



# Mineralogical Association of Canada

[www.mineralogicalassociation.ca](http://www.mineralogicalassociation.ca)

## THE CANADIAN MINERALOGIST NEWS

### Highlights

Our September issue includes a new feature for *CJMP*, short communications, this time a practical contribution on “Picture-Perfect Petrography: Affordable Thin-Section Scanning for Geoscientists in the Digital Era” from Derek Leung and Andy McDonald. Additional short comms. are in the pipeline. Our research content commences with a cautionary tale on the use of pyrite composition as a prospecting tool for gold mineralization with an example from northern Canada. This encouragingly international issue also features characterization studies of pegmatite-hosted carlosbarbosaite, a critical metal-bearing (U and Nb) pegmatite mineral from Argentina, and stibiotantalite (Sb and Ta) from China. A pentavalent U-bearing mineral, shinkolobweite, has been described from the Democratic Republic of Congo, and a new platinum alloy mineral, sidorovite ( $\text{PtFe}_3$ ), reported from Russian placer deposits. In addition, Louis Cabri and Andy McDonald strike borishanskiite and platarsite, two platinum group metal alloys, off the list of accredited mineral species; the former reverts to polarite ( $\text{PdPb}$ ), and the latter to S-rich sperrylite. So edit your databases, manuscripts, and holiday greeting cards accordingly.

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

**Shinkolobweite, from the Shinkolobwe Mine, Democratic Republic of Congo: A New Mineral Containing Uranium in the Rare Pentavalent Oxidation State**, by Travis Olds, Aaron Lussier, Václav Petříček, Jakub Plášil, Anthony Kampf, Allen Oliver, Peter Burns, Mateusz Dembowski, and Ian Steele (Vol. 61, 2023), mentioned above and already burning up the airwaves.

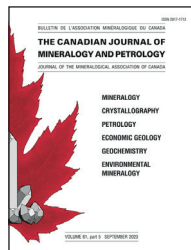
In second place is our July issue’s leader, **Trace Element Characteristics of Tourmaline in Porphyry Cu Systems: Development and Application to Discrimination** by Christopher Beckett-Brown, Andrew McDonald, and Beth McClenaghan, also from volume 61, from earlier this year.

Running close behind is the new short communication for the practically-minded petrologist, **Picture-Perfect Petrography: Affordable Thin-Section Scanning for Geoscientists in the Digital Era**, by Derek Leung and Andrew McDonald.

We can’t easily report on our most-cited paper, and this is also relevant for those for whom impact factors are a critical parameter in your lives, since the change of name from *The Canadian Mineralogist* (up until December 2022) to *The Canadian Journal of Mineralogy and Petrology* (from January 2023) means that some of our journal statistics are “compromised” during the brief transition period between names. So do not panic; all is well (numbers aside).

### Our Associate Editors

As a means of both gratefully acknowledging and promoting the efforts of researchers in the mineralogical and geoscience community who donate their time to the necessary task of facilitating effective peer review, we continue to use this space to feature our Associate Editors (AE’s). In this issue, we feature two more of our long-standing contributors from our expertise base.



### MATTHEW STEELE-MACINNIS



Dr Steele-MacInnis works from the Department of Earth and Atmospheric Sciences at the University of Alberta (Canada). Following his BSc (Hons) at Memorial University of Newfoundland (Canada) and his PhD from Virginia Tech. (USA), he conducted a postdoc at ETH Zurich (Switzerland) and was an Assistant Prof. at the University of Arizona (USA), before joining U of A in 2017. His research interests include the properties and roles of fluids in the Earth, especially those that form ore deposits. He has published more than 90 papers and his works have been cited over 3200 times to date. His research group website can be found at <https://sites.ualberta.ca/~steelema/index.html>. He has served as an associate editor of *CJMP* since 2016.

