



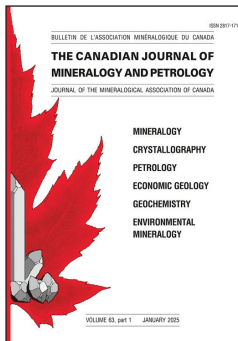
# Mineralogical Association of Canada

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## NEWS FROM THE CANADIAN JOURNAL OF MINERALOGY AND PETROLOGY (CJMP)

### Highlights

The November *CJMP*, volume 62 (6), available wherever fine literature is sold (GeoscienceWorld, specifically), features a diverse assortment of contributions. Like Forrest Gump's box 'o chocolates, you never know what you'll get. For openers, we feature an answer to the age-old (there's a joke in there) question of if you want a date for a zircon-poor magma, will apatites do? If the magmas are alkaline, even in spite of a hydrothermal overprint, the answer can be 'yes', according to researchers from Switzerland and Georgia. Next up is an examination of mineral layering mechanisms using magnetic susceptibility fabrics from igneous rocks in Greenland, from researchers in Ottawa, Texas, Germany, Scotland, and England.



Some familiar home-cooked flavors for the main course are provided by new mineral announcements, including ehrlingite ( $\text{Bi}_8\text{Te}_3$ ) from an abandoned gold mine in British Columbia, and two new minerals from the ever-productive Pb-Zn-Cu-bearing Redmond Mine in North Carolina from Anthony Kampf and colleagues. These (minerals) include a lead thiosulfate, dinilawite, sigilite, and Pb-Zn sulfate. Based on the titles, these are the eighth and ninth new minerals to derive from these Redmond Mine ores, to date. Louis Cabri provides a memorial for Donald Clayton Harris, an important contributor to mineral analysis and mineral codification and the Canadian geosciences through the second half of the twentieth century.

For dessert, we feature abstracts from the 10<sup>th</sup> international Symposium of Granitic Pegmatites, which took place in Brandon, Manitoba in May 2024, as a constituent of the annual national GAC-MAC-PEG meeting, as it then became known. The symposium was also dedicated to Professor Robert (Bob) Martin, whose contributions to the pegmatite and pegmatite minerals community, and to this journal (in its former guise as *The Canadian Mineralogist*) are enormous. This includes over 40 pages of extended abstracts from the pegmatite symposium, which comprised over 40 sessions on session topics including pegmatite melt origins, geochronology, exploration methods, gems, and experimental petrology, among other things.

Our recently most-read publications, according to GeoScienceWorld, include the following:

**Recognizing Tourmaline in Mineralized Porphyry Cu Systems: Textures and Major-Element Chemistry** by Christopher Beckett-Brown, Andrew McDonald, and Beth McClenaghan. This paper has shot to the top of the charts, outpacing its partner paper and former chart-topper by the same authors, **Trace Element Characteristics of Tourmaline in Porphyry Cu Systems: Development and Application To Discrimination**, which is now running as one of the most cited recent papers in *CJMP*. These both appear in volume 61 (1) from 2023 *CJMP*.

In close second place are the 10<sup>th</sup> International Symposium on Granitic Pegmatites abstract volume described above, and **Screening Apatite for Potential Use as a U-Pb Geochronometer in Zircon-Poor Magmatic Rocks: Age of Late-Stage Alkaline Magmatism in the Bolnisi District, Georgia** by Şafak Sönmez, André Paul, Nino Popkhadze, Alexey Ulianov, and Robert Moritz (see also above for more on this paper).

The currently most recently cited *CJMP* paper, according to GeoscienceWorld statistics, is **On the Attributes of Mineral Paragenetic Modes** by Robert Hazen, Shaunna Morrison, Anirudh Prabhu, Jason Williams, Michael Wong, Sergey Krivovichev, and Marko Bermanec, in volume 61 (4) from 2023.

