**Tuesday, April 25, 2017**
**SOLAR SYSTEM SITES: ICE AND OCEAN WORLDS:**
**SEEKING EVIDENCE OF HABITABLE CONDITIONS AND**
**LIFE ACTIVITY IN SERPENTINIZING SYSTEMS**
**10:15 a.m. Arizona Ballroom D**

**Chairs:** **Alexis Templeton**
**Beth Orcutt**

10:15 a.m. McCollom T. M. *
*Experimental Constraints on Rates of Hydrogen and Methane Generation in Serpentinizing Environments* **[#3226]**
Results of recent laboratory experiments indicate that generation of hydrogen and methane is very sluggish in low temperature serpentinizing environments.

10:30 a.m. German C. R. * Hand K. P. McDermott J. M. Seewald J. S. Kinsey J. C. Bowen A. D. Chien S. Schaffer S. R. Bach W. Boetius A.
*Oases for Life in Ice Covered Oceans* **[#3201]**
We present results from a 2016 robotics-based expedition to the ice-covered Arctic Ocean that reveal evidence for serpentinizing seafloor hydrothermal activity.

10:45 a.m. Orcutt B. N. * D'Angelo T. Labonté J. Goordial J. Bergenthal M. Freudenthal T. Lilley M. Früh-Green G. IODP Expedition 357 Science Party
*Microbial Activity in the Serpentinizing Subsurface of Atlantis Massif: Initial Results from IODP Expedition 357* **[#3284]**
Deep biosphere results from the serpentinizing subsurface of Atlantis Massif from IODP Expedition 357.

11:00 a.m. Rempfert K. R. * Miller H. M. Bompard N. Nothaft D. Matter J. M. Kelemen P. Fierer N. Templeton A. S.
*Geologic Constraints on Microbial Dynamics in a Subsurface Serpentinite Ecosystem* **[#3370]**
We studied microbial diversity in the subsurface of the Samail Ophiolite to shed insight into how communities vary within serpentinites as controlled by geology.

11:15 a.m. Twing K. I. * Crespo-Medina M. Brazelton W. J. Sanchez-Murillo R. Schrenk M. O.
*Expression of Metabolic Pathways in Microbial Communities from a Tropical Serpentinizing Environment* **[#3213]**
This research assesses the metabolic potential and expression of microbial communities in a continental, tropical site of serpentinization.

11:30 a.m. Seyler L. M. * Hoehler T. McCollom T. Kubo M. Sabuda M. Williams L. Schrenk M.
*Global Metabolomics as a Means of Linking Microbial Activities and Their Biogeochemical Consequences in Serpentinizing Systems* **[#3287]**
Untargeted metabolomics was used to characterize intracellular and aqueous metabolites from biomass samples obtained from an actively serpentinizing habitat.

11:45 a.m. Blank J. G. * Etiope G. Stamenković V. Rowe A. R. Kohl I. Li S. Young E. D.
*Methane at the Aqua de Ney Hyperalkaline Spring (N. California USA), a Site of Active Serpentinization* **[#3608]**
We present new results of methane isotopologues from Aqua de Ney, a site of active serpentinization, and discuss methane as a biomarker in the search for life.

12:00 p.m. Rowe A. R. * Yoshimura M. LaRowe D. E. Bird L. J. Amend J. P. Hashimoto K. Nealson K. H. Okamoto A.
*In Situ Electrochemical Enrichment and Isolation of a Magnetite-Reducing Bacterium from a high pH Serpentinizing Spring* **[#3134]**
This report provides evidence of the in situ activity of microbes using extracellular substrates as sinks for electrons in a terrestrial serpentinizing spring.

12:15 p.m. *Lunch*