

Crystal Data: Monoclinic. *Point Group:* 2/*m*. Massive, intergrown with novákite, koutekite, and arsenic. *Twinning:* Polysynthetic along {010}.

Physical Properties: *Cleavage:* Perfect along {010}. Hardness = 3.5–4 VHN = 146 (25 g load). D(meas.) = 5.4 D(calc.) = 5.97

Optical Properties: Opaque. *Color:* Pale steel-gray on fresh surface; in polished section, very pale gray. *Streak:* Black. *Luster:* Metallic, tarnishing black. *Anisotropism:* Very strong; in pale gray-green and dark brown with violet tint.

R₁–R₂: (400) 46.4–48.2, (420) 45.8–48.4, (440) 45.2–48.6, (460) 44.8–48.4, (480) 44.6–48.0, (500) 44.6–48.5, (520) 44.5–49.2, (540) 44.2–49.5, (560) 43.8–49.4, (580) 43.5–49.1, (600) 43.4–48.9, (620) 43.5–48.8, (640) 43.7–48.6, (660) 43.8–48.3, (680) 43.7–47.9, (700) 43.3–47.6

Cell Data: *Space Group:* P2₁/c. *a* = 5.839(2) *b* = 5.111(2) *c* = 8.084(3) β = 99.7°
Z = 10

X-ray Powder Pattern: Černý Důl mine, Czech Republic.
3.144 (10), 2.616 (10), 2.495 (9), 3.604 (7), 1.795 (7), 1.687 (6), 3.295 (5)

Chemistry:

	(1)	(2)
Cu	30.35	29.77
As	69.91	70.23
Total	100.26	100.00

(1) Černý Důl mine, Czech Republic; by electron microprobe, average of 10 analyses. (2) CuAs₂.

Occurrence: In hydrothermal calcite veins cutting diopside hornfels lenses, in pyroxene gneisses and mica schists. Probably a late-stage reaction product formed at the expense of novákite and arsenic below 130 °C (Černý Důl mine, Czech Republic).

Association: Novákite, koutekite, arsenic, arsenolamprite, silver, löllingite, nickeline, chalcocite, skutterudite, bornite, chalcopyrite, tiemannite, clausthalite, uraninite, hematite, fluorite (Černý Důl mine, Czech Republic); lautite, kutínaite (Niederbeerbach, Germany); domeykite, algodinite, koutekite (Mohawk, Michigan, USA).

Distribution: From the Černý Důl mine, Krkonoše (Giant Mountains), Czech Republic [TL]. At Mühlthal, Niederbeerbach, Odenwald, Hesse, Germany. From Mohawk, Keeweenaw Co., Michigan, USA.

Name: From the Latin *pax*, peace.

Type Material: Charles University, Prague, Czech Republic; National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 162605.

References: (1) Johan, Z. (1961) Paxite—Cu₂As₃, a new copper arsenide from Černý Důl in the Giant Mts. (Krkonoše). Acta Univer. Carolinae, Geologica, 77–88 (1962) (in Czech with English abs.). (2) (1962) Amer. Mineral., 47, 1484–1485 (abs. ref. 1). (3) Johan, Z. (1985) The Černý Důl deposit (Czechoslovakia): an example of Ni-, Fe-, Ag-, Cu-arsenide mineralization with extremely high activity of arsenic; new data on paxite, novakite and kutinaite. Tschermaks Mineral. Petrog. Mitt., 34, 167–182.