## Polkovicite $(Fe, Pb)_3(Ge, Fe)_{1-x}S_4$ (x = 0.18 to 0.69)

**Crystal Data:** Cubic. *Point Group:* n.d. Massive with other sulfides.

**Physical Properties:** Hardness = n.d. VHN = 119–124 (50 g load). D(meas.) = n.d. D(calc.) = n.d.

**Optical Properties:** Opaque. *Color:* Brownish gray; in reflected light, white with cream-red tint. *Streak:* Dark gray. *Anisotropism:* Distinct.
$R_1$–$R_2$: (470) 43.5–44.5, (535) 43.0–44.0, (591) 44.0–45.0, (658) 45.5–46.5

**Cell Data:** *Space Group:* n.d. Z = n.d.

**X-ray Powder Pattern:** n.d.

**Chemistry:**

| | (1) |
|---|---|
| Fe | 29.3 |
| Pb | 14.6 |
| Cu | 3.6 |
| Ge | 4.5 |
| As | 1.8 |
| S | 34.2 |
| Total | 88.0 |

(1) Lower Silesia, Poland; by electron microprobe.

**Polymorphism & Series:** Forms a series with morozeviczite.

**Occurrence:** In epigenetic veinlets and metasomatic replacement zones replacing sandstone and older sulfides, in brecciated sandstones underlying copper-bearing shales.

**Association:** Marcasite, chalcopyrite, bornite, chalcocite, tennantite, sphalerite, galena.

**Distribution:** From the Polkovice mine, Lower Silesia, Poland.

**Name:** For the Polkovice mine, Poland.

**Type Material:** Jagellonian University, Kraków, Poland.

**References:** (1) Haranczyk, C. (1975) Morozeviczite and polkovicite, typochemical minerals of Mesozoic mineralization of the Fore-Sudenten monocline. Rudy Metalle, 20, 288–293 (in Polish).
(2) (1981) Amer. Mineral., 66, 437 (abs. ref. 1).