Thursday, July 27, 2017
POSTER SESSION II: DEVELOPMENTS IN ADVANCED TECHNIQUES FOR METEORITE AND RETURNED SAMPLE ANALYSIS
5:30 p.m. Poster Area

Imae N. Yamaguchi A. Ojima T. Kimura M.
Characterization of Tiny Fragments of Stony Meteorites by X-Ray Diffraction Using Gandolfi Attachment **[#6079]**
We characterized a tiny grain of ordinary chondrites for a new nondestructive classification using the Gandolfi attachment combined with the focusing optics producing intense X-ray.

Penttilä A. Maconi G. Kassamakov I. Gritsevich M. Haeggström E. Muinonen K.
Laboratory Measurements of Full-Mueller-Matrix Single-Particle Scattering **[#6092]**
We developed a setup for multi-angular measurements of light scattered by mm- to µm-sized samples. We demonstrate a non-destructive approach to derive the optical properties of small samples which facilitates research on planetary materials.

Loiselle L. M. Ireland T. R. Holden P. Ávila J. N. Lanc P.
Towards High Precision In Situ Triple Oxygen Isotopic Analysis with SHRIMP SI **[#6176]**
We demonstrate using *in situ* ion microprobe triple oxygen isotope analysis with SHRIMP SI that we can successfully resolve small $\Delta^{17}O$ offsets (i.e., order 0.20‰) and clearly distinguish populations from Mars, Earth and the main group pallasites.

Welzenbach L. C. Fries M. D. Grady M. M. Greenwood R. C. McCubbin F. M. Smith C. L. Steele A. Zeigler R. A.
Identifying the Effects of X-Ray Computed Tomography on Mars 2020 Tier I Organic Compounds **[#6253]**
X-rays to see through / X-rays could change organics / Organics from Earth or Mars?

Carrier B. L. Beaty D. W. Hecht M. H. Liu Y.
Planning for the Scientific use of Samples of Martian Granular Materials Potentially to be Returned by Mars Sample Return **[#6292]**
We are seeking community feedback on the objectives we want to achieve using returned samples of martian granular material and on planning for the collection and subsequent analysis of those samples.

Fries M. D. Evans C. A. McCubbin F. M. Harrington A. D. Regberg A. B. Snead C. J. Zeigler R. A.
Advanced Curation Activities at NASA: Preparation for Upcoming Missions **[#6372]**
NASA Curation cares for NASA's astromaterials and performs advanced curation so as to improve current practices and prepare for future collections. Cold curation, microbial monitoring, contamination control/knowledge and other aspects are reviewed.

Yakovenko A. A. Borkiewicz O. J. Xu W. Lapidus S. H. Li T. Winans R. E.
Application of Synchrotron-Based X-Ray Scattering Methodologies to Meteorite Research at Advanced Photon Source **[#6407]**
Advanced Photon Source, Argonne National Laboratory operating several different X-ray beamlines. These facilities offer access to a range of structural characterization techniques, which are ideally suited for the studies of meteorites.

Martikainen J. Penttilä A. Gritsevich M. Muinonen K.
UV-Vis-NIR Spectral Modeling of Meteorites Using Novel Multiple-Scattering Methods **[#6193]**
Spectral modeling of meteorites using novel multiple-scattering methods.