

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . Crystals typically short to long prismatic, may be acicular, elongated along [001], pseudo-hexagonal, to 8 cm; columnar, fibrous, rounded, granular, powdery, massive. *Twining:* On {110}, contact or less commonly penetration twins, repeated to give trillings, furlings; may be polysynthetic.

**Physical Properties:** *Cleavage:* On {110}, nearly perfect; on {021}, poor; on {010}, interrupted. *Fracture:* Uneven to subconchoidal. *Tenacity:* Brittle. Hardness = 3.5  
D(meas.) = 3.76(2) D(calc.) = 3.780 May be thermoluminescent; fluorescent under UV, cathodoluminescent under X-rays and electron beams.

**Optical Properties:** Transparent to translucent. *Color:* Colorless, gray, pale yellow, pale green, yellowish brown, pale red, may be longitudinally zoned; colorless in transmitted light. *Luster:* Vitreous, resinous on breaks.

*Optical Class:* Biaxial (-). *Orientation:*  $X = c; Y = b; Z = a$ . *Dispersion:*  $r < v$ , weak.  
 $\alpha = 1.517\ \beta = 1.663\ \gamma = 1.667\ 2V(\text{meas.}) = \text{n.d.}\ 2V(\text{calc.}) = 7^\circ 07'$

**Cell Data:** *Space Group:*  $Pm\bar{c}n$ .  $a = 5.1059(7)\ b = 8.4207(13)\ c = 6.0319(11)\ Z = 4$

**X-ray Powder Pattern:** Synthetic.

3.535 (100), 3.450 (70), 2.0526 (50), 2.458 (40), 1.9053 (35), 2.481 (34), 2.4511 (33)

**Chemistry:**

	(1)	(2)
CO <sub>2</sub>	30.35	29.81
CaO	2.70	
SrO	66.31	70.19
BaO	0.17	
Total	99.53	100.00

(1) Strontian, Scotland. (2) SrCO<sub>3</sub>.

**Mineral Group:** Aragonite group.

**Occurrence:** An uncommon low-temperature hydrothermal mineral formed in veins in limestone, marl, and chalk; in geodes and concretions; rarely occurs in hydrothermal metallic veins; common in carbonatites.

**Association:** Barite, calcite, celestine, harmotome, sulfur.

**Distribution:** Dozens of known localities, nearly all in minor amounts. From Strontian, Argyll, Scotland. In Germany, from Clausthal and Bad Grund, Harz Mountains; at Bräunsdorf, near Freiberg, Saxony; in the Lützw mine, Könitz, Thuringia; commercial deposits at Drensteinfurt, near Hamm, Westphalia; in the Dreislar mine, near Medebach, with fine crystals from Aschberg, Beckum, North Rhine-Westphalia. In Austria, large crystals from Oberdorf, Styria, and at Leogang, Salzburg; from Brixlegg, Tirol. From Nepean Township, Ontario, Canada. In the USA, from the Strontium Hills, 16 km north of Barstow, San Bernardino Co., California; in the Homestake mine, Lead, Lawrence Co., South Dakota; in Illinois, at a number of mines around Rosiclare, as the Minerva #1 mine, Cave-in-Rock, Hardin Co., Illinois; in the Winfield quarry, Union Co., Pennsylvania. From the Sierra Mojada district, Coahuila, Mexico. In the Kovdor, Sallanlatvi, and Vouriyärvi carbonatites, and the Khibiny and Lovozero massifs, Kola Peninsula, Russia.

**Name:** For Strontian, Scotland, source of the first specimens.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 196–200. (2) Speer, J.A. and M.L. Hensley-Dunn (1976) Strontianite composition and physical properties. *Amer. Mineral.*, 61, 1001–1004. (3) Jarosch, D. and G. Heger (1988) Neutron diffraction investigation of strontianite, SrCO<sub>3</sub>. *Bull. Minéral.*, 111, 139–142. (4) (1953) NBS Circ, 539, v. 3.

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