## MAC TRAVEL & RESEARCH GRANT WINNERS 2023

We congratulate Tiera Naber, Aneesa Ijaz Rabbani, Taylor Ducharme, Jonathan Spence, Kristine Nymoen, Bruna Coldebella, Marie Kieffer, and Decla McParland, each of whom received a 2023 Mineralogical Association of Canada Travel & Research Grant.

### Tiera Naber



Tiera Naber is a recent master of science graduate from the University of British Columbia (UBC), Vancouver, Canada. Tiera investigated the source and timing of rare earth element mineralization associated with fenite in southeastern Yukon under the supervision of Professor Lee A. Groat. At GAC-MAC-SAG 2023, Tiera orally presented her graduate research, along with several of her colleagues at UBC. During the conference, she connected with several experts in her field of research, such as Professor Anthony E. Williams-Jones. As an early career geoscientist, Tiera found the Plenary Lectures fascinating and inspiring. Tiera also had the opportunity to attend several Technical Sessions outside of her field of research and thoroughly enjoyed learning about innovative research in the Lithium in Pegmatites session. Tiera and her colleagues spent their evenings attending events at Science North and Dynamic Earth venues. They were impressed by the interactive nature of the exhibits and the passion of the staff at Science North. At Dynamic Earth, they took an immersive underground mine tour that was both educational and entertaining, providing them with a unique and memorable experience.

### Aneesa Ijaz Rabbani



Aneesa Ijaz Rabbani is a third-year PhD student at McMaster University, Canada, supervised by Dr. Janok Bhattacharya. Her interests lie in the intersection of sedimentology, sequence stratigraphy, hydrogeology, fluvial geomorphology, and geophysics. Her project is a neat assimilation of the aforementioned disciplines. The MAC travel grant allowed her to attend EGU'23, Vienna, Austria where she presented on the topic: "Evaluating Backwater vs Upstream Tectonic Controls on the Gravel-Sand Transition, Cretaceous Dunvegan Formation, Western Canada Sedimentary Basin." Aneesa was graciously invited as the keynote speaker for the following: Session GM4.3: Source-to-Sink: A Multi-Proxy Approach to Disentangle Forcings throughout the Sedimentary Record.

### Taylor Ducharme



Taylor Ducharme is completing a PhD at the University of Ottawa (Canada), studying deformation and metamorphism of exhumed high-pressure metamorphic rocks in Greece. Taylor used his travel grant to attend the Goldschmidt 2023 conference in Lyon, France, where he gave an oral presentation on his research concerning a petrologically unusual set of glaucophane-bearing hydrothermal veins. With the support of the travel grant, Taylor was also able to attend the pre-conference

ExTerra workshop, which served as a networking opportunity for both established experts and early-career scientists to discuss future directions for the study of structural and petrological processes operating in subduction zones using rocks exhumed from these settings. Between the workshop and his presentation, Taylor made valuable connections and engaged in insightful discussions that have helped him grow as a researcher as he looks ahead to his post-doctoral research.

### Jonathan Spence



Jonathan Spence completed his HBSc thesis in May of 2022 at McMaster University (Hamilton, Canada). He is currently a PhD student in the Earth and Atmospheric Sciences department at the University of Alberta (Canada) under the supervision of Dr. Sasha Wilson. He was awarded the MAC travel grant to attend the Goldschmidt 2023 geochemistry conference in Lyon, France, where he presented his research on the geochemical and

mineralogical components of enhanced rock weathering as a carbon capture, utilization, and storage technology. This grant was instrumental in allowing Jonathan to attend the conference, at which he was given insightful feedback and suggestions for his work, as well as making great contacts with other researchers and those working in the carbon capture industry.

### Kristine Nymoen



Kristine Nymoen is a PhD candidate at Harquail School of Earth Sciences, Laurentian University (Canada), working on the Metal Earth project. Previously she has completed a BSc and MSc in bedrock- and resource geology at the Norwegian University of Technology and Science (Norway). Her PhD research is focused on integrating whole-rock geochemistry with zircon Hf-O isotopes and trace elements of Archean tonalite-trondhjemite-granodiorite (TTGs) and felsic volcanic rocks in the southeastern Superior craton. The study investigates the spatial, temporal, and depth variability of their sources to better understand the evolution of crustal architecture and its role in level of mineral endowment. Aided by the MAC travel grant, she presented her research at the 2023 6<sup>th</sup> International Archean Symposium hosted in Perth, Australia with an oral presentation entitled “The evolving crustal architecture of the Wawa subprovince,” in which she presented geochemical and isotopic variability between two sources in the Wawa subprovince. By attending talks and having discussions with experts in her field, working in other parts of the world, she has gained important insights into the newest findings in Archean research. She now has an extended professional network and invaluable scientific feedback that she will use to excel in her career.

### Bruna Coldebella



Bruna Coldebella completed her MSc in mineralogy and petrology in 2019 at the University of São Paulo (Brazil). She is currently a PhD candidate in Earth Sciences at Université Laval in Quebec (Canada) under the supervision of Professor Crystal LaFlamme. Her PhD research combines trace elements and isotopic chemistry of orogenic gold deposits to trace metals through the crust from source to sink. Brunna received the

MAC travel grant to attend the 2023 GAC-MAC meeting in Sudbury (Canada), where she presented a talk on the pyrite-to-pyrrhotite devolatilization reaction and its relevance to orogenic gold fluid generation.

The presentation was based on recently acquired in situ sulfide chemistry data and multiple sulfur isotopes from the Pontiac metasedimentary subprovince (Superior Craton, Canada) and its possible contributions to the gold endowment in the proximal Abitibi greenstone belt. The conference also covered a diverse program that contributed to her formation as a PhD candidate.

### Marie Kieffer



Marie Kieffer is finishing her PhD at the University of Quebec in Chicoutimi (Canada) under the supervision of Prof. Sarah Dare (Canada Research Chair in Geochemistry Applied to Ore Deposits). She is working on developing the use of trace elements in apatite as a petrogenetic indicator and as an indicator mineral for mineral exploration and sedimentary studies. The MAC travel grant allowed Marie to attend the Wager and Brown

workshop and the 14<sup>th</sup> International Platinum Symposium, both held in Cardiff (Wales, United Kingdom) in July 2023. At each of the conferences, she presented a poster entitled “Trace elements in apatite record differentiation processes in Sept-Iles mafic layered intrusion: implications for mineral exploration of Fe-Ti-P mineralisation” and gave a talk entitled “Apatite chemistry as a petrogenetic indicator for mafic layered intrusions,” for which she received a prize. By presenting her research at international conferences, she received valuable feedback from expert researchers on mafic layered intrusions. Attending the Wager and Brown fieldwork and talks and poster sessions at both conferences also allowed her to network and to be learn more about several concepts that will be of use for her PhD and in further research.

### Decla McParland



Decla McParland is a PhD student in the Department of Earth and Environmental Sciences at the University of Waterloo (Waterloo, Canada) under the supervision of Dr. Jenine McCutcheon. Her research studies biomineralization, with a focus on microbially influenced Mg-carbonate mineral formation by sulfate-reducing bacteria in microbial mat systems. Decla was awarded the MAC travel grant to conduct fieldwork studying

the hydromagnesite-magnesite playas near Atlin, BC. These playas provide a unique environment to study near surface Mg-carbonate minerals and the biogeochemical processes behind microbialite formation, as the wetland in these playas support a well-structured benthic microbial community. This weeklong field campaign involved diurnal sampling along a transect of the wetland to characterize changes in microbial community composition, water chemistry, and mineralization over depth and time. Completion of microbial characterization for this site furthers understanding of microbialite formation, CO<sub>2</sub> sequestration, and the biogeochemistry of alkaline wetlands. Samples collected from this field work complement other experiments in Decla's thesis, such as the creation of a synthetic alkaline wetland to study Mg-carbonate mineral formation in a laboratory setting.

### GAC-MAC-IAH-CNC 2025 OTTAWA

Register for the GAC-MAC-IAH-CNC 2025 conference here: <https://event.fourwaves.com/ottawa2025/registration>.