

PROCEEDINGS OF SOCIETIES  
MINERALOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

Meeting held June 24, 1937

The following papers were read.

(1) *Wollastonite solid-solutions from Scawt Hill, Co. Antrim.* By Prof. C. E. TILLEY. Wollastonites with distinctive optics comparable with those of synthetic solid solutions in the system  $\text{CaO-FeO-SiO}_2$  are recorded from hybrid rocks (wollastonite-bearing dolerites) of the Scawt Hill contact zone.

(2) *Notes on silicate synthesis with a laboratory gas furnace.* By Dr. A. T. DOLLAR.

Comparisons are made between methods of synthesizing silicates, in a high-temperature research laboratory, with (a) a Fletcher gas-blast crucible furnace, and (b) a vertical electric crucible furnace of platinum resistance type, having approximately the same dimensions. Utility of the gas furnace is discussed in relation to the bulk, homogeneity, rate of production and cost of silicate melts which it yields. Technical details are illustrated by reference to the preparation of diopside glass.

(3) *Some new pyroxenes included in the system clinoenstatite, clinohypersthene, diopside, hedenbergite.* By Mr. W. A. DEER and Mr. L. R. WAGER.

Four pyroxenes from the Skaergaard Halvoen intrusion, Kangerdlugsuak, East Greenland, have been analysed. They occur in a series varying from a hypersthene olivine-gabbro at the base to a fayalite-quartz-gabbro at the top of the crystallisation-differentiated gabbro complex. The pyroxene, as well as the rocks in which they occur, show a remarkable increase in the percentage of ferrous iron. The pyroxenes are all low in sesquioxides and may be regarded as approximating in composition to members of the clinoenstatite-clinohypersthene-diopside-hedenbergite system. Two of the pyroxenes are very rich in the clinohypersthene molecule and extend the field of previously investigated natural augites. The most feriferous type is almost a pure member of Bowen's (1935) hedenbergite-clinohypersthene solid solution series, and contains nearly 70 per cent  $\text{FeSiO}_3$ .

(4) *A new micro-pyknometric method for the specific gravity of heavy solids: with a note on the accuracy of specific gravity determinations.* By Mr. F. A. BANNISTER and Dr. MAX H. HEY.

A straight silica tube of  $\frac{1}{2}$  mm. bore, closed at one end, serves as a variable volume pyknometer. The accuracy of the method may reach about 0.5 per cent with 5 to 30 milligrams of material.

(5) *An occurrence of corundum at Fraserburgh, Aberdeenshire.* By Mr. ROBERT WALLS.

Corundum is found at several places on the coast at Fraserburgh as small, usually irregular, grains embedded in muscovite, in a biotite-feldspar rock. The beds at Fraserburgh are metamorphosed sediments of the andalusite-schist-facies. It is suggested that the corundum bearing rocks were derived from andalusite-schist (into which they pass) by the desilicating action of alkali-aluminate emanations from neighbouring pegmatites. Analogous cases in France and Australia are mentioned.

(6) *A review of the data of the Mg-Fe clinopyroxenes.* By Mr. N. F. M. HENRY.

The identification of clinoenstatite and clinohypersthene from igneous rocks in all the reports that have been examined rests on insufficient evidence, mainly on inclined extinctions alone. The available data for the series is summarised.

(7) *Fourteenth list of new mineral names.* By Dr. L. J. SPENCER.

(8) *Paragenesis of kyanite-amphibolites.* By Prof. C. E. TILLEY, with chemical analyses by Mr. H. C. G. VINCENT.

The genesis of the assemblage hornblende-kyanite in metamorphic rocks is briefly discussed. Special reference is made to the problems offered by kyanite-bearing amphibolites and eclogites of the Glenelg area (Scotland).