

Crystal Data: Hexagonal. *Point Group:* 3*m*. As plate-like crystals to 10 μm; dendritic aggregates.

Physical Properties: *Cleavage:* n.d. *Tenacity:* n.d. *Fracture:* n.d. *Hardness* = n.d. *D(meas.)* = n.d. *D(calc.)* = n.d.

Optical Properties: *Color:* Grayish in transmitted light. *Streak:* n.d. *Luster:* n.d. *Optical Class:* n.d.

Cell Data: *Space Group:* R3*c*. *a* = 10.456 (7) *c* = 37.408(34) *Z* = 6

X-ray Powder Pattern: D'Orbigny angrite meteorite (intensities not given). 6.52, 5.24, 3.46, 3.21, 3.02, 2.88, 2.75

Chemistry:	(1)		(1)
SiO ₂	1.39	NiO	0.02
TiO ₂	0.07	ZnO	0.05
Al ₂ O ₃	0.09	SrO	0.43
FeO	6.10	La ₂ O ₃	0.08
MnO	0.04	Yb ₂ O ₃	0.15
MgO	0.01	Nd ₂ O ₃	0.18
CaO	47.06	SO ₃	0.01
Na ₂ O	0.15	<u>Ce₂O₃</u>	<u>0.25</u>
K ₂ O	0.03	Total	99.22
Cr ₂ O ₃	0.01		

(1) D'Orbigny angrite meteorite; average electron microprobe analysis supplemented by Raman spectroscopy; corresponds to (Ca_{8.91}Sr_{0.05}REE_{0.04})_{Σ=9.0}(□_{0.52}Ca_{0.42}Na_{0.05}K_{0.01})_{Σ=1.0}(Fe²⁺_{0.68}Fe³⁺_{0.26}Al_{0.02}Ti_{0.01}Mn_{0.01}Zn_{0.01})_{Σ=0.99}(P_{6.75}Si_{0.26})_{Σ=7.01}O_{28.02}.

Occurrence: In an angrite meteorite as well-defined domains associated with Fe sulfide near the contact between fayalite-kirschsteinite overgrowth/symplectite and hedenbergite.

Association: Kuratite, ulvöspinel, hedenbergite, Ca and Fe olivine, Fe sulfide.

Distribution: From the D'Orbigny angrite meteorite.

Name: Honors Professor Ting-Ying Hsüeh Ma (1899-1979), a palaeontologist who pioneered research into relations between coral growth rate, sea-water temperature, paleoclimate, and paleogeography. He was an early advocate of continental drift. Joint Director of the Department of Geology and the Institute of Oceanography, National Taiwan University (1946-1950).

Type Material: Natural History Museum, Vienna, Austria (Section D'Orbigny C-N1172-NH Wien) and the National Museum of Natural Science, Taiwan, ROC (NMNS007600-P020440).

References: (1) Hwang, S.L., P. Shen, H.T. Chu, T.F. Yui, M.E. Varela, and Y. Iizuka (2019) New minerals tsangpoite Ca₅(PO₄)₂(SiO₄) and matyhite Ca₉(Ca_{0.5}□_{0.5})Fe(PO₄)₇ from the D'Orbigny angrite. *Mineral. Mag.*, 83, 293-313.