

THE OPTICAL PROPERTIES OF PENFIELDITE¹

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PENFIELDITE was originally described from Laurion, Greece, where it occurs in hexagonal prisms with distinct basal cleavage, strong double refraction, and optically positive character. The author measured the following optical constants on a specimen of the mineral kindly furnished by Colonel Washington A. Roebling of Trenton, N. J.:

Uniaxial; +; $\omega = 2.13$; $\epsilon = 2.21$ both ± 0.01 ; birefringence 0.08.

A specimen labeled "penfieldite, Tintic District, Utah," in a Survey collection, transmitted to the United States National Museum in 1902 (No. 85013) altho identical in appearance with penfieldite has the following optical properties, and is thus shown to be unquestionably a different mineral: Uniaxial; -; $\omega = 2.14$, $\epsilon = 2.13$, both ± 0.01 ; birefringence thus about 0.01. It has since been crystallographically and chemically examined by Dr. Wherry and proves to be mimetite. A full description of this unusual occurrence will appear in the *Proc. U. S. Nat. Museum*.

IS PARTSCHINITE A DISTINCT SPECIES?¹

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PARTSCHINITE is described as occurring in small, dull, monoclinic crystals somewhat resembling augite, in the auriferous sands of Olopian, Transylvania. It has the same physical properties as the garnet, spessartite, but is said to differ from spessartite in crystal symmetry.

A specimen of partschinite from the type locality, kindly furnished the author by Colonel Washington A. Roebling, when examined under the microscope proved to be nearly colorless and isotropic in section and to have an index of refraction of 1.787 ± 0.003 ; it is no doubt ordinary garnet, near spessartite.

It therefore seems probable that the "partschinite" crystals are merely distorted garnet crystals, or possibly paramorphs of garnet after a monoclinic form.

The author would be glad to receive other specimens of "partschinite" so that the data may be further checked. A crystal or fragment the size of a grain of wheat is ample. Exchange can be arranged with the U. S. National Museum.

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