

PRINT ONLY: METEORITES

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[Super Heavy \(\$Z>50\$ \) Galactic Cosmic Ray Nuclei Abundance on the Base of the Track Parameters Measuring in the Pallasite Olivine Crystals](#) [#1407]

New results of the super-heavy cosmic ray nuclei abundance due to the track in the pallasite olivine in the frame of OLIMPIA project are presented. It was detected near 850 tracks with $Z>50$ and four corresponding Th-U group.

Alexeev V. A.

[Ordovician Fossil Meteorites in Sweden: Numerous Meteorite Falls or Single Meteorite Shower?](#) [#1003]

There is no necessity to set up a hypothesis of intensive flux of meteorites to Earth during ~1–2 Ma about 480 Ma ago.

Caporali S. Pratesi G. Moggi-Cecchi V. Franchi I. A. Greenwood R. C.

[NWA 4419: A New R Chondrite from Northwest Africa](#) [#2488]

NWA 4419 is an R chondrite recently found in Northwest Africa. Textural, compositional and isotopic data are presented, supporting the classification as R4 chondrite.

Dredge I. Parnell J. Lindgren P. Taylor C. Bowden S.

[Elevated Flux of Mid-Ordovician Micrometeorites](#) [#1273]

An elevated flux of micrometeorites is recorded from a mid-Ordovician limestone section in NW Scotland. This coincides with an elevated flux of meteorites detected previously in Sweden.

Golubeva L. F. McFadden L. A. Shestopalov D. I. Hasanova L. O.

[Comparative Analysis of the Color Characteristics of Vesta's Areas and HED Meteorites](#) [#1064]

From comparing the colors of the units in the northern hemisphere of Vesta and HED meteorites we inferred that Vesta units differ from HEDs in sizes of grains scattering light and in mineral compositions.

Korochantsev A. V. Lorenz C. A. Ivanova M. A. Zaytsev A. V. Kononkova N. N. Roshina I. A.

Korochantseva E. V. Sadilenko D. A.

[Sediment-Dispersed Extraterrestrial Chromite in Ordovician Limestone from Russia](#) [#1101]

The high content of extraterrestrial chromite grains was discovered in Russian Ordovician sediments, those are coeval to Swedish limestones, bearing the fossil meteorites and extraterrestrial chromites.

Kurat G. Zinner E. Varela M. E. Ntaflos T.

[SiGrMet05: A Silicate-Graphite-Metal Inclusion from the Campo del Cielo \(IAB\) Iron](#) [#1536]

Lithologies either rich in silicates, or chromite, or graphite, form sub-units of the inclusion, which is cut by metal-graphite veins. Complex break-down reactions of exotic precursors are indicated.

Lavrentjeva Z. A.

[The Formation of Pallasites](#) [#1042]

Pallasites may have been formed not from core-mantle boundaries as widely inferred, but from impact-generated mixtures of core and mantle materials.

Lorenz C. A. Teplyakova S. N. Korochantsev A. V. Kononkova N. N. Roshina I. A. Sadilenko D. A.

[The Structure and Composition of Large Metal Nodule from the Ghubara L5 Chondrite](#) [#1103]

The large metal nodule was found in the Ghubara L5 chondrite. The metal demonstrates widmannstätten texture that is unique in chondritic metal. The nodule could be formed by the partial or complete impact melting of chondritic precursor.

Lyul A. Yu. Kolesov G. M.

[*Distribution of Some Elements Among Chondrules of Unequilibrated Chondrites: 1. Fe, Cr, Na, and Sc*](#) [#1552]

The histograms of the distribution of Fe, Cr, Na and Sc contents among chondrules of unequilibrated chondrites are presented. Effect of metamorphic processes on chemical composition of chondrules is discussed.

Marakushev A. A. Zinovieva N. G.

[*Liquid Immiscibility in the Parent Bodies of Ordinary Chondrites and Genetic Types of Iron Meteorites*](#) [#1057]

Our data on ordinary chondrites prove their genetic relations with some iron meteorites, which led us to suggest that iron and pallasite cores may occur even in planets of the most primitive (chondritic) evolutionary level.

Miyamoto M. Koizumi E. Mikouchi T.

[*Cooling Rates of Y 980459 and DaG 476 Shergottites on the Basis of Fe-Mg Zoning of Olivine*](#) [#1143]

We have developed a model to calculate the cooling rate by using the Fe-Mg zoning of olivine and applied it to martian meteorites. The results are 0.20°C/h and 0.089°C/h for Y 980459 and DaG 476 shergottites, respectively.

Moggi-Cecchi V. Pratesi G. Franchi I. A. Greenwood R. C.

[*Textural and Compositional Features of NWA 4222, a New Martian Meteorite*](#) [#2387]

Textural and compositional features of the recently discovered martian meteorite NWA 4222 are presented, focusing on differences and affinities with other desert martian meteorites.

Nazarov M. A. Ntaflos Th. Brandstaetter F. Kurat G.

[*FeO/MnO Ratios of Lunar Meteorite Minerals*](#) [#1059]

FeO/MnO ratios of lunar meteorite minerals were determined based on numerous EMP analyses. The ratio of Ca-rich pyroxene was found to be dependent on Ca content and MG#. FeO/MnO ratio of olivines and orthopyroxenes is least variable.

Papike J. J. Karner J. M. Shearer C. K. Burger P. V.

[*Pyroxene Mineralogy of Martian Meteorites: Major and Minor Element Systematics*](#) [#1180]

Chemistry of pyroxene from 19 martian meteorites.

Pizzarello S. Williams L. B.

[*Soluble Organic Species Released from the Insoluble Carbonaceous Material of a Pristine CR2 Meteorite*](#) [#1369]

The hydrothermolytic treatment of a CR2 macromolecular carbonaceous material released several aliphatic and aromatic hydrocarbons.

Pratesi G. Moggi-Cecchi V. Franchi I. A. Greenwood R. C.

[*NWA 4418: A New Mesosiderite from Northwest Africa*](#) [#2430]

NWA 4418 is a new mesosiderite recently found in Northwest Africa. Textural, compositional and isotopic data are presented, and a subclassification as 3B is proposed.

Slyuta E. N. Nikitin S. M. Korochantsev A. V. Lorents C. A. Skripnik A. Ya.

[*Strong Physical and Mechanical Anisotropy of Ordinary Chondrites*](#) [#1051]

The revealed three-dimensional distribution of compressive strength in ordinary chondrites can be approximated by prolate ellipsoid.

Wasson J. T. Choe W.-H.

[*The IIG Iron Meteorites: Probable Formation in the IIAB Core*](#) [#2271]

Because, on most element-Au diagrams, the IIG irons plot along approximate extensions of IIAB trends, we argue that these P-rich irons formed in the evolved IIAB core. Offsets on some element-Au diagrams suggest formation in pockets of P-rich magma.