

**Pokrovskite****Mg<sub>2</sub>(CO<sub>3</sub>)(OH)<sub>2</sub>•0.5H<sub>2</sub>O**

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**Crystal Data:** Monoclinic. *Point Group:* 2/m (by analogy to malachite). Crystals are prismatic to acicular, to 7 mm, in sheaves; as spherulitic aggregates, may be cross-vein fibrous, asbestiform.

**Physical Properties:** Hardness = ~3 D(meas.) = 2.51–2.52 D(calc.) = 2.58

**Optical Properties:** Semitransparent, may be opaque due to inclusions. *Color:* White with a flesh tint. *Streak:* White. *Luster:* Dull.

*Optical Class:* Biaxial (-). *Orientation:* X ∧ c = 8°; elongation, negative. α = 1.537

β = 1.619 γ = 1.619 2V(meas.) = 18°

**Cell Data:** *Space Group:* P2<sub>1</sub>/a (by analogy to malachite). a = 9.43(1) b = 12.27(1)  
c = 3.395(3) β = 96.60(9)° Z = 4

**X-ray Powder Pattern:** Zlatogorsk massif, Kazakhstan.

2.60 (10b), 2.17 (9), 6.10 (7), 4.70 (7), 3.73 (7), 1.661 (7b), 1.385 (5)

**Chemistry:**

	(1)	(2)
SiO <sub>2</sub>	< 0.10	
CO <sub>2</sub>	28.78	29.02
Al <sub>2</sub> O <sub>3</sub>	< 0.05	
Fe <sub>2</sub> O <sub>3</sub>	1.90	
MnO	1.02	
MgO	50.80	53.16
CaO	0.39	
BaO	0.10	
Na <sub>2</sub> O	0.10	
K <sub>2</sub> O	< 0.10	
H <sub>2</sub> O <sup>+</sup>	16.72	17.82
H <sub>2</sub> O <sup>-</sup>	0.44	
Total	100.50	100.00

(1) Zlatogorsk massif, Kazakhstan; (OH)<sup>1-</sup> and H<sub>2</sub>O confirmed by IR, corresponds to (Mg<sub>1.93</sub>Fe<sub>0.04</sub>Mn<sub>0.02</sub>)<sub>Σ=1.99</sub>(CO<sub>3</sub>)(OH)<sub>2</sub>•0.42H<sub>2</sub>O. (2) Mg<sub>2</sub>(CO<sub>3</sub>)(OH)<sub>2</sub>•0.5H<sub>2</sub>O.

**Occurrence:** An uncommon species in ultramafic bodies of dunite or serpentinite.

**Association:** Dolomite, magnesite, sjögrenite (Zlatogorsk intrusion, Kazakhstan); coalingite, mcguinnessite (Cedar Hill quarry, Pennsylvania, USA).

**Distribution:** From a drillhole in the Zlatogorsk massif, 90 km west-southwest of Kokchetav, Kazakhstan. In the USA, at the Hunting Hill quarry, Montgomery Co., Maryland; in the Cedar Hill quarry, Lancaster Co., Pennsylvania; at the Addie quarry, Jackson Co., North Carolina; from the Gabbs mine, Gabbs district, Nye Co., Nevada; at Lytton, Sonoma Co., California.

**Name:** Honors Pavel Vladimirovich Pokrovskii (1912–1979), Russian mineralogist, Institute of Geology and Geochemistry, Sverdlovsk, Russia.

**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

**References:** (1) Ivanov, O.K., Y.A. Malinovskii, and Y.V. Mozherin (1984) Pokrovskite. Mg<sub>2</sub>[(CO<sub>3</sub>)(OH)<sub>2</sub>]•0.5H<sub>2</sub>O – a new mineral from the Zlatogorskaya layered intrusive (Kazakhstan). Zap. Vses. Mineral. Obshch., 113, 90–95. (2) (1985) Amer. Mineral., 70, 217 (abs. ref. 1).