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Laboratory X-ray micro-computed tomography for silicate materials

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Abstract: Laboratory X-ray micro-computed tomography is a fast-growing method that allows non-invasive imaging of samples from different areas. This method is very useful in any scientific field where analysis in a non-destructive manner is needed. In the presentation we will provide basic principles in micro-CT imaging, including sample preparation and mounting, scanner parameters, image reconstruction, image visualization, filtering, and segmentation. Special attention will be paid to study of silicate porous materials, where the types of porosity and volume fraction could be evaluated by the resulting micro-CT data.