

Thursday, March 24, 2016

[R603]

**POSTER SESSION II: EXOBIOLGY: ORGANIC DELIVERY,  
HABITABLE ENVIRONMENTS, ANALOGS, AND TOOLS**

6:00 p.m. Town Center Exhibit Area

Kashyap S. Sklute E. C. Holden J. F. Dyar M. D. **POSTER LOCATION #69**  
[Characterization of Nanophase Iron Oxides Produced Through Bioreduction by Hyperthermophiles](#) [#2192]

Mineral signatures may be the only evidence of life left on other planets. Mineral products from bioreduction by hyperthermophiles are spectrally characterized.

Rask J. C. **POSTER LOCATION #70**  
[Elevated Radiation Environment at Worswick Hot Springs](#) [#2835]

We report on the discovery of radioactivity at Worswick Hot Springs. This work supports companion biochemical and microbial investigations at the field site.

Nuevo M. Sandford S. A. Cooper G. **POSTER LOCATION #71**  
[Sugar and Sugar Derivatives in Residues Produced from the UV Irradiation of Astrophysical Ice Analogs](#) [#1278]

We present the results of the search for sugars and sugar-like compounds in the organic residues produced by the irradiation of astrophysical laboratory ice analogs.

Locke D. R. Burton A. S. Niles P. B. **POSTER LOCATION #72**  
[Conversion and Extraction of Insoluble Organic Materials in Meteorites](#) [#2730]

Methods for isolating and converting IOM in meteorites including pyrolysis and oxidation.

Elsila J. E. Burton A. S. Aponte J. C.  
Blackmond D. G. Dworkin J. P. et al. **POSTER LOCATION #73**  
[The Diversity of Meteoritic Amino Acids: Variations in Abundance and Enantiomeric Composition and Implications for Exobiology](#) [#1533]

We summarize recent discoveries of amino acid diversity across meteorite types and the relationship to potential formation and processing histories.

Burton A. S. Elsila J. E. Glavin D. P. Dworkin J. P. Ornek C. Y. et al. **POSTER LOCATION #74**  
[Searching for Extraterrestrial Amino Acids in a Contaminated Meteorite: Amino Acid Analyses of the Canakkale L6 Chondrite](#) [#2961]

Indigenous amino acids in an L6 chondrite? It appears so.

Steele A. Starke V. Fries M. D. F. Glamoclija M. Needham A. et al. **POSTER LOCATION #75**  
[The Extraction, Amplification and Sequencing of DNA from Ordinary Chondrites and the Allende CV Chondrite — Of Course Its Terrestrial But How Did It Get There?](#) [#2597]

We have extracted amplified and sequenced eubacterial and eukaryotic DNA from ordinary chondrites and Allende. Speciation reflects handling and point of impact.

Gulick V. C. Ishikawa S. T. Freeman P. M. Johnsen T. Angell J. et al. **POSTER LOCATION #76**  
[Building a Biosignature Rock Sample Library and Developing Automated Classifiers](#) [#2825]

This abstract summarizes our progress on building a mineral, rock, and biosignature sample library and developing automated classifiers from Raman spectra.

Nie N. X. Dauphas N. Greenwood R. C. **POSTER LOCATION #77**  
[Iron and Oxygen Isotope Fractionation During Photo-Oxidation](#) [#1489]

High-precision Fe isotope measurements were performed to pinpoint the mass fractionation law during photo-oxidation, and oxygen isotopes were also investigated.

Chen C. C. Tissot F. L. H. T. Dauphas N. D.

Bekker A. B. Halverson G. P. H. et al.

**POSTER LOCATION #78**

[\*<sup>238</sup>U/<sup>235</sup>U Ratio in Carbonates as a Global Paleoredox Proxy\*](#) [#1677]

The results obtained from this study will be used to reconstruct the evolution of the marine redox conditions through time.

Yano H. Yamagishi A. Hashimoto H. Yokobori S. Kobayashi K. et al.

**POSTER LOCATION #79**

[\*The First Year Operation and Initial Sample Analysis and Curation Preparation of TANPOPO, the Japanese Astrobiology Experiment Onboard the ISS-JEM-EF\*](#) [#3009]

Japan's first astrobiology experiment TANPOPO is now onboard ISS for meteoroid capture and terrestrial microbe exposure for sample returns every year in 2016–2019.

Craft K. L. Hagedorn M. Tiffany J. Bradburne C.

**POSTER LOCATION #80**

[\*DESAL: Reducing Salt Content for In-Situ Automated DNA Extractions\*](#) [#3035]

The DESALination project tackles a challenge in astrobiological life detection: reducing salinity of samples to enable characterization of organisms within.

Acosta-Maeda T. E. Misra A. K. Sharma S. K.

Berlanga G. Muchow D. et al.

**POSTER LOCATION #81**

[\*Remote Raman Measurements of Minerals, Organics, and Inorganics at 430 m Range\*](#) [#3053]

Remote Raman of chemicals at 430 m.

Huang T. Xiao L. Wang H. M. Wang R. C. Chen Z. Y.

**POSTER LOCATION #82**

[\*Microorganism Isolated from Dalangtan Playa \(Qaidam Basin, PR China\) and Their Implications for Mars Potential Life\*](#) [#1998]

Microbes isolated from extremely arid and hyper saline Dalangtan Playa (as a Mars analog) provide implications for Mars potential life styles.