

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As extremely thin, bent platy crystals to 50 μm; in very dense, earthy, and fine-grained aggregates with colloform textures.

**Physical Properties:** *Cleavage:* Perfect on (001). *Tenacity:* Flexible, inelastic, slightly malleable (synthetic material). *Fracture:* n.d. *Hardness* = ~2 VHN = 61-93, 74 average (10 g load). D(meas.) = n.d. D(calc.) = 5.92

**Optical Properties:** Opaque. *Color:* Gray to dark gray; bluish gray in reflected light.

*Streak:* Dark gray to almost black. *Luster:* Metallic to dull.

*Optical Class:* *Birefractance:* Very weak. *Anisotropism:* Moderate (oil), brown to bluish gray.

R<sub>1</sub>-R<sub>2</sub>: (470) 37.1-37.9, (546) 35.9-37.1, (589) 35.15-36.3, (650) 33.9-34.9

**Cell Data:** *Space Group:* two monoclinic sub-cells

Q (pseudotetragonal): *a* = 5.84(1) *b* = 5.86(1) *c* = 17.32(1) β = 94.14(1)° Z = 4

H (pseudohexagonal): *a* = 6.28(1) *b* = 3.66(1) *c* = 17.33(1) β = 91.46(1)° Z = 2

**X-Ray Diffraction Pattern:** Pirquitas deposit, Jujuy Province, Argentina.

2.876 (100) (Q and H 006); 2.068 (60) (Q 220); 4.34 (40) (Q 004); 3.46 (30) (Q and H 005);

5.78 (20) (Q and H 003); 3.339 (20) (Q 104); 3.132 (15) (Q and H 005)

Chemistry:	(1)	(2)
Pb	54.68	59.38
As	5.27	5.15
Ag	0.33	
Fe	1.45	1.28
Sn	17.13	13.61
S	21.14	20.58
Total	100.00	100.00

(1) Pirquitas deposit, Jujuy Province, Argentina; average electron microprobe analysis; corresponds to Pb<sub>11.21</sub>As<sub>2.99</sub>Ag<sub>0.13</sub>Fe<sub>1.10</sub>Sn<sub>6.13</sub>S<sub>28.00</sub>. (2) (Pb<sub>11.3</sub>Sn<sup>2+</sup><sub>1.2</sub>)<sub>Σ=12.5</sub>As<sub>3</sub>Fe<sup>2+</sup>Sn<sup>4+</sup><sub>5</sub>S<sub>28</sub>.

**Mineral Group:** Cyindrite group.

**Occurrence:** A primary mineral in a telescoped Ag-Sn-Zn polymetallic hydrothermal vein deposit.

**Association:** Franckeite, cyindrite, pyrite-marcasite, hocartite, Ag-rich rhodostannite, arsenopyrite, galena.

**Distribution:** From the Pirquitas deposit, Jujuy Province, northwest Argentina.

**Name:** Honors Beatriz Lydia Coira (b. 1941), Professor of Petrology, University of Jujuy, Argentina, for her research on volcanism, regional geology, and ore-deposit formation in Argentina.

**Type Material:** Department of Materials Engineering and Physics, University of Salzburg, Austria (14943-14946); Natural History Museum, London, England (BM 2008, 47); the Landesmuseum Joanneum, Graz, Styria Province, Austria; and in the ore deposit collection of the Chair of Mineralogy, Faculty of Natural Sciences, University of Salta, Argentina.

**References:** (1) Paar, W.H., Y. Moëlo, N.N. Mozgova, N.I. Organova, C.J. Stanley, A.C. Roberts, F.J. Culletto, H.S. Effenberger, D. Topa, H. Putz, R.J. Sureda, and M.K. de Brodtkorb (2008) Coiraite, (Pb,Sn<sup>2+</sup>)<sub>12.5</sub>As<sub>3</sub>Fe<sup>2+</sup>Sn<sup>4+</sup><sub>5</sub>S<sub>28</sub>: a franckeite-type new mineral from Jujuy Province, NW Argentina. *Mineral. Mag.*, 72, 1083-1101.