Mineralogical Society of America

web

www.minsocam.org

PRESIDENT'S LETTER

In my last President's Letter to *Elements*, I wrote about the importance of getting children enthused about the wonder of minerals at an early age. My own excitement as a child when holding a quartz crystal for the first time inspired me to study minerals as a life work. It got me thinking about what we at MSA are doing to help children (and their teachers and parents) to find this same sense of wonder. As part of our Strategic Planning process at MSA, we are examining all our activities with a view to how well they enable us to achieve our mission. In MSA's Mission Statement, there is this sentence (emphasis is mine): "It [mission] encourages fundamental research about natural materials; **supports the teaching of mineralogical concepts and procedures; and attempts to raise the scientific literacy of society** with respect to issues involving mineralogy in the widest sense."

Education has been part of MSA's mission from the very beginning, and MSA does have a number of educational programs for all ages. These include:

- Mineralogy4Kids website (https://min4kids.org);
- Minerals Day website (www.mineralsday.org);
- Online Teaching Resources (https://msaweb.org/teachingminpet/);
- Distinguished Lecturer Program (https://msaweb.org/msa-distinguished-lecturer-program/);
- Short Courses and Workshops (https://msaweb.org/shortcourse/)
- MSA Ambassadors; and our
- YouTube Channel (https://www.youtube.com/@mineralogicalsocietyofamer6947).

What we don't have, however, is an Education Committee to provide guidance and oversight for all our educational efforts. As a first step toward establishing a standing committee (which will have to be approved by vote of the MSA Council), I would like to launch an MSA Education Task Force. The charge of this Task Force will be to examine MSA's existing educational programs, establish metrics for effectiveness, identify gaps in MSA's offerings, suggest ideas for filling those gaps, and draft a proposal to Council to set up an Education Committee.

If you are an MSA Member and would like to participate in this Task Force, please email Ann Benbow at abenbow@minsocam.org expressing your interest and your reasons for participating. With many thanks for your help!

Jeffrey Post, 2023 MSA President

NOTES FROM CHANTILLY

- MSA 2023 membership renewals continue. Please renew today using the link on the MSA home page (www.msaweb.org) if you have not already done so.
- Members and Fellows who are in the senior, honorary, and life categories are sent renewal notices. They need not pay dues, but are sent notices as the best way to prompt an update of membership information, particularly mail and e-mail addresses.

EVENTS

2023 Goldschmidt Conference: The conference, which is organized by the Geochemical Society and the European Association of Geochemistry, will be from July 9–14 in Lyon, France. For more information, visit https://2023.goldschmidt.info/.

Geological Society of America Annual Meeting: This conference will take place in Pittsburgh, Pennsylvania, from October 15 to 18, 2023. MSA will have its Awards Luncheon there, as well as Awards Lectures and sponsored presentations. For more information, visit https://www.gsa2023.org/.

42nd FM-TGMS-MSA Tucson Mineral Symposium: The symposium is held in conjunction with the Tucson Gem and Mineral Show®, and will take place on Saturday, February 10, 2024. The symposium is co-sponsored by the Tucson Gem and Mineral Society, the Friends of Mineralogy, and the Mineralogical Society of America. The symposium theme is: "Pegmatites: Crystals Big & Beautiful." An audience of avocational and professional mineralogists and geologists is expected. Further details and the call for papers are on the Friends of Mineralogy website.

Minerals Day 2023. This annual event, which began in 2020 as part of Earth Science Week (American Geosciences Institute) is on Monday, October 9, 2023. The theme this year is **Minerals: The Big Ideas**. MSA is inviting anyone interested in minerals to send in the five to ten most important concepts about minerals that EVERYONE needs to know. MSA will collate and rank the submissions and publish them on Minerals Day. The Big Ideas will be used as the basis for curricular materials developed by MSA and will be made freely available on the MSA (www.msaweb.org) and Minerals Day (www.mineralsday.org) websites. The teaching materials will be accompanied by virtual professional development sessions for K–12 teachers and interested collectors. To submit your **Big Ideas**, please email them, and your rationales for your ideas, to Ann Benbow at abenbow@minsocam.org.

CONTRIBUTIONS

Many members contribute to MSA by including a contribution with their annual dues and/or by responding to special appeals. The *MSA Forward* Annual Fund supports MSA's communications infrastructure. Depending on the wishes of the member, contributions are deposited with the principal of the MSA Endowment, the J. Alexander Speer Outreach Fund, MSA Mineralogy/Petrology Fund, J. B. Thompson Fund, Edward H. Kraus Crystallographic Research Fund, F. Donald Bloss Fund, or the Buseck Lecture Fund. The income of these Funds is used to support MSA's research grants in crystallography, mineralogy, and petrology; the *MSA* Undergraduate Prizes; the Mineralogical Society of America Award; the Distinguished Public Service Award, the

Mineralogical Society of Poland

www.ptmin.pl

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 area of mineralogy, petrology, and geochemistry.

This year, just like in 2021, the jury decided to award three prizes: one for doctoral and two for master dissertations. Congratulations to the winners! It is the first, but certainly not the last award in their scientific careers.

Piotr Król during the fieldwork in Greenland.

