

Tuesday, March 24, 2009
POSTER SESSION I: PRESOLAR GRAINS
6:30 p.m. Town Center Exhibit Area

Zinner E. Gyngard F.

[*FIB in the NanoSIMS*](#) [#1046]

The O and Mg isotopic analysis of small presolar spinel grains in the NanoSIMS is substantially improved if nearby grains of isotopically normal composition are sputtered away with the finely focused Cs primary ion beam.

Leitner J. Hoppe P. Zipfel J.

[*NanoSIMS Investigation of Presolar Silicates and Oxides in Primitive Solar System Materials*](#) [#1512]

Impact residues in 76 small Stardust craters were investigated, as well as 12500 μm^2 of matrix of the CR chondrite NWA 852, for their O isotopes. All residues are isotopically normal, and 27 presolar silicates and oxides were found in NWA 852.

Tachibana S. Nagahara H. Ozawa K. Tamada S. Ogawa R.

[*Condensation Experiments of Mg-rich Crystalline and Amorphous Silicates in Vacuum*](#) [#2512]

We compare results of two types of kinetic condensation experiments of Mg-silicates; "quench" and "cooling" experiments. Highly non-equilibrium condensates can be obtained in quench-type experiments at very low pressures.

Takigawa A. Tachibana S. Nagahara H. Ozawa K.

[*Condensation Anisotropy of Corundum Around AGB Stars and Its Effect on Infrared Spectra*](#) [#1731]

In order to understand the forming processes of refractory dust, we conducted condensation experiments of corundum at high and low supersaturation and investigated the effects of condensation conditions on the shape of dust and infrared spectra.

Verchovsky A. B. Fisenko A. V. Semjonova L. F. Wright I. P.

[*Preparations and Analysis of a New Set of Grain-size Fractions of Nanodiamonds from Kainsaz*](#) [#1908]

A new set of grain-size fractions of nanodiamonds from Kainsaz have been prepared and analysed. A three populations of nanodiamonds with different carbon isotopic compositions have been identified.

Kashiv Y. Kratz K.-L.

[*The \$\alpha\$ -Process in Supernova Presolar SiC Grains*](#) [#2534]

Preliminary results of the new High Entropy Winf model of nucleosynthesis in SN Type II are presented. It is shown that the Mo isotopic composition measured in SiC X grains could be explained by the primary α -process.

Fujiya W. Sugiura N. Hiyagon H. Takahata N. Sano Y.

[*Ion Probe Analysis of \$^{54}\text{Cr}\$ Isotopic Compositions of an Organic Residue from Murchison CM2 Chondrite*](#) [#1486]

We measured $^{54}\text{Cr}/^{52}\text{Cr}$ ratios of Cr bearing grains contained in an organic residue from Murchison CM2 chondrite using the NanoSIMS 50 to search for carriers of ^{54}Cr isotopic anomalies found in bulk carbonaceous chondrites.

Yokoyama T. Walker R. J. Alexander C. M. O'D. MacPherson G. J.

[*Osmium Isotope Anomalies in Chondrite Components: Refractory Inclusions, Chondrules, Metal and Presolar Grains*](#) [#1489]

We present precise Os isotope data for chondrite components (CAIs, chondrule, metal and IOMs). None of the CAIs, chondrule or metal show Os isotopic anomalies that are resolvable from the solar, while the IOMs possess large nucleosynthetic anomalies.

Jagoutz E. Jagoutz O. E. Ott U.

[*A Rb Isotopic Shift Due to Nucleosynthesis \(S-Process\)?*](#) [#1815]

We describe experimental procedures for high-precision measurements of Rb isotopes and briefly discuss evidence for a component in meteorites that may be due to enhanced abundance of Rb from the weak s-process.

King A. Henkel T. Chapman S. Rost D. Lyon I.
[First Analysis of Gently Separated Presolar Graphite](#) [#2501]

A gentle separation procedure has been used to isolate presolar graphite grains from the Murchison meteorite. This provides pristine samples with which to study stellar environments. We report the the first TOFSIMS analyses of a gently separated presolar graphite grain.

Davidson J. Busemann H. Alexander C. M. O'D. Nittler L. R. Schrader D. L. Orthous-Daunay F. R. Quirico E. Franchi I. A. Grady M. M.

[Presolar SiC Abundances in Primitive Meteorites by NanoSIMS Raster Ion Imaging of Insoluble Organic Matter](#) [#1853]

We present results obtained with NanoSIMS raster ion imaging to determine the abundance of presolar SiC in the insoluble organic matter (IOM) extracted from a number of different classes of chondrites (both carbonaceous and ordinary).

Gilmour J. D.

[Late Loss of "Planetary" \(Actually Presolar\) P3 Gases from Nanodiamonds](#) [#1603]

The relationship between Xe and Kr in the solar wind and P3 suggests P3 is presolar and includes a contribution from ^{129}I that was alive in the early solar system, constraining the timing of trapping of P3.

Hynes K. M. Gyngard F.

[The Presolar Grain Database: <http://presolar.wustl.edu/~pgd>](#) [#1198]

We present a website containing a compilation of the available presolar grain isotopic data. The database is available for use by the entire cosmochemistry community and all data is available for download.

Hoppe P. Huth J. Ott U.

[NanoSIMS Studies of Presolar Graphite Grains: Are C-Isotopic Ratios Grain-Size-Dependent?](#) [#1010]

We performed C, N, O, and Si isotope measurements on presolar graphite grains with the NanoSIMS. While micrometer-sized graphite grains have predominantly isotopically light C, most of submicrometer-sized graphite grains have heavy C.