

## CAPTIONS FOR THE SUPPLEMENTARY FIGURES

Supplementary Figure 1a. Joints in the ultrabasic Yanisvaara body produce parallelepiped-shaped blocks.

Supplementary Figure 1b. Fine-grained olivine (Ol) in an ultrabasic rock at Yanisvaara. Mineral symbols used are Ilm: ilmenite, Ol: olivine, Srp: serpentine.

Supplementary Figure 2a-f. Textures and associations in ultrabasic rocks at Yanisvaara. Mineral symbols used are Amp: amphibole, Ap: apatite, Brt: baryte, Clc: clinocllore, Hem: hematite, Hsm: Ni–Mn-based oxide likely related to hausmannite, Ilm: ilmenite, Mag: chromian magnetite, Ol: olivine, Pn: pentlandite, Srp: serpentine.

Supplementary Figure 3. Triangular plot showing the F – Cl – OH compositional variations in grains of accessory apatite in the Yanisvaara body (blue circles), compared with the field shown schematically for apatite in the Lotmvara-II body (Ltm-II) after Barkov *et al.* (2023a). The mineral symbols used are Clap: chlorapatite, Fap: fluorapatite, Hap: hydroxylapatite.

Supplementary Figure 4. The two series of compositions of pentlandite (Pn) and cobaltpentlandite (Copn) are shown in plots of Ni *versus* Fe, expressed in values of atoms per formula unit (*apfu*) and based on a total of 17 *apfu*.