

The two compounds showed the following optical properties, which are essentially identical with those recorded by Rankin and Wright:

			α	β	γ
$\alpha\text{CaO.SiO}_2$	Monoclinic	+	1.612		1.654
3CaO.2SiO_2	Monoclinic	+	1.642	1.643	1.650

The 3CaO.2SiO_2 compound is monoclinic, shows a perfect cleavage parallel to (100), and an extinction angle in the plane of symmetry ($X\wedge c$) of 15° .

The specimen was brought in by a student and given to Prof. W. G. Blake of the high school. He in turn took it to Prof. D. A. Dupre of Wofford College, who sent it to Mr. George L. English, from whom the writer received it.

The student upon questioning gave evasive answers, but stated that he had found it on Cedar Springs branch, about 3 miles southeast of Spartanburg, S. C. Examination of the branch, and the hillsides on each side revealed only schists and gneisses.

Spartanburg is situated on the Carolina, Clinchfield and Ohio Railroad, which is stated to be ballasted in part by slag, near the city. Situated also on this railroad, 185 miles to the north, is Kingsport, Tenn., with a large cement plant, (the most probable source of the material). It seems to the writer that the student found the specimen along the railroad, and realizing its artificial character by the associated material, took it to his instructor with the idea of puzzling him (a not uncommon trick of students).

PROCEEDINGS OF SOCIETIES

JOINT MEETING OF THE NEW YORK MINERALOGICAL CLUB AND THE NEW YORK MICROSCOPICAL SOCIETY

A joint meeting of the New York Mineralogical Club and the New York Microscopical Society was held in the west Assembly Room of the American Museum of Natural History on Wednesday evening, February 14, at 8.00 P.M. The President of the New York Mineralogical Club presided. There was an attendance of 45 members of the two organizations.

The reading of the minutes of the last meeting was dispensed with and the Chair introduced Mr. Thomas P. Clendenin of Columbia University who delivered a highly interesting address on "*Minerals Under the Microscope.*"

Through the courtesy of Mr. Dwight L. Elmendorf of the Microscopical Society a special projection stand devised and operated by Mr. Elmendorf was used, which projected upon the screen with striking clearness the illustrative slides used by the speaker giving remarkably brilliant effects under polarized light and showing very sharp figures with convergent light. The speaker in describing the petro-

graphic microscope, characterized it as an optical machine. He described the preparation of the slide by which minerals are studied under the microscope, and explained a number of rock section slides illustrating the characters by which minerals are distinguished both in plain light and with polarized light effects.

At the close of his address a vote of thanks was tendered to Mr. Clendenin for his highly illuminating paper. Dr. Kunz spoke briefly on the recent deaths of the two eminent mineral collectors, Norman Spang and Clarence S. Bement. The meeting then adjourned.

HERBERT P. WHITLOCK, *Recording Secretary*

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences, April 12, 1923

A stated meeting of the Philadelphia Mineralogical Society was held on the above date with the president, Mr. Vaux, in the chair. Twenty-two members and two visitors were present.

Upon favorable recommendation of the council, Messrs. Andrew Mantz and Frank K. Pickel were elected to active membership.

Mr. Horace Blank addressed the society on "*The Constitution of Complex Minerals*," or those that are compounds of higher order, composed of two or more saturated compounds. The history of the theories of valence was reviewed, in particular the dualistic theory of Berzelius; followed by a detailed account of Werner's coördinate extension of the notions of valence, with the ideas of primary and secondary valence. Coördinate formulas of many substances were presented, and it was shown how the salts of hetero-polyacids and iso-polyacids might be explained on this basis.

Mr. Oldach reported on the trip to Perkiomenville on March 25th, participated in by Messrs. Hallowell, Hilbiber, Tallis, Clay, Trudell, Knabe, Broadbelt, and himself. Considerable stilbite was obtained.

SAMUEL G. GORDON, *Secretary*

BOOK REVIEWS

HANDBOOK AND DESCRIPTIVE CATALOGUE OF THE COLLECTIONS OF GEMS AND PRECIOUS STONES IN THE UNITED STATES NATIONAL MUSEUM. GEORGE P. MERRILL, assisted by MARGARET W. MOODEY and EDGAR T. WHERRY. *Bull. U. S. Nat. Museum*, 118, 1922.

This handbook is a new edition, largely rewritten, of a descriptive catalogue of the gem collections in the National Museum, published in 1902. Preceding the catalogue proper are short chapters on the history and arrangement of the collections, and on names, physical and chemical properties of precious stones.

In the catalogue of the gem collections, the gem minerals are arranged alphabetically. Each is briefly described giving physical properties, composition, occurrence, and miscellaneous information of interest. The individual specimens are then listed and rather fully described; name, locality, cut, color, weight, measurements, and number being given.

Following this are the catalogues of related collections; rough and cut stones, imitation stones, synthetic stones, models of cuts, ornamental objects not used for