Wednesday, March 21, 2018 [W456]
CHONDRITES AND THEIR COMPONENTS III: PARENT BODY PROCESSES
1:30 p.m. Montgomery Ballroom

Chairs: **Gokce Ustunisik**
Justin Simon

1:30 p.m. Bland P. A. * Travis B. J.
Extending the Mudball Model to Other Chondrite Groups **[#2911]**
Previously we have applied the mudball model to CMs. We explore whether it can be applied more generally to the geophysical evolution of carbonaceous asteroids.

1:45 p.m. Dobrica E. * Nuth J. A. Rietmeijer F. Brearley A. J.
Fayalite Formation During Hydrothermal Experiments: Constraints on Early Fluid-Assisted Hydration Processes on Asteroids **[#2340]**
Fayalite puzzle / Explained by experiments / The chondrite story.

2:00 p.m. Martínez-Jiménez M. * Brearley A. J.
Aqueous Alteration Effects in Chondrules in the Most Pristine CR2 Chondrite, Queen Alexandra Range (QUE) 99177: Further Insights into the Earliest Stages of Fluid-Rock Interaction **[#2274]**
We have examined the effects of the earliest stages of aqueous alteration in chondrules from the pristine CR QUE 99177, focusing on silica and glass alteration.

2:15 p.m. Bates H. C. * King A. J. Donaldson Hanna K. L. Bowles N. E. Russell S. S.
Linking Mineralogy and Spectroscopy of Hydrated CM Carbonaceous Chondrites in Preparation for Primitive Asteroid Sample Return **[#1286]**
This study presents reflectance spectra for a number of fully hydrated CM1 carbonaceous chondrites, which have had their mineralogy well characterised.

2:30 p.m. King A. J. * Greenwood R. C. Gibson J. M. Schofield P. F. Franchi I. A.
The Oxygen Isotopic Composition of the most Aqueously Altered CM Carbonaceous Chondrites **[#2201]**
Bulk oxygen isotopic compositions of CM1 and CM1/2 chondrites are lighter than the CM2s. This may be due to parent body and terrestrial weathering processes.

2:45 p.m. Fujiya W. * Hoppe P. Fukuda K. Lindgren P. Lee M. R. et al.
Carbon Isotopic Ratios of Carbonate in CM Chondrites and the Tagish Lake Meteorite **[#1377]**
Carbon isotopic ratios of carbonate in CM chondrites and Tagish Lake were determined. We discuss a possible link between ice in asteroids and in comets.

3:00 p.m. Han J. * Brearley A. J. Keller L. P.
A Record of Nebular vs. Asteroidal Processes in Amoeboid Olivine Aggregates from Kainsaz (CO3.2) **[#2863]**
Our TEM study of AOAs in Kainsaz (CO3.2) presents lines of evidence for both nebular and parent body processing of olivine and pyroxene in AOAs.

3:15 p.m. Zhang Y. * Qin L.
Molybdenum Isotopic Evidence for the Evaporation Loss of Mo in CK Chondrites and Implications for Their Formation Mechanism **[#2215]**
CKs exhibit positive Mo isotopic fractionation, suggesting thermal metamorphism occurred after they departed from their parent body.

3:30 p.m. McCoy T. J. * Corrigan C. M. Davidson J. Schrader D. L. Righter K.
Sulfidization Contemporaneous with Oxidation and Metamorphism in CK6 Chondrites **[#1729]**
CK6 chondrites: Metamorphism — check (but not that different than OCs); oxidation — check (but not quite as oxidized); sulfidization — hey, that's new!

3:45 p.m. Lewis J. A. * Jones R. H.
Evidence from Secondary Minerals for Three Stages of Metasomatism During Thermal Metamorphism in Ordinary Chondrites **[#1254]**
Model of alteration during OC metamorphism: prograde hydrous alteration, dehydration near peak metamorphism, and retrograde infiltration of anhydrous fluids.

4:00 p.m. Dygert N. * Patchen A. D. Miller N. R. McSween H. Y.
An Application of REE-in-Two-Pyroxene Thermometry to LL Chondrites: Evidence for Multistage Metamorphism and a Rubble Pile Parent Body **[#1750]**
We applied a REE-in-two pyroxene thermometer to LL chondrites and found thermal histories consistent with multistage metamorphism and a rubble pile parent body.

4:15 p.m. Baziotis I. Asimow P. D. * Hu J. Ferrière L. Ma C. et al.
High Pressure Polymorphs in the Château-Renard (L6) Ordinary Chondrite: Implications for Collisions on Its Parent Body **[#2946]**
The Château-Renard highly shocked L6 chondrites contains numerous high-pressure polymorphs, including a sodic pyroxene phase with the Raman spectrum of jadeite.

4:30 p.m. Moreau J. * Kohout T. Wünnemann K.
Numerical Modeling of the Ordinary Chondrites Shock Metamorphism Transition from Shock Stage 5 to 6 **[#1164]**
Using shock physics mesoscale modeling, we studied melting and post-heating of ordinary chondrites at the shock stage 5 and 6 transition of shock metamorphism.