

Supplemental Figure 1

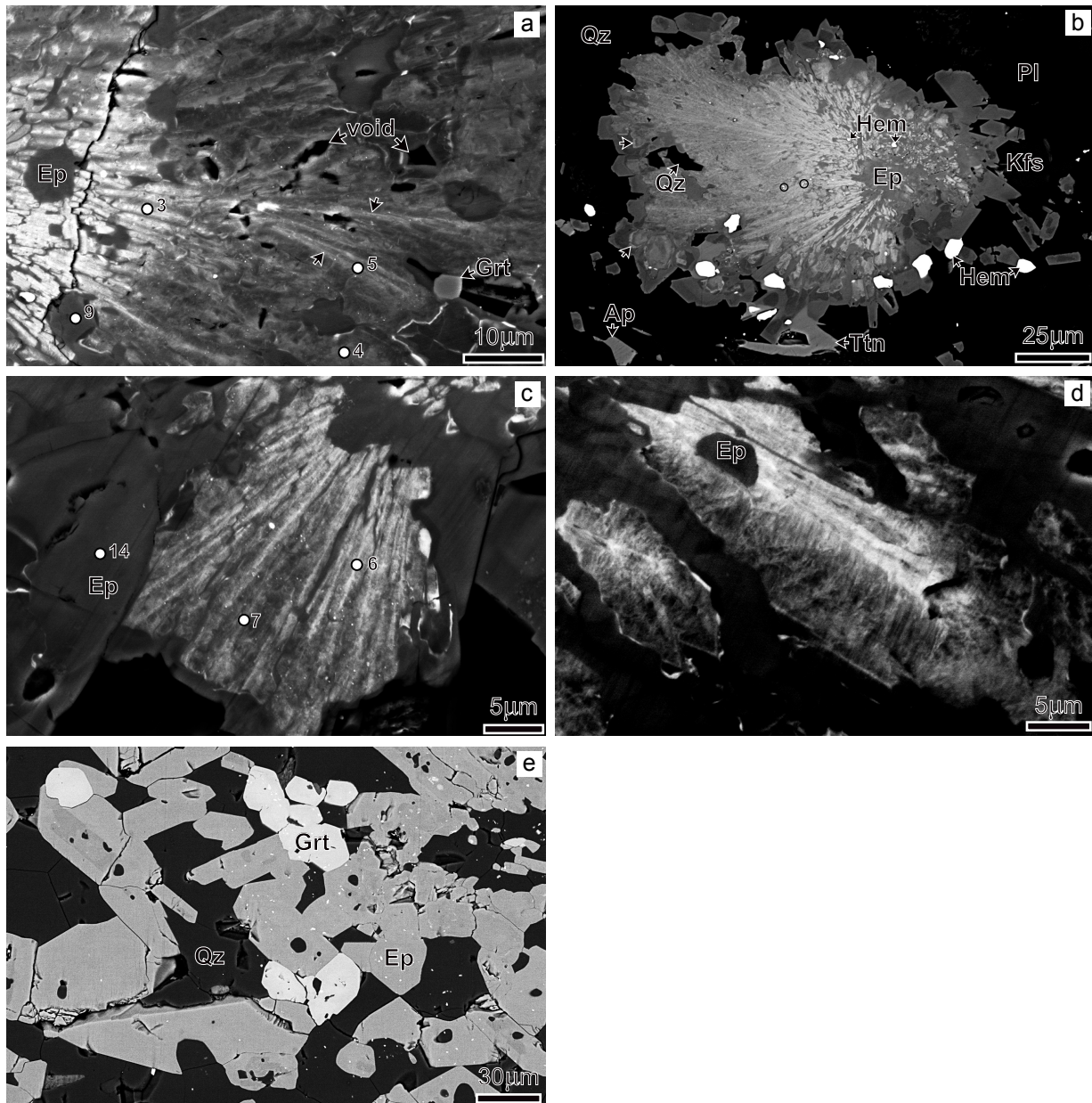


Figure S1 Backscattered electron (BSE) images of epidote textures in the metavolcanic breccia.

(a) Enlarged view of the rectangular area specified in Fig. 2b, the REE-rich epidote crystals are radially arranged about the core. Thinner epidote fibers (lower right, indicated by arrows) radiate further outwards. Several equant epidote and garnet grains are enclosed in the spherulite. The outer zone of the spherulite is dominated by REE-poor interfibrillar epidote.

(b) An epidote spherulite is overgrown by euhedral epidote grains. The radiating point (middle right) of the spherulite is fragmented, with randomly oriented bits of the bright fibrous epidote cemented by dark epidote. The arrowed epidote grains (left side) display zoned REE content similar to that of the epidote grains in the radial euhedral crystal aggregate of Fig. 2g. Several euhedral epidote grains are adjacent to the spherulite (middle right). Fine-grained hematite and zircon (in black circles) are included in the spherulite.

