mass. The evidence from this crystal suggests that the smoky quartz in this locality is colored by stibnite.

Some parts of the faces of the quartz crystal shown in Figure 1-C are etched and pitted with finely granular pyrite which has been partly oxidized. This is significant in indicating that the quartz crystals came from the sulphide bearing hot water solutions associated with the deposition of the cinnabar and stibnite, rather than from later meteoric waters depositing silica in previously mineralized fractures. The sequence of crystallization as observed from all specimens is: first, stibnite; second, cinnabar; third, quartz; fourth, pyrite; and fifth, dickite.

SCHROECKINGERITE FROM BEDFORD, NEW YORK

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On a recent visit to Kinkel's quarry, just outside of Bedford, N. Y., pegmatite specimens were collected that exhibited a few small fragments of a greenish yellow mineral, thought at the time to be autunite. On further examination, however, it was found that its optical constants, especially its indices of refraction, were not in agreement with those of autunite.

The mineral was finally determined to be schroeckingerite, a hydrous uranium carbonate, named after Baron Schroeckinger in 1873 by A. Schrauf.[1] It is stated by Winchell[2] to be an alteration product of uranium minerals. Schrauf's material came from Joachimstal in northwestern Czechoslovakia,[3] as did that later described by E. S. Larsen.[4] The mineral has not, to the writer's knowledge, been described from any other locality.

The mineral is apparently monoclinic and has perfect {010} and distinct {100} cleavages, giving a large number of laths exhibiting inclined extinction and the acute bisectrix, with a smaller number exhibiting parallel extinction and a flash interference figure. All the laths are extremely small, the larger fragments of the material being made up of clusters of small laths.

The optical characteristics were determined to be as follows: Extinction $30° \pm$; $r > v$ strong. Very strong crossed dispersion giving

[1] *Tscherm. Min. Mitt.*, **1873**, p. 137.

[2] Winchell, A. N., *Elements of Optical Mineralogy*, 3rd edit., 1933, Part **II**, p. 86.

[3] Hintze, *Handbuch der Mineralogie*, Bd. **1**, Abt. 3, Hälfte 1, 1930.

[4] Larsen, E. S., *The Microscopic Determination of the Nonopaque Minerals*, *U.S.G.S., Bull.* **679**, 1921.

abnormal interference colors in reddish brown and blue. $(-)2V = 40° - 45° \pm$. Indices of refraction: $\alpha = 1.658$, $\beta = 1.682$, $\gamma = 1.685$. (Larsen and Berman[5] record: $\alpha = 1.658$, $\beta = 1.690$, $\gamma = 1.685$. The limit of experimental error of the writer's determinations is probably about 0.003.) Pleochrosim: X = colorless, Y = very pale greenish yellow, Z = pale greenish yellow.

It is hoped that with further study of the schroeckingerite and of the other uranium minerals whose manner of occurrence is similar, especially in the Kinkel's quarry pegmatite and other southern New England pegmatites, something may be learned concerning the nature of their interrelations.

The writer is indebted to Dr. Edward H. Watson and Dr. Dorothy Wyckoff of Bryn Mawr College for their assistance in checking the above results and to Miss S. Grace Hower of Bedford, N. Y., for collecting additional material.

[5] Larsen, E. S., and Berman, H., *The Microscopic Determination of the Nonopaque Minerals*, 2nd edit., *U.S.G.S. Bull.* **848**, 1934.

BOOK REVIEW

DER LÖSS UND SEINE GEOTECHNISCHEN EIGENSCHAFTEN, SCHEIDIG, ALFRED. 233 p. with 132 text figs. and 6 tables. *Dresden* and *Leipzig*, Th. Steinkopf, **1934.** (Bound, RM 20.)

It is gratifying to see that someone has undertaken the arduous but useful task of summarizing most of the available information on the much debated loess problem. The magnitude of the task can be inferred from the author's bibliography which contains no less than 580 references.

It is true that this summary was primarily made as a background for the main topic which treats of loess from the standpoint of the civil engineer, as stated in the subtitle. Nevertheless, fully one-half of the text, comprising two of the three main chapters is sufficiently general in nature to interest the geomorphologist, sedimentary geologist, pedologist and geographer.

The first part (pp. 3–72), under the general title of "geological and geographical principles," discusses the characteristics of "true" loess, the distribution of loess deposits on the earth's surface, morphology of loess-landscapes, genesis, classification and economic importance of loess. Numerous sketch-maps and diagrams illustrate the description of occurrences in the various countries and many half-tones accompany the discussion of typical loess-landscapes. [Nothing is definitely known concerning the origin of the name "loess" beyond the fact that it was in use early in the 19th century, as a folk-term for particular kinds of soils along the Middle Rhine. Its relation to the German words for loose (=lose) and loosening (=lösen) is merely suggested. Neither can a strict definition of loess be given, as yet; there are no less than 20 hypotheses which have been proposed for its mode of origin. The