MISS MARJORIE J. WHITEHOUSE (communicated by the President): *The deuteric mineral sequence in the Enoggera granite, Queensland.*

The minerals found in veins and vughs in this granite near Brisbane are described. The period of main magmatic consolidation was followed by pegmatite formation and the initiation of cavities in the rock. While the rock was still hot the deuteric period occurred beginning with the kaolinization of the felspars and the chloritization of the ferromagnesian minerals. Then followed the deposition of chlorite and epidote, the pneumatolytic minerals, some calcite, the zeolites (prehnite, laumontite, gismondite) and, finally, many vughs were completely filled with calcite.

MR. M. PERUTZ (communicated by Prof. C. E. Tilley): *On iron-rhodonite, pyroxmangite, and their relations to rhodonite.* Determinations of the unit-cell of iron-rhodonite and approximate measurement of the dimensions of pyroxmangite have been made. The similarity of the structures of iron-rhodonite and pyroxmangite is established. By comparison with Gossner's description of rhodonite the conclusion is arrived at that the structure of the former minerals is different from that of rhodonite. After a determination of the density, volume, and mass of the cell of iron-rhodonite, possibilities of relations with enstatite were suggested.

## BOOK REVIEWS

DIE FEDOROW-METHODE. W. NIKITIN, University of Ljubljana. Published by Borntraeger, Berlin, **1936,** 109 pp. 41 text figures. 7 plates. Price, RM. 12.40.

Professor Nikitin has long been recognized as an outstanding authority on the Fedorov method of use of the universal stage. This volume gives a concise account of the stage and its use, and includes additions of recent years to the technique.

Forty-five pages are given to a summary of the general description and manipulation of the stage, emphasizing the four axis stage with which Professor Nikitin has dealt in earlier publications. Special refinements are described for the study of minerals of low birefringence, and for the study of dispersion. The use of convergent light on the universal stage is also described as a means of attaining greater accuracy.

A leading contribution of the book is the description of a method of determining the refringence of a crystal by measuring the angle at which total reflection is obtained on balsam filled cleavages. No great accuracy is claimed for this procedure but even an approximation is a welcome contribution in the study of grain mounts especially.

The methods of Boldyrew, Berek and Dodge for determining the relationship between the optic axial angle and birefringence are given together with the diagrams which these men have published.

A detailed description is given of the method of learning the orientation relationship between the indicatrix and the crystallographic elements of a mineral. The application of these principles is made to the determination of twin laws.

The last section deals with the study of feldspars according to the methods of Fedorov.

R. C. EMMONS

ATLAS DER ANALYSEN-LINIEN DER WICHTIGSTEN ELEMENTE, FRITZ LÖWE, 37 pp., 3 figs. 16 full page plates. Dresden and Leipzig, Th. Steinkopf, **1936** (RM. 10.00).

This book is a second edition of the author's "Atlas der Letzten Linien" (published in) 1928. Separate spectra of the following 46 elements are reproduced and arranged in alphabetical order. Ag, Al, As, Au, B,* Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs,* Cu, Fe, Ge,* Hg, Ir, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Pd, Pt, Rb,* Rh,* Sb, Si, Sn, Sr, Ta, Te, Th, Ti, Tl,

U,* V, W, Zn, Zr. Those marked (*) were rephotographed for this edition. Facing these plates are wave length tables of the most important lines. The spectra for 17 elements are reproduced in two different spectral ranges. Two to four individual spectra of each element prepared by sparking varying weights of material are shown in juxtaposition, which is of great value in selecting useful lines for analytical work.

There are 9 pages of text which contains a brief annotated bibliography of published wave length tables and atlases. The wave lengths of 629 important lines are arranged in numerical order on the last ten pages of the book. The next (longer) stronger line is stated for each. This compact little volume can be recommended both as a handy laboratory manual and reference book of spectral line patterns, as well as a convenient wave length tabulation of the most characteristic spectral lines.

LESTER W. STROCK

ELEMENTS OF OPTICAL MINERALOGY—An Introduction to Microscopic Petrography. ALEXANDER N. WINCHELL. Fifth edition, revised and enlarged. *Part I. Principles and Methods*. xii+263 pages, over 300 illustrations. John Wiley A Sons, Inc., New York, **1937,** Price $3.50.

Professor Alexander N. Winchell's book on *Optical Mineralogy*, has served for many years as one of the leading American texts in this field of Mineralogy. Its popularity is shown by the short intervals between succeeding editions epsecially in recent years: 1908, 1922, 1928, 1931, 1937.

In this the fifth edition the changes made have been in the nature of corrections, minor additions and refinements. Over 60 new or revised illustrations have been added, including recent models of microscopes and other accessory optical instruments. The last chapter is devoted to "Special Methods of Study" in which the applications of the universal stage of Fedorov and the dispersion methods of immersion liquids for the accurate determination of the optical properties of crystallized materials are described in considerable detail.

W. F. H.

## NEW MINERAL NAMES

### Chlopinite (Klopinite, Hlopinite)

I. E. STARIK: Studies of the "lead method" for measuring geologic time and its application to the determination of chlopinite from Khilok, Transbaikalia. *Inter. Geol. Cong. Report of the XVI session*, U. S. A., **1933,** vol. 1, pp. 217–224, 1936.

NAME: In honor of the Russian chemist, V. G. Chlopin.

CHEMICAL PROPERTIES: A columbo-titanate of uranium, thorium, yttrium and iron. $M_2Cb_2TiO_8$. Analysis: $Cb_2O_5$ 39.92, $Ta_2O_5$ 7.37, $TiO_2$ 10.01, $SiO_2$ 0.61, $UO_2$ 8.12, $ThO_2$ 2.22, $Y_2O_3$ 17.65, $Fe_2O_3$ 8.16, FeO 1.83, MnO 0.26, CaO 0.96, PbO 0.19, BeO 0.03, $K_2O+Na_2O$ 0.24, $H_2O$ 2.94. Sum 100.64. 1.15 cc. helium per gram.

PHYSICAL PROPERTIES: Color black. Isotropic, $n>1.768$. $G=5.24$.

OCCURRENCE: Found with monazite and feldspar at Khilok, Transbaikalia.

W. F. FOSHAG

### Talasskite

W. D. NIKITIN: A new variety of the olivene group. *Mem. Soc. Russe. Mineral.*, 2d series, vol. **65,** pp. 281–288, 1936.

NAME: From the locality, Talassa Valley, Kirghizian, U. S. S. R.

CHEMICAL PROPERTIES: A silicate of ferrous and ferric iron, $(FeMg)_5\ Fe'''(SiO_4)_3$. Analysis: $SiO_2$ 29.87, $TiO_2$ 0.08, $Fe_2O_3$ 12.07, FeO 54.88, CaO 0.20, MgO 2.54, $Na_2O$ 0.71, $K_2O$ 0.08, MnO 0.02; Sum 100.45.