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**ABSTRACTS**

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## Pegmatites in Romania: present state of knowledge and perspectives for critical raw materials

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The pegmatite occurrences in Romania are widespread in Variscan and younger medium-grade metamorphic basement complexes of the Carpathians. Extensive prospecting followed by small-scale mining for commodities like feldspar and mica resulted in a fairly good knowledge of their distribution and composition. General features are the lack of an apparent association with coeval granitic rocks, occurrence as swarms of small lenses scattered in the host schists and gneisses, a simple mineralogy (quartz-feldspar-mica, subordinate tourmaline, garnet, apatite), homogeneous or irregularly zoned internal structure (Hann, 1987; Mârza, 1985). These features are invoked in support of metamorphic segregation/anatexis as genetic mechanism (*Ibid.*), and the definition of a Carpathian pegmatitic province, geographically divided in several subprovinces/districts (Mârza, 1980).

Exceptions to one or more features of this general scheme include pegmatites associated to undeformed granites of uncertain age (possibly Mesozoic, Pană *et al.*, 2002) in the Apuseni Mountains, as well as large pegmatite bodies, and most importantly, local to areal concentration of Li and Be, and scattered beryl, Li-minerals and/or niobotantalate occurrences, all of these in the pegmatites of the Variscan basement of the Alpine Getic Nappe in the South Carpathians.

In the case of Li and Be concentrations, structural constraints such as the post-Variscan basement remobilization due to extensional differential uplift triggering upward concentration of volatiles, or occurrence in particular Li-rich formations (staurolite-bearing micaschists) could provide clues for this exceptional behaviour and guidelines for further investigation.

Metamorphic mobilization and segregation without or with rare/subordinate pegmatite formation appears also likely to concentrate disseminated critical and strategic raw materials. Areal distribution and constant structural position of K-feldspar migmatites locally enriched in Zr, Nb-Ta, Y, REE, Sn and U-Th (*e.g.*, Hîrtopanu and Fairhurst, 2014) could indicate a K-metasomatism localized along a Variscan metamorphic thrust, emplacing juvenile metapelites over reworked pre-Variscan felsic rocks in the Lotru Metamorphic Suite (basement of the Alpine Getic Nappe, South Carpathians).

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