Ore mineralogy and trace elements

Session submitted to IMA2022 Lyon

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Description:

The general need for raw materials and ores steadily increases. Therefore, besides better understanding on the genesis of ore deposits, mineral intergrowth, as well as valuable by-products for a zero-waste policy, new methods for the exploration of ore minerals are relevant for both scientific and economic considerations. One major key for these aspects is the investigations of ore minerals and incorporated trace elements. In the last decades, analytical techniques (e.g., LA-ICP-MS, SIMS, EPMA, TEM, WDX element maps) have significantly advanced the study of ore minerals, from nano- and micro- towards deposit-scale, including measurements of lower concentrations of trace elements. In general, trace elements are particularly of interest as they can provide crucial information for ore formation and can act as exploration tools. This session therefore focuses particularly on ore minerals, including its role in mineral exploration, ore genesis, and mineral processing. We invite contributions applied to mineral geochemistry of different ore deposit types. We particularly welcome integrative studies using trace elements, isotope systematics and phase relationships to understand the genesis of ore minerals using different approaches ranging from field work, reflected-light microscopy towards sophisticated analytical methods such as LA-ICP-MS, SIMS, EPMA, TEM, WDX element maps.

Comments:

Submitted in the framework of the IMA Commission on Ore Mineralogy