(c) Enlarged view of the area on the lower left part of Fig. 3d, showing the radiating REE-rich epidote fibers with interfibrillar REE-poor epidote, overgrown by a thin rim of REE-poor epidote.

(d) Enlarged view of the area on the lower middle of Fig. 3d, where finer epidote fibers grew at large angles from the thicker fibers, forming a feathery dendrite-like texture.

(e) Randomly arranged euhedral epidote, quartz, and garnet forming an epidote-rich aggregate. Some of the epidote grains show slight compositional zoning (upper left).

Supplemental Figure 2

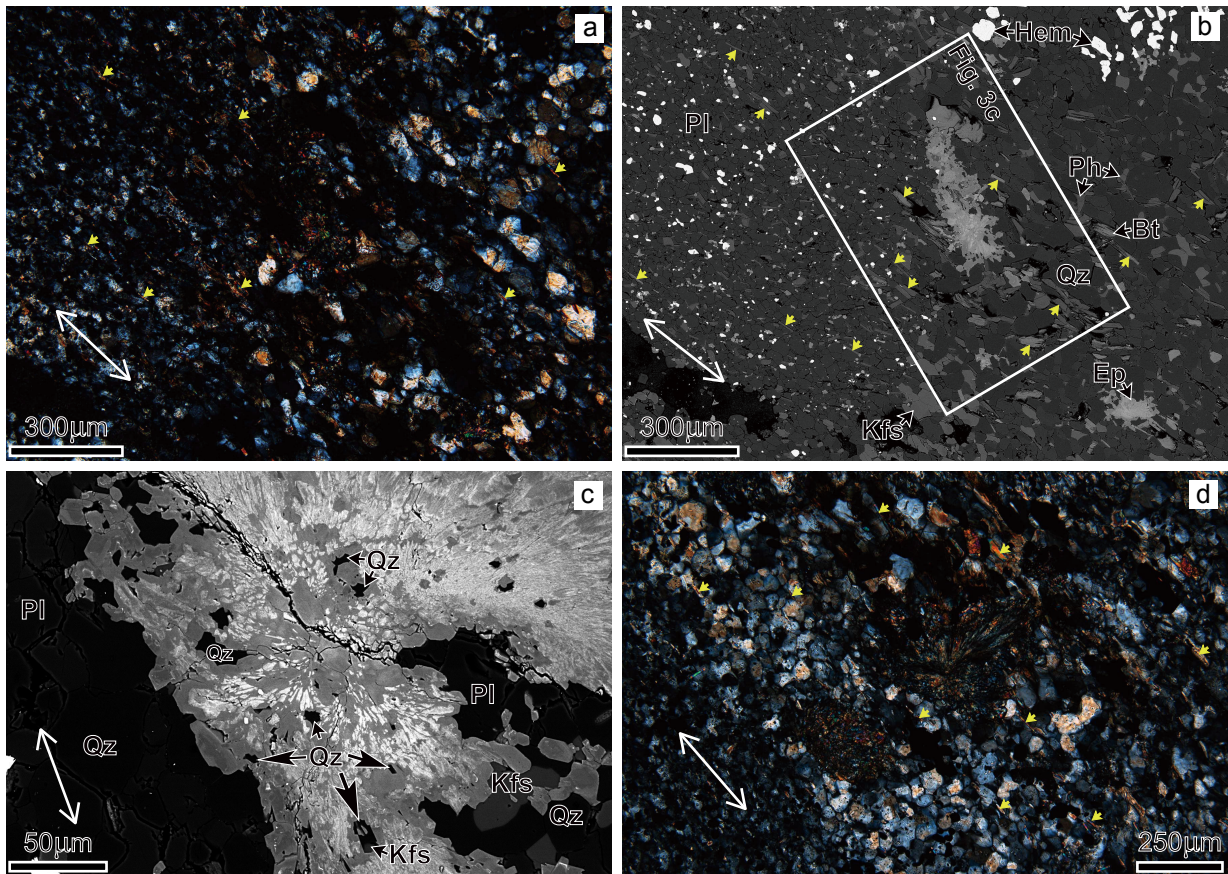


Figure S2 BSE images and photomicrographs showing the relationship between the orientations of the crystals in the spherulite texture and the foliation (indicated by double-headed arrows).

(a–b) A large scale photomicrographs (a, cross-polarized light) and corresponding BSE image (b) of the epidote spherulite shown in Fig. 3c and Fig. 3d. The foliation is defined by acicular phengite and biotite (indicated by yellow arrows).

(c) An enlarged BSE image of lower part of the epidote spherulite in Fig. 3a showing quartz and K-feldspar are included in the core of the spherulite, which is fragmented, with the bright bits of epidote cemented by dark epidote.

(d) Photomicrographs (cross-polarized light) with the same field of view shown in Fig. 3a. The foliation is defined by acicular phengite and biotite (indicated by yellow arrows).