

**Crystal Data:** Isometric. *Point Group:*  $4/m\bar{3}2/m$ . As powdery coatings.

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness* = n.d.  
*D(meas.)* = n.d. *D(calc.)* = 6.5  
Non-fluorescent in SW UV and LW UV.

**Optical Properties:** Translucent. *Color:* Yellow. *Streak:* n.d. *Luster:* [Earthy].  
*Optical Class:* n.d.; probably isotropic. *n(calc)*  $\approx$  1.9

**Cell Data:** Space Group: *Fm*3*m*. *a* = 5.6282(5) *Z* = 4

**X-ray Powder Pattern:** Bastnäs deposit, Sweden.

3.25 (100), 1.991 (61), 1.6969 (46), 2.815 (31), 1.292 (15), 1.1486 (12), 1.6246 (9)

<b>Chemistry:</b>	(1)
La <sub>2</sub> O <sub>3</sub>	39.29
Ce <sub>2</sub> O <sub>3</sub>	39.00
Pr <sub>2</sub> O <sub>3</sub>	4.06
Nd <sub>2</sub> O <sub>3</sub>	7.60
Sm <sub>2</sub> O <sub>3</sub>	0.28
Gd <sub>2</sub> O <sub>3</sub>	0.27
Y <sub>2</sub> O <sub>3</sub>	0.08
SiO <sub>2</sub>	0.38
CaO	0.02
F	11.70
-O = F	4.93
Total	97.75

(1) Bastnäs deposit, Sweden; electron microprobe and EDS analyses, IR spectroscopy confirms absence of OH<sup>-</sup> and CO<sub>3</sub><sup>2-</sup>; corresponding to  
(La<sub>0.431</sub>Ce<sub>0.425</sub>Nd<sub>0.082</sub>Pr<sub>0.044</sub>Si<sub>0.011</sub>Sm<sub>0.003</sub>Gd<sub>0.003</sub>Y<sub>0.001</sub>Ca<sub>0.001</sub>)<sub>Σ=1.001</sub>F<sub>1.10</sub>O<sub>0.95</sub>.

**Occurrence:** Formed by alteration of primary bastnäsit-(La), most likely by a decarbonation reaction.

**Association:** Ferriallanite-(Ce), bastnäsit-(La), quartz.

**Distribution:** At the Bastnäs deposit, Skinnskatteberg District, Västmanland County, Sweden.

**Name:** Honors Professor Ulf Hålenius (b.1951), head of the Department of Mineralogy, Swedish Museum of Natural History, for his contributions to mineral sciences.

**Type Material:** Swedish Museum of Natural History, Stockholm, Sweden; (no. 20030025).

**References:** (1) Holstam, D., J., Grins, and P.Nysten (2004) Håleniusite-(La) from the Bastnäs deposit, Västmanland, Sweden: A new REE oxy-fluoride mineral species. *Can. Mineral.* 42(4), 1097-1103. (2) (2005) *Amer. Mineral.*, 90, 769 (abs. ref. 1).