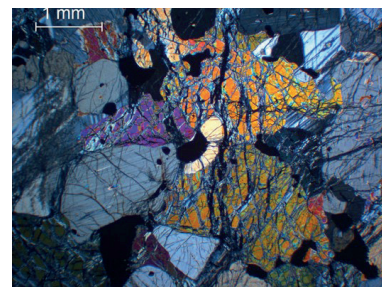
### YUANMING PAN



Dr Pan is employed by the University of Saskatchewan (Canada) Dept. of Geological Sciences. His research encompasses almost all aspects of diverse minerals from chemical compositions to crystal structures, defects, physical properties, formation mechanisms, and environmental and technological applications. His work appears in a broad selection of journals from Earth Sciences, including *The Canadian Mineralogist* to *Chemistry, Physics, and Material Sciences*, and they have been cited over 10,000 times to date. Much of his recent work involves the study of compositional and crystallographic vagaries of quartz, but also includes environmental, geochemical, and mineralogical studies of a variety of minerals and elements, including arsenic, cadmium and thorium, among others. His research profile can be found at <https://artsandscience.usask.ca/profile/YPan#Publications>. He has been serving as an associate editor for *CJMP* since at least 2012, and he advises this editor that his very first paper was published in *The Canadian Mineralogist*.

### FEATURED MINERAL/TEXTURE

The accompanying image illustrates the paragenetic complexity demonstrated in the Critical Zone of the Bushveld Complex, South Africa. In a sample from the new Ivanplats exploration, we see an anhedral olivine (orange and purple birefringence) intergrown with chrome spinel (chromite), in the rock type known locally as feldspathic harzburgite. This has been interpreted as post-cumulus growth of olivine which has become stabilised in a magmatic cumulate by increased volatile content, in this case produced by the proximal thermal dehydration of dolomitic xenoliths derived from the floor rocks, tens of metres below. A band of optically continuous peritectic orthopyroxene at the centre of the image separates olivine from spinel.



A feldspathic harzburgite from the northern limb of the Bushveld Complex, South Africa, showing coarse-grained amoeboid olivine, intimately intergrown with surrounding cumulus-textured primocryst enstatite, showing fine lamellar exsolution of calcic pyroxene, and interstitial plagioclase feldspar. The opaque grains intergrown with the olivine or as subhedra adjacent to it are chromites. PHOTO COURTESY OF SIYASANGA DYAN.

## Call for papers – Thematic Issue in honour of Jim Franklin

Dear Friends, students, and colleagues of Jim Franklin:

It has been a while since Jim retired as Chief Geoscientist at the Geological Survey of Canada and he continues as a consultant and principal for several companies. Jim influenced so very many, near and wide, with his ideas on the formation of massive sulfide and many other ore deposit types; his dedication to the earth sciences covers the gamut of mentoring, researching, managing and outreach. To recognize the impact he has had and continues to have on our science, a special issue of *The Canadian Journal of Mineralogy and Petrology (CJMP)*, formerly *The Canadian Mineralogist*, is being developed in his honour. We personally invite you to be part of this initiative and to consider submitting a paper to this very special issue.

Jim has always had a passion for ore deposits research, and it is our intention to formulate a special issue around this theme. He also delved into many aspects of ore deposits, ranging from their geochemistry, mineralogy, geological setting, isotopic signatures, etc., so a contribution that falls into any of one these related areas would be welcomed. Our goal is to showcase research that highlights Jim's long-term contributions.

The plan right now is to have contributions submitted by **March 2024**, followed by reviews being conducted shortly thereafter. This would provide ample time to assemble those contributions accepted for publication into a special issue, which would be published later in 2024. *The Canadian Journal of Mineralogy and Petrology* is entirely digital, and thus there will be no strict guidelines as to how many papers may be included in an issue. Another goal that we are working on is to be able to provide partial or complete open access for the articles published in this issue. Having this special issue formulated in an open access basis, available to the entire world, would be an incredible way to honour Jim.

If you are interested in providing a submission, please send an email to one of the guest editors, Dan Marshall: marshall@sfu.ca, Steve Piercey: spiercey@mun.ca, or Lyn Anglin: anglin.cd@gmail.com an idea of what your paper will involve. If you are unable to contribute, you may be willing to serve as a reviewer for the contributions received and we would equally welcome hearing from you.

