the Department of Scientific and Industrial Research, the Medical Research Council and the Agricultural Research Council, independently of, say, the Home Office. Hence the Colonial Office should, as was implied in the criticism of the Select Committee on Estimates, make it manifest that its administration is thoroughly competent to ensure the wise selection of targets and effective follow-up of results, and to command the confidence alike of its scientific staff and of those men of science who serve on its advisory bodies.

It may be recalled that the organization of the Colonial Office was reviewed in a debate in the House of Lords on October 24, when Lord Winster suggested the appointment of a Secretary of State for the Colonial African Empire. This suggestion met with little support, but, strangely enough, there was no reference in the debate to the one outstanding lesson offered by the vicissitudes of the East African groundnuts scheme and which, from the recent report of the Overseas Food Corporation, now appears to have been learnt, namely, the imperative necessity for a firm scientific basis for all such schemes, and for ample time for experimental investigation on the spot before large-scale commitments are incurred. It is to be hoped that the Select Committee on Estimates and the Advisory Council on Scientific Policy will not fail to look further into the points raised in the 1946–47 report. Before the next annual report on Colonial research appears, steps should be taken to establish beyond question the adequacy of the organization of the Colonial Office to deal with its scientific responsibilities, or, if the need be established, to strengthen it to discharge those responsibilities in a way which will command the full confidence of all those scientific workers in any way associated with the work.

PHYSICO-CHEMICAL CONSTANTS OF ORGANIC COMPOUNDS

Physico-Chemical Constants of Pure Organic Compounds

By Prof. J. Timmermans. (International Union of Pure and Applied Chemistry.) Pp. viii+693. (New York and Amsterdam : Elsevier Publishing Co., Inc. ; London : Cleaver-Hume Press, Ltd., 1950.) 95*s*.

PROF. J. TIMMERMANS has done a service to science in bringing together in one volume authoritative values for the main physical properties of a large number of substances in the realm of organic chemistry. Up to the present, it has often been a matter of doubt as to the most reliable value to choose from the many to be found in the literature and as to the accuracy of the value when chosen. These doubts need no longer exist, now that this volume is available.

The author is director of the International Bureau of Physico-Chemical Standards in Brussels and a member of the Committee of Physico-Chemical Data of the International Union of Pure and Applied Chemistry. As is stated in the preface, "The volume is among the fruits of a quarter of a century's activity of the International Bureau and combines the results obtained in their laboratories with those provided by a systematic harvesting of the whole of the chemical literature up to January 1st, 1950". But it is more than that, for it is the life-work, almost, of an expert in fine measurement whose steady enthusiasm has inspired the work. Prof. Timmermans is also the author of a book, "La Notion d'Espèce en Chimie" (Paris : Gauthier-Villars, 1928), in which he sets out the precautions necessary before a measured constant may be deemed reliable ; the standard of purity of the substance on which the determination is made is of first importance, and certain criteria of purity have to be satisfied. That work was brought up to date and translated by R. E. Oesper and published under the title "Chemical Species" (New York and London : Macmillan, 1940).

The present volume is not only useful because it provides in an accessible way reliable values of the physical properties of organic substances, but also because it directs attention to those details to which heed must be given if a measurement is to be of permanent value. Those who make use of the book for reference should be careful to read the sixteen pages of the introduction, which set out the rules employed to assess the accuracy and precision of the published values of constants and the influence of the system of units adopted. It is only in the light of the author's remarks in the introduction that the choice of the values in the tables will be understood and their reliability gauged. It is to be hoped that one result of the publication of this volume will be that the measurements recorded in the literature will in future be of a higher standard of reliability, and that so many will not fall outside the rules for incorporation in a future extended edition as have had to be discarded in compiling the present volume.

The object of the work is set out clearly in the introduction : it "records, as completely as possible, those physico-chemical constants of organic compounds which have been measured with sufficient care to warrant their acceptance as data established with a precision worthy of contemporary science". The author states that "in order to facilitate the use of this work we have been careful to reduce the results of different authors to the same system of units, where this has appeared to be useful". It is not always clear where this has been done, and whether the results of some of the older measurements quoted would not need correction to the international scale of temperature.

As to the scope of the work, owing to the lack of reliable data it is not possible to provide systematic tables of the chief physical properties of the compounds—such as density, boiling and freezing points, vapour pressures, viscosities, surface tensions, refractive indices, and thermal constants and their variation with temperature—but only those properties of each substance which meet the standards of reliability, and sometimes these are limited to only a few properties. Nevertheless, in the 607 pages of tables there is a wealth of highly useful data relating to hundreds of organic compounds. A full list of references is given at the end of the volume. This follows a short sketch of the history of the systematic investigation of the physical properties of organic compounds which began with the famous work of Kopp on molecular volumes. There is a formula index as well as a subject index, giving the names of the compounds and the number of the page on which the name appears. Reference, therefore, is easy.

This book will be of value to the research chemist, and libraries should possess it for reference.

A. C. EGERTON