Imhofite $Tl_6As_{15.33}S_{26}$

Crystal Data: Monoclinic. *Point Group:* $2/m$. As thin plates, which may be aggregated into radial or spherical forms, less than 1 mm.

Physical Properties: Hardness = ∼2 VHN = 38 D(meas.) = n.d. D(calc.) = 4.39

Optical Properties: Translucent. *Color:* Copper-red; in polished section, pure white, inclining to cream colored compared to galena, with strong bright red internal reflections. *Anisotropism:* Very strong.
R_1–R_2: n.d.

Cell Data: *Space Group:* $P2_1/n$. $a = 8.755(5)$ $b = 24.425(15)$ $c = 5.739(3)$ $\beta = 108.28(5)^\circ$ Z = 2

X-ray Powder Pattern: Binntal, Switzerland.
2.675 (100), 2.88 (90), 3.96 (70), 3.67 (65), 4.10 (40), 3.58 (40), 3.18 (40)

Chemistry:

	(1)	(2)
Tl	33.6	38.22
Cu	1.67	
As	30.2	35.80
S	33.7	25.98
Total	99.17	100.00

(1) Binntal, Switzerland; by electron microprobe. (2) $Tl_6As_{15.33}S_{26}$ as determined by crystal structure analysis.

Occurrence: Of hydrothermal origin.

Association: Realgar, lead sulfantimonides.

Distribution: From the Lengenbach quarry, Binntal, Valais, Switzerland [TL].

Name: To honor Josef Imhof (1902–1969), professional mineral collector of Binn, Switzerland.

Type Material: Mineralogical-Petrographical Institute, University of Bern, Bern, Switzerland, L3491-64.

References: (1) Burri, G., F. Graeser, F. Marumo, and W. Nowacki (1965) Imhofit, ein neues Thallium–Arsenosulfosalz aus dem Lengenbach (Binnatal, Kanton Wallis). Chimia (Switzerland), 19, 499–500 (in German). (2) (1966) Amer. Mineral., 51, 531–532 (abs. ref. 1). (3) Nowacki, W. (1967) Über neue Mineralien aus dem Lengenbach. Jahrb. Naturhist. Mus. Bern, 1963–1965, 293–299 (in German). (4) (1969) Amer. Mineral., 54, 1498 (abs. ref. 3). (5) Divjaković, V. and W. Nowacki (1976) Die Kristallstruktur von Imhofit, $Tl_{5.6}As_{15}S_{25.3}$. Zeits. Krist., 144, 323–333 (in German with English abs.). (6) Balić-Žunić, T. and E. Makovicky (1993) Contributions to the crystal chemistry of thallium sulfosalts I. The O-D nature of imhofite. Neues Jahrb. Mineral., Abh., 165, 317–330.