Millosevichite $(Al, Fe^{3+})_2(SO_4)_3$

Crystal Data: Hexagonal. *Point Group:* $\overline{3}$ (by analogy to mikasite). Tiny crystals in granular aggregates; in stalactitic porous to pumiceous masses, to 3 cm.

Physical Properties: Hardness = 1.5 D(meas.) = 1.72 D(calc.) = 2.86 Hygroscopic.

Optical Properties: Semitransparent. *Color:* Indigo, bright red, brick-red, becoming gray with hydration. *Streak:* Red. *Luster:* Vitreous.
Optical Class: Isotropic, anomalous. $n = 1.573$

Cell Data: *Space Group:* $R\overline{3}$ (synthetic). $a = 8.055$ $c = 21.191$ $Z = 6$

X-ray Powder Pattern: L'vov-Volyn' Basin, Ukraine.
3.50 (10), 5.81 (5), 2.656 (4), 4.23 (3), 2.91 (3), 2.357 (2) 2.220 (2)

Chemistry:

	(1)
SO_3	54.35
Al_2O_3	20.9
Fe_2O_3	8.8
MgO	2.32
CaO	0.86
H_2O	2.55
insol.	9.96
Total	99.74

(1) L'vov-Volyn' Basin, Ukraine; average of two analyses, corresponding to $(Al_{1.85}Fe_{0.49})_{\Sigma=2.34}(SO_4)_3$.

Occurrence: Precipitated at high temperature from gasses originating from solfataric activity or burning coal measures.

Association: Sulfur, sal ammoniac, letovicite, alunogen, boussingaultite (Kladno, Czech Republic).

Distribution: From the Alum Grotto, Vulcano, Lipari Islands, Italy. At the Velikomostov-3 coal mine, L'vov-Volyn' Basin, Ukraine. In the Schoeller coal mine, Libušin, near Kladno, Czech Republic. From Miskolc-Lyukóbánya, Hungary. At Shamokin, near Burnside, Northumberland Co., Pennsylvania, USA.

Name: To honor Professor Federico Millosevich (1875–1942), Italian mineralogist, University of Rome, Rome, Italy.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 539. (2) Srebrodol'skii, B.I. (1974) A millosevichite find in the USSR. Doklady Acad. Nauk SSSR, 214, 429–430 (in Russian). (3) (1978) NBS Mono. 15, 8.