

**Wednesday, March 21, 2012**  
**CHONDRITE COMPONENTS AND PRIMARY PROCESSES**  
**1:30 p.m. Montgomery Ballroom**

**Chairs: Michael Weisberg**  
**Simon Clemett**

- 1:30 p.m. Haenecour P. \* Floss C.  
[Stardust in Fine-Grained Chondrule Rims and Matrix in LaPaz 031117: Insights Into the Conditions of Dust Accretion in the Solar Nebula](#) [#1107]  
 Abundances of presolar SiC and oxides are similar in the matrix and a chondrule rim of LAP 031117, but presolar silicate abundances are higher in the matrix. Silicates may have been destroyed during accretion of the rim onto a still hot chondrule.
- 1:45 p.m. Leitner J. \* Hoppe P. Zipfel J.  
[The Stardust Inventories of Graves Nunataks 95229 and Renazzo: Implications for the Distribution of Presolar Grains in CR Chondrites](#) [#1835]  
 We report the discovery of presolar silicates, oxides and SiC in fine-grained chondrule rims in GRA 95229 and Renazzo, supporting the idea that the fine-grained material was accreted from the solar nebula prior to parent body formation.
- 2:00 p.m. Leroux H. \*  
[TEM Investigation of Fine-Grained Components in the Matrix of the Bishunpur \(LL3.1\) Chondrite](#) [#1761]  
 We report an analytical TEM study of the matrix of the LL3.1 Bishunpur chondrite. Although parent body secondary alteration phases are present, amorphous material is frequent and reveals a nonequilibrium formation, likely during a nebular process.
- 2:15 p.m. Verchovsky A. B. \* Pearson V. K. Fisenko A. V. Semenova L. F.  
 Sephton M. A. Wright I. P.  
[Separation of O from Carbon in CR Meteorites During Stepped Combustion](#) [#2645]  
 During metamorphism of CR meteorites Q carrier, in contrast to most of the macromolecular material, is encased into the matrix and therefore can be separated from the organic carbon by stepped combustion. Q may not be carbonaceous.
- 2:30 p.m. Amari S. \* Matsuda J.  
[Noble Gas Study of Q-Rich Fractions from Saratov \(L4\)](#) [#1051]  
 We separated Q-rich fractions from Saratov (L4). One of the fractions, AJ, has the highest <sup>132</sup>Xe concentration ( $2.1 \cdot 10^{-6}$  cm<sup>3</sup> STP/g) that has ever been measured in any extraterrestrial material.
- 2:45 p.m. Clemett S. J. \* Messenger S. R. Thomas-Keprta K. L. Nakamura-Messenger K.  
[The Spatial Distribution of Organic Matter and Mineralogical Relationships in Carbonaceous Chondrites](#) [#2889]  
 Microprobe two-step laser mass spectrometry utilizing a novel vacuum UV photoionization source has been applied to mapping the spatial distribution of organic species in carbonaceous chondrite matrices at micron spatial resolutions.
- 3:00 p.m. Yokoyama T. \* Ito N. Fukami Y. Okui W.  
[Strontium Isotope Anomalies in Allende and Tagish Lake Meteorites: Results for Sequential Acid Leaching Experiments](#) [#1897]  
 We performed sequential acid leaching for Allende (CV3) and Tagish Lake (C2) meteorites, and precisely measured Sr isotopes in the leachates. We found that the main carriers of isotopically anomalous Sr are CAI for Allende and presolar grains for Tagish Lake.

- 3:15 p.m. Jacquet E. \* Gounelle M. Alard O.  
[\*Trace Element Microdistribution in Carbonaceous Chondrite Chondrules\* \[#1102\]](#)  
We present LA-ICP-MS analyses of silicate phases in chondrules of CR and CV chondrites. Olivine/mesostasis REE partitioning approach equilibrium for the coarser-grained chondrules. Pyroxene data offer further evidence of gas-melt interaction.
- 3:30 p.m. Chen J. H. \* Papanastassiou D. A. Zhang J. Dauphas N. Davis A. M.  
[\*Correlated Ca, Ti, and Cr Isotopic Anomalies in Meteorites\* \[#2607\]](#)  
We present new  $^{48}\text{Ca}$  isotopic anomalies, correlated with  $^{50}\text{Ti}$  in the same whole meteorites. The effects are compatible with wide distribution of neutron rich supernova Ia products and may have “filled” significant deficits in the solar system.
- 3:45 p.m. Huang S. \* Jacobsen S. B.  
[\*Calcium Isotopic Variations in Chondrites: Implications for Planetary Isotope Composition\* \[#1334\]](#)  
We present mass-dependent Ca isotopic effect in chondrites.
- 4:00 p.m. Davidson J. \* Laurretta D. S. Schrader D. L.  
[\*Compositional Variations in Silicate Phases Within the CV and CK Carbonaceous Chondrites\* \[#1494\]](#)  
We present compositional data for chondrule olivine in a number of CV3 and CK3 chondrites to investigate their chondrule formation conditions. Several lines of evidence suggest they do not share a common origin.
- 4:15 p.m. Brearley A. J. \*  
[\*MIL 07687 — An Intriguing, Very Low Petrologic Type 3 Carbonaceous Chondrite with a Unique Style of Aqueous Alteration\* \[#1233\]](#)  
MIL 07687 is a unique low petrologic type carbonaceous chondrite with a very high abundance of matrix (~68 wt%) and unusual style of alteration. Chondrules contain primary glass, but matrix has been extensively replaced by a fibrous Fe-oxyhydroxide.
- 4:30 p.m. Weisberg M. K. \* Ebel D. S. Kita N. T. Nakashima D.  
[\*Petrology and Oxygen Isotopes of Chondrules in NWA 5492 and GRO 95551: A New Type of Metal-Rich Chondrite\* \[#1463\]](#)  
NWA 5492 and GRO 95551 are the first samples of a new type of metal-rich chondrite and possibly new parent body. Their silicates are mostly reduced and oxygen isotope ratios of their chondrules plot between the TF and Y-R lines in three-isotope space.