

**PRINT ONLY: COSMOCHEMISTRY, DISK PROCESSES, AND METEORITES**

Alexeev V. A.

[Fossil Meteorites of Sweden: What are Their Cosmic-Ray Exposure Ages? \[#1019\]](#)

It is highly probable that all meteorites found in Sweden have cosmic-ray exposure ages less than 2 Ma and that all these meteorites are fragments of one meteoroid.

Gorin V. D. Alexeev V. A. Kashkarov L. L. Ustinova G. K.

[Pre-Atmospheric Sizes and Orbits of the Ash Creek and Tamdakht Chondrites According to the Results of Track and Cosmogenic Radionuclide Investigation \[#1038\]](#)

The results of the track and cosmogenic radionuclide study in the fresh-fallen Ash Creek and Tamdakht chondrites are used in order to estimate the pre-atmospheric size and ablation as well as the most probable elements of orbits of the chondrites.

Hiltl M. Bauer F. Ernstson K. Mayer W. Neumair A. Rappenglück M. A.

[SEM and TEM Analyses of Minerals Xifengite, Gupeite, Fe<sub>2</sub>Si \(Hapkeite?\), Titanium Carbide \(TiC\) and Cubic Moissanite \(SiC\) from the Subsoil in the Alpine Foreland: Are they Cosmochemical? \[#1391\]](#)

SEM and TEM analyses of millimeter- to centimeter-sized particles from Holocene soils reveal a multi-stoichiometric iron silicide matrix containing purest crystals of titanium carbide and cubic moissanite. A cosmochemical origin is suggested.

Lavrentjeva Z. A.

[Olivine, Ca,Al-Rich Inclusions and Presolar Grains in the Enstatite Chondrites \(EC\): Clues to EC-Forming Region \[#1055\]](#)

Oxidizing conditions must have played a role during early petrogenesis of the ECs. CAIs in ECs either formed in or were dispersed into regions distinct from CC and OC. The isotopic compositions of presolar grains in ECs are comparable with those of the supernova.

Miyamoto M. Kaiden H.

[Evidence for Parent-Body Thermal-Metamorphism of CO<sub>3</sub> Chondrite by Analyzing Fe-Mg Zoning of Olivine \[#1156\]](#)

We studied whether thermal metamorphism of Y-791717 CO<sub>3.6</sub> chondrite occurred in the parent body or in the primitive solar nebula by fitting the calculated Fe zoning of olivine to observed one. The result for the 600°–1000°C range shows the best fit.

Pack A. Horvath B. Hofmann M. Goldmann A. Albrecht N. Gellissen M. Zipfel J. Palme H.

[Defining the Terrestrial Oxygen Isotope Fractionation Line and Observed Oxygen Isotopic Heterogeneity Within the Allende Meteorite \[#1827\]](#)

We show that the O isotope terrestrial fractionation line does not pass through the origin. Allende is isotopically heterogeneous (on 0.3 g scale) with no correlation with the chemical composition.

Rubin A. E.

[CAIs, Dustballs and Refractory Lithophile Abundances in Chondrite Groups \[#1016\]](#)

Porous centimeter-sized dustballs and millimeter-sized CAIs respond to aerodynamic forces in the same way and were concentrated in the same nebular regions. The CV-CK zone contained abundant dust and CAIs and acquired the highest amounts of refractory lithophiles.