Tuesday, July 25, 2017
POSTER SESSION I: CAIS AND OTHER REFRACTORY MATERIALS
5:30 p.m. Poster Area

Manga V. R. Zega T. J. Muralidharan K.
Thermodynamic Modeling of Condensation of Perovskite and Spinel Solid Solutions Pertaining to Solar Nebula Conditions **[#6390]**
Calcium-aluminium-rich inclusions can provide insights into the chemical and physical processes that occurred during the formation of solar system. We perform thermodynamic modeling of condensation of solid solution phases from solar nebular gas.

Keller L. P. Han J.
Metastable Phase Relations in the System CaO-Al_2O_3-MgO-TiO_2: Application to Ca- and Al-Rich Inclusions **[#6374]**
We discuss the occurrence of metastable aluminous spinel, aluminous perovskite, and defect-structured hibonite in CAIs and experiments.

Ross D. K. Simon J. I. Zolensky M.
Northwest Africa 10758: A New CV3 Chondrite Bearing a Giant CAI with Hibonite-Rich Wark-Lovering Rim **[#6378]**
Initial observations and mineral compositions for this new CV3 chondrite will be presented. Characteristics of a giant CAI, its Wark-Lovering rim, and alteration of the chondrite matrix will be discussed.

Righter K. Pando K. M. Ross D. K. Butterworth A. L. Gainsforth Z. Jilly-Rehak C. E. Westphal A. J.
Oxygen Buffering in High Pressure Solid Media Assemblies: New Approach Enabling Study of fO_2 from IW IW–4 to IW+4.5 **[#6311]**
We describe preliminary results of a new oxygen buffering technique that can be applied to a wide variety of problems in planetary science; the application here is $MgAl_2O_4$ spinels.

Yoshizaki T. Nakashima D. Nakamura T. Ishida H. Sakamoto N.
Origin of Spinel Framboids in Calcium-Aluminum-Rich Inclusions **[#6020]**
Mineralogical, petrological and O-isotopic study of a CV CAI suggests that spinel framboids in the CAI were originally mini-CAIs that condensed separately under different conditions and subsequently aggregated to form the inclusion.

Ebert S. Render J. Brennecka G. A. Burkhardt C. Bischoff A. Kleine T.
^{50}Ti Evidence for Different Refractory Precursors in Chondrules **[#6255]**
Different refractory precursors in chondrules are necessary to explain the different ^{50}Ti isotope data for Na-rich chondrules in ordinary and CO3 chondrites.

Bonning G. P. Ireland T. R. Ávila J. N. Mallmann G.
Chondrule Olivine Provenance in Carbonaceous Chondrites: Chemical and Oxygen Isotope Systematics **[#6151]**
Bulk chondrites have specific and distinct bulk O-isotopic compositions, yet they appear to sample common populations of chondrules that exhibit wide-ranging O-isotope compositions. We examine the populations of chondrules in CV, CO, and CM chondrites.

Baeza L. Ireland T. R. Ávila J. N. Mallmann G.
Chondrule Oxygen Isotope Systematics in Unequilibrated Ordinary Chondrites: Insights into Their Nebular Reservoir **[#6166]**
Ordinary chondrites (OCs) have distinct bulk O-isotope composition. The range of chondrule O-isotope composition in the OCs is similar among H, L, and LL groups. Do OCs chondrules represent a single or various populations of the protoplanetary disk?

Hanna R. D. Ketcham R. A.
Evidence for Accretion of Fine-Grained Rims in a Turbulent Nebula for CM Murchison **[#6143]**
By examining the 3D morphology of FGRs and enclosed chondrules we find that FGRs were formed in a weakly turbulent nebula and that chondrule morphology likely influenced the amount of dust accreted to the chondrule surface.