

**Crystal Data:** Triclinic. *Point Group:*  $\bar{1}$ . As platy crystals to 20  $\mu\text{m}$ , typically in divergent spherical aggregates to 0.1 mm.

**Physical Properties:** *Cleavage:* Poor on (010). *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = 3-4 D(meas.) = n.d. D(calc.) = 3.286

**Optical Properties:** Transparent. *Color:* Pale sky blue to aqua. *Streak:* Very pale blue. *Luster:* Vitreous. *Optical Class:* Biaxial (n.d.).  $n = 1.620(5)$

**Cell Data:** *Space Group:*  $P\bar{1}$ .  $a = 6.969(9)$   $b = 7.676(9)$   $c = 8.591(11)$   $\alpha = 82.01(9)^\circ$   
 $\beta = 71.68(8)^\circ$   $\gamma = 102.68(8)^\circ$   $Z = 2$

**X-ray Powder Pattern:** Cap Garonne mine, France.

7.307 (100), 3.141 (24), 2.818 (24), 4.519 (23), 2.343 (22), 4.277 (18), 3.455 (17)

Chemistry:	(1)	(2)
CuO	37.53	37.79
Al <sub>2</sub> O <sub>3</sub>	24.37	24.22
Fe <sub>2</sub> O <sub>3</sub>	0.72	
As <sub>2</sub> O <sub>5</sub>	23.52	27.29
SO <sub>3</sub>	1.81	
SiO <sub>2</sub>	0.65	
H <sub>2</sub> O	[11.40]	10.70
Total	100.00	100.00

(1) Cap Garonne mine, France; average of 6 electron microprobe analyses, presence of H<sub>2</sub>O and OH confirmed by Raman spectroscopy, H<sub>2</sub>O by difference; corresponding to  $\text{Cu}_{1.94}(\text{Al}_{1.96}\text{Fe}_{0.04}^{3+})_{\Sigma=2.00}(\text{As}_{0.84}\text{S}_{0.09}\text{Si}_{0.04})_{\Sigma=0.97}\text{O}_{10}\text{H}_{5.19}$ . (2)  $\text{Cu}_2\text{Al}_2(\text{AsO}_4)(\text{OH},\text{O},\text{H}_2\text{O})_6$ .

**Occurrence:** A secondary mineral in the oxidation zone of a hydrothermal sulfide deposit presumably formed under acidic conditions.

**Association:** Bariopharmacoalumite, cyanotrichite, parnauite, chalcophyllite, mansfieldite (Cap Garonne mine); chalcophyllite, mansfieldite, olivenite, goethite (Salsigne mine).

**Distribution:** From the Annex S chamber and pillar 44b, Cap Garonne mine, Var, Provence-Alpes-Côte d'Azur and at the Salsigne gold mine, Aude, Languedoc-Roussillon, France.

**Name:** Honors Jean-Paul Forêt (b. 1943), a retired engineer of the French Ministry of Equipment, and a co-founder of the Musée de la Mine de Cap Garonne.

**Type Material:** Natural History Museum of Los Angeles County, California, USA (# 63573, 63574, 63575, 63576, 63577); the Museum Victoria, Melbourne, Australia (M51746); and Muséum National d'Histoire Naturelle, Paris, France (# 211.58).

**References:** (1) Mills, S.J., A.R. Kampf, A.M. McDonald, G. Favreau, and P.-J. Chiappero (2012) Forêtite, a new secondary arsenate mineral from the Cap Garonne mine, France. *Mineral. Mag.*, 76(3), 769-775. (2) (2015) *Amer. Mineral.*, 100, 659-660 (abs. ref. 1).