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Limestone Microstructure Study Using Synchrotron X-ray CMT Technique

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Beamline(s): X27A

Synchrotron x-ray computed microtomography was applied to study the microstructure of limestone samples. Information on microstructures of these geological materials is very important in geophysical and natural gas/oil resource studies, as they are essential in understanding internal flow dynamics and formation mechanisms. Obtaining reliable microstructure information on these materials in a fast and easy way is always a challenge to geological scientists. The application of synchrotron computed microtomography (CMT) at the X27A beamline is an effective method for the investigation since it is a non-destructive technique, provides high spatial resolution images of microstructures, and requires little sample preparation. At present, we are still processing our data. We believe that the results from this study will help to provide a better understanding of the formation mechanisms of these materials and macroscopic fluid-flow dynamics in this material.

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