

A comprehensive mechanism for the origin of continental crust and EM1:Archean subduction factory

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Composition of the continental crust can be explained comprehensively by Archean processes including 1) production of arc basalt magmas induced by slab dehydration, not by slab melting, and 2) anatexis of the initial crust and subsequent delamination of restite. The delaminated restite has the signature identical to EM1, a geochemical reservoir in the present mantle.