Inorganic Reactions. A Study of Metal Complexes in Solution. FRED BASOLO and RALPH G. PEARSON. Wiley, New York, ed. 2, 1967. xiv + 701 pp., illus. \$17.95.

It has been nine years since the first edition of Basolo and Pearson's book. In the interval there has been an extremely rapid growth in studies of the mechanisms of coordination reactions. The area of investigation previously bounded largely by the substitution reactions of Co(III) and Pt(II) plus a few oxidation-reduction systems has expanded to take in a multitude of chemical systems including many previously considered immeasurably fast, many that no one previously bothered to examine, and many that were previously unknown. As the authors point out, the number of publications per month in kinetics and mechanisms of inorganic chemical systems has quadrupled since 1957. A remarkable number of recent Nobel Prize laureates, including Eigen, Porter, Norrish, Zeigler, Natta, Mulliken, and Calvin, have made contributions of direct or indirect importance to this area. The last decade has been perhaps the most exciting period in coordination chemistry since the time of Werner.

Clearly the authors had a tough job in preparing a new edition of this book. A minor revision would have been completely inadequate, and indeed the second edition is greatly expanded and has many new features. The material has been reorganized and extensively updated. Although the resulting book probably will not transmit an aura of excitement to a student new to the subject, it does bring the admiration of this reviewer, who has found it highly readable and packed full of vital, well-documented, and current information.

At the time of their first edition

Basolo and Pearson were deeply engaged in a not always pleasant scientific dispute with Ingold, Tobe, and others regarding the nature of Co(III) substitution reactions—in particular, the role of hydroxide ion was in question. Were the reactions S_N2 or S_N1CB ? As recent converts and enthusiastic proponents of crystal field theory, Basolo and Pearson put considerable emphasis on this topic. These interests were strongly reflected in their book, and on these and other topics of controversy the authors did not hesitate to express their views. Undoubtedly their forthright viewpoints helped to stimulate additional research. Many of their earlier points were well made, and, as they mention in their new preface, it has not been necessary to modify greatly the ideas that were presented in the first edition. If any fault can be found with the new edition it would be the very occasional tendency of the authors to try too hard to defend their own position in areas where they have made important contributions, contributions which now are widely accepted, but where every phenomenon does not fit. There are so many new areas in which to pick arguments that it would be best in the absence of some new data or new insight to admit to some possible exceptions and save more space for new material. Indeed, for the most part this is done, and the new book has better balance and better perspective than the old one. Even the new sections on hard and soft acids and bases are written with admirable restraint, considering the involvement of one of the authors in this subject.

The second edition has expanded 65 percent in number of pages and appears to contain about 80 percent more textual material than the first. The illustrations are new and the presentation of the tables and graphs is much improved. The authors have done an extensive and impressive job of literature documentation, which is invaluable for those using the book as a research reference. Many parts of the book are remarkably current for a rapidly moving research area.

New chapters are included on the reactions of transition metal organometallics and on photochemistry. A sizable section on metal ion catalysis is almost all new, and new material is included on the theory of bonding, stereochemistry, hard and soft acids and bases, fast reactions, chelate mechanisms, ligand stereospecificity, and photoracemization. The chapter on oxidation-reduction reactions is greatly expanded, reflecting the research activ-

ity in this field. As before, the chapters on substitution reactions of octahedral and of square planar complexes dominate the book. This material is well presented and is valuable both in its collection and in its interpretation of research accomplishments.

In summary, the new edition by Basolo and Pearson is not only of considerable value to those active in research but because it is well written it also is quite appropriate for someone new to this area of chemistry. It is highly recommended.

DALE W. MARGERUM

*Department of Chemistry,
Purdue University,
Lafayette, Indiana*

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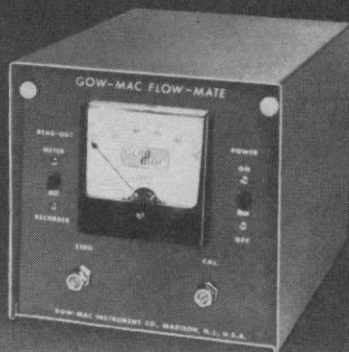
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Australian Inland Waters and Their

(Continued on page 924)

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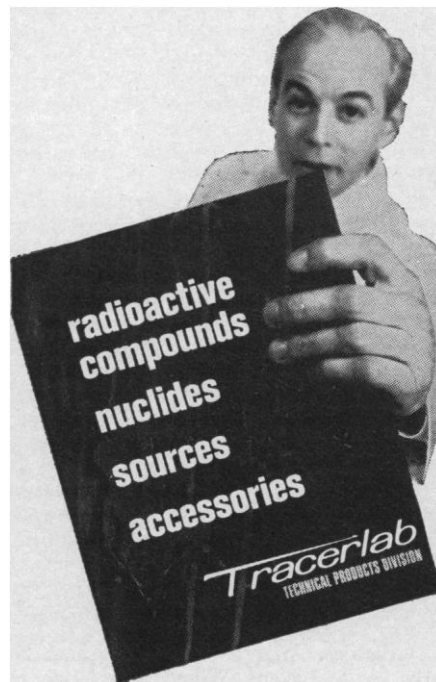
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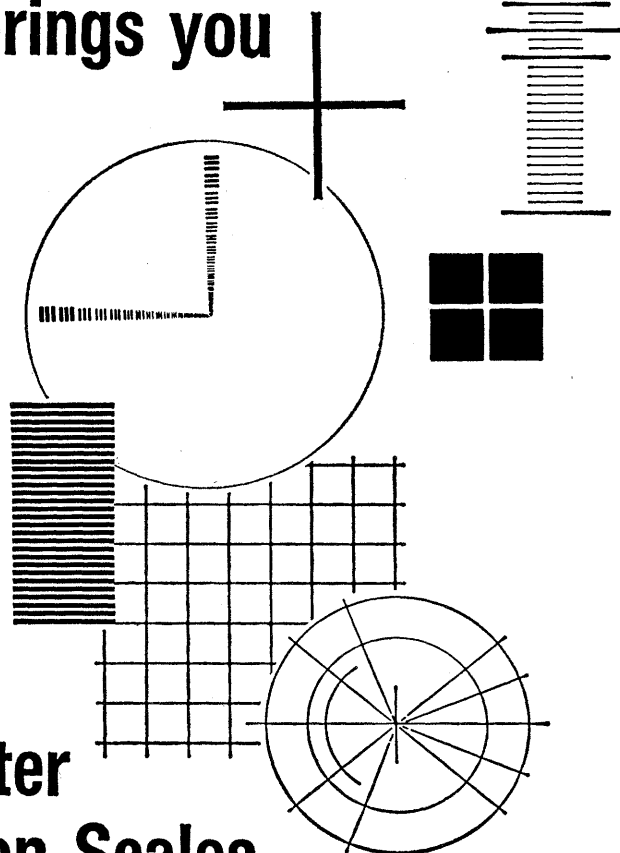
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Fleischmajer & Billingham: Epithelial-Mesenchymal Interactions

As editors of the 18th Hahnemann Symposium, Drs. Fleischmajer and Billingham have brought together an invaluable collection of information on the interactions of epithelial and mesenchymal cells. These types of interactions, called heterotypic, are critical in determining the ontogeny of numerous organs and tissues of the body. The symposium presents extensive analyses of these important processes *in vivo* and *in vitro* at both the cellular and molecular levels. The symposium thus has implications in the various medical fields dealing with the crucial biological problems of cellular differentiation and organogenesis.

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Edited by Raul Fleischmajer, Section of Dermatology, Department of Medicine, Hahnemann Medical College and Hospital; and Rupert E. Billingham, Department of Medical Genetics, University of Pennsylvania School of Medicine.

1968/approx. 354 pp./approx. 160 figs./\$15.75

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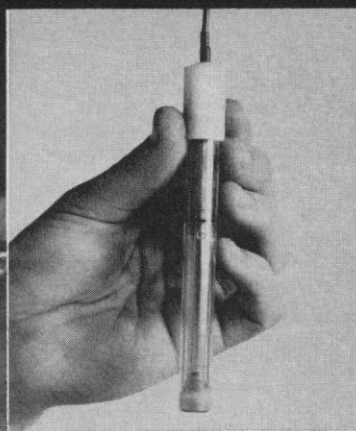
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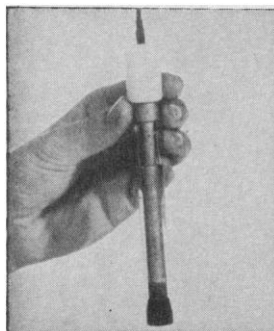


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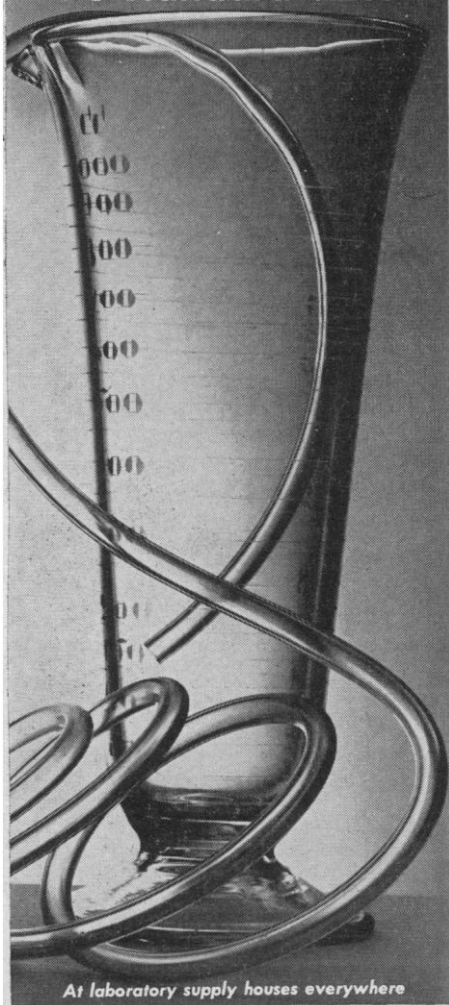
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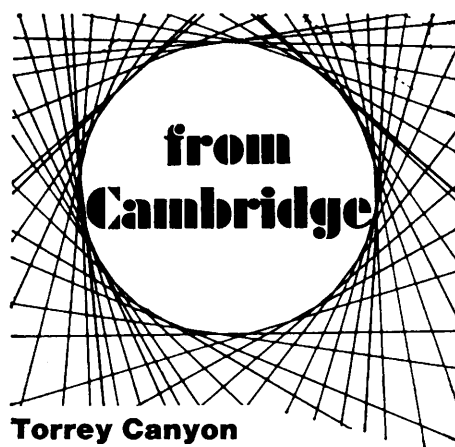
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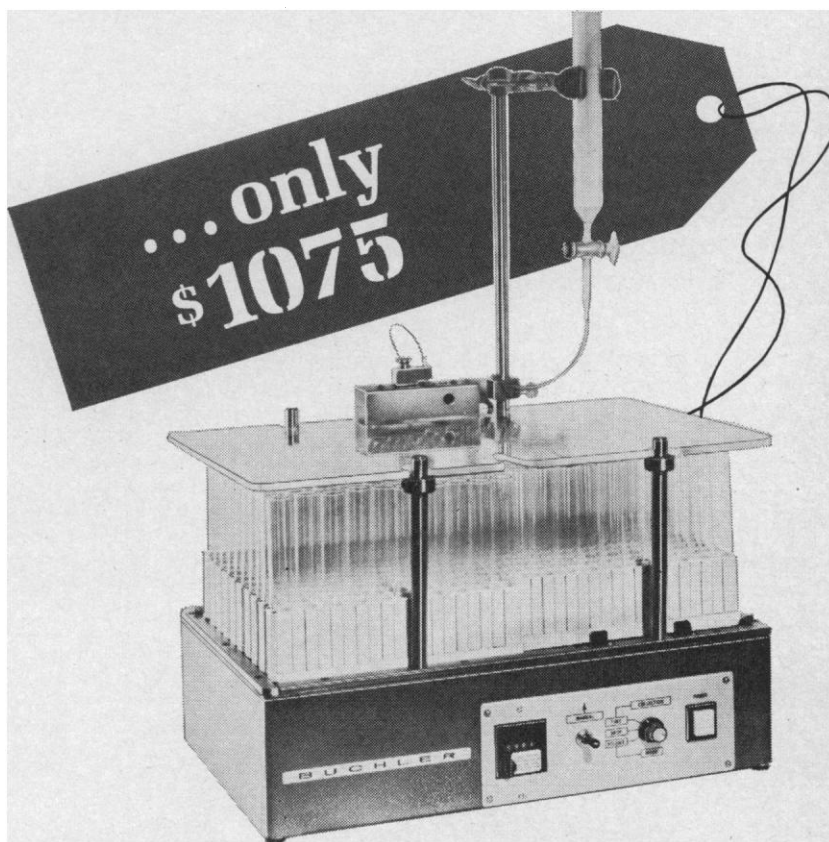
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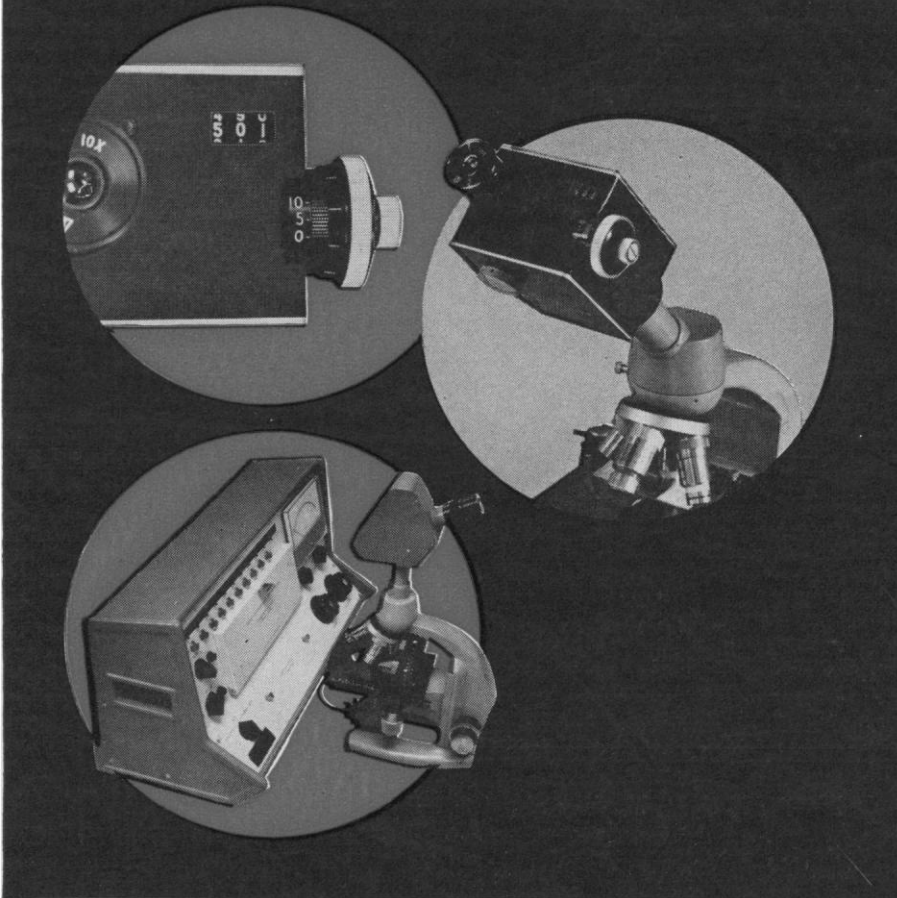
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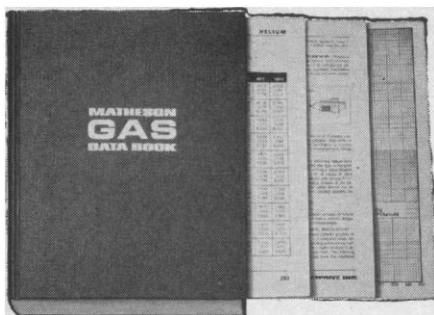


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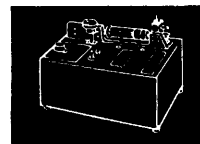
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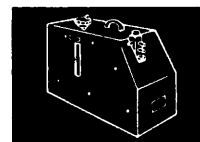
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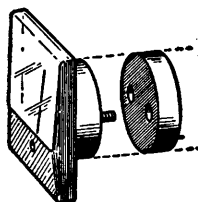
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