Ferruccite

Crystal Data:  Orthorhombic.  Point Group: $2/m2/m2/m$.  As minute tabular crystals.

Physical Properties:  Cleavage: \{100\}, \{010\}, and \{001\}.  Hardness = $\sim$3
D(meas.) = 2.496  D(calc.) = 2.5075 (synthetic).  Soluble in $\text{H}_2\text{O}$, bitter and acid taste.

Optical Properties:  Translucent.  Color: Colorless to white; colorless in transmitted light.
Optical Class:  Biaxial (+) (synthetic).  Orientation: $X = c$; $Y = b$; $Z = a$.  $\alpha = 1.301$
$\beta = 1.3012$  $\gamma = 1.3068$  $2\nu(\text{meas.}) = 11^\circ25'$

$Z = 4$

3.39 (100), 3.41 (85), 2.31 (40), 2.84 (25), 3.82 (20), 2.14 (20), 2.03 (20)

Chemistry:  Analyses of relatively pure material are not available.

Occurrence:  As a fumarolic sublimate.

Association:  Sassolite, fluorborates, and fluorsilicates.

Distribution:  From Vesuvius, Campania, and on Vucano, Aeolian Islands, Italy. At volcanoes on the Kamchatka Peninsula, Russia.

Name:  Honors Professor Ferruccio Zambonini (1880–1932), Italian mineralogist, student of fumarolic minerals.
