Orthopyroxene-plagioclase vein in peridotite xenoliths as an indicator of wedge-mantle derivation

Shoji Arai[1], Yohei Shimizu[2], Shuichi Takada[3], Satoko Ishimaru[4]

[1] Dept. Earch Sci., Kanazawa Univ., [2] Dept. Earth Sci., Kanazawa Univ, [3] Natulal sci and Technology,Kanazawa Univ., [4] Dept. Earth Sci., Kanazawa Univ.

Orthopyroxene-plagioclase veinlet is one of the petrographical characteristics of sub-arc mantle peridotite xenoliths. When the veins are sufficiently thick modal quartz is preserved by orthopyroxenite lining along the boundary with olivine. The melt that produced the veins is similar in chemistry to some arc magmas such as adakite and TTD, and was derived from slab melting.