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H_2O-D_2O exchange in lawsonite

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ABSTRACT

The mineral lawsonite, $CaAl_2Si_2O_7(OH)_2 \cdot H_2O$, was deuterated to about 93% in a thermobalance by H_2O-D_2O gas-phase exchange at temperatures between 375 and 425 °C. The kinetics of this reaction are reported and diffusion coefficients for the H_2O-D_2O exchange are calculated from thermogravimetric measurements.