

Tuesday, July 18, 2017
**THE ROLE OF MINERALS IN THE FATE OF ORGANIC MATTER
AND CHEMICAL EVOLUTION**
4:10 p.m. Price Center Theatre

Chair: Matthew Pasek

- 4:10 p.m. Cooper G. J. T. * Surman A. J. Cronin L.
[Steering Complex Reaction Networks with Minerals](#) [#4056]
Uncontrolled condensation reactions are expected to produce a combinatorial explosion. However, this can be tamed; Environmental changes (i.e. minerals) can programme the condensation amino acids into consistently different products/structures.
- 4:50 p.m. Akouche M. Jaber M. Maurel M.-C. Lambert J.-F. Georgelin T. *
[A Molecular Vestige of the Origin of Life on Minerals: Phosphorybosyl-Disphosphate](#) [#4085]
Nucleotides were synthesized from Ribose, Adenine, and phosphates on silica surfaces in one pot process. A important molecular intermediate was enlightened, the phosphorybosyl pyrophosphate. This molecule is a molecular relic of early earth.
- 5:10 p.m. Piedrafita G. * Castro C. Messner C. Griffin J. L. Ralser M.
[High-Throughput Kinetic Screening of Non-Enzymatic Metabolic Conversions Driven by Single Amino Acids](#) [#4213]
A screening for catalytic effects of single amino acids on central metabolism is done by high-throughput LC/MS experiments, finding several non-enzymatic reactions driven by cysteine/iron(II), with implications on evolution of first biocatalysts.
- 5:30 p.m. *Session Adjourns*