



Mineralogical Association of Canada

www.mineralogicalassociation.ca

THE CANADIAN MINERALOGIST NEWS

Highlights

In the July issue of *TCM*, we feature the characterization of three new minerals: bortolanite, $\text{Ca}_2(\text{Ca}_{1.5}\text{Zr}_{0.5})\text{Na}(\text{NaCa})\text{Ti}(\text{Si}_2\text{O}_7)_2(\text{FO})\text{F}_2$, from the Bortolan Quarry, Poços de Caldas Massif, Minas Gerais, Brazil; hâleniusite-(Ce), CeOF , the Ce analogue of hâleniusite-(La) from Água de Pau Volcano, São Miguel Island, Azores District, Portugal; and thorasphite, $\text{Th}_2\text{H}(\text{AsO}_4)_2(\text{PO}_4) \cdot 6\text{H}_2\text{O}$, from Elsmore, New South Wales, Australia. In addition, we feature Argentinian tourmalines of the Tusaquillas composite granitic batholith and the magnetic petrology (not a typo, this is a textural analysis based on magnetic susceptibility) of Brazilian granitoids, as well as how sodium and water complement one another crystallographically in beryls.

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

PGE distribution in Merensky wide-reef facies of the Bushveld Complex, South Africa: Evidence for localized hydromagmatic control, by Stephen Prevec, Savvas Largatzis, William Brownscombe, and Tobias Salge (Vol. 59, 2021)

A proposed new mineralogical classification system for granitic pegmatites, by Michael Wise, Axel Müller, and William Simmons (Vol. 60, 2022)

Zeolite Minerals from Wat Ocheng, Ta Ang, Ratanakiri Province, Cambodia – Occurrence, Composition, and Paragenesis by Paula C. Piilonen, Glenn Poirier, William Lechner, Ralph Rowe, and R. Peter Richards (Vol. 60, 2022)

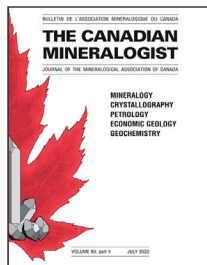
Our Associate Editors

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 would like to use this space to feature our Associate Editors. In this issue, we feature two of our longer-standing contributors from our crystallographic expertise base. Both have provided editorial services to *TCM* since 2013 and have even collaborated in research with one another.

R. James “Jim” Evans

Dr. Evans is a research associate of the Department of Earth, Ocean and Atmospheric Sciences at the University of British Columbia, in Vancouver (Canada). He teaches introductory courses on gems and precious metals, as well as lecturing on symmetry in both mineralogy and other parts of science, and has research interests in mineralogy, Mössbauer spectroscopy, and quantum chemistry. He is part of our core group of associate editors

(since 2013) with expertise in mineral crystallography, and has particular expertise in the crystallography of hydrated minerals, as well as tourmalines and other pegmatoidal minerals. His most recent first-authored papers deal with the crystal chemistry of sakhaite–harkerite solid solution found in skarns and other calcareous rocks formed at low pressure and high temperature. He has studied and helped define the current grouping of the dumortierite group of minerals. He also coauthored “the book” on Gem Deposits (Elsevier) in 2014.



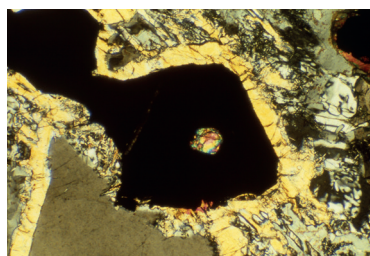
Henrik Friis

Dr. Friis is an associate professor at the Norwegian Center for Mineralogy (NORMIN) at the Natural History Museum in Oslo (Norway). He has also been serving as an associate editor for *TCM* since 2013 as part of the crystallography core (or unit cell, if you prefer) of the journal. He has particular interest in the mineralogy of alkaline complexes both as potential REE ores and as crystallochemical curiosities. His most cited coauthored paper

is on zirconosilicates of the Ilímaussaq Complex in South Greenland, a fertile study area of his, published in 2016, and his most-cited first authored paper is on niobium mobility during weathering, published in *The Canadian Mineralogist*. His expertise also extends to ichthyosaurs, on which he published earlier in 2022.

Featured Mineral/Texture

Our featured mineral texture for this article is a granulite facies assemblage in metapelitic rocks in which, elsewhere, sapphirine and relicts after osumilite suggest temperatures in excess of 900 °C and pressures between 6 and 10 kbar. In this example, chosen for its aesthetics, a grain of zircon is insulated from a complex metamorphic assemblage.



A nearly euhedral grain of zircon, surrounded by iron oxides, which are reacting with an assemblage of feldspars, cordierite, and quartz to form thick rims of strongly pleochroic orthopyroxene in granulite-facies charnockitic paragneisses from the Grenville Province in eastern Labrador. Field of view is around 1.5 mm wide, with crossed nicols. IMAGE COURTESY OF S. PREVEC.

SUDBURY 2023 GAC-MAC-SGA JOINT ANNUAL MEETING

May 24–27, 2023

Laurentian University, in Sudbury, Ontario, Canada

Discovering Ancient to Modern Earth – Découvrir la Terre Ancienne à Moderne



The geoscience community is invited to attend the Joint Annual Meeting of the **Geological Association of Canada (GAC)**, **Mineralogical Association of Canada (MAC)**, and **Society for Geology Applied to Ore Deposits (SGA)**, which will be held at Laurentian University in Sudbury, Ontario, Canada, on **24–27 May 2023**, with pre- and post-meeting workshops and field trips.

The meeting is being hosted by the **Harquail School of Earth Sciences and Mineral Exploration Research Centre at Laurentian University (Canada)**.

Sudbury is one of the world's oldest (~1.8 Ga), largest, and best-exposed meteorite impact sites on Earth, hosts one of the world's premiere Ni-Cu-PGE mining districts, and is surrounded by a wide range of superbly exposed Archean, Proterozoic, Paleozoic, and Quaternary rocks.

The city of Greater Sudbury, the largest city in northeastern Ontario, lies amidst glacially shaped ridges, and green boreal forests and contains 330 lakes (>10 hectares) and 110 lakes (>100 hectares). The success of more than 40 continuous years of environmental reclamation efforts has led to numerous national and international awards, including a

Government of Canada Environmental Achievement Award, a United States Chevron Conservation Award, and a United Nations Local Government Honours Award.

Meeting Theme

The theme of the meeting is **Discovering Ancient to Modern Earth**, reflecting the location of Sudbury at the intersection of the Archean Superior Province, Proterozoic Southern and Grenville provinces, and Paleozoic–Quaternary cover sequences. The conference will include an exceptionally diverse program of **Symposia, Special Sessions, General Sessions, Field trips, Workshops**, and **Short Courses** covering the complete spectrum of geoscience disciplines. Preliminary information is available at <