

+

#0036

+

**Trace elements and three oxygen isotopes ratios
in olivine of EOC.**

Sukhanova*, K., * Institute of Precambrian Geology and Geochronology, Russian Academy of Sciences (IPGG RAS), cris.suhanova92@yandex.ru.

Equilibrated ordinary chondrites (EOC) form the most common but poorly-studied group of meteorites [1]. Thermal metamorphism influenced on the major element concentrations of minerals and led to their homogenization. However, trace elements and three oxygen isotope composition varies to a lesser extent and remains unequilibrated even in meteorites of petrological type 6 [2].

Trace elements in olivine vary significantly in petrographic types from 4 to 6. Moderately volatile elements (V, Ni, Cr, Rb) show a slight tendency to homogenization, while refractory elements (Zr, Y, Nb, Ti) do not demonstrate such features.

At 4 p.t. chondrite, olivine preserved their primary isotopic ratios and can be used for the chondrule-formation conditions reconstruction. Due to 5-6 p.t. chondrites, oxygen isotopic composition of olivine was partially homogenized, however, it reflects secondary processes on the chondritic parent body, such as thermal metamorphism, fluid activity, and impact events.

[1] Scott, E., Krot A. (2014) Treatise on Geochemistry, 65–137. [2] Sukhanova, K. et al. (2020) Geochemistry

+

International 58, 1321–1330.

+

Cite abstract as:

Sukhanova, K. (2021) . Paneth Kolloquium, Online (Germany), abstract URL:
<https://paneth.eu/PanethKolloquium/2021/0036.pdf> (abstract #0036).