

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

2021 fiscal year first term / second term / others

31/05/2022

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

Name of the research project:

Principal applicant: Fengke Cao

Affiliated institution and department: Western University, Dept. Earth Science

Collaborator

Name:

Affiliated institution and department:

Research report: During FY 2022 it was not possible to conduct in-person research. However, SEM, EPMA, and Raman analyses were carried out on loaned samples of Martian regolith breccia meteorites. Combined with measurements from Western University, we have a new coordinated chemical-structural-spectroscopic view of the effects of shock on Martian regolith meteorites and their constituents – especially plagioclase. These results will soon be presented in part at the International Mineralogical Association meeting in two abstracts let by Fengke Cao: *Shock Effects in Lithic and Crystal Clasts in Martian Regolith Breccias* and *Micro X-Ray Diffraction of Experimentally Shocked Plagioclase Feldspars*. The work done at IPM both remotely and during Fengke's 2019 visit will form a key part in Fengke's upcoming PhD thesis.