Konderite $PbCu_3(Rh,Pt,Ir)_8S_{16}$

Crystal Data: Hexagonal. *Point Group:* $6/m$, 6, $6/m$ $2/m$ $2/m$, 622, or $\overline{6}m2$. As inclusions in Pt–Fe alloy.

Physical Properties: *Cleavage:* In two directions, "average". *Tenacity:* Brittle. Hardness = n.d. VHN = 372–793, 592 average. D(meas.) = n.d. D(calc.) = n.d.

Optical Properties: Opaque. *Color:* Steel-gray. *Luster:* Metallic.
R_1–R_2: (400) — , (420) 43.3–45.1, (440) 42.8–44.6, (460) 42.6–44.4, (480) 42.4–44.4, (500) 42.3–44.6, (520) 42.5–44.8, (540) 43.8–45.1, (560) 43.1–45.4, (580) 43.4–45.8, (600) 43.8–46.2, (620) 43.9–46.5, (640) 44.2–46.6, (660) 44.4–46.8, (680) 44.8–47.0, (700) 45.0–47.4

Cell Data: *Space Group:* $P6/m$, $P6$, $P6/mmm$, $P622$, or $P\overline{6}m2$. a = 7.024(20) c = 16.48(2) Z = n.d.

X-ray Powder Pattern: Konder massif, Russia.
2.98 (10), 1.763 (10), 2.459 (9), 2.85 (5), 1.715 (5), 1.291 (3), 5.10 (2)

Chemistry:

	(1)
Rh	14.2
Pt	25.2
Ir	19.2
Pb	9.53
Cu	8.25
Fe	0.28
Ni	0.38
S	23.7
Total	100.74

(1) Konder massif, Russia; by electron microprobe, average of 10 analyses; corresponding to $Pb_{1.00}(Cu_{2.81}Ni_{0.14}Fe_{0.11})_{\Sigma=3.06}(Rh_{2.99}Pt_{2.80}Ir_{2.16})_{\Sigma=7.95}S_{16.00}$.

Occurrence: As inclusions in a Pt–Fe alloy from an alkalic ultramafic massif.

Association: Pt–Fe alloy, erlichmanite.

Distribution: From the Konder massif, Aldan Shield, Sakha, Russia [TL].

Name: For the occurrence in the Konder massif, Russia.

Type Material: Mining Institute, St. Petersburg, Russia, 1500/1.

References: (1) Rudashevskii, N.S., A.G. Mochalov, N.V. Trubkin, A.I. Gorshkov, Y.P. Men'shikov, and N.I. Shumskaya (1984) Konderite, $PbCu_3(Rh,Pt,Ir)_8S_{16}$, a new mineral. Zap. Vses. Mineral. Obshch., 113, 703–712 (in Russian). (2) (1986) Amer. Mineral., 71, 229 (abs. ref. 1).