



## **New Isotopic age data for understanding the resetting radioactive clock of the Kazdağı Massif (Western Anatolia, Turkey)**

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The Kazdağı Massif comprises one of the well-known high-grade metamorphic complexes in the western Anatolia (Turkey). This high-grade succession is subdivided into two units, which is separated by regionally defined unconformity. The lower unit defines a typical oceanic crust package including ultramafic rocks and cumulate gabbros (Tozlu metaophiolite unit). The upper unit comprises of a thick platform succession of detritals and carbonates with mafic volcanic intercalations. Carbonates of this succession are now found as white coarse-crystalline marbles, detritals are schists, metagranites and migmatites and mafic volcanic intercalations are as amphibolites (Sarıkız unit). The whole sequence is cut by shallow-seated Late Oligocene-Early Miocene non-metamorphic granites (Evciler, Eybek granites). New  $^{40}\text{Ar}$ - $^{39}\text{Ar}$  amphibole ages of 22-19.7 Ma state that both associations of the Tozlu metaophiolite and Sarıkız units experienced almost the same age era as the youngest granites (Evciler, Eybek granites) in the study area. In addition to that, previous U-Pb zircon age results indicate a peak metamorphism age of the Kazdağı Massif is around 30-35 Ma. Such young Ar-Ar ages from the Kazdağı Massif, which gather close to the granite intrusion crystallization ages, are likely indicators of the resetting radioactive clock of the Kazdağı Massif. This data is also in agreement of a single stage migmatization of the massif during the Alpine Orogeny.