

Wöhler who ultimately succeeded in 1827. Accordingly, Wöhler is generally given credit for the discovery, but in recent years Fogh has put forward a strong claim of priority on behalf of Oersted (1824-25), and has shown that Oersted's method of reducing anhydrous aluminium chloride with potassium amalgam and distilling off the mercury from the product can be made to give satisfactory results.

The origin of the important product kaolin is still somewhat obscure, although it is clear that kaolin results from the degradation of complex minerals, principally through the agency of carbon dioxide. Disintegration of potash felspar may have been effected in three different ways, namely: (1) by the pneumolytic and hydrothermal action of volcanic gases; (2) by the action of atmospheric carbonic acid; and (3) by the action of vegetable acids from decayed organic matter. According to R. Schwarz and R. Waelker, kaolin and laterite are not to be regarded as primary products of weathering, but rather as secondary compounds synthesised from the potash, alumina and silicic acid which are formed during the continuous hydrolytic dissociation of potash felspar. Such a theory would account for both the comparative scarcity of kaolin and also the simultaneous formation of other so-called products of weathering. A table is given which shows the varying amounts of bauxite and laterite produced in various countries during the years 1925-31.

The different metallurgical processes in use are described fully, particularly the Hall-Hérout process, in which remarkable success was achieved by the happy combination of a number of ideas, every one of which had already been in use for some time. The remainder of the volume is devoted to the classification of the various physical properties of the metal.

*Handbuch der biologischen Arbeitsmethoden.* Herausgegeben von Prof. Dr. Emil Abderhalden. Lief. 420. Abt. 2: *Physikalische Methoden*, Teil 3, Heft 4. *Nachweis der biologisch wichtigen Körper durch Fluoreszenz und Fluoreszenzspektren.* Von Charles Dhéré. Pp. 3097-3306. (Berlin und Wien: Urban und Schwarzenberg, 1933.) 11.50 gold marks.

In turning over the pages of this section of Abderhalden's great encyclopædia, one is impressed with the wealth of information imparted, much of which must be new to anyone not keeping abreast of current literature on the subject. The treatment is in four parts: (1) introduction (5 pages); (2) apparatus and methods (64 pages); (3) physical chemistry of fluorescence phenomena (20 pages); (4) a special part (96 pages).

The second part brings together in easily readable form detailed descriptions of a very wide range of apparatus and accessories, together with good practical accounts of their functions or applications. In the next part, dealing with the physical chemistry of fluorescence, one finds a robust treatment of the fundamental principles and methods of experiment in general terms, but not in such detail as to serve as

a laboratory manual. Finally, in the special part, the work reaches its culminating point in the proving and identification of biological materials by fluorescence, and here the fruits of many thousands of applications are garnered. Carbohydrates, glucosides, fats, phosphatides, proteins, porphyrins, chlorophyll, animal principles, alkaloids (especially the numerous cinchona bases), and several other classes of substances command individual consideration. The book is well printed, the figures are good and the bibliography is rich in its detail.

*Die Chemie des Pyrrols.* Band 1: *Pyrrol und seine Derivate: Mehrkernige Pyrrolsysteme ohne Farbstoffcharakter.* Von Hans Fischer und Hans Orth. Pp. xii+460. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1934.) 28 gold marks.

THIS monograph on pyrrole chemistry satisfies a need which has long existed, for it is thirty years since an adequate account of the group has appeared. No author could be better qualified for the present task than Hans Fischer, whose life-work has been to extend, and in many directions to create, the knowledge of the chemistry of both the simpler pyrroles and of the polynuclear pyrrole derivatives.

The volume under review contains the simpler pyrroles and the polynuclear pyrroles without pigment character; a second volume is to discuss the pyrrole pigments, the porphyrins and chlorophyll, etc., and the physiological side of pyrrole chemistry. The work consists of a discussion of different types of pyrroles, their reactions and the methods for their synthesis, and provides at the same time a dictionary of all the pyrrole derivatives which are known. Particularly valuable are the preparative methods which are given, and the authors' observations on the most suitable means of synthesis of a given pyrrole should be most useful to future workers. As supplements are included an account of the derivatives of maleic acid obtained on oxidative degradation of pyrroles, which are therefore important for determination of constitution; also recommended methods for the preparation of starting materials for pyrrole synthesis. Consultation is facilitated by an elaborate index.

K. F. A.

*Manual of Safety Requirements in Theatres and other Places of Public Entertainment.* Issued by the Home Office, 1934. Pp. ii+106. (London: H.M. Stationery Office, 1935.) 2s. 6d. net.

THIS is a valuable, because most practical, summary of precautions against accidents of all kinds in places of public entertainment, with careful explanation of the reasons for them, and examples of disaster following neglect, and the 'requirements' to be observed by licensees. Suggestions for improvement of any future edition are welcomed, and will no doubt be forthcoming to a book so considerably planned and clearly expressed. There is an excellent index, and diagrams are provided for the more important safety devices. Everyone responsible for public entertainments should be acquainted with this manual.