

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As an irregular mass to 9 μm .

Physical Properties: *Cleavage:* n.d. *Hardness* = n.d. *D(meas.)* = n.d. *D(calc.)* = 3.41

Optical Properties: *Color:* n.d. *Luster:* n.d.
Optical Class: n.d.

Cell Data: *Space Group:* $P\bar{1}$. $a = 10.367$ $b = 10.756$ $c = 8.895$ $\alpha = 106.0^\circ$ $\beta = 96.0^\circ$
 $\gamma = 124.7^\circ$ $Z = 2$

X-ray Powder Pattern: Calculated pattern.

2.544 (100), 2.089 (83), 2.541 (78), 2.104 (78), 2.54 (71), 2.683 (66), 2.937 (59)

Chemistry:	(1)	(2)
Al_2O_3	44.63	84.51
CaO	15.36	15.49
SiO_2	14.62	
V_2O_3	10.64	
MgO	9.13	
Ti_2O_3	4.70	
FeO	0.46	
Total	99.55	100.00

(1) Acfer 214 CH3 carbonaceous chondrite; by electron microprobe, average of 6 analyses; corresponds to $\text{Ca}_{2.00}(\text{Al}_{2.55}\text{Mg}_{1.73}\text{V}^{3+}_{1.08}\text{Ti}^{3+}_{0.50}\text{Ca}_{0.09}\text{Fe}^{2+}_{0.05})_{\Sigma=6.01}(\text{Al}_{4.14}\text{Si}_{1.86})_{\Sigma=6.00}\text{O}_{20}$.

(2) $\text{Ca}_2\text{Al}_6\text{Al}_6\text{O}_{20}$.

Occurrence: In the core of a Ca-Al-rich inclusion (CAI) in the Acfer 214 CH3 carbonaceous chondrite meteorite, presumably a refractory phase from the solar nebula.

Association: Hibonite, perovskite, kushiroite, Ti-kushiroite, spinel, melilite, anorthite, FeNi-metal.

Distribution: From the Acfer 214 CH3 carbonaceous chondrite meteorite.

Name: Honors Addi Bischoff (b. 1955), cosmochemist at University of Münster, Germany, for his many contributions to the mineralogy of carbonaceous chondrites, including CAIs in CH chondrites.

Type Material: G.J. Wasserburg Meteorite Collection, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California, USA (Acfer 214-1580).

References: (1) Chi Ma, A.N. Krot, and K. Nagashima (2017) Addibischoffite, $\text{Ca}_2\text{Al}_6\text{Al}_6\text{O}_{20}$, a new calcium aluminate mineral from the Acfer 214 CH carbonaceous chondrite: A new refractory phase from the solar nebula. *Amer. Mineral.*, 102, 1556-1560.