

Mineralogy Boot Camp Session #22

Sources of Mineral Names

There are over 5,500 minerals currently recognized, although only about 100 of them are commonly encountered. The classification of these numerous minerals is based on a logical and systematic system, using chemistry and mineral structure as described in Mineralogy Boot Camp Sessions #6 and #7. Minerals are *named*, however, in a much more random way. Most of the common minerals were formally named during the 18th and 19th centuries. In general, most minerals are named using one of the following categories, with examples of some common minerals provided.

For some special physical property:

Malachite: from the Greek *mallows*, which refers to its consistent green color.

Barite: based on the Greek *barys* (for *heavy*), referring to its high specific gravity (density).

Pyrite: from Greek meaning *fire*, referring to bright sparks caused when hit by metal.

Fluorite: based on the Latin *fluere* (to flow) because it melts at a lower temperature than other minerals and is used as a metallurgical flux. The term *fluorescence* and the name of the element *fluorine* were both derived from fluorite.

Augite: name based on the Greek word for “shine” or “luster”, alluding to the appearance of its cleavage surfaces.

Cinnabar: from the ancient Greek word *kinnabari*, possibly derived from ancient Persian *zinjifrah*, apparently meaning *dragon’s blood*, in reference to its red color.

For some distinctive chemical property:

Calcite: from the Latin *calx*, referring to burnt lime. Calcite in limestone must be heated (“burned”) to make quicklime, used in the production of cement.

Sodalite: named for its sodium content.

Gypsum: from the Greek *gypsos*, meaning *plaster*. Gypsum has been used for thousands of years to produce various plaster products, such as Plaster of Paris.

After a geographic location (often where first found):

Turquoise: from French meaning *Turkish*, because turquoise originally came into Europe through Turkey.

Magnetite: originally called *lodestone*, it was renamed in 1845 to indicate the lodestone locality of Magnesia, Greece. This name also alludes to its magnetic properties.

Topaz: name derived from Topasos Island in the Red Sea.

Tourmaline: from *turamali*, an ancient name for all colored gems from Sri Lanka.

Copper: from the Greek *kyprios* (referring to Cyprus), where ancient copper mines were located.

To honor a famous (or not so famous) person, often in the field of mineralogy:

Smithsonite: in honor of James Smithson (1754-1829), founder of the Smithsonian Institute.

Dolomite: for the French mineralogist and geologist Dolomieu (1750-1801).

Goethite: in honor of the German poet Goethe (1749-1832).

Chkalovite: for the Russian aviator Valery Pavlovich Chkalov (1904-1938), the first pilot to make a non-stop flight in 1937 from Moscow to the United States via the North Pole.

Or just about anything, particularly for older mineral names:

Apatite: derived from the Greek word for *deceive*, because gem varieties of apatite were confused with other minerals.

Garnet: from the Latin *granatus*, meaning *like a grain* because of its common granular shape.

Epidote: from the Greek *epidosis* (meaning *increase*), alluding to the shape because one side of the crystal base is longer than the others.

Hornblende: an old German word for any dark mineral crystal that occurs in ores but contains no recoverable metal.

Sphalerite: from the Greek *sphaleros* (meaning *treacherous*), because dark varieties were often mistaken for galena, but contained no lead.

Asbestos: from the Greek for *inextinguishable*, after the mistaken idea that once it is ignited, it could not be extinguished. Asbestos has been used as wicks in ancient oil lanterns.

The origin of many mineral names is lost in antiquity, and the reasons can only be guessed at today. The Commission on New Minerals, Nomenclature and Classification of the International Mineralogical Association reviews descriptions of proposed new mineral species and approves the name. Reusing obsolete or discredited names (of which there are thousands) is not permitted. The person(s) making the application to certify a new mineral must not name the mineral after themselves. The Commission discourages naming a mineral after a commercial organization that has made no “specific and worthwhile contribution” to mineralogy.