Pošepnýite $(Cu^{+}_{3}\square_{3})_{\Sigma=6}(Hg^{2+}_{4}Cu^{+}_{2})_{\Sigma=6}Sb_{4}(Se_{12.5}\square_{0.5})_{\Sigma=13}$

Crystal Data: Cubic. *Point Group*: $\bar{4}\,3m$. As idiomorphic to hypidiomorphic grains to 100 μm.

Physical Properties: *Cleavage*: None. *Tenacity*: n.d. *Fracture*: n.d. Hardness = 3.5-4 (by analogy in the group). D(meas.) = n.d. D(calc.) = 6.23

Optical Properties: Opaque. *Color*: Steel-gray, light brown in reflected light. *Streak*: n.d.
Luster: Metallic.
Optical Class: Isotropic. Non-pleochroic.
R: (470) 35.3, (546) 34.8, (589) 34.9, (650) 34.9

Cell Data: *Space Group*: $I\bar{4}\,3m$. a = 10.964(1) Z = 2

X-Ray Diffraction Pattern: Shaft No. 16 - Háje, near Příbram, Central Bohemia, Czech Republic.
3.165 (100), 1.938 (65), 1.653 (31), 2.930 (24), 2.002 (16), 1.778 (13), 1.119 (12)

Chemistry:

	(1)	(2)
Ag	1.21	
Cu	14.95	12.25
Hg	27.74	30.93
Fe	0.03	
Cd	0.12	
Tl	0.03	
Zn	0.08	
Sb	19.06	18.77
As	0.37	
Se	34.51	38.05
S	1.66	.
Total	99.74	100.00

(1) Shaft No. 16 - Háje, near Příbram, Central Bohemia, Czech Republic; average electron microprobe analysis; corresponds to $(Cu_{3.33}Ag_{0.28})_{\Sigma=3.61}(Hg_{3.43}Cu_{2.50}Zn_{0.03}Cd_{0.03}Fe_{0.01})_{\Sigma=6.00}(Sb_{3.88}As_{0.12})_{\Sigma=4.00}(Se_{10.83}S_{1.29})_{\Sigma=12.12}$. (2) $(Cu^{+}_{3}\square_{3})_{\Sigma=6}(Hg^{2+}_{4}Cu^{+}_{2})_{\Sigma=6}Sb_{4}(Se_{12.5}\square_{0.5})_{\Sigma=13}$.

Polymorphism & Series: In a series, $(Cu^{+}_{3+x}\square_{3-x})_{\Sigma=6}(Hg^{2+}_{4-x}Cu^{+}_{2+x})_{\Sigma=6}Sb_{4}(Se_{12.5}\square_{0.5})_{\Sigma=13}$ $0 \leq x << 2$

Mineral Group: Tetrahedrite group.

Occurrence: In a low-temperature, complex, selenide assemblage in a vein-type hydrothermal uranium deposit.

Association: Příbramite, dzharkenite, ferroselite, tiemannite, hakite-(Hg), tetrahedrite-(Zn), antimonselite, uraninite, calcite.

Distribution From the dump of shaft No. 16 - Háje, near Příbram, Central Bohemia, Czech Republic.

Name: Honors František *Pošepný* (1836-1895), a geologist and a founder of modern economic geology.

Type Material: National Museum, Department of Mineralogy and Petrology, Prague (P1P 15/2015) and the Mining Museum, Příbram, Březové Hory, Czech Republic (1/2016).

References: (1) Škácha, P., J. Sejkora, J. Plášil, and E. Makovicky (2020) Pošepnýite, a new Hg-rich member of the tetrahedrite group from Příbram, Czech Republic. J. Geosci., 65(3), 173-186.