Oursinite $(Co,Mg)(UO_2)_2Si_2O_7 \cdot 6H_2O$

Crystal Data: Orthorhombic. *Point Group:* $mm2$ or $2/m\ 2/m\ 2/m$. In radiating aggregates of acicular crystals elongated ‖ [001], to 1 mm.

Physical Properties: *Cleavage:* On $\{hk0\}$. Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.674 Radioactive.

Optical Properties: Transparent. *Color:* Pale yellow.
Optical Class: Biaxial (–). *Orientation:* $Y = c$. $\alpha = 1.624(2)$ $\beta = 1.640(2)$ $\gamma = 1.650(2)$
2V(meas.) = n.d. 2V(calc.) = 76°

Cell Data: *Space Group:* *Aba*2 or *Abam*. a = 12.74(1) $b = 17.55(2)$ $c = 7.050(6)$
Z = 4

X-ray Powder Pattern: Shinkolobwe, Congo.
8.73 (100), 2.853 (90), 7.20 (70), 4.141 (70), 5.16 (50), 3.528 (40), 4.55 (35)

Chemistry:

	(1)
SiO_2	13.21
UO_3	66.71
NiO	0.30
CoO	6.56
MgO	0.42
H_2O	[12.80]
Total	[100.00]

(1) Shinkolobwe, Congo; by electron microprobe, average of seven analyses, H_2O by difference; corresponds to $(Co_{0.78}Mg_{0.09}Ni_{0.04})_{\Sigma=0.91}(UO_2)_{2.07}Si_{1.95}O_7 \cdot 6.30H_2O$.

Occurrence: A secondary mineral in brecciated dolostone containing uraninite.

Association: Soddyite, kasolite, schoepite, sklodowskite, torbernite, lepersonnite, bijvoetite, curite.

Distribution: From Shinkolobwe, Katanga Province, Congo (Shaba Province, Zaire).

Name: From the French *oursin*, meaning *sea urchin*, in allusion to the mineral's appearance.

Type Material: Royal Museum of Central Africa, Tervuren, Belgium, RGM1321.

References: (1) Deliens, M. and P. Piret (1983) L'oursinite $(Co_{0.86}Mg_{0.10}Ni_{0.04})O \cdot 2UO_3 \cdot 2SiO_2 \cdot 6H_2O$, nouveau minéral de Shinkolobwe, Shaba, Zaïre. Bull. Minéral., 106, 305–308 (in French with English abs.). (2) (1984) Amer. Mineral., 69, 567 (abs. ref. 1).