



Contribution ID: 526

Type: **Poster (+) Presentation**

## **Microstructure changes of oilwell cement enhanced by micro crystalized Ca-montmorillonite in ScCO<sub>2</sub> condition**

*Wednesday, 2 June 2021 09:00 (1 hour)*

ScCO<sub>2</sub> was used as the solvent and intercalator when micro crystalized Ca-montmorillonite(MC Ca-MMT) was modified from Ca-MMT powder. With micro crystallization, carbonates crystallite was produced between Ca-MMT layers and provided active sites for the further reaction when mixed with oilwell cement. Enhanced oilwell cement by MC Ca-MMT was investigated based on the mechanical property and microstructure variations after curing in accelerated carbonation conditions. The microstructure of carbonation layers in enhanced oil well cement was observed and calculated according to the CT scanning results.

### **Time Block Preference**

Time Block A (09:00-12:00 CET)

### **References**

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### **Newsletter**

### **Student Poster Award**

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**Session Classification:** Poster +

**Track Classification:** (MS10) Advances in imaging porous media: techniques, software and case studies