Dall’Asén A. G.   Stokke A. R.   Paul R.   Kayastha R.   Bromley B. C.   et al. POSTER LOCATION #75
Mineralogical and Elemental Composition of Carbonaceous Chondrites by Micro-Raman Spectroscopy and SEM/EDS [#2571]
We present a comparative study of the composition of the chondrules and matrix of chondritic meteorites Moss and Murray using Raman spectroscopy and SEM/EDS.

Young J. M.   Glotch T. D.   Yesiltas M. POSTER LOCATION #76
Tracking Thermal History of Chondritic Parent Bodies via Raman Spectroscopic Analysis of PAH Contents [#1767]
Tiny organic rings / Are records of history / Read it with lasers.

Varela M. E. POSTER LOCATION #77
Acfer 182 Gives New Clues to Chondrule Formation [#1358]
Study of Mg-rich cryptocrystalline (CC) and ferreous radiating pyroxene (RP) chondrules as a contribution to better constrain chondrule formation processes.

Crapster-Pregont E. J.   Gemma M. E.   Ebel D. S. POSTER LOCATION #78
Rare Earth Elements in CV Carbonaceous Chondrite Components [#2933]
Chondrule glass, matrix / So different; they combine / Near-flat REE! CAIs mix in / Do they skew refractories? / Need more statistics!

Garvie L. A. J. POSTER LOCATION #79
Powder X-Ray Diffractometry of the Orgueil Carbonaceous Chondrite: Insights into the Clay Mineralogy [#2085]
Insights into the bulk nature of the clays are provided by powder X-ray diffraction (XRD) of samples prepared using standard clay identification procedures.

Aponte J. C.   Abreu N. M.   Keller L. P.   Elsila J. E.   Dworkin J. P. POSTER LOCATION #80
Soluble Amines in Anomalous CR Chondrite Miller Range (MIL) 090001 [#1543]
MIL 090001 has amines in 30 times lower concentrations compared with CR2s and unique isotopic composition. Differences not the result of parent body processes.

Bose M.   Root R. POSTER LOCATION #81
Identification of Organic and Elemental Sulfur in the Fine-Grained Matrix of Graves Nunataks GRA 95229 [#2098]
Elemental and organic sulfur is abundant in the interchondrule matrix of GRA 95229, and is predominantly associated with sulfates.

Yamamoto D.   Kuroda M.   Tachibana S.   Sakamoto N.   Yurimoto H. POSTER LOCATION #82
Oxygen Isotope Exchange Between Amorphous Forsterite and Water Vapor; An Experimental Study [#1995]
Oxygen isotope exchange between sub-micron-sized amorphous forsterite dust and water vapor would occur at >~500 K within the disk lifetime.

Dobrica E.   Ogliore R. C.   Engrand C.   Nagashima K.   Brearley A. J. POSTER LOCATION #83
Oxygen Isotope Systematics of Magnetite in Hydrated Antarctic Micrometeorites: New Water Reservoir [#2666]
Magnetite in AMMs / A new water reservoir / Falling to the Earth.

Le Guillou C.   Leroux H.   Zanetta P-M.   Brearley A. J.   de la Pena F.   et al. POSTER LOCATION #84
Water Content in Amorphous Silicates of Chondrite Matrices Determined by Advanced TEM Analysis — And Scanning Transmission X-Ray Microscopy [#2342]
Methodology for water content determination at the nanometer scale. Amorphous silicates in ALH 77307 and Renazzo are heterogeneously hydrated (from 7 to 12%).
Johnson J. M. Brearley A. J. POSTER LOCATION #85
Porous, Ca-Rich Aggregates and Complex Minor Element Data of Chondrule Phenocrysts in the Northwest Africa NWA 2364 CV3 Chondrite and Its Lithic Inclusion: Evidence of Fluid-Rock Interactions [2674]
CV3 Chondrite / Shows trace element exchange / Perplexing moist past.

Tracing the Earliest Stages of Hydrothermal Alteration on Primitive Asteroids [1482]
The modal mineralogy, H abundances, and infrared spectra of LAP 04514, LAP 04796, and LAP 04565 indicate that they are amongst the least altered CM chondrites.

Louro M. D. Abreu N. M. Friedrich J. M. POSTER LOCATION #87
Examining Chondrule and Clast Sizes in the CM Chondrites LaPaz Icefield 04514, LaPaz Icefield 04527, and LaPaz Icefield 04565 [2387]
We investigate the sizes of chondrules and clasts (mineral fragments) in three CM chondrites that experienced very limited aqueous alteration.

Lee M. R. Cohen B. E. Mark D. F. Boyce A. POSTER LOCATION #88
Evidence for Widespread Post-Hydration Heating of the CM Carbonaceous Chondrites [1285]
The CM carbonaceous chondrite SCO 06043 gives an Ar/Ar age of <3.2 Ga, supporting the idea that many CMs experienced late-stage heating.