We thank for your consideration, and we look forward to a positive response, with sincere regards,

**Dan, Steve, Lyn & the editorial and CJMP team**

## MAC TRAVEL AND RESEARCH GRANT AWARDS IN 2022

The Mineralogical Association of Canada (MAC) awarded eighteen Student Travel and Research Grants in 2022 that totaled \$15,000. Report excerpts from three of the recipients follow.



**Dana Šilerová** is an MSc student at Simon Fraser University (Canada) under the supervision of Dr. Brendan Dyck. Her research focuses on the structural and metamorphic evolution of the Great Slave Lake shear zone, a Paleoproterozoic continental transform boundary in northwestern Canada. She uses in situ U-Pb dating of accessory minerals via laser ablation-inductively coupled plasma-mass spectrometry in conjunction with field mapping and petrography to generate new information about the timing and duration of ductile shear along the shear zone. The MAC Travel Grant allowed her to attend the 2022 GAC-MAC-IAH-CNC-CSPG Joint Annual Meeting in Halifax, where she gave a talk about her MSc research in the highly relevant petrochronology session titled "It's about time". The conference

provided her with a fantastic opportunity to meet other researchers in her field and to have many valuable discussions with them, both about her work and theirs.



**Dany Savard** is a PhD candidate at the Université du Québec à Chicoutimi (UQAC), Canada, under the supervision of Dr. Paul Bédard and Dre. Sarah Dare. He received the MAC Travel Grant to present his work on a new mapping protocol using a rapid response cell for laser ablation coupled to a time-of-flight mass spectrometer (LA-FF-ICP-TOF-MS) for the simultaneous quantification of multiple minerals at the 11<sup>th</sup>

Geoanalysis 2022 conference in Freiberg (Germany). Presenting and assisting at such specialized international conferences is essential to learn from and discuss with other researchers to build a borderless network and follow the latest development in microanalytical chemistry. Dany's research is directed toward quantitative 3D-analysis at micrometer scale by LA-ICP-MS of major and trace elements in magmatic melt inclusions and their host minerals. With an emphasis on iron-oxide apatite (IOA) deposit, the 3D-mapping protocol would allow a better and wider characterization and understanding of trapped melt in various geological environment.



**Colton Vessey** is a 4<sup>th</sup> year PhD candidate at the University of Alberta (Canada), under the supervision of Drs. Sasha Wilson, Anna Harrison, and Maija Raudsepp. His research examines how environmental conditions (temperature, redox, aqueous speciation) impact carbon mineralization — storage of CO<sub>2</sub> as benign carbonate minerals — processes relevant to CO<sub>2</sub> sequestration in natural and mining environments. Carbon mineralization of (ultra)mafic mining wastes can both offset emissions and reduce mobility of potentially toxic contaminants; however, the impact of redox-sensitive metals (e.g., Fe) and anionic species on carbon storage rates and efficiencies is poorly constrained. The MAC Travel Grant assisted Colton in travelling to Centre National de la Recherche Scientifique (Toulouse, France) for a six-week research trip to conduct in-situ Raman spectroscopy experiments that will contribute to his PhD thesis. Initial results from this work show dissolved silica may both inhibit or enhance carbon mineralization depending on the environmental conditions.

## BRANDON GAC-MAC-PEG 2024 JOINT ANNUAL MEETING

May 19–22, 2024

Brandon University, in  
Brandon, Manitoba, Canada



The 2024 Joint Annual Meeting of the **Geological Association of Canada (GAC)** and the **Mineralogical Association of Canada (MAC)** will be held on **May 19–22, 2024**, at Brandon University, Manitoba, Canada. This meeting will include all the expected GAC and MAC programming, as well as the **10<sup>th</sup> International Symposium on Granitic Pegmatites** with field trips and special sessions.

The preliminary program is now available, and abstract submission is open. Early submissions (before January 20, 2024) will receive a substantial fee reduction. Abstract submission will close on February 15, 2024. Registration will open on February 1, 2024: lower registration fees will be applied to those who register before April 7, 2024.

Visit <https://event.fourwaves.com/gacmac2024/pages> to view the program and submit your abstracts.