Hawleyite CdS

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Crystal Data: Cubic. Point Group: $\overline{4}3m$. Very fine-grained powdery coatings.

Physical Properties: Hardness = n.d. VHN = n.d. D(meas.) = n.d. D(calc.) = 4.87

Optical Properties: Opaque to subtranslucent. Color: Bright yellow.

R: n.d.

Cell Data: Space Group: $F\overline{4}3m$. a = 5.818 Z = 4

X-ray Powder Pattern: Hector-Calumet mine, Galena Hill, Canada. 3.36 (100), 2.058 (80), 1.753 (60), 2.90 (40), 1.337 (30), 1.186 (30), 1.120 (30)

Chemistry: Composition established by semiquantitative spectroscopic analysis.

Polymorphism & Series: Dimorphous with greenockite.

Mineral Group: Sphalerite group.

Occurrence: As coatings on fine-grained sphalerite and siderite in vugs; probably of secondary origin, deposited from meteoric waters in vugs and along late fractures.

Association: Sphalerite, siderite, greenockite.

Distribution: In Canada, in the Hector-Calumet mine, Keno-Galena Hill area, Yukon Territory [TL], and in the Strathcona mine, Sudbury, Ontario. In the USA, near Hanover, Grant Co., New Mexico; at the Crestmore quarry, Riverside Co., California; from near Bethel Church, Pike Co., Indiana; and at Franklin, Sussex Co., New Jersey. From near Komna, Czech Republic. In the Los Blancos mine, Sierra de Cartagena, Murcia Province, Spain. From Ragada, Greece. At Tynagh, near Killimor, Co. Galway, Ireland. In the Fall Hill quarry, Ashover, Derbyshire, England. From the Noril'sk region, western Siberia, Russia. In the Coquimbana mine, Cerro Blanco district, Chile. From the Tui mine, Mt. Te Aroha, New Zealand. In the Kolar Gold Fields, Karnataka, India. Likely yet to be discovered at additional localities, as easily mistaken for greenockite.

Name: To honor Professor James Edwin Hawley (1897–1965), Canadian mineralogist, Queen's University, Kingston, Ontario, Canada.

Type Material: Canadian Geological Survey, Ottawa, Canada, 12164; Harvard University, Cambridge, Massachusetts, USA, 123839.

References: (1) Traill, R.J. and R.W. Boyle (1955) Hawleyite, isometric cadmium sulfide, a new mineral. Amer. Mineral., 40, 555–559.