

Thursday, July 26, 2018
**POSTER SESSION II: ISOTOPIC, CHEMICAL, AND
 EXPERIMENTAL STUDIES OF METEORITES**
 5:30 p.m. Foyer

McCain K. A. McKeegan K. D. Young E. D. Brearley A. J. Alexander C. M. O'D.
[Fluid Evolution on Carbonaceous Asteroids: Interrogating the Carbonate Record](#) [#6172]

We present two complementary studies of carbonate minerals in carbonaceous chondrites: A high-precision in-situ study by ion probe, and a novel gas-source technique using two clumped isotope species of CO₂ and D¹⁷O.

Patzek M. Bischoff A. Ludwig T. Trieloff M. Visser R. John T.
[O-Isotopes of Mineral Constituents of CI-Like Clasts from Ureilites](#) [#6256]

Oxygen isotope data of olivine and pyroxene obtained by SIMS plot on the CCAM with generally negative Δ^{17} . Phyllosilicate-rich areas are enriched in ¹⁷O and a regression line intersects the CCAM at positive Δ^{17} of ~2.8 ‰.

Hopp T. Kleine T.
[Ruthenium Isotope Fractionation in Partially Differentiated Meteorites](#) [#6132]

We obtained mass-dependent Ru isotopic data for ureilites, acapucloite-lodranites and brachinites, with the ultimate goal to investigate the processes of metallic melt formation and segregation in partially differentiated meteorite parent bodies.

Meftah N. Mostefaoui S.
[Abundances and Distribution of Siderophile Trace Elements in Metal of Unequilibrated Ordinary Chondrite](#) [#6325]

We analyzed the distribution of trace siderophile elements between kamacite and taenite in order to shed light on the thermal history of the metal grains in sharp unequilibrated ordinary chondrite.

Guda L. V. Kravtsova A. N. Kubrin S. P. Soldatov A. V.
[Investigation of the Ordinary Chondrites Markovka and Polujamki Using XRF, XRD, Mossbauer and XANES Spectroscopies](#) [#6115]

The study of the H4 ordinary chondrites Markovka and Polujamki was carried out using XRF, XRD, Mössbauer and XANES spectroscopy. The CAIs, the areas with high content of S, K, P and Cr, Fe-containing phases and the Fe oxidation states were described.

Korochantseva E. V. Buikin A. I. Verchovsky A. B. Lorenz C. A. Korochantsev A. V.
[Noble Gas Elemental Ratios of Ghubara, Revealed by Stepwise Combustion and Crushing Methods](#) [#6311]

The He-Ne-Ar stepwise crushing and combustion results on different Ghubara lithologies are presented. We discuss the nature of very unusual 20Ne/³⁶Ar ratios of the analyzed samples.

Krämer Ruggiu L. Sautter V. Lasue J. Beyssac O. Beck P. Bonal L. Montagnac G.
[Chondrites Analysis by Raman and Infrared Spectroscopy Preparing SuperCam](#) [#6091]

Through analyzing the mineralogy by two channels of observation on SuperCam, the Raman spectrometry and the VISIR reflectance spectroscopy, we try to define how to detect chondrites and make the distinction between the diverse classes and groups.

Minin D. A. Shatskiy A. Litasov K. D.
[Fe-Ni-P Phase Diagram at 6 GPa](#) [#6174]

We have determined Fe-Ni-P phase diagram at 900°–1100°C and 6 GPa. At subsolidus conditions, the Metal-rich side of the ternary has three phases: Fe-Ni alloy, (Fe,Ni)_{3-x}P, where $x \leq 0.6$, and (Fe,Ni)₂P. The melting begins at 950°C at the Ni-P join.

Maconi G. Helander P. Gritsevich M. Penttilä A. Kassamakov I. Puranen T. Salmi A.
Hægström E. Muinonen K.

[*Optical Properties of Levitated Particles Obtained Using a \$4\pi\$ Scatterometer*](#) [#6338]

We describe newly build scatterometer for controlled non-destructive measurement of light scattered by a mm- to μm -sized sample held in place by sound. The device can be used to obtain optical properties of cosmic dust and other valuable samples.

Dutta A. Bhattacharya A.

[*Petrochemical Characterization of Adhikot and Khairpur Enstatite Chondrites \(EC\)*](#) [#6124]

Petrochemical characterization of enstatite chondrites (EC).