Tin Sn

Crystal Data: Tetragonal. *Point Group:* $4/m\ 2/m\ 2/m$. Natural crystals are not known; in irregular rounded grains and aggregates, to 1.5 mm.

Physical Properties: *Fracture:* Hackly. *Tenacity:* Ductile, malleable. Hardness = 2 VHN = 7–9 (10 g load). D(meas.) = 7.31 D(calc.) = 7.286

Optical Properties: Opaque. *Color:* Tin-white. *Luster:* Metallic. *Anisotropism:* Moderate.

R_1–R_2: (400) 76.3–72.7, (420) 79.4–74.2, (440) 81.9–75.8, (460) 84.0–77.6, (480) 85.5–79.2, (500) 86.7–80.5, (520) 87.5–81.4, (540) 88.1–81.9, (560) 88.2–82.0, (580) 88.0–81.9, (600) 87.7–81.5, (620) 87.2–81.1, (640) 86.7–80.7, (660) 86.3–80.4, (680) 85.8–80.1, (700) 85.4–79.8

Cell Data: *Space Group:* $I4_1/amd$. $a = 5.831$ $c = 3.182$ $Z = 4$

X-ray Powder Pattern: Synthetic.
2.915 (100), 2.793 (90), 2.017 (74), 2.062 (34), 1.484 (23), 1.442 (20), 1.205 (20)

Chemistry: Typically nearly pure tin by electron micoprobe analyses.

Occurrence: Rare, in some placers; in unspecified kimberlite pipes; in seafloor spreading zones.

Association: Platinum, iridosmine, gold, copper, sorosite, cassiterite.

Distribution: From the Nesbitt LaBine uranium mines, Beaverlodge area, Saskatchewan, Canada. At a placer in Broad Brook, Five Corners Hamlet, Windsor Co., Vermont, USA. From the Rio Tamaná, the Department of Chocó, Cauca, Colombia. At the Ilímaussaq intrusion, southern Greenland. In Nigeria, from the Badiko district, Bauchi, and in the Agbaja ironstone formation. From Oued Berkou, Algeria. At the Gasborn district, Filipstad, Sweden. From the Elkiaidan River, eastern North Nuratin Range, Uzbekistan. At the Baimka gold-PGE placer deposit, in the Bol'shoy Anyuy River area, western Chukotka, Russian Far East, Russia. In the Aberfoyle and Sam Rivers, headwaters of the Clarence River, near Oban, New South Wales, Australia. From the Mid-Atlantic Ridge (26°N) and East Pacif Rise (21°S).

Name: A word of Old English origin, related to the Dutch *tin* and German *zinn*; the chemical symbol from the Latin *stannum*.

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