

**Crystal Data:** Orthorhombic, pseudohexagonal. *Point Group:*  $2/m\ 2/m\ 2/m$ ,  $mm2$ , or  $222$ . Crystals tabular on  $\{001\}$ , pseudohexagonal in section. *Twinning:* Sector twinning with composition plane  $\{110\}$ .

**Physical Properties:** *Cleavage:*  $\{001\}$ , good. Hardness = n.d.  $D(\text{meas.}) = 5.7$   
 $D(\text{calc.}) = [5.55]$

**Optical Properties:** Transparent to translucent. *Color:* Orange.  
*Optical Class:* Biaxial (-). *Orientation:*  $X = a$ ;  $Z = b$ .  $\alpha = \text{n.d.}$   $\beta = 2.01$   $\gamma = 2.06$   
 $2V(\text{meas.}) = 55^\circ$

**Cell Data:** *Space Group:*  $Cmmm$ ,  $Cm2m$ ,  $Cmm2$ , or  $C222$ .  $a = 14.04$   $b = 24.07$   
 $c = 14.13$   $Z = [16]$

**X-ray Powder Pattern:** Margnac mine, France.  
 7.08 (vvs), 3.128 (vvs), 3.485 (vs), 3.153 (vs), 3.516 (s), 2.023 (s), 6.05 (ms)

Chemistry:	(1)
UO <sub>3</sub>	85.15
CaO	2.20
SrO	2.05
BaO	0.00
K <sub>2</sub> O	3.35
H <sub>2</sub> O <sup>+</sup>	7.45
Total	100.20

(1) Margnac mine, France; by electron microprobe, H<sub>2</sub>O by TGA; corresponding to  $(\text{Ca}_{0.40}\text{K}_{0.36}\text{Sr}_{0.20})_{\Sigma=0.96}\text{U}_{3.00}\text{O}_{10} \cdot 4.17\text{H}_2\text{O}$ .

**Occurrence:** In the oxidation zone of a uranium deposit.

**Association:** Uranophane, “gummite”.

**Distribution:** From the Margnac mine, Compreignac, Haute-Vienne, France.

**Name:** For Henri Agrinier (1928–1971), an engineer in the Mineralogy Laboratory of the French Atomic Energy Commission, Paris, France.

**Type Material:** University of Pierre and Marie Curie, Paris; National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 137454.

**References:** (1) Cesbron, F., W.L. Brown, P. Bariand, and J. Geffroy (1972) Rameauite and agrinierite, two new hydrated complex uranyl oxides from Margnac, France. *Mineral. Mag.*, 38, 781–789. (2) (1973) *Amer. Mineral.*, 58, 805 (abs. ref. 1).