

Reactions between metal and silicate in the early differentiating Earth

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The differentiation of the Earth into its metallic core and silicate mantle and crust was among the most profound events shaping the planet in its early history, and the geochemical consequences of this event remain today, recorded in the composition of minor and trace elements in the core and mantle. I describe experimental investigations into the reactions between metal and silicate melts at high pressure and temperatures, and interpret these results to better understand the conditions of core formation in the early developing Earth.