

GREENOCKITE

CdS

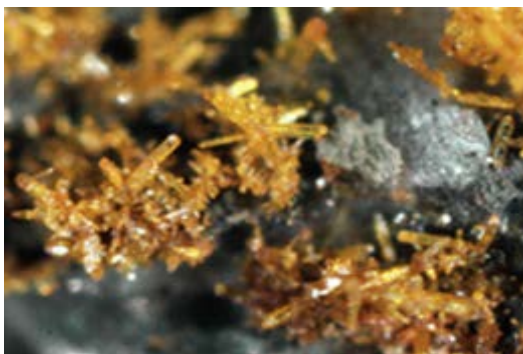
The only significant cadmium mineral. It occurs in low-temperature hydrothermal deposits, often associated with sphalerite. Northern Peninsula.

Iron County: Buck iron mine: With other sulfides and uraninite (Vickers, 1956b).

Ontonagon County: White Pine: As a microscopic constituent disseminated in the Nonesuch Shale along bedding planes and fractures in the pyritic zone and in a fringe area below the pyritic zone and above the copper-iron transition zone. Associated are digenite, bornite, chalcopyrite, and pyrite. Forms rims on sulfide grains and around pseudomorphs of copper sulfides after pyrite (Brown, 1966, 1968).

FROM: Robinson, G.W., 2004 *Mineralogy of Michigan* by E.W. Heinrich updated and revised: published by A.E. Seaman Mineral Museum, Houghton, MI, 252p.

UPDATE



Greenockite crystals to 0.2 mm from the Huron River uranium prospect, Baraga County; A. E. Seaman Mineral Museum specimen DM 27316, John Jaszczak photograph.

Greenockite, like all cadmium-bearing species, is not a common mineral, and is usually found as yellowish, powdery coatings on sphalerite or smithsonite, due to its close geochemical association with zinc. Crystals of greenockite are even less common, and are restricted to only a few hydrothermal mineral occurrences worldwide, making their occurrence in Michigan an especially interesting one. Northern Peninsula.

Baraga County: The Huron River uranium prospect, NW $\frac{1}{4}$ NW $\frac{1}{4}$ section 1, T51N, R30W: As caramel-orange microcrystals in calcite-cemented brecciated quartz. Most crystals consist of simple hexagonal prisms, terminated by a pedion, or in combination with a pyramid. Twinning on $(10\bar{1}\bar{2})$ is common and may result in furlings similar to those reported from Llallagua, Bolivia by Gordon (1939). While greenockite was noted as occurring at this locality by Vickers (1956), its presence was not confirmed (by X-ray diffraction) until recent collecting produced a number of specimens (Carlson et al., 2007a).

UPDATE FROM: Robinson, G.W., and Carlson, S.M., 2013, *Mineralogy of Michigan Update*: published online by A.E. Seaman Mineral Museum, Houghton, MI, 46p.