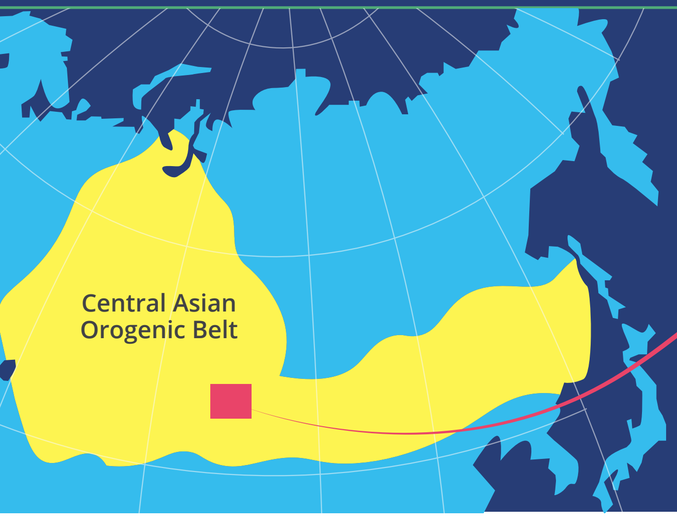
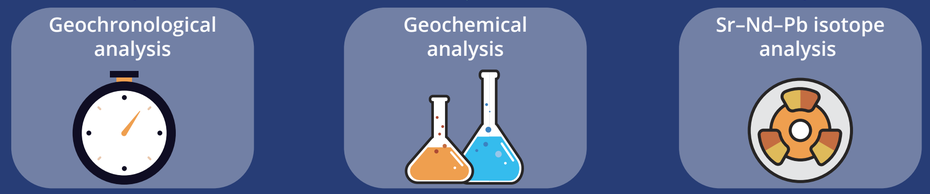
The Petrogenesis of Pillow Basalts in West Junggar, Northwest China



West Junggar, Northwest China includes silurian pillow basalts of the Mayilashan Formation

Petrogenesis of these rocks are important for the understanding of the tectonic evolution of the area

Petrogenesis of pillow basalt samples



What is the origin, chronology, and chemical composition of pillow basalts in West Junggar?

Zircon dating

Eruption: 437.2 ± 2.2 Ma
Middle Silurian period

Geochemical analysis

Chemical signature of ocean island basalt (OIB), which is alkaline, rich in light rare earth elements, and deficient in heavy rare earth elements

Sr-Nd-Pb isotope analysis

Dupal-like isotopic signature of the crust of the southern Paleo-Asian Ocean

These characteristics indicate that the magmas were derived from a deep OIB reservoir

The origin, chronology, and chemical composition of pillow basalts reveal more about the evolution of the ancient Paleo-Asian Ocean

Geological Journal

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YANG *et al.* (2017) | DOI: 10.1002/GJ.3078

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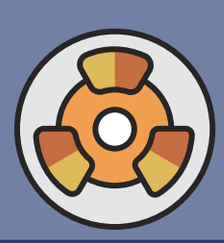

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