Gananite ${
m BiF_3}$

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Crystal Data: Cubic. Point Group: $\overline{4}3m$. In irregular aggregates, to 0.15 mm.

Physical Properties: Fracture: Uneven. Tenacity: Brittle. Hardness = n.d. VHN = 135-153 D(meas.) = n.d. D(calc.) = 8.928

Optical Properties: Translucent. Color: Brown to black, greenish black; gray in reflected light. Streak: Dark gray. Luster: Resinous to semimetallic.

Optical Class: Isotropic.

 $R: (407)\ 11.08, (435)\ 12.31, (546)\ 12.73, (591)\ 12.92, (621)\ 12.96, (647)\ 13.27$

Cell Data: Space Group: $P\overline{4}3m$ (synthetic, ICDD 11-10). a = 5.825(1) Z = 4

X-ray Powder Pattern: Ganan area, China.

3.37 (100), 2.057 (90), 1.756 (80), 2.91 (70), 2.272 (50), 1.334 (50), 1.188 (50)

Chemistry:

(1) Ganan area, China; by electron microprobe, corresponding to Bi_{1,00}F_{2,84}. (2) BiF₃.

Occurrence: In wolframite-bearing quartz veins.

Association: Bismuth, bismuthinite, pyrite, chalcopyrite.

Distribution: In the Ganan area, Laikeng district, southern Jiangxi Province, China.

Name: Presumably for its occurrence in the Ganan area, China.

Type Material: National Museum of Geology, Beijing, China.

References: (1) Longzai Cheng, Zongshao Hu, Shiwei Pan, Rongsheng Huang, and Shuliang Guo (1984) Gananite (α -BiF₃), a new bismofluoride mineral from Jiangxi, China. Yanshi Kuangwu Ji Ceshi, 3, 119–123 (in Chinese with English abs.). (2) (1988) Amer. Mineral., 73, 1494 (abs. ref. 1).