# Effect of Phosphate Adding Order on Adsorption and Desorption of Cadmium by Geothite. (S11wang212930-Poster)

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## Abstract:

The adsorption of cadmium (Cd) by oxides has been extensively studied in well controlled systems. However, the sorption kinetics, especially desorption kinetics in the presence of phosphate, received relatively limited attention. A batch equilibrium method was used to investigate changes in sorption kinetics of Cd by goethite under two different adding sequence of phosphate: 1) treating goethite with phosphate for 7 days before the addition of Cd, and 2) introducing phosphate and Cd at the same time. Results demonstrated that Cd adsorption was substantially enhanced in the presence of phosphate in both cases. Adding order had little effect on adsorption kinetics of Cd, and the sorption reached apparent equilibrium within 24 hours for both adding sequences. However, different adding order did impact Cd desorption kinetics. The system in which Cd and phosphate were added simultaneously had relatively higher extraction percentage of Cd than that pretreated with phosphate.

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