

Mineralogical Society of Poland

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YOUNG SCIENTISTS AWARDED

The Best Master and Best PhD Thesis Awards are given annually by the Mineralogical Society of Poland and recognize outstanding and original contributions in the areas of mineralogy, petrology, and geochemistry. Many excellent contributions were submitted in 2021, making it virtually impossible for the jury to choose a single winner. It was not until after long discussions that the jury decided to award three prizes, two for doctoral and one for master dissertations. Congratulations to the winners! We hope it is a great start to their illustrious scientific careers.

The Best Master Thesis of 2021 was written by **Kamil Bulcewicz**. The awarded work "Record of metamorphism in metapelites of the Izera-Kowary unit in the area between Śnieżka and Okraj Pass" was carried



Kamil Bulcewicz with his favorite high-pressure sample.

out at the Institute of Geological Sciences of the University of Wrocław (Poland) under the supervision of Jacek Szczepański. In his master's thesis, Kamil used pseudo-sections and classical geothermobarometry tools to recreate the record of metamorphism in mica slate with garnet. Kamil reconstructed burial depths of metapelites at ca. 60 km, followed by nearly isothermal decompression and subsequent retrograde under greenschist facies conditions. He suggested that the switch between the two exhumation stages may have occurred at shallower depths and higher temperatures than previously proposed.

Kamil continues his work with high-pressure rocks at the University of Wrocław as a PhD

student. He is a new but already highly praised academic teacher. Kamil loves fieldwork so much that he has also decided to work at the Polish Geological Institute.

The Best Doctoral Thesis of 2021 was written by **Michał Bukała**. The awarded work "Subduction processes recorded by the Baltica outer



Michał Bukała during fieldwork in Svalbard.

margin in the Scandinavian Caledonides" was carried out at the Faculty of Geology, Geophysics and Environmental Protection, AGH University of Science and Technology in Kraków (Poland) under the supervision of Jarosław Majka. The presented work is a collection of four thematically related publications focused on metamorphic processes that took place within a subducting plate during the Caledonian Orogeny in the early Paleozoic. Regional P-T-t-d paths were reconstructed and presented in his publications, but other general geological processes were also addressed, including (1) the relationship between progressive dehydration reactions and seismic activity (Bukała et al. 2020a; https://doi.org/10.3389/feart.2020.594453),

(2) burial and exhumation of the buoyant continental crust (Bukała et al. 2020b; https://doi.org/10.3390/min10040295), and (3) the role of fluid in metamorphic reactions and (meta)stability of mineral paragenesis (Bukała et al. 2018; https://doi.org/10.1111/jmg.12306; Holmberg et al. 2019; https://doi.org/10.2478/geoca-2019-0027).

Michał's research interest has evolved from metamorphic petrology (primarily utilizing thermobarometry and U-Pb geochronology) towards (micro)structural geology, emphasizing the role of fluid–rock interactions and seismically induced deformation under high-pressure conditions. So far, the results of his process-oriented research have been applied to understanding the dynamics of Scandinavia, Svalbard, and the Greenland Caledonides. Taking the position of assistant professor at the Polish Academy of Sciences (Kraków, Poland), he has shifted his research to the younger orogenic setting of the Carpathians.

The award in the category of Best PhD thesis was also received by **Arkadiusz Krzątała** for the work "New and rare minerals from



Arkadiusz Krzątała in the Hatrurim Complex, a unique locality on the world mineral map.

paralava of the Hatrurim Basin, Israel" carried out at the Institute of Earth Sciences, at the University of Silesia in Katowice (Poland). His PhD thesis supervisor was Irina Galuskina. The main aim of Arkadiusz's research was to describe new and rare minerals from coarsegrained paralavas of the Hatrurim Complex. This is a unique complex of pyrometamorphic rocks distributed in the territory of Israel, Jordan, and the State of Palestine. The complex consists of high-temperature/ low-pressure rocks (sanidine facies) and products of their low-temperature transformations. In his doctoral thesis, Arkadiusz proposed a model of formation of bariumvanadium mineralization in enclaves. He showed that, despite many years of research, these rocks are not fully explored and still

contain unknown minerals. The most important achievement of his doctoral thesis was the discovery of a new mineral bennesherite Ba₂Fe²⁺Si₂O₇, named for the Ben Nesher Mount in Israel. This is the first barium mineral of the melilite group.