



## **New geochemical and geochronological data constraining metamorphism of the Tavşanlı Zone, NW Turkey**

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The Tavşanlı Zone is a high-grade metamorphic belt, representing subduction and exhumation between the Sakarya Zone and the Afyon-Bolkardağ Zone in Western Anatolia. The Sivrihisar area of the Tavşanlı Zone comprises Paleozoic metamorphic rocks including sedimentary and magmatic originated; Eocene granites; Neogene sedimentary rocks and alluvium. Metasedimentary rocks are composed of marble, schist and quartzite. Metamagmatics are gneiss and metabazites.

This study presents new and precise, whole-rock chemistry; phengite- $^{40}\text{Ar}/^{39}\text{Ar}$  age data from this area to constrain the high pressure (HP)-low temperature (LT) metamorphism of the Tavşanlı Zone.  $^{40}\text{Ar}/^{39}\text{Ar}$  dating of two phengite samples from schists gave plateau ages between  $82,5 \pm 0,14$  and  $83,29 \pm 0,22$  Ma, which are interpreted as the metamorphic age of these schists, and as the age of metamorphism affected the Tavşanlı Zone. Also these ages constrain the timing of the closure of the Neo-Tethys.