Choi J. Nagao K. Baek J. M. Lee J. I. POSTER LOCATION #89
Effect of Thermal Metamorphism on Noble Gas of Carbonaceous Chondrites: Comparison of Vigarano (CV3) and Maralinga (CK4) [1940]
We present results of stepwise heating analyses of noble gases of Vigarano (CV3) and Maralinga (CK4).

Arai T. Komatsu M. Takenouchi A. Mikouchi T. Tomeoka K. POSTER LOCATION #90
Na Variation and Redox State of Plagioclase in CK4 Chondrites: Possible Record of Thermal Metamorphism [2995]
Na variation and redox state of plagioclase in CK4 chondrites are studied to understand thermal metamorphism.

Leitner J. Vollmer C. Hoppe P. POSTER LOCATION #91
A Study of Osbornite from Enstatite Chondrites at the Submicrometer Scale [1851]
Osbornite in Enstatite Chondrites has isotopically light nitrogen (~30 ‰). It is likely a secondary phase and only a minor contributor to bulk nitrogen.

Alpert S. A. Ebel D. S. Weisberg M. K. POSTER LOCATION #92
Comparison of Opaque Nodules in UOCs Watonga and Semarkona [2920]
Opaque nodules in unequilibrated ordinary chondrites Semarkona and Watonga are compared using mode code. Nodules in Watonga exhibit relative homogeneity.

Schrader D. L. Zega T. J. POSTER LOCATION #93
Pyrhottite and Pentlandite in LL3 to LL6 Chondrites: Determining Compositional and Microstructural Indicators of Formation Conditions [2621]
We investigate the compositions and microstructures of sulfides in LL3 to LL6 chondrites in preparation of analyzing Hayabusa sulfides.

Niihara T. Koike M. Kagoshima S. Tanaka K. Sano Y. POSTER LOCATION #94
Preliminary Sulfur Isotope Studies on Chelyabinsk Chondrite [1852]
We performed petrology, mineralogy, and isotopic measurements on impact melted portion of Chelyabinsk chondrite.
Impacts on the LL-Chondrite Asteroid(s) — New Insights from Shock-Melted Meteorites

Schmieder M. Kring D. A.
POSTER LOCATION #95

LL-impact melt breccias from Antarctica and Africa show evidence for rapid cooling, and are compared and contrasted with impact-melted H- and L-chondrites.

Measuring the Shock Stage of Asteroid Regolith Grains by Electron Back-Scattered Diffraction

POSTER LOCATION #96

We are developing techniques to use EBSD for regolith shock determination.

Development of an Advanced Electron Microscopy Methodology: Comparison of the Mineralogy of Fine-Grained Rims and Adjacent Matrix in the CM Paris Chondrite

Zanetta P-M. Leroux H. Le Guillou C. Zanda B.
POSTER LOCATION #97

The mineralogy of the matrix and fine-grained rims are compared in the Paris chondrite thanks to a new methodology suited for material with small grain size.

Porosity Variations Between Fine Grained Rims and Matrix in a CM Chondrite by 3D Serial Sectioning

POSTER LOCATION #98

3D serial sectioning of CM chondrite EET 96029 find porosity variation between matrix and fine grained rims: Implications for fluid flow on the CM parent body.

High Resolution Visualization of Carbonaceous Chondrite Fabric by X-Ray Computed Tomography

POSTER LOCATION #99

Evidence of compaction and quantification of primary porosity in carbonaceous chondrites using the highest resolution X-ray micro-tomography ever performed.

Tieschitz (H/L3.6): Modal Analysis by Pixel Counting

DeFelice J. D. Ebel D.
POSTER LOCATION #100

Modal analysis using pixel counting provides a quantitative analysis of clast abundance in EMPA images in Tieschitz (H/L 3.6).

Scale Dependence in Porosity for Intact Stones of Kosice

Macke R. J. Kohout T. Toth J.
POSTER LOCATION #101

Size matters. Porosity of completely intact stones of Kosice is a function of specimen volume.

Understanding the Effects of Antarctic Weathering on the Petrologic and Spectral Characteristics of Pristine CR Carbonaceous Chondrites

Abreu N. M. Cloutis E. A. Hamilton V. E.
POSTER LOCATION #102

Weathering of CRs is heterogeneous. Oxidation of Fe-Ni and nanosulfides observed. Matrix has localized Fe-enrichment, silicates, C-matter minimally affected.

Modeling Meteorite Heat Transfer in an Antarctic Environment

POSTER LOCATION #103

We are modeling the thermal interactions of meteorites in an Antarctic environment to constrain the equilibrium depth of meteorites sinking from solar heating.
Moreau J. Kohout T. Wünnewann K.  
**POSTER LOCATION #104**

*Numerical Modeling of Shock Wave Propagation in Iron and Troilite Assemblages in Ordinary Chondrites* [1165]

Using shock physics mesoscale modeling, we studied the propagation of shock waves within iron and troilite grain eutectic mixtures in ordinary chondrites.

Kletetschka G.  
**POSTER LOCATION #105**

*Magnetization of Extraterrestrial Allende Material May Relate to Terrestrial Descend* [1364]

Decelerating/accelerating process allows magnetic remanence acquisition at temperature when collapsible deformation took place on Allende meteorite.