

Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. Crystals minute octahedra, may be modified by the cube or dodecahedron. *Twinning:* Observed.

Physical Properties: Hardness = 5.5 D(meas.) = 6.898 D(calc.) = 6.806

Optical Properties: Transparent. *Color:* Dark pistachio-green. *Streak:* Brownish black. *Luster:* Vitreous. *Optical Class:* Isotropic. $n = 2.37$

Cell Data: *Space Group:* $Fm\bar{3}m$ (synthetic). $a = 4.1769$ $Z = 4$

X-ray Powder Pattern: Synthetic.
2.088 (100), 2.410 (91), 1.476 (57), 0.9838 (21), 0.8517 (17), 1.259 (16), 1.206 (13)

Chemistry: Analyses of natural material are lacking.

Mineral Group: Periclase group.

Occurrence: In a hydrothermal Ni-U vein (Johanngeorgenstadt, Germany); in a small tabular nickel deposit at the contact between quartzite and serpentinitized ultramafics; it apparently formed at ~ 730 °C and < 2 kbar during thermal metamorphism, possibly of a nickel-rich meteorite (Bon Accord, South Africa).

Association: Bismuth, annabergite, aerugite, xanthiosite (Johanngeorgenstadt, Germany); liebenbergite, trevorite, nickeloan serpentine, nickeloan ludwigite, violarite, millerite, gaspéite, nimite, bonaccordite (Bon Accord, South Africa).

Distribution: At Johanngeorgenstadt, Saxony, Germany. From three km west of the Scotia Talc mine, Bon Accord, Barberton district, Transvaal, South Africa. From Kambalda, 56 km south of Kalgoorlie, Western Australia.

Name: For Professor Robert William Eberhard Bunsen (1811–1899), German chemist of the University of Heidelberg, Heidelberg, Germany, who had observed artificial NiO.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 500–501. (2) (1953) NBS Circ. 539, 1, 47.