

**Report for the Joint Use/Research of the Institute for Planetary Materials,
Okayama University for FY2024**

Month/Day/Year

Category: International Joint Research General Joint Research Joint Use of Facility
Workshop

Name of the research project: Thermal conductivity of Earth materials

Principal applicant: Wen-Pin Hsieh

Affiliated institution and department: Institute of Earth Sciences, Academia Sinica

Collaborator

Name: Takayuki Ishii

Affiliated institution and department: IPM

Research report:

In this study, we aimed to better understand the thermal conductivity of mantle minerals at relevant pressure-temperature conditions in Earth's interior. My collaborator, Dr. Takayuki Ishii, has used the state-of-the-art large volume presses in IPM to synthesize several high-quality mineral crystals. We are going to measure their thermal conductivity using an optical pump-probe method in my lab.