

**Tuesday, March 20, 2012**  
**POSTER SESSION I: SOLAR NEBULA MIXING AND CAIs**  
**6:00 p.m. Town Center Exhibit Area**

Yamada K. Inaba S.

[\*On Low-Mass Planetary Migration in an Optically Thick Disk\*](#) [#1126]

A protoplanet embedded in a gas disk experiences a torque from the disk that generally changes its orbit elements. We numerically examine the torque exerted on a planet by an optically thick accretion disk for various values of the opacity and the accretion rate.

Pascucci I. Apai D.

[\*Stellar-Mass-Dependent Evolution of Planet Forming Disks\*](#) [#1244]

We present new and archival observational data demonstrating that disk evolution is stellar-mass-dependent. We discuss the implications of this finding for the formation of giant and terrestrial planets around stars of different masses.

Fujita T. Ohtsuki K. Tanigawa T.

[\*Capture of Planetesimals by Circumplanetary Disks\*](#) [#1378]

We examine orbital evolution of planetesimals approaching a growing giant planet with a circumplanetary disk by integrating Hill's equation including the gas drag term, and evaluate the capture probability.

Suetsugu R. Ohtsuki K.

[\*Global Orbital Integration for Temporary Capture of Planetesimals by a Giant Planet: Implication for Their Source Region\*](#) [#1157]

We use a three-body system that consists of the Sun, a planet, and a test particle, and perform global orbital integration to examine effects of a high-mass planet on temporary capture.

Perry J. Kimery J. Matthews L. S. Hyde T. W.

[\*Effects of Monomer Shape on the Formation of Fractal Aggregates Under a Power Law Distribution\*](#) [#2615]

Studies modeling the coagulation of dust particles typically assume spherical monomers, which may not always be valid. This work compares morphologies of aggregates built from spherical monomers as well as prolate and oblate ellipsoidal monomers.

Kropf A. Libourel G.

[\*Condensation Processes in the Early Solar Nebula — Experimental Approaches\*](#) [#1920]

We present a new technical setup to study high-T/low-P condensation from a gas under early solar nebula conditions in order to get an experimental condensation sequence and an experimental proxy of the young stellar environment.

Archer G. J. Walker R. J.

[\*Highly Siderophile Element and Rhenium-Osmium Isotope Systematics of Calcium-Aluminum Rich Inclusions: Evidence for Early Solar System Properties and Processes\*](#) [#2379]

Highly siderophile element abundances and Re-Os isotope systematics were determined for six Allende CAIs. HSE abundances were consistent with previously published results for these CAIs. Several CAIs plot off a primordial Re-Os isochron.

Williams C. D. Wadhwa M. Janney P. E. Hines R. R. Bullock E. S. MacPherson G. J.

[\*The Measurement of Titanium Isotopic Compositions of Allende Refractory Inclusions by LA-MC-ICPMS\*](#) [#2523]

We report on the in situ measurement of titanium isotope ratios by LA-MC-ICPMS in nine Allende CAIs. Matrix-matched glass standards were synthesized and used for the correction of matrix-effects and isobaric interferences.

Haring M. M. Flemming R. L. Terskikh V. Grossman L. Simon S. B.

[\*Crystal Structure and Cation Ordering in Fassaite from Type B CAI TS62B in Allende CV3\*](#) [#2601]

We report cation ordering data of fassaite from Allende Type B TS62B by  $^{29}\text{Si}$  and  $^{27}\text{Al}$  Magic Angle Spinning (MAS) and triple quantum (3Q) MAS Nuclear Magnetic Resonance spectroscopy. This is the first such data reported for meteoritic fassaite.

Hamilton V. E. Connolly H. C. Jr.

[\*In Situ Microspectroscopy of a Type B CAI in Allende: Mineral Identification in Petrographic Context\*](#) [#2495]

We show that IR  $\mu$ -spectroscopy (7–25  $\mu$ m) offers a powerful approach to identifying and mapping the distribution of individual minerals in meteorites at the 50- $\mu$ m scale, avoiding the loss of petrographic context that occurs with powdered preparations.

Chizmadia L. J. Bravo-Ruiz H.

[\*QUE97416 and A-88882094, Two CO3 Breccias: Evidence from Petrologic Subtypes Determined from Amoeboid Olivine Inclusions\*](#) [#2918]

AOIs in QUE 97416 and Asuka -882094 have differing ratios of Fe:Mg olivine which seems to indicate a range of subtypes from 3.2 to 3.6. This can be best explained if these meteorites are brecciated representatives of the CO3 parent body asteroid.

Ivanova M. A. Ivanov A. V. Lorenz C. A. MacPherson G. J.

[\*An Unusual Type B2 CAI and a P-Ca-Rich Clast from Kaidun\*](#) [#2262]

We report results on petrology, mineral chemistry, and bulk composition of one Kaidun sample, #A3-9, a rare CAI that encloses an unusual P,Ca-rich object of unclear origin.

Han J. Brearley A. J.

[\*Microstructural Observations of Spinel-Pyroxene Refractory Inclusions from the ALHA 77307 CO3.0 Carbonaceous Chondrite: Comparison with CAI-Like Objects in an Amoeboid Olivine Aggregate\*](#) [#1324]

We report TEM observations of CAIs from the ALHA 77307 CO3.0 chondrite and discuss their origin and thermal histories. Additionally, we compare these observations with those from refractory CAI-like objects in an AOA.

Han J. Brearley A. J.

[\*The Microstructure and Microchemistry of Amoeboid Olivine Aggregates from the ALHA 77307 CO3.0 Carbonaceous Chondrite: Constraints on Formation and Thermal Histories\*](#) [#1323]

We present new microstructural and microchemical observations obtained by TEM on olivine and refractory Ca-Al-rich phases in AOAs from the ALHA 77307 CO3.0 chondrite and discuss their implications for the formation and thermal histories of the AOAs.