

## Recent advances in high-pressure synchrotron X-ray experiments on magmas under pressure at the beamline 16-BM-B in Advanced Photon Source

\*Yoshio Kono<sup>1</sup>

1. Geodynamics Research Center, Ehime University

High-pressure synchrotron X-ray experiments using large volume press is one of the most useful tools to investigate structure and properties of Earth's materials under high pressure and high temperature conditions. However, in contrast to extensive studies on high-pressure mineralogy and mineral physics, experimental investigation of structure and properties of magmas under pressure has been limited, due to experimental difficulties. In the past decade, new developments in high-pressure experiments, particularly combined with synchrotron X-ray techniques, have advanced the study of magmas under pressure. The new experiments have revealed significant changes to the structure and physical properties of magmas under pressure. In this talk, I will introduce recent advances in high-pressure synchrotron X-ray experiments for studying magmas at high pressures, developed at the beamline 16-BM-B, HPCAT in Advanced Photon Source, USA.

Keywords: High pressure, Magma, Synchrotron X-ray