

Supplementary Information (ESI) of this article:

ESI Table S1: EPMA analysis of major element composition in olivine and melt inclusion (wt%).

ESI Table S2:  $^{40}\text{Ar}/^{39}\text{Ar}$  results from single grain total fusion analysis of olivine.

ESI Table S3:  $^{40}\text{Ar}/^{39}\text{Ar}$  data for the whole rock matrix.