Entrapment and Desorption Kinetics of Aqueous CO2 on Goethite. (S02-schulthess134653-Poster)

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Abstract:

Carbon dioxide is ubiquitous in soils and its concentration varies significantly with the seasons. Although it is recognized that the adsorption of carbonate affects the reactivity of oxides toward other anions, knowledge of kinetics of carbonate desorption remains limited. Adsorption of carbon dioxide onto porous goethite, aged from two minutes to one day, and then desorbed with pure air was studied. The desorption data were successfully fitted by one-site and two-site kinetic models. After one-day residence, the amount of carbonate that easily desorbed (within two days purging) was about 10% less than in the two-minute delay desorption.

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