Charmarite $Mn_4^{2+}Al_2(CO_3)(OH)_{12}\cdot 3H_2O$

Crystal Data: Monoclinic. *Point Group:* $2/m$. As complexly faceted crystals, several cm in length, with {100}, {221}, {$2\overline{2}1$}, and {001} prominent; 28 forms have been recognized. *Twinning:* Commonly twinned on {100}, producing contact twins or finely polysynthetic lamellae.

Physical Properties: *Cleavage:* {100} and {010}. Hardness = ∼3 D(meas.) = 6.30–6.49 D(calc.) = [6.38]

Optical Properties: Transparent. *Color:* Colorless to yellow; colorless to gray or brown in thin section. *Streak:* White. *Luster:* Adamantine.
Optical Class: Biaxial (–). *Pleochroism:* X = light brownish; Z = brownish. *Dispersion:* Weak, inclined. $\alpha = 2.250(8)$ $\beta = 2.382(8)$ $\gamma = 2.410(8)$ 2V(meas.) = 50°

Cell Data: *Space Group:* $P2_1/a$. $a = 13.37$–13.379 $b = 7.16$–7.174 $c = 7.11$–7.116 $\beta = 105.96°$–$106°$ Z = 4

X-ray Powder Pattern: Mounana mine, Gabon.
3.441 (FFF), 3.428 (FFF), 3.206 (FF), 4.93 (F), 3.081 (F), 4.32 (mF), 3.569 (mF)

Chemistry:

	(1)
V_2O_5	29.1
PbO	71.6
Total	100.7

(1) Mounana mine, Gabon; by electron microprobe, corresponds to $Pb_{2.00}V^{5+}_{2.00}O_7$.

Occurrence: In the oxidized zone of a lead-bearing U–V deposit (Mounana mine, Gabon).

Association: Francevillite, wulfenite (Mounana mine, Gabon).

Distribution: In the Mounana uranium mine, Franceville, Gabon. From the Kusu deposit, 85 km south of Kinshasa, Bas-Congo Province, Congo (Bas-Zaire Province, Zaire). From St. Andreasberg, Harz Mountains, Germany. Found at Vrančice, near Příbram, Czech Republic.

Name: Honors Jean Chervet (1904–1962), French mineralogist.

Type Material: National School of Mines, Paris, France.

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