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ABSTRACTS

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**Irena Peytcheva, Anna Lazarova, Georgi Granchovski,
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New mineralogical data from the Jolotca deposit, Romania: mineral hosts for Nb, Y, intermediate and heavy REE

Gavril Săbău, Elena Negulescu

Geological Institute of Romania, 1 Caransebeș St., 012271 Bucharest 32, Romania; e-mails: g_sabau@yahoo.co.uk; elinegu@yahoo.com

The Jolotca metallogenetic sector underwent a manifold history due to shifting approaches regarding its status as a mineral occurrence, prospect, deposit or even mining site for various commodities. The vein mineralization is related to the Ditrău Alkaline Massif, recording a short Carnian to Norian magmatic to postmagmatic evolution (Klötzli *et al.*, 2022, and references therein), as supported also by U-Th-Pb_T monazite ages.

Ianovici (1938) gives the first account of pyrite and subordinate base metal sulfides mineralization in carbonate gangue, associated with zircon/*malacon/beccarite* (in fact probably monazite). Pantó (1950) reports contemporaneous mining (in 1942) for pyrite and deems the Pb-Zn mineralization not worth recovering. Yet, prospecting and exploration work extended for a few decades and abruptly terminated in 1999 resulted in reserve estimations for Mo-Zn-Pb-REE (Constantinescu and Anastasiu, 2017, and references therein).

The most abundant phases of interest are niobian rutile for Ti and Nb (Săbău, 2009; Hirtopanu *et al.*, 2015), formed early in the crystallization sequence, and late-stage monazite + REE-fluorocarbonates for light REE.

A mineralizing stage occurring during/after rutile corrosion and overgrowth by massive to idiomorphic ilmenite, consist of streaks and sprays of micron-sized, lath- to needle-shaped oxide grains, associated with chlorite and partly included in ilmenite. The grains mostly represent intergrowths (partly epitaxial) of several phases. The minerals present are fergusonite-(Y) enriched in Gd+Dy or Nd+Sm+Eu, Ti-bearing fersmite and Fe-Mn-columbite, vigezzite, nioboaeschnynite-(Y), Ce- and Nd-dominant aeschnynite/niobo-aeschnynite, and a metamict vigezzite-like phase containing high Th and silicon. The latter phase matches the mineral UM2001-09-O:CaNbREESiTiY described by Aurisicchio *et al.* (2001), appearing in similar complex assemblages and intergrowths, though Ta and U-enriched unlike in the Jolotca occurrence.

At Jolotca most of REE, represented by Ce and La, and bound in phosphate, carbonate and silicate phases of the mineralization. The here reported mineral assemblage concentrates in oxides REE heavier than Ce associated with late-stage Nb not hosted in rutile.

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