Simonellite $C_{19}H_{24}$

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. A crystalline incrustation.

Physical Properties: Hardness = n.d. D(meas.) = 1.08 D(calc.) = 1.10

Optical Properties: Semitransparent. *Color:* White.
Optical Class: [Biaxial.] α = n.d. β = n.d. γ = n.d. 2V(meas.) = n.d.

Cell Data: *Space Group:* *Pnna* (studied on material recrystallized from benzene).
$a = 9.231(3)$ $b = 9.134(3)$ $c = 36.01(1)$ Z = 8

X-ray Powder Pattern: n.d.

Chemistry:

	(1)	(2)
C	89.84	90.42
H	10.15	9.58
Total	99.99	100.00

(1) Fognano, Italy. (2) $C_{19}H_{24}$; 1,1-dimethyl-7-isopropyl-1,2,3,4-tetrahydrophenanthrene, MP 59° C–60° C, BP 314° C–316° C.

Occurrence: In lignite, apparently derived from coniferous forests.

Association: n.d.

Distribution: From a coal mine at Fognano, near Montepulciano, Tuscany, Italy. A component of other brown coals and volcanic ashes, but noted in organic extractions.

Name: Honors Professor Vittorio Simonelli (1860–1929), Italian geologist, University of Bologna, Bologna, Italy, who discovered the mineral.

Type Material: n.d.

References: (1) Ciusa, R. and A. Galizzi (1921) Ricerche su alcuni costituenti delle lignite. Gazetta Chimica Italiana, 51(1), 55–60 (in Italian). (2) (1922) Amer. Mineral., 7, 178 (abs. ref. 1). (3) Foresti, E. and L. Riva di Sanseverino (1969) The X-ray crystal and molecular structure of an organic mineral: simonellite, $C_{19}H_{24}$. Atti Rend. Accad. Lincei, 47, 41–54.