

## **Using Si isotopes to assess chemical weathering of silicate rocks.**

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The chemical weathering of silicate rocks acts as a long-term sink for atmospheric carbon dioxide. It has been shown that rivers contain Si with heavier dissolved isotope compositions relative to the continental crust, and thus Si isotopes may be a potential tool for assessing chemical weathering, although the mechanism for this fractionation remain unclear. It would seem from available data that the fractionation occurs during clay formation, akin to divalent cations, although the scale of biological fractionation in soils is poorly constrained. Here I will review our current understanding of the fractionation of Si in the weathering environment, with examples from studies of the in-situ fractionation, which is strongly effected by hydrological parameters and vegetation.

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