Bornhardtite $\text{Co}^{2+}\text{Co}^{3+}\text{Se}_4$

Crystal Data:  Cubic.  \textit{Point Group}: $4/m \ 3 \ 2/m$.  Massive.


Optical Properties:  Opaque.  \\textit{Color}: Rose-red.  \\
R: (400) 41.3, (420) 42.8, (440) 44.3, (460) 45.4, (480) 46.4, (500) 47.2, (520) 47.8, (540) 48.4, (560) 49.2, (580) 49.2, (600) 49.7, (620) 50.2, (640) 50.8, (660) 51.4, (680) 52.0, (700) 52.7

Cell Data:  \textit{Space Group}: $Fd\overline{3}m$.  \\
$a = \sim 10.2$  \\
Z = 8

X-ray Powder Pattern:  Trogtal quarry, Germany.  \\
2.7 (100), 2.4 (100), 2.3 (100), 2.2 (100), 2.0 (100), 1.96 (100), 1.42 (100)

Chemistry:  No analysis appears ever to have been made.

Mineral Group:  Linnaeite group.

Occurrence:  Of hydrothermal origin.

Association:  Trogtalite, hastite, clausthalite.

Distribution:  In Germany, in the Harz Mountains, from the Trogtal quarry, near Lautenthal [TL], and at Tilkerode.  In the Pinky Fault uranium deposit, Saskatchewan, Canada.  From Cerro de Cacheuta, Mendoza Province, Argentina.

Name:  Honors Dr. Wilhelm Bornhardt (1864–1946), German student of ore deposits.

Type Material:  n.d.