Omeiite $(Os, Ru)As_2$

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$, or $mm2$. Crystals are tabular or elongated ‖ [010], to 20 μm.

Physical Properties: *Cleavage:* Parallel to elongation. *Tenacity:* Brittle. Hardness = n.d. VHN = n.d. D(meas.) = n.d. D(calc.) = 11.20

Optical Properties: Opaque. *Color:* Dull steel-gray; in polished section, white with a yellow tint in air, milky yellow in oil. *Luster:* Metallic. *Pleochroism:* Weak, yellow to grayish yellow. *Anisotropism:* Distinct.
R_1–R_2: n.d.

Cell Data: *Space Group:* *Pnnm* or *Pnn*2. $a = 5.409$ $b = 6.167$ $c = 3.021$ $Z = 2$

X-ray Powder Pattern: Danba, China.
2.63 (100), 1.915 (100), 2.67 (80), 4.06 (60), 2.06 (60), 2.01 (60), 1.209 (60)

Chemistry:

	(1)
Os	48.9
Ru	4.0
Ir	0.6
Ni	0.3
Fe	0.2
Co	0.1
As	44.2
Total	98.3

(1) Danba, China; by electron microprobe, average of six analyses; corresponding to $(Os_{0.87}Ru_{0.14}Ir_{0.01})_{\Sigma=1.02}As_{2.00}$.

Polymorphism & Series: Forms a series with anduoite.

Occurrence: In a Cu–Ni sulfide deposit associated with an ultramafic body.

Association: Pyrrhotite, pentlandite, chalcopyrite, violarite, cubanite, bornite, sphalerite, galena, linnaeite, magnetite, testibiopalladite, sudburyite, michenerite, sperrylite, kotulskite, gold, argentian gold.

Distribution: From Danba, Sichuan Province, China [TL].

Name: For Omeishan, a well-known mountain in Sichuan Province, China.

Type Material: Museum of Geology, National Bureau of Geology [Beijing?], China.

References: (1) Ren Yingxin, Hu Qinde, and Xu Jingao (1978) A preliminary study on the new mineral of the platinum group – omeiite, $OsAs_2$. Acta Geol. Sinica, 52, 163–167 (in Chinese with English abs.). (2) (1979) Amer. Mineral., 64, 464 (abs. ref. 1).