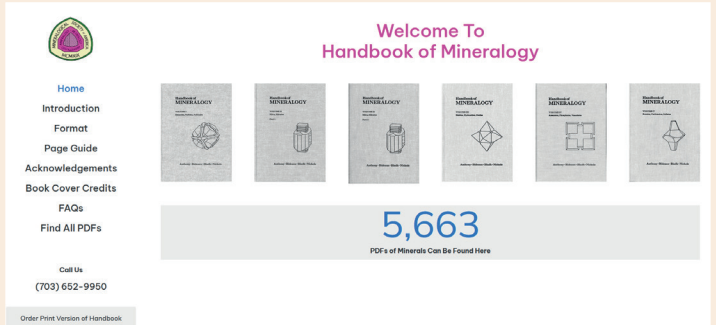
The Best Doctoral Thesis of 2023 "Evolution of continental crust in the Archean Napier Complex, East Antarctica" was written by **Piotr Król** under the supervision of Prof. Monika A. Kusiak (Institute of Geophysics, Polish Academy of Sciences, IG PAS). It addresses the geological history of the Napier Complex in Enderby Land in East Antarctica. The complex contains ultra-high (>900 °C) temperature granulites and crusts that extend in age back to almost 4 billion years ago. The dissertation involved U-Pb isotope analysis of mineral zircon, along with chemical analysis of the whole rock geochemistry from samples collected by Australian expeditioners in the 1960s and 70s. These have greatly increased the known extent of Eoarchean (>3.6 billion years) crust (Krol et al. 2020; https://doi.org/10.1016/j.gr.2019.12.014). The project also revealed younger crustal domains in other areas, including the Scott and Raggatt Mountains, showing that the Complex was built 2.5 Ga from several crustal components before and after the 2.8-Ga event (Krol et al. 2022; https://doi.org/10.1016/j.precamres.2021.106530). Piotr continues his work with Archean rocks from granulitic terranes in Antarctica, India, and Greenland at the IG PAS in Warsaw, Poland.

Cont'd from page 190

Dana Medal, the Roebling Medal; the websites; and the Distinguished Lecturer program. If you have not done so previously, please consider contributing at the next opportunity.

DID YOU KNOW?

The *Handbook of Mineralogy* has been re-designed as part of the new MSA website: https://handbookofmineralogy.org/. This open access publication contains pdfs of 5,663 minerals (as of this writing) and is constantly updated. The minerals are in alphabetical order and are easily searchable. Information about each mineral includes chemical formula, crystal data, physical and optical properties, cell data, X-ray diffraction pattern, and much more. A limited number of hard copies of the five-volume handbook are available for sale by contacting the MSA Business Office at business@minsocam.org.



Dominika Wicher-Jarząb.

One of the works awarded in the category Best Master Thesis of 2022 was written by **Dominika Wicher-Jarząb** under the supervision of Adam Szuszkiewicz at the Institute of Geological Sciences, University of Wrocław. The thesis "Mineralogical characteristics of tourmaline from selected occurrences of the mylonitized rocks of the Niemcza zone" is a mineralogical study of tourmalines from mylonites, quartz-graphite schists, and metapsammites in the Niemcza shear zone, SW Poland, at the northeastern periphery of the European Variscides. Dominika analyzed the tourmalines in terms of their appearance, mode of occurrence, solid inclusion assemblages, and chemical composition. The main aim of this research was to test the potential of these minerals in reconstructing metamorphic evolution of the Niemcza zone rocks. To achieve this goal, she used scanning electron microscopy, electron microprobe, and Raman microspectroscopy. The obtained results allowed her to identify principal substitution mechanisms in the crystals and to classify them as mostly oxy-dravite and dravite, rarely magnesio-foitite, with a small amount of schorl molecules. Dominika also demonstrated the metamorphic origin of the crystals and showed that their complex internal structure reflects variations of PT conditions during crystallization that can be correlated with the polyphase evolution of the Niemcza zone.

Alongside her geological education, Dominika also successfully pursued her great passion for music and received a master's degree at the Academy of Music in Wrocław.

Agnieszka Huć

The other award in the category of Best Master Thesis was received by **Agnieszka Huć**, supervised by Marcin Stachowicz (Department of Geochemistry, Mineralogy, and Petrology, Faculty of Geology, University of Warsaw). Agnieszka's thesis is focused on structural transformations of chevkinite group minerals. The subject of her work is part of a larger project on understanding the processes of mobilization and concentration of rare earth elements (REE) in the Earth's crust. The chevkinite-group minerals (CGM) are dominantly monoclinic REE-Ti-Fe sorosilicates, with REE_2O_3 contents up to ~50 wt%. Minerals of the group are known from hundreds of terrestrial localities and have also been recorded in lunar and Martian rocks. The studied crystals of chevkinite (Ce) originated from the pegmatite of Harramosh, Pakistan, and had an average formula of $(Ce_{1.8}La_{0.81}Nd_{0.65}Ca_{0.44})_4Fe^{2+}(Fe^{2+}_{1.02}Ti_{0.77}Mn_{0.14}Mg_{0.10})_{2.0}\ Ti_{2.0}(Si_2O_7)_2$. The main aim of Agnieszka's thesis was to examine the temperature and pressure conditions of crystal formation, as well as later alteration processes. This was done as hydrothermal alteration experiments, a series of experiments in the oven at temperatures ranging from 550 to 1000 °C and during high-pressure experiments in a diamond anvil cell (DAC) apparatus at pressures up to 5 GPa. The study shows that controlling the temperature, time, air or argon environment, and quenching mode during the experiments may lead to transformations of the crystal structure in both directions (from $P2_1/a$ to $C2/m$, from $C2/m$ to $P2_1/a$) depending on the conditions.

The hydrothermal experiments promoted transformation from $C2/m$ toward $P2_1/a$ symmetry, while applying high pressure in the DAC reversed the process.