

A Note on a New Occurrence of Baddeleyite in Larvikite from Larvik, Norway

LENNART WIDENFALK & ROLAND GORBATSCHEV

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L. Widenfalk & R. Gorbatshev, Department of Mineralogy and Geology, Uppsala University, Box 555, S-751 22, Uppsala 1, Sweden.

Baddeleyite has been discovered in larvikite from the central parts of the town of Larvik, Norway. The mineral was identified by microprobe and optical means. Microprobe analysis shows virtually pure ZrO_2 , the contents of U and Th are below the limit of detectability. The optic axial angle is $2V(-) = 30^\circ$, refraction is high, birefringence weak, color in thin-section is dirty yellowish-brown. Sets of twinning lamellae possibly coinciding with poorly developed cleavage run parallel to (110). The crystals are tabular

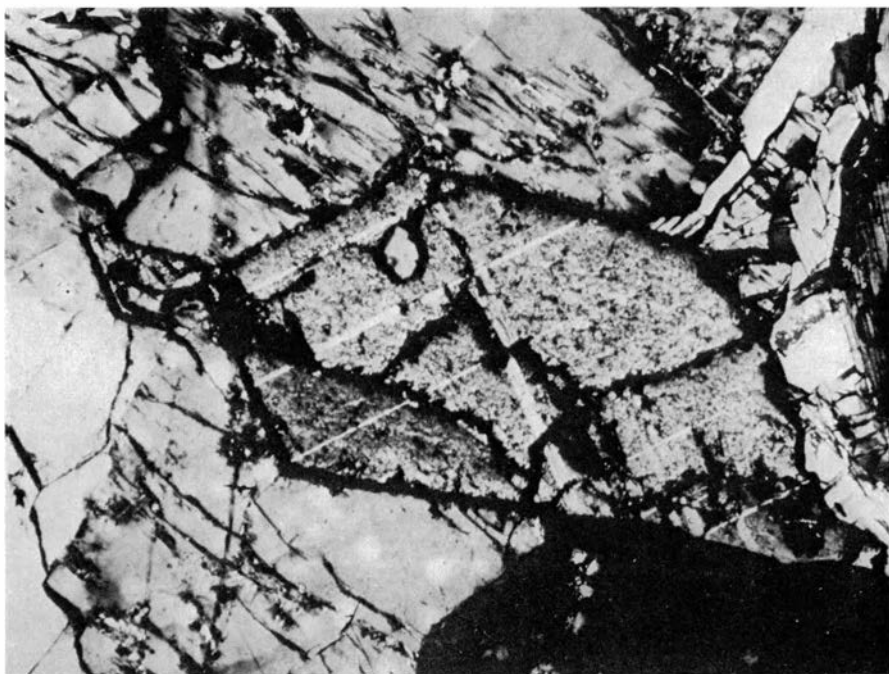


Fig. 1. Baddeleyite crystal in larvikite. The crystal is tabular parallel to (100). Twinning, which is distinguishable as sets of light lamellae runs parallel to (110) which is also the orientation of the terminating crystal surfaces. Crossed nicols, $135\times$.

parallel to (100), other identified crystal surfaces being (110). The largest discovered crystal had a thin-section maximum diameter of 0.7 mm (Fig. 1).

The mineral association of the investigated larvikite comprises alkali feldspar, oligoclase, nepheline, olivine, biotite, augite, Ca-amphibole, apatite, magnetite, and ilmenite. As is evident from this composition, the occurrence of baddeleyite in larvikite is due to the undersaturation of the rock in Si.

Previously, finds of baddeleyite in larvikite have been made by J. Hysingsjord and H. Neumann (Neumann, personal communication).

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