

Thursday, July 27, 2017

**CARBONACEOUS CHONDRITES AND THEIR PARENT BODY EVOLUTION II**

1:30 p.m. Sweeney B

*The session discusses carbonaceous chondrites parent body evolution.*

**Chairs: Brigitte Zanda  
Maitrayee Bose**

- 1:30 p.m. Komatsu M. \* Fagan T. J. Yamaguchi A. Mikouchi T. Yasutake M. Zolensky M. E.  
[Amoeboid Olivine Aggregates in Antarctic CR Chondrites: Petrologic Variations Among CR Chondrites](#) [#6101]  
A set of Antarctic CRs were examined to see intra-group variations. AOAs in Y-791498, Y-793261, and A-881828 have largely escaped from aqueous alteration. Extensive aqueous alteration in A-881595 and shock deformation in Y-982405 are also observed.
- 1:45 p.m. Weyrauch M. \* Zipfel J. Weyer S.  
[Formation Conditions of Zoned and Unzoned Metal Grains in CB and CH Chondrites](#) [#6192]  
Isotopic and trace element analyses of zoned and unzoned metal grains from CH and CB chondrites indicate formation by condensation from an impact plume. Zoned metals rather formed in the shell of that plume and unzoned grains in the inner regions.
- 2:00 p.m. Mane P. \* Domanik K. Wallace P. M. Zega T. J.  
[Compositional and Microstructural Analysis of Metal Assemblages Hosted in a Refractory Inclusion](#) [#6360]  
Compositional and electron back scatter diffraction analysis of metal assemblages from a compact type-A CAI suggests that these assemblages record complicated formation and alteration processes in the early solar system.
- 2:15 p.m. Imae N. \* Nakamuta Y.  
[A New Mineralogical Approach of the CO<sub>3</sub> Chondrites for the Identification of Primordial Phases and the Thermal History](#) [#6078]  
Using subdivided various CO<sub>3</sub> chondrites, we newly developed the revealing methods for the thermal history on the parent body and primordial phases from the least metamorphosed type mainly using the X-ray diffraction, and obtained new understanding.
- 2:30 p.m. Bose M. \* Root R.  
[Sulfur Speciation in Graves Nunataks GRA 95229 and Murchison: Similarities and Differences](#) [#6339]  
We identified cysteine, a sulfur bearing amino acid *in situ* of Murchison and a large (120 × 150 μm<sup>2</sup>) phosphorus-bearing domain in GRA 95229 using XRF and u-XANES. Elemental sulfur, abundant in GRA 95229, is always co-located with sulfate.
- 2:45 p.m. MacArthur J. L. \* Bridges J. C. Hicks L. J. Price M. C. Wickham-Eade J. E. Burchell M. J. Hansford G. M. Butterworth A. L.  
[Carbonaceous Chondrites as an Analogue for Stardust Comet Grains](#) [#6011]  
Stardust comet grain capture was simulated using carbonaceous chondrite powders. Identification of three FO<sub>43-59</sub> grains and one magnetite in the keystones suggests affinities to chondrite matrix and shows they survive capture like Wild2 terminal grains.