

Friday, April 28, 2017

**SOLAR SYSTEM SITES: EARTH IN TIME/DEEP BIOSPHERE:  
NOVEL GEOLOGIC RESERVOIRS FOR BIOSIGNATURE PRESERVATION**

**1:30 p.m. Arizona Ballroom A-C**

**Chairs:** Sarah Johnson  
Amy Williams

- 1:30 p.m. Jahnke L. L. \* Des Marais D. J.  
[Eukaryotic Sterol Biomarkers: Production and Fate in a Laminated Microbial Mat](#) [#3732]  
Cyclic triterpenoids are particularly well preserved in sediments and provide an organic molecular record which spans more than two billion years.
- 1:45 p.m. Siljeström S. \* Parenteau M. N. Jahnke L. L. Cady S. L.  
[ToF-SIMS and GC-MS Analyses of Microbial Mats from Astrobiologically Relevant Settings in Yellowstone National Park, USA](#) [#3267]  
Results from ToF-SIMS and GC-MS analyses of microbial mats that are actively being fossilized in hot springs in Yellowstone National Park, USA are presented.
- 2:00 p.m. Wanger G. \* Orphan V. J. Bhartia R.  
[Hidden Textures in a Marine Carbonate Revealed by Deep UV Spectroscopy](#) [#3503]  
Deep UV fluorescence and Raman Spectroscopy was used to study a marine carbonate. UV Fluorescence revealed a stromatolitic texture preserved in the rock.
- 2:15 p.m. Melchiorre E. B. \* Luu K. Garcia A.  
[Implications for Astrobiology and Early Life on Earth from Stichtite \(Mg<sub>2</sub>Cr<sub>2</sub>\(OH\)<sub>16</sub>\[CO<sub>3</sub>\]\\*4H<sub>2</sub>O\)](#) [#3062]  
Stichtite (hydrotalcite carbonate) preserves a record of potentially habitable serpentinizing environments and may serve as a molecular sieve and genograph.
- 2:30 p.m. Manning-Berg A. R. \* Tuite M. Williford K. Czaja A. D. Kah L. C.  
[Exceptional Preservation of Biomarkers in the 1.2 Ga Angmaat Formation Chert, Bylot Supergroup, Baffin Island](#) [#3438]  
Biomarkers from well-preserved carbonaceous matter in early diagenetic peritidal chert of the 1.2 Ga Angmaat Formation, Bylot Supergroup.
- 2:45 p.m. Noe Dobrea E. Z. \* McAdam A. C. Freissinet C. Franz H. Belmahdi I. Hamersley M. R. Archer R. Stoker C. R. Parker W. G. Glavin D. P. Calef F.  
[Mechanisms for Preservation of Organics in Jarosite at the Painted Desert](#) [#3356]  
We explore the mechanisms for the preservation of organics in Jarosite in ancient terrestrial samples.
- 3:00 p.m. Olcott Marshall A. \* Lockamy D.  
[Gypsum-Hosted Biomarkers in an Iron-Rich Environment](#) [#3453]  
We characterized the biomarkers preserved in iron- and gypsum-rich Mars analog samples, environments that previously were thought not to preserve biomarkers.
- 3:15 p.m. Zaikova E. \* Fuqua S. Hughes S. S. Kobs Nawotniak S. Garry W. B. Lim D. S. S. Heldmann J. Johnson S. S.  
[Microbial Community Structure, Metabolism, and Function in Basaltic Caves and Lava Tubes](#) [#3693]  
Structure and function of microbial communities in basaltic caves to investigate biological activity contribution to formation of secondary mineral deposits.
- 3:30 p.m. Carrier B. L. \* Beegle L. W. Bhartia R. Abbey W. J.  
[UV Attenuation in Rocks and Minerals: Implications for Habitability and Biosignature Preservation on Mars](#) [#3596]  
The attenuation of UV radiation in different rocks and minerals will be discussed, with a focus on implications for habitability and biosignature preservation.
- 3:45 p.m. CONFERENCE ADJOURNS