Goldschmidt 2021 Abstract
https://doi.org/10.7185/gold2021.6312

Minerals-, glassy-, globular opaque and fluid inclusions from metamorphic recrystallized “MVT” sulfide mineralization from Blazna-Guşet prospect, Rodna Mountains, Romania.

IOAN PINTEA[1], **SORIN SILVIU UDUBASA**[2], EDUARD GHINESCU[1], MARIA LIDIA NUTU[3], ELENA LUISA IATAN[3] AND ION BERBELEAC[3]

[1]Geological Institute of Romania
[2]University of Bucharest, Department of Mineralogy
[3]Institute of Geodynamics of Romanian Academy
Presenting Author: sorin.udubasa@gmail.com

The “MVT”-type of Upper Precambrian metamorphosed Pb-Zn mineralization from Blazna-Guşet prospect in the Eastern Carpathians contains various minerals, transparent and opaque phases together with fluid inclusions. Cymrite ($BaAl_2Si_2O_8 \cdot OH$), chalcopyrite, pyrrhotite, Fe-poor sphalerite, galena, and intercalations of silicate, graphite, and quartz are present in the Carbonate Formation [1]. Prograde are microminerals inclusions (possible halite, anhydrite, barite, calcite, etc.) and silicate glassy-like inclusions, sulfide grains, and/or globular trails of medium-grade amphibolitic facies. Retrograde are the trails of aqueous-carbonic fluid inclusions and solid stepdaughter aggregates.

Recrystallization of sphalerite by partial melting concentrates Germanium from 650 ppm up to 70 wt.% in Ge-minerals [2]. Germanite from the Blazna-Guşet ore deposit shows variable morphological aspects, reminding zircon and/or apatite microcrysts, in short prismatic, tubular, and barrel forms of brownish color in yellowish sphalerite [3]. Its presence vs. synthetic Gadolinium gallium garnet (GGG) from RRUFF [$Gd_3Ga_2(GaO_4)_3$] was preliminarily indicated by Raman spectroscopy (Fig. 1). Genetically, it is emphasized that germanite was formed “in-situ” by removing Ge and/or (Gd, Ga) from sphalerite lattice during metamorphic recrystallization.

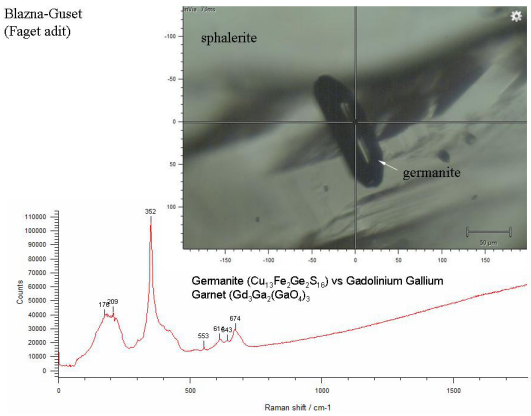

Fig.1. Raman spectra of germanite ($Cu_{13}Fe_2Ge_2S_{16}$) vs. synthetic Gadolinium gallium garnet (GGG) from RRUFF [$Gd_3Ga_2(GaO_4)_3$] in recrystallized sphalerite from the Blazna-Guşet ore deposit.

References:

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