

**Tuesday, March 11, 2008**  
**POSTER SESSION I: CARBONACEOUS CHONDRITES**  
**6:30 p.m. Fitness Center**

Ebel D. S. Brunner C. E. Weisberg M. K.

*Multiscale Abundance and Size Distribution of Inclusions in the Allende CV3 Meteorite by X-Ray Image Analysis of Slabs* [#2121]

Analysis of combined X-ray (CMAS + Fe) and BSE maps of Allende slabs (13  $\mu\text{m}/\text{pxl}$ ) and sections (4–5  $\mu\text{m}/\text{pxl}$ ) (>19  $\text{mm}^2$ ) yield higher matrix and AOA, lower CAI abundances than McSween (1977). Size distributions of chondrules and CAIs are similar.

Nakashima D. Schwenzer S. P. Ott U. Ivanova M. A.

*Trapped Noble Gases in the Isheyevo CH/CB Chondrite* [#1478]

Noble gases in the silicate and metallic phases of the Isheyevo CH/CB chondrite were measured. Only the metallic phases appear to contain Ar-rich noble gases associated with subsolar-like Xe.

Hammond S. J. Bland P. A. Gordon S. H. Rogers N. W.

*ICP-MS Analysis of a Suite of Carbonaceous Chondrites* [#1786]

This study expands on the current bulk carbonaceous chondrite (CC) data set, using ICP-MS techniques. This precise and accurate technique provides an insight into volatile element depletion patterns in CCs, and a comparison between fall and find samples.

Miyahara M. Uehara S. Ohtani E. Nagase T. Nishijima M. Vashaei Z. Kitagawa R.

*The Anatomy of Altered Chondrules and FGRs Covering them in a CM Chondrite by FIB-TEM/STEM* [#1194]

Altered chondrules covered by fine-grained rims (FGRs) in Cold Bokkeveld CM chondrite were anatomized by FIB-TEM/STEM to clarify aqueous alteration record. FIB-TEM/STEM analyses could reveal aqueous alteration by Fe- and Mg-rich fluid.

Jogo K. Nakamura T. Ahn I. Lee J. I. Kusakabe M.

*Secondary Fayalites and Metamorphic Olivine-rich Aggregates in the Yamato-86009 CV3 Carbonaceous Chondrite: Evidence for Complex Formation of CV3 Asteroids* [#1576]

Iron-probe oxygen isotope analysis indicates that secondary fayalite and magnetite formed at low temperature (<300°C), while a FeO-rich metamorphic olivine aggregate originated neither a differentiated nor an R-chondrite parent body.

Zolotov M. Yu. Mironenko M. V.

*Early Alteration of Matrices in Parent Bodies of CI/CM Carbonaceous Chondrites: Kinetic-Thermodynamic Modeling* [#1998]

Aqueous alteration of fine-grained matrices in parent bodies led to major changes in mineralogy and solution composition during the first 100–1000 years after the beginning of ice melting.

Russell S. D. J. Longstaffe F. J. King P. L. Larson T. E.

*Whole-Rock, Clay Mineral, and Olivine Oxygen and Hydrogen Isotope Compositions of the Tagish Lake Carbonaceous Chondrite* [#1709]

We present the oxygen and hydrogen isotope compositions of primary and secondary phases in the Tagish Lake carbonaceous chondrite.

Isobe H. Ozaki H.

*Compositional Variation of Phyllosilicate Minerals in Aqueous Alteration Experiment of Allende Meteorite Under Reduced Condition* [#2003]

Hydrothermal alteration experiments of Allende meteorite shows that heterogeneity of the Mg/Fe composition of phyllosilicate in the run products depends on run temperatures and durations.

Gordon S. H. Howard L. E. Menzies O. N. Bland P. A. Hammond S. J. Rogers N. W. Prior D. J.  
*Dark Inclusions of Allende: Evidence for Nebula or Parent Body Processing?* [#1929]

XRD, EBSD, and solution ICP-MS analysis techniques have been combined to show that dark inclusions within Allende (CV3) were most likely formed and altered in the nebula and that their precursor material may have been Allende matrix-like material.

Izawa M. R. M. Flemming R. L. King P. L. Peterson R. C.  
*Bulk Mineralogy and Spectral Properties of the C2 Chondrite Tagish Lake: A Correlated X-Ray Diffraction (XRD) and Biconical Reflectance Infrared Spectroscopy Study* [#2149]

We present a sample correlated XRD and reflectance IR of the C2 chondrite Tagish Lake. Quantitative mineral abundances were determined via Rietveld refinement. This allows a direct comparison of bulk mineralogy with remote sensing properties.

Yabuta H. Alexander C. M. O'D. Fogel M. L. Kilcoyne A. L. D. Cody G. D.  
*The Mildly-Heated C2 WIS 91600 Evaluated Through Complementary Analyses of the Insoluble Organic Matter* [#2273]

Insoluble organic matter (IOM) from WIS 91600 was analyzed by elemental analyzer with isotope mass spectrometry, <sup>13</sup>C NMR, pyrolysis-GC-MS, and carbon-XANES. WIS 91600 IOM reveals a history of mild and short-term heating, which probably followed aqueous alteration.

Bunch T. E. Irving A. J. Wittke J. H. Rumble D. III Gellissen M. Palme H.  
*Evidence for Pervasive Metamorphism on the CR Chondrite Parent Body from Highly Equilibrated CR6 Chondrites Northwest Africa 2994 and Northwest Africa 3100* [#1991]

Two highly equilibrated chondrites have isotopic and compositional affinities with Tafassasset and CR chondrites, but are fractionated relative to the latter.