

Intra-oceanic plate deformation related to fragmentation of the oceanic lithosphere

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The mantle section of the Oman ophiolite is the largest piece recognized so far of uppermost oceanic lithosphere exposed at the Earth's surface. Extensive structural mapping of these rocks has been conducted throughout the Oman mountain range in order to unravel mantle processes associated with the generation of the oceanic lithosphere. We investigated three shear zones developed in the Hilti-Fizh mantle sections to reveal a process for fragmentations of oceanic lithosphere.