Thursday, April 27, 2017
ORIGIN AND EVOLUTION OF LIFE: PREBIOTIC CHEMISTRY: REACTION KINETICS, THERMODYNAMICS, AND HABITABILITY
10:15 a.m. Mesa Room

Chairs: **Eric Boyd**
Grayson Boyer

10:15 a.m. Howells A. E. * Leong J. M. Ely T. Robinson K. J. Shock E. L.
Microbial Populations Reflect the Geochemical and Physical Properties of Serpentinization-Hosted Ecosystems **[#3653]**
This study is an evaluation of microbial populations sustained by serpentinization-reacted fluids in the Oman Somail Ophioloite.

10:30 a.m. Amenabar M. A. Shock E. L. Roden E. E. Boyd E. S. *
Energy Demand, Not Supply, Dictates Microbial Substrate Preference **[#3377]**
Energy demands of energy conserving electron transfer reactions rather than energy supplies dictate substrate preference in metabolically flexible microbes.

10:45 a.m. Barnard D. T. * McBride R. A. Maynard M. S. A. Gindt Y. M. Stanley R. J.
Extremophile DNA Repair **[#3408]**
Life exists in extreme environments. To this end, we have characterized the properties of DNA repair proteins from three thermal environments spanning 100K.

11:00 a.m. Boyer G. M. * Woods J. Shock E. L.
Balancing Function and Bioenergetic Cost: Lipid Oxidation State in the Context of Hot Spring Temperature and Redox Chemistry **[#3600]**
Carbon in hot spring extremophile lipids becomes more oxidized with decreasing temperature and increasing dissolved oxygen concentration.