

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . Crystals are prismatic, pseudohexagonal about [010], to 5 mm; commonly massive, compact. *Twinning:* Common on {101}.

**Physical Properties:** *Fracture:* Subconchoidal. *Tenacity:* Brittle. Hardness = 2.5–3 VHN = 70–72 (25 g load). D(meas.) = 6.2–6.3 D(calc.) = 6.33

**Optical Properties:** Opaque. *Color:* Dark steel-gray, tarnishes bluish; in polished section, dull grayish white. *Streak:* Steel-gray. *Luster:* Metallic. *Pleochroism:* Weak in air, strong in oil, grayish brown to whitish gray, with a faint bluish gray tinge or creamy with a pink tint. *Anisotropism:* Strong, vivid blue and deep violet.

$R_1$ – $R_2$ : (400) 30.5–36.0, (420) 30.4–39.7, (440) 29.8–41.6, (460) 28.9–39.8, (480) 28.0–36.5, (500) 27.4–34.0, (520) 27.0–32.3, (540) 26.7–31.2, (560) 26.5–30.3, (580) 26.4–29.7, (600) 26.3–29.3, (620) 26.3–29.1, (640) 26.3–28.8, (660) 26.3–28.9, (680) 26.4–28.9, (700) 26.6–29.2

**Cell Data:** *Space Group:*  $Bbmm$ .  $a = 6.62$   $b = 7.94$   $c = 4.06$   $Z = 4$

**X-ray Powder Pattern:** Silver King mine, Arizona, USA.

2.61 (100), 3.30 (60), 2.02 (50), 1.985 (50), 1.884 (50), 1.740 (40), 1.421 (40)

**Chemistry:**

	(1)	(2)	(3)
Ag	53.31	52.10	53.01
Cu	31.00	32.14	31.24
Fe	trace		
S	16.02	15.26	15.75
Total	100.33	99.50	100.00

(1) Foster mine, Cobalt, Canada. (2) Guarisamey, Mexico; average of three analyses. (3) AgCuS.

**Occurrence:** In hydrothermal veins, formed most commonly by secondary processes, although it also forms as a primary mineral.

**Association:** Freibergite, bornite, chalcopyrite, galena, other sulfides.

**Distribution:** An accessory mineral in a number of deposits, although only rarely in good crystals. From Zmeyewskaja-Goro, near Zmeinogorsk (Schlangenberg), Altai Mountains, Siberia, Russia [TL]. In Kazakhstan, at Dzhezkazgan. From Godejord, Norway. At Rudelstadt and Kupferberg, Silesia, Poland. From Příbram and Vrančice, Czech Republic. In Australia, at Mt. Lyell, Tasmania, and from Broken Hill, New South Wales. In Chile, at Santiago, at San Lorenzo in Aconcagua, and at Copiapó and Tarapacá. In the USA, in Arizona, an important ore mineral at the Silver King and Magma mines, Superior, Pinal Co. In Colorado, at many mines in the state; crystallized from the Red Mountain district, San Juan Co.; the American Sisters mine, Clear Creek Co., and elsewhere. From Butte, Silver Bow Co., Montana. In Canada, from Cobalt and Gowganda, Timiskaming district, Ontario; and at the Silver King mine, south of Nelson, British Columbia.

**Name:** In honor of Professor Friedrich Stromeyer (1776–1835), chemist and mineralogist, University of Göttingen, Göttingen, Germany, who first analyzed the mineral.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 190–191. (2) Frueh, A.J., Jr. (1955) The crystal structure of stromeyerite, AgCuS: a possible defect structure. *Zeits. Krist.*, 106, 299–307. (3) Suhr, N. (1955) The  
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Ag<sub>2</sub>S–Cu<sub>2</sub>S system. *Econ. Geol.*, 50, 347–350. ??data used?? (??) Baker, ??, ?? (1991) ??title?? *Acta Cryst.*, ??, 891–??. str, Strunz?? (4) Berry, L.G. and R.M. Thompson (1962) X-ray powder data for the ore minerals. *Geol. Soc. Amer. Mem.* 85, 36–37. (5) Ramdohr, P. (1969) The ore minerals and their intergrowths, (3rd edition), 477–480. (6) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 539. (7) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union. Ocean Pictures, Moscow, 196.