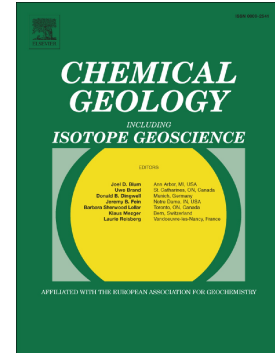


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Chromium isotope systematics in the Connecticut River

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Abstract:

Limited constraints on Cr isotope fractionation during weathering and river transport is currently a gap in our understanding of the chromium (Cr) isotope system, which as an emerging proxy in environmental and paleoenvironmental studies. Here, we investigate Cr mobility and isotope fractionation from the temperate Connecticut River, USA, including Cr concentrations and isotopic compositions of river water, suspended particles, riverbed sediments, and weathering profiles. The $\delta^{53}\text{Cr}$ values of the Connecticut River water range from -0.17‰ to $+0.92\text{‰}$, which are similar to or higher than the weathered rocks in the

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