Monteponite CdO

Crystal Data: Cubic. *Point Group*: 4/*m* $\bar{3}$ 2/*m*. As octahedra, with cube modification, in a druse of fine crystals, to 0.05 mm; pulverulent, massive. *Twinning*: Penetration twins, law unknown.

Physical Properties: Hardness = 3 D(meas.) = 8.1–8.2 (synthetic). D(calc.) = 8.238

Optical Properties: Transparent. *Color*: Black; red to orange-brown in transmitted light.
Luster: Brilliant.
Optical Class: Isotropic. *n* = 2.49 (Li).

Cell Data: *Space Group*: *Fm*3*m* (synthetic). *a* = 4.6953 Z = 4

X-ray Powder Pattern: Synthetic.
2.712 (100), 2.349 (88), 1.661 (43), 1.416 (28), 1.355 (13), 1.0499 (13), 0.9584 (11)

Chemistry:

	(1)	(2)
Cd	87.5	87.54
O	[12.5]	12.46
Total	[100.0]	100.00

(1) Genarutta mine, Sardinia, Italy; O by difference. (2) CdO.

Polymorphism & Series: Forms a solid solution series with lime. Dimorph of cadmoxite.

Mineral Group: Periclase group.

Occurrence: As a coating over "calamine" (Genarutta mine, Sardinia, Italy); in sulfide ore (Verkhoyan'ya, Russia). In altered pyrometamorphic rocks (Jordan).

Association: "Calamine" [smithsonite or hemimorphite] (Genarutta mine, Sardinia, Italy); cadmium, otavite (Verkhoyan'ya, Russia).

Distribution: From the Genarutta mine, Monteponi, near Iglesias, Sardinia, Italy. At Welrath, Belgium. From southern Verkhoyan'ya, Russia. From the Hatrurim Complex, Daba-Siwaqa, Jordan.

Name: For *Monteponi*, near the locality on Sardinia, Italy.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 502-503 [cadmium oxide]. (2) Vlasov, K.A., Ed. (1966) Mineralogy of rare elements, v. II, 575-576. (3) Fairbanks, E.E. (1946) The punched card identification of ore minerals [cadmium oxide=monteponite]. Econ. Geol., 41, 761-768, esp. 767. (4) (1947) Amer. Mineral., 32, 484 (abs. ref. 3). (5) (1953) NBS Circ. 539, 2, 27. (6) Khoury, H.N., E.V. Sokol, S.N. Kokh, Y.V. Seryotkin, O.A. Kozmenko, S.V. Goryainov, and I.D. Clark (2016) Intermediate members of the lime-monteponite solid solutions ($Ca_{1-x}Cd_xO$, x = 0.36-0.55): Discovery in natural occurrence. Amer. Mineral., 101, 146-161.