

Characterization and changes in the thermal behavior of the phosphorite sample from Toolse deposit (Estonia) along the drill-core

Kaljuvee, Tiit; Tõnsuaadu, Kaia; Kallaste, Toivo; Graul, Sophie; Hints, Rutt; Kivimäe, Eliise-Koidula; Petkova, Vilma; Triikkel, Andres Journal of thermal analysis and calorimetry 2024 / p. 12651 - 12664 <https://doi.org/10.1007/s10973-024-13655-x> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The enrichment process of vanadium in lower ordovician vanadiferous black shales from Estonia : investigating critical metal resources in Europe

Ndiaye, Mawo; Graul, Sophie; Kallaste, Toivo; Hints, Rutt Goldschmidt 2023 Abstract 2023 / 1 p.
<https://doi.org/10.7185/gold2023.14076>

LA-ICP-MS imaging technique application on Estonian sedimentary phosphorites : revealing REE enrichment stages and advanced ore characterisation

Graul, Sophie; Monchal, Vincent; Rateau, Rémi; Joosu, Lauri; Moilanen, Marko; Ndiaye, Mawo; Hints, Rutt EGU General Assembly 2024 2024 / EGU24-7319 <https://doi.org/10.5194/egusphere-egu24-7319>

REE + Y distribution in Tremadocian shelly phosphorites (Toolse, Estonia) : multi-stages enrichment in shallow marine sediments during early diagenesis

Graul, Sophie; Kallaste, Toivo; Pajusaar, Siim; Urston, Kriksjan; Gregor, Andre; Moilanen, Marko; Ndiaye, Mawo; Hints, Rutt Journal of Geochemical Exploration 2023 / art. 107311 <https://doi.org/10.1016/j.gexplo.2023.107311> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

REE potential in sedimentary apatite: Delve deeper with microanalytics

Graul, Sophie; Monchal, Vincent; Rateau, Rémi; Joosu, Lauri; Moilanen, Marko; Ndiaye, Mawo; Hints, Rutt 4th European Mineralogical Conference. Dublin, Ireland : programme and abstracts 2024 / p. 275 : ill <https://www.minersoc.org/wp-content/uploads/2024/09/EMC-Programme-and-Abstracts-FINAL.pdf>

Unconventional resources of REE : challenges for exploration and processing, with the example of Estonian phosphorite

Graul, Sophie; Monchal, Vincent; Joosu, Lauri; Hints, Rutt Kliimast, geoloogias, ringmajandusest ja ajaloost 2024 / lk. 12-14 : ill.
https://www.ester.ee/record=b5673955*est <https://kirjandus.geoloogia.info/reference/49111>