Supporting Information for

**Missing western half of the Pacific Plate: Geochemical nature of the Izanagi–Pacific Ridge interaction with a stationary boundary between the Indian and Pacific mantles**

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**Additional Supporting Information (Files uploaded separately)**

- Supporting information Figure S1
- Caption for Dataset S1

**Introduction**

[This supporting information includes Figure S1:

- Formed by the data compilation by *Class and Kerstin* [2012].
- Showing a new Indian-Pacific mantle boundary in $\varepsilon$Nd-$\varepsilon$Hf isotope systematics.

[This supporting information includes Dataset S1 as a separate Excel file:

- Served with Excel spreadsheet including all the newly analyzed data.
- The analytical procedures are all listed in the main text.
- Note: Color coded in blue is from literature, black shows analytical result in this study.
Figure S1. Indian and Pacific mantle domain boundary in $\varepsilon$Nd-$\varepsilon$Hf isotope systematics. Data from Class and Kerstin [2012]. P99 and P07 are from Pearce et al. [1999 and 2007]. DM, FOZO, HIMU, EM1, and EM2 are from Stracke et al. [2005]. The plume-influenced MORBs in the Galapagos Ridge all plot in the Pacific mantle field, although they plot closer to the Indian–Pacific boundary line, but do not violate mantle discrimination. This suggests negligible effects on their small volume mantle source by the small degree of mantle melting for E-MORBs only, but with dilution by a larger degree of melting for depleted-(D-) and N-MORBs [Kimura and Kawabata, 2015; Niu et al., 2002].

References


**Data Set S1.** Analytical results of ocean floor basalts and ocean island basalts in the western Pacific.