

A
SYSTEM
OF
MINERALOGY,
COMPRISING THE
MOST RECENT DISCOVERIES:

INCLUDING
FULL DESCRIPTIONS OF SPECIES AND THEIR LOCALITIES, CHEMICAL ANALYSES
AND FORMULAS, TABLES FOR THE DETERMINATION OF MINERALS,
AND A TREATISE ON MATHEMATICAL CRYSTALLOGRAPHY
AND THE DRAWING OF FIGURES OF CRYSTALS.

ILLUSTRATED BY NUMEROUS WOOD CUTS AND FOUR COPPER PLATES.

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1850.

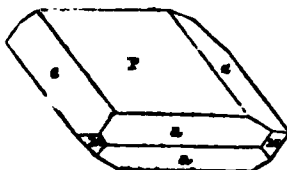
A.

the bars were dissolved, and every ton of iron yielded a ton and a half to two tons of a reddish mud, which was oxyd of copper, affording each ton 16 cwt. of pure copper.

When purified, it is employed in dyeing operations, and in the printing of cotton and linen, and for various other purposes in the arts. It is manufactured mostly from old sheathing copper, copper trimmings, and refinery scales.

BROCHANTITE. Brochantit, *Levy*. Konigine, *Levy*. Krisuvigite, *Forchhammer*.

Trimetric. $M : M = 114^\circ 20'$, $P : a = 148^\circ 30'$, $a : a$ (over P) $= 117^\circ$, $a : a$ (adjacent planes) $= 150^\circ 30'$, $P : a = 104^\circ 45'$. Surface M blackish and dull. Cleavage parallel to M . Also massive; reniform with a columnar structure.



$H. = 3.5-4$. $G. = 3.7-3.9$. Lustre vitreous. Color emerald-green, blackish-green. Streak paler green. Transparent.

Composition.— $\text{Cu S} + 3\text{Cu H} [= \text{Cu}^4 \text{S H}^2]$ —Sulphuris acid 17.76, protoxyd of copper 70.28, water 11.96. Analyses: 1, 2, Magnus, (*Pogg. xiv*, 141); 3, Forchhammer, (*J. f. pr. Ch. xxx*, 396); 4, Berthier, (*Ann. Ch. Phys.* 1, 360):

	S	Cu	Zn	Pb	H
1. Botabanya,	17.132	62.626	8.181	0.080	11.887=99.856, Magnus.
2. "	17.426	66.935	8.145	1.048	11.917=100.471, Magnus.
3. <i>Krisuvigite</i> ,	18.88	67.75	—	—	12.81=99.44, Forchhammer.
4. Mexico,	16.6	66.2	—	—	17.2=100, Berthier.

The last, from Mexico, corresponds to $\text{Cu}^4 \text{S H}^2$.

B.B. fuses on charcoal and yields metallic copper.

Occurs in small but well defined crystals, with malachite and native copper, at Katharinenburg in Siberia. The Konigine was found at the same locality. Also at Botabanya. The Krisuvigite occurs in small beds at Krisuvig in Iceland.

Brochantite was named by Levy in honor of Brochant de Villiers.

LETTESOMITE, *Percy*. Velvet Copper Ore. Cuivre Velouté, *Levy*. Kupferwazmterz.

Occurs in spherical globules or in druses consisting of short delicate fibres, and having an appearance like velvet. Color clear smalt-blue. Lustre pearly.

Composition.— $\text{Cu}^4 \text{Al S}^2 \text{H}^2$, *Percy*—Sulphuric acid 16.78, oxyd of copper 49.85, alumina 10.76, water 22.59. Analyses by *J. Percy*. (*Phil. Mag.* [3], xxxvi, 100):

S	Al	Fe	Cu	H
15.88	11.70	—	48.16	23.06=98.30.
14.12	11.06	1.18	46.59	23.06, insol. 2.35=98.36.

Occurs sparingly at Moldawa in the Banat, coating the cavities of an earthy hydrated oxyd of iron; and according to *Percy*, a white amorphous substance occurs sparingly with it, consisting of alumina and sulphuric acid.

CONNELLITE. Sulphato-chlorid of Copper, *Connel*, *Proc. Brit. Assoc.* for 1847.

Rhombohedral. In hexagonal prisms with replaced angles. Lustre vitreous. Color fine blue. Translucent.

Composition.—From trials by *Connel*, supposed to be a compound of a sulphate and chlorid of copper.

Associated with arsenate of copper in Cornwall.