

### Chromatographic Reviews

Progress in Chromatography, Electrophoresis and Related Methods, Vol. 2. Edited by Michael Lederer. Pp. viii+195. (Amsterdam: Elsevier Publishing Company; London: D. Van Nostrand Company, Ltd., 1960.) 46s.

APPEARING about a year after the first, this second volume contains six articles. In a preview of gas-liquid chromatography (C. J. Hardy and F. H. Pollard), principles and techniques are dealt with and there are 600 references. Despite the vast literature on the subject, the authors have succeeded remarkably well in covering the essentials so adequately. Starch-block electrophoresis (H. Bloemendahl) is a comparatively short article which provides clear practical details and reviews applications of this important method. G. Biserte and associates write about the paper chromatography of dinitrophenyl amino-acids. This is a most satisfying article, for not only does it supply full data about solvent systems and  $R_F$  values but it also includes details of the preparation and properties of dinitrophenyl amino-acids and describes the dinitrophenylation of proteins and peptides with subsequent treatments for liberating and examining the labelled terminal amino-acids.

Flavonoid pigments are covered by J. H. Harborne, who deals clearly with the paper chromatography of the many substances belonging to this class. The article on human haemoglobin (H. K. Prins) is a most interesting survey of electrophoretic and chromatographic techniques which have been used with such striking success in the past ten years for demonstrating and isolating a large number of hitherto unknown haemoglobins. Finally, E. Hayek reviews a special kind of chromatography of inorganic substances based on adsorption and precipitation mechanisms. Like the first volume, all the articles are in English, and were originally published in the *Journal of Chromatography*. This second volume is full of interest, is up to date and maintains the high standards of its predecessor.

R. CONSDEN

### Review of Studies in the Flow of Information among Scientists

Vol. 1: Text. Pp. v+62. Vol. 2: Tables. Pp. ii+48. (Washington, D.C.: Bureau of Applied Social Research, Columbia University, 1960.) Available from the National Science Foundation, Office of Science Information Service, Washington, 25, D.C.

THIS review, which was commissioned by the National Science Foundation, is not a review in the ordinary sense. It is rather part of the raw material for such a review. The authors have assembled the statistical material of a number of reports on the flow of information to scientists under the different questions considered. They come to no conclusions. Their purpose seems to have been to leave to others the formulating of conclusions, and only to suggest where further work might be done. The documents will be of value only as an *aide memoire* to those who are planning further surveys.

The subject of the flow of information to scientists is undoubtedly important. So far, however, the efforts to understand this process have led mainly to the collection of curious information. This has resulted in very few measures for improving the situation. The report makes no serious effort to direct attention to what might be useful and what is

not. My own paper of 1948 (which is the earliest covered by the survey) is extensively quoted in the tables, although, so far as I know, it never led to any positive action except more surveys. My paper of 1958, which was a detailed survey of the use of serial literature in the Science Museum Library in 1956, is only referred to in one table. But this later paper was used to decide what literature in the Science Museum Library should be duplicated in the National Lending Library for Science and Technology.

Two important results on the flow of information to scientists which we in the Department of Scientific and Industrial Research Headquarters obtained are not mentioned at all. The first was the availability of Russian scientific literature in the United Kingdom in 1956; the second was the extent to which working scientists said they could read French, German and Russian. It matters not. The first result was mainly instrumental in starting the National Lending Library. The second assisted materially in the discussions which led to the starting of the Department of Scientific and Industrial Research's Russian translating programme. Let not the cynic say from this example that in this field "Useful results lead to action. Useless results lead to learned papers". The fundamental problem is going to become more serious as the scientific effort of the world increases.

D. J. URQUHART

### Some Problems of Chemical Kinetics and Reactivity

Vol. 1. By Academician N. N. Semenov. Revised and expanded by the author. Translated by Dr. J. E. S. Bradley. Pp. x+305. (London and New York: Pergamon Press, 1958.) 50s. net.

PROF. SEMENOV'S pioneering book on chain reactions was published more than twenty years ago, and since then there has been intense activity in the study of chemical kinetics, of which there is now extensive literature. In the preface the author states that he does not think the main problems are completely solved. The number of papers published since 1950, quoted in the references, is very large, and the subject has been brought up to modern publications so far as possible. The Russian work is fully covered, but the literature of all countries has been included and older work of importance finds its place. The treatment is critical, and when complete evidence is lacking or findings are contradictory this is pointed out.

The first part of the book deals with radical reactions in three main branches: unimolecular reaction, alternative univalent free radical reactions, and reactions of biradicals. The section on hydrocarbon oxidation reports recent work, including that of Shtern, which suggests that aldehyde formation is more important than peroxide intermediates, but it cannot be said that finality has been reached in this field.

The second and third parts deal with chain reactions. There is a critical discussion of the inhibiting effect of nitric oxide. The initiation and termination of chains on walls are considered from a new point of view, which is also involved in the discussion of heterogeneous catalysis. The appendixes deal with activation energies calculated by the London method.

The translation is very good, and the book reads as if it had been written in English originally. With the later volumes, the work is one which should be carefully studied by all physical chemists.

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