# Viscosity measurement of molten iron-sulfur alloys under high pressure

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Fe-FeS melt is thought to be the major candidate of outer core material. Viscosity of this melt is one of the most important physical properties to investigate the core formation processes. In the present study, we performed the in-situ viscosity measurement of Fe-FeS eutectic melt under high pressure using X-ray radiography falling sphere method. High pressure experiments were performed by MA-8 multianvil press (SPEED-1500) installed at SPring-8, BL04B1. It is revealed that viscosity of the Fe-FeS eutectic melt is about 10-2 Pa s up to 7 GPa and there is little pressure variation. The result of this study is consistent with that of FeS melt structure analysis. And it is also revealed that viscosity decreased with increasing temperature.