

## X線CT可視化技術による Berea 砂岩中のマイクロバブルCO<sub>2</sub>流動特性の検討 X-ray CT visualization of CO<sub>2</sub> microbubbles migration in Berea sandstone

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Laboratory core flooding experiment was run to investigate supercritical CO<sub>2</sub> migration in brine saturated sandstone. The sample was cylindrical Berea sandstone measuring 35mm in diameter and 70mm in length. A grooved disc and a special porous filter were set to the sample ends.

Supercritical CO<sub>2</sub> was injected into the sample under same pressure and temperature conditions. X-CT system was used to visualize migrations of CO<sub>2</sub> injected from different filters. When injecting CO<sub>2</sub> from the special porous filter the CO<sub>2</sub> was microbubble and through the grooved disc the CO<sub>2</sub> was normal bubble. CO<sub>2</sub> saturation estimated from CT values and the CO<sub>2</sub> distribution clearly showed advantages of microbubble CO<sub>2</sub> injection and the experimental results suggest the usefulness of microbubble CO<sub>2</sub> injection in both saline aquifer storage and enhanced oil recovery.

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