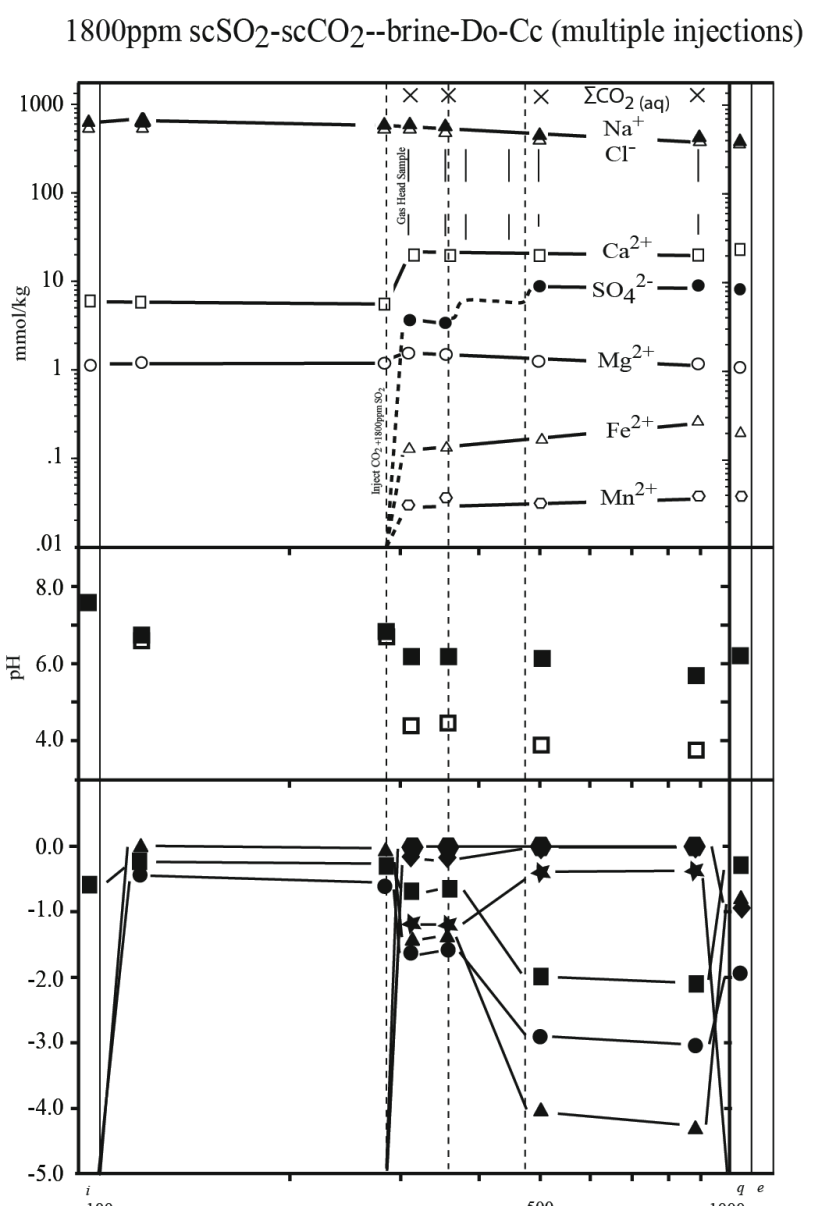
A Geochemical and Experimental Evaluation of Geologic CO_2-SO_2 Co-Sequestration

John P. Kaszuba, Dept. of Geology & Geophysics, University of Wyoming



Hydrothermal experiment emulates carbonate reservoir (Madison Limestone).

Supercritical carbon dioxide and 1800 ppmv sulfur dioxide were injected three times in the span of eight days.

Brine and supercritical fluid were sampled approximately 24 hours after each injection.

Sulfate concentrations in the brine increased accordingly.

No sulfur was detected in the supercritical fluid.

These results suggest that sulfur dioxide readily partitions out of supercritical carbon dioxide and into the brine. In conjunction with our other results, our experiments suggest that co-sequestration of carbon dioxide and sulfur dioxide is a viable option for Carbon Capture and Storage.