

Wednesday, April 26, 2017
 POSTER SESSION III:
 SOLAR SYSTEM SITES: EARTH IN TIME/DEEP BIOSPHERE:
 NOVEL GEOLOGIC RESERVOIRS FOR BIOSIGNATURE PRESERVATION
 7:00 p.m. Main Hall

Newman S. A. Fakra S. C. Marcus M. A. Bosak T.

[*The Role of Microbial Mats in the Fossilization of Soft-Bodied Organisms in Sandy Sediments*](#) [#3326]

This study experimentally investigates the role of microbial mats in the preservation of soft-bodied organisms in siliciclastic environments.

McLain H. L. Glavin D. P. Aponte J. C. Dworkin J. P. Friedrich J. M. Ebel D. S. Hill M. Towbin H.
[*Effect of Tube-Based X-Ray Microtomography Imaging on the Amino Acid Content of the Murchison CM2 Chondrite*](#) [#3354]

The effect of tube-based X-ray microtomography imaging on the amino acid content and chirality of the Murchison to determine if X-rays was studied.

Kelly E. T. Parenteau M. N. Wilhelm M. B. Davila A. F. Quinn R. C. Jahnke L. L. Rull F.
 Sanz-Arranz J. A. Sansano A.

[*Production and Preservation of Lipid Biomarkers by Iron-Oxidizing Chemolithotrophs in Circumneutral Iron Deposits*](#) [#3566]

We examine lipid biomarkers of chemolithoautotrophs from Fe springs in Yellowstone National Park, for similar communities could have operated on early Mars.

Harrold Z. R. Hausrath E. M. Murray A. E. Tschauer O. Garcia A. H. Lanzirotti A. Marcus M. A.
 Newville M. Bartlett C. L. Raymond J.

[*Iron-Bearing Minerals as a Trace Nutrient Source for Snow Algae Communities and Implications for Mineral Biosignature Formation*](#) [#3495]

A field and laboratory-based study of snow algae-microbe-mineral interactions and their potential for producing mineralogical biosignatures.

Lewis J. M. T. Watson J. S. Najorka J. Sephton M. A.

[*The Role of Sulfates and Iron Oxides in the Search for Organic Matter on Mars*](#) [#3703]

Iron oxides are a potential amenable host of organic matter on Mars.

Wilhelm M. B. Carrizo D. Davila A. F. Parro V. García-Villadangos M. Blanco Y. Stoker C. Glass B.
[*Biomolecular Preservation in Subsurface Soils of the Hyperarid Atacama Desert*](#) [#3433]

Old, dry, organically lean soil from the Atacama was analyzed for lipids, amino acids, proteins, and stable isotopes to assess preservation under dry conditions.

Zaloumis J. Farmer J. D.

[*Biosignature Capture and Preservation Potential of Modern Carbonates: A View into Destructive Early Diagenetic Processes*](#) [#3664]

In order to understand the taphonomic potential of carbonates, we look towards an active carbonate deposit to see early degradation mechanisms at work.

Cushing G. E.

[*Mars Global Cave Candidate Catalog \(MGC³\)*](#) [#3708]

The Mars Global Cave Candidate Catalog (MGC³) contains locations of over 1000 cave-entrance candidates. Survey methods and catalog contents are discussed.

Léveillé R. J.

[*ATiLT – Astrobiology Training in Lava Tubes*](#) [#3372]

Astrobiology Training in Lava Tubes (ATiLT) provides training for students through astrobiology-themed science investigations conducted in lava tube caves.