PŮVODNÍ PRÁCE/ORIGINAL PAPER

New occurrence of kruťaite and petříčekite at the former uranium mine Slavkovice, western Moravia, Czech Republic

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Abstract

Two rare copper diselenides, kruťaite and petříčekite, were found in two museum samples of vein fillings from the uranium mine Slavkovice, western Moravia (Czech Republic). Kruťaite occurs as small isometric isolated euhedral to subhedral zoned crystals enclosed and partly replaced by umangite. Petříčekite forms small elongated or isometric inclusions enclosed by kruťaite and other Cu-selenides. Optical data, Raman spectra and chemical composition of both phases are specified in this paper. Kruťaite contains elevated contents of Co (up to 0.15 *apfu*) and Ni (up to 0.09 *apfu*), whereas petříčekite is Ni-Co free and enriched in Fe (up to 0.25 *apfu*). Both phases seem to be the oldest selenides in the given assemblage, and are associated with umangite, athabascaite, eskebornite, klockmannite, bukovite, uraninite, chalcopyrite, calcite and hematite. The studied ore assemblage originated at temperature not exceeding ca. 100 °C. The fugacity of selenium as well as the Se/S ratio of the parent fluids decreased significantly during paragenetic evolution of the studied mineralization.

Key words: *kruťaite, petříčekite, selenides, chemical composition, Raman spectra, uranium deposits, Slavkovice*
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