

Thursday, March 22, 2018

[R629]

POSTER SESSION II: MATERIAL ANALOGS I: GENERAL LABORATORY ANALYSES

6:00 p.m. Town Center Exhibit Area

Bradley E. T. Cantrell A. E. Gallagher D. L. Kuba S. *POSTER LOCATION #450*
[Laboratory Experiments on Astrophysical Dust Analogs at NASA/MSFC](#) [#2635]

We present research at the Dusty Plasma Laboratory at NASA/MSFC including charging, morphological, and light scattering properties of micron sized grains.

Wyrick D. Y. Bařařaoęlu H. Patterson R. *POSTER LOCATION #451*
[Regolith Transport: Shape \(and Size\) Matter](#) [#2834]

Triangles and stars / Behave weirder than circles / Boomerangs are wild.

Ferrari M. De Angelis S. De Sanctis M. C. Ammannito E. *POSTER LOCATION #452*
 Raponi A. et al.
[Reflectance Spectroscopy of Ammoniated Phyllosilicates](#) [#2413]

We describe the laboratory production and IR spectroscopic measurements of ammoniated phyllosilicates starting from the corresponding NH₄-free minerals.

Ashley K. T. McKeeby B. E. Harlov D. E. Bodnar R. J. Ramsey M. S. *POSTER LOCATION #453*
[High-Resolution Raman Spectroscopy Constraints on Apatite Halogen Composition: Implications for Planetary Volcanism and Igneous Processes](#) [#1483]

Raman spectroscopy is used to measure halogen content in synthetic apatites and in the SNC Nahkla. Implications for magma crystallization and evolution.

Martin D. J. P. Leiva A. Bell S. K. Pernet-Fisher J. F. Joy K. H. et al. *POSTER LOCATION #454*
[Investigating the Orientation of Minerals Using FTIR Microspectroscopy](#) [#2138]

Spectral variations of olivine, pyroxene, and plagioclase due to orientation are investigated and applied to analogues to find orientations of unknown minerals.

De Angelis S. Ferrari M. De Sanctis M. C. Biondi D. *POSTER LOCATION #455*
 Boccaccini A. et al.
[Design, Development, and Testing of an Environmental P-T Cell for Infrared Spectroscopy Measurements](#) [#1428]

We designed and developed an environmental cell to acquire infrared reflectance spectra of materials under controlled pressure and temperature.

Weber I. Morlok A. Grund T. Bauch K. E. Hiesinger H. et al. *POSTER LOCATION #456*
[A Mid-Infrared Reflectance Database in Preparation for Space Missions](#) [#1430]

In order to interpret IR spectra from space missions, a reference mid-IR database is presented. The focus is on natural and synthetic samples.

Greenberger R. N. Ehlmann B. L. Kelemen P. B. Manning C. E. *POSTER LOCATION #457*
 Harris M. et al.
[Spectral Classification and Unmixing with Microimaging Spectroscopy of Mafic Rock Cores from the Oman Drilling Project: Implications for Planetary Dataset Analysis](#) [#2454]

We test classification and unmixing algorithms to map minerals with microimaging spectroscopy using an analog dataset to determine most effective method(s).

Nelson R. M. Boryta M. D. Hapke B. W. Manatt K. S.
Shkuratov Y. G. et al.

POSTER LOCATION #458

[Laboratory Simulations of Planetary Surfaces: Interpreting Remote Sensing Data in Terrestrial Context](#) [#1834]

We present photometric properties of simulated planetary regolith materials. The results have an interesting application to modifying Earth's changing climate.

Lane M. D. Klima R. L. Glotch T. D. Dyar M. D.

POSTER LOCATION #459

[Mid-Infrared Spectra of Synthetic Pyroxenes Over the Entire Ca-Mg-Fe Quadrilateral](#) [#2722]

Pyroxene heaven / Entire quadrilateral / Done in mid-IR.#LPSCHaiku.