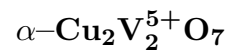


# Blossite



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**Crystal Data:** Orthorhombic. *Point Group:*  $mm2$ . As equant anhedral crystals, to 150  $\mu\text{m}$ , typically intergrown with other fumarolic copper vanadates.

**Physical Properties:** Hardness = n.d.  $D(\text{meas.}) = 3.95\text{--}3.97$  (synthetic).  $D(\text{calc.}) = 4.051$

**Optical Properties:** Opaque. *Color:* Black; white in reflected light, with red-brown internal reflections. *Streak:* Red-brown. *Luster:* Metallic.

*Optical Class:* Biaxial.  $n = [2.05]$  (rule of Gladstone and Dale). *Anisotropism:* Moderate; gray to creamy gray-brown. *Birefractance:* Weak to moderate; in shades of cream-white.

$R_1\text{--}R_2$ : (481) 14.6–15.3, (547) 15.4–16.6, (591) 14.8–16.7, (644) 14.5–15.7

**Cell Data:** *Space Group:*  $Fdd2$ .  $a = 20.676(6)$   $b = 8.392(3)$   $c = 6.446(2)$   $Z = 8$

**X-ray Powder Pattern:** Synthetic  $\alpha\text{-Cu}_2\text{V}_2\text{O}_7$ . (ICDD 26-566).

3.260 (100), 3.080 (100), 3.220 (80), 2.483 (80), 2.102 (70), 2.096 (70), 1.712 (70)

## Chemistry:

	(1)	(2)
$\text{V}_2\text{O}_5$	53.28	53.34
CuO	46.49	46.66
Total	99.77	100.00

(1) Izalco volcano, El Salvador; by electron microprobe. (2)  $\text{Cu}_2\text{V}_2\text{O}_7$ .

**Polymorphism & Series:** Dimorphous with ziesite.

**Occurrence:** A very rare sublimate, probably formed between 100–200 °C, from the outer sulfate zone of a fumarole in the crater of a basaltic composite volcano.

**Association:** Fingerite, stoiberite, mcbirneyite, ziesite.

**Distribution:** From the summit crater of Izalco volcano, El Salvador.

**Name:** To honor Dr. F. Donald Bloss (1920– ), American mineralogist, Virginia Polytechnic Institute, Blacksburg, Virginia, USA.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 164270.

**References:** (1) Robinson, P.D., J.M. Hughes, and M.L. Malinconico (1987) Blossite,  $\alpha\text{-Cu}_2^{2+}\text{V}_2^{5+}\text{O}_7$ , a new fumarolic sublimate from Izalco volcano, El Salvador. *Amer. Mineral.*, 72, 397–400. (2) Calvo, C. and R. Faggiani (1975)  $\alpha$  cupric divanadate. *Acta Cryst.*, 31, 603–605.