Feinglosite  \( \text{Pb}_2(\text{Zn}, \text{Fe}^{2+})(\text{AsO}_4, \text{SO}_4)_2(\text{OH}, \text{H}_2\text{O}) \)  

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**Crystal Data:** Monoclinic.  **Point Group:** 2/\( m \) or 2.  As crystals, to 10 \( \mu \)m, composed of multiple individuals, in radiating botryoidal aggregates.

**Physical Properties:**  **Tenacity:** Sectile.  **Hardness:** 4–5  \( \text{VHN} = 253–285, \) 263 average (100 g load).  \( \text{D(meas.)} = \text{n.d.} \)  \( \text{D(calc.)} = [6.56] \)

**Optical Properties:**  **Semitransparent.**  **Color:** Pale olive-green; in reflected light, very pale brownish gray.  **Streak:** White.  **Luster:** Adamantine.

**Optical Class:**  **Biaxial.**  \( \alpha = \text{n.d.} \)  \( \beta = \text{n.d.} \)  \( \gamma = \text{n.d.} \)  \( 2\text{V(meas.)} = \text{n.d.} \)  **Birefringence:** Very weak.

**Cell Data:**  **Space Group:** \( \text{P}_2_1/m \) or \( \text{P}_2_1_1_2_1 \).

\[
\begin{align*}
\text{a} & = 8.973(6) \\
\text{b} & = 5.955(3) \\
\text{c} & = 7.766(6) \\
\beta & = 112.20(6)^\circ \\
\text{Z} & = 2
\end{align*}
\]

**X-ray Powder Pattern:** Tsumeb, Namibia.

\[
\begin{align*}
3.246 (100), & 2.988 (60), 2.769 (60), 4.85 (50), 2.107 (50), 3.659 (30), 2.293 (30)
\end{align*}
\]

**Chemistry:**

\[
\begin{align*}
\text{SO}_3 & = 5.3 \\
\text{As}_2\text{O}_5 & = 22.1 \\
\text{FeO} & = 1.8 \\
\text{ZnO} & = 7.3 \\
\text{PbO} & = 61.4 \\
\text{H}_2\text{O} & = [2.1]
\end{align*}
\]

\[
\text{Total} = 100.0
\]

(1) Tsumeb, Namibia; by electron microprobe, average of seven analyses, total Fe as FeO, H\(_2\)O by difference; with (OH)\(^+\) supplied for charge balance, corresponds to \( \text{Pb}_{2.09}(\text{Zn}_{0.68}\text{Fe}_{0.18})^{2+}_2(\text{AsO}_4)_{1.46}(\text{SO}_4)_{0.50}(\text{OH})_{1.96}\cdot 0.62\text{H}_2\text{O} \).

**Mineral Group:** Brackebuschite group.

**Occurrence:** A very rare secondary mineral, in a cavity in chalcocite, from an oxidized zone in a dolostone-hosted hydrothermal polymetallic ore deposit.

**Association:** Goethite, anglesite, wulfenite, chalcocite, arsendescloiizite, gypsum.

**Distribution:** From Tsumeb, Namibia.

**Name:** To honor Dr. Mark N. Feinglos (1948– ), American medical researcher and mineral collector specializing in Tsumeb minerals, Durham, North Carolina, USA, who first noted the mineral.

**Type Material:** The Natural History Museum, London, England, 1984,943; Harvard University, Cambridge, Massachusetts, USA, 95.66.


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