Single crystal elasticity of minerals under high-pressure conditions determined by inelastic x-ray scattering

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Elasticity is one of the most basic properties of materials and one of the most important ones for high-pressure minerals to understand the earth's interior as elastic-wave velocities of the earth's interior are the most measured properties of the earth's interior. The understanding of the earth's interior is progressing with accumulation of seismic velocity data and experimentally measured elastic data. Single crystal elasticity is required to understand the relationship between anisotropic minerals and earth's interior. We have developed a technique to determine single crystal elasticity of minerals under high pressure conditions using inelastic x-ray scattering. We will introduce some recent results by means of this technique.

Keywords: single crystal elasticity, high pressure , inelastic x-ray scattering

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