

## Sr and Nd isotope compositions of the Alley volcanic rocks of the Oman ophiolite

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Preliminary data for the Sr and Nd isotope compositions of the Alley volcanic rocks in the Oman ophiolite are reported. The samples analyzed are fresh lavas of tholeiitic andesite, tholeiitic rhyolite and boninite, all of which show clear arc-like geochemical signatures. Nd isotope compositions of the andesites and rhyolites are consistent with those of intrusive rocks related to the axial-stage volcanism (Geotimes volcanics), indicating that these magmas were derived from MORB-like depleted mantle source. The boninites, however, show clearly lower Nd isotope ratios than the andesites and rhyolites. Sr isotope ratios of the rhyolites and boninites are significantly higher than those of the products of axial-stage volcanism, whereas the andesites show only slightly enriched Sr isotope compositions. The varied Sr and Nd isotope compositions observed for these lavas suggest that the isotope composition of the slab-derived fluid and/or the extent of mantle metasomatism by the fluid varied during the production of these magmas. Because these magmas are considered to have been generated in different stages of the Alley volcanism, these data may reflect the change in fluid-mantle interaction during the initial stage of subduction of the young, hot oceanic lithosphere.