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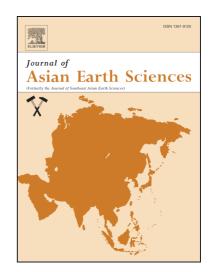
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Early Devonian back-arc extension in the eastern Central Asian Orogenic Belt:

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Mongolia (North China)

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Abstract

The Early Devonian bimodal volcanic sequence is firstly recognized in the Xilinhot area, central Inner Mongolia (North China). Zircon U-Pb dating of rhyolitic sample gives crystallization age of 407 ± 2 Ma, which is interpreted as the extrusive age of this bimodal volcanic sequence. Basaltic samples belong to tholeitte series whereas rhyolitic samples are peraluminous. Basaltic rocks show typical N-MORB-like REE and trace elemental patterns, with depletion of LREEs and negligible anomalies of Eu (δ Eu = 0.83-1.00). They have initial 87 Sr/ 86 Sr ratios ranging from 0.7077 to 0.7086, and positive ϵ Nd(t) values from +7.5to +9.0. By contrast, rhyolitic rocks show enrichment in LREEs and LILEs but depletion in HFSEs, with negative Eu anomalies (δ Eu = 0.58-0.68). They have negative ϵ Nd(t)

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