

33 - Surface precipitation mechanisms and their role in metal sequestration in natural environments

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One often observes a residence time effect on metal desorption and in some cases, pronounced hysteresis. These observations have been related to diffusion phenomena as well as surface precipitate formation. Over the past 15 years it has become apparent that the formation of mixed metal-Al hydroxide (layered double hydroxides, LDHs) phases that form with metals, such as Co, Ni, and Zn, can play an important role in metal sequestration. These phases can form in natural soils at higher pHs and metal loadings. Once the phases form, and mineral transformations occur over time, the metal bioavailability is significantly reduced. This presentation will discuss advances in understanding the mechanisms of LDH formation, and subsequent impacts on sequestration, from a multi-spatial and multi-temporal scale approach.

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[Sorption Reversibility of Organic and Inorganic Pollutants in Natural Solids: The Elephant in the Room? \(08:00 AM - 12:00 PM\)](#)

Location: New Orleans Downtown Marriott at the Convention Center

Room: Blaine Kern E

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