Central Dakota Gem & Mineral Society

Chalcopyrite

Chalcopyrite as a crystal

Chalcopyrite is a brassy-colored, copper iron sulfide. It was named by Johann Friedrich Henckel in 1725, rom the Greek "chalkos" meaning copper, and "pyrites" meaning to strike fire. It has a green-black streak yet tarnishes in a variety of iridescent purple, blue, and red. It sometimes goes by the term "peacock rock". It is often mistaken for pyrite, but is a softer 3.5 - 4 on the Mohs scale. It is brittle and can shatter if struck. It has poor cleave, and fractures unevenly. It can be found in tetragonal crystal form, massive, and even botryoidal.

This mineral has been mined as a copper ore for thousands of years. Copper mixed with zinc creates brass, but mixed with tin creates bronze - a metal used in tools for ages. It is very common in sulfide veins, high-temperature hydrothermal veins, igneous dikes, and more. When oxidized, or weathered, chalcopyrite may form malachite, azurite cuprite, and other minerals.

"Peacock rock"

Botryoidal form

Group: Sulfide. The chemical formula is $CUFeS_2$

Klein, Cornelis and Cornelius S. Hurlbut, jr., Manual of Mineralogy, Wiley, 20th ed., 1985, pp. 277 - 278

http://en.wikipedia.org/wiki/chalcopyrite

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