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Title: Nature and Reactivity of Layered Double Hydroxides formed by Coprecipitating Mg, Al and As(V): Effect of Arsenic Concentration, pH, and Aging

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## Highlights

- 1) High amounts of As(V) are removed co-precipitating As(V) with Mg and Al
- 2) As(V) coprecipitated with Al and Mg retards the formation and transformation of LDHs
- 3) The nature and reactivity of As(V)-Mg-Al co-precipitates are influenced by pH, aging, and As concentration
- 4) Less As(V) is removed by P from co-precipitates than when sorbed onto pre-formed LDHs
- 5) Both *inner-* and *outer-sphere* As(V) complexes occur in As(V)-Mg-Al LDHs [EXAFS and XANES spectra and As(V) desorption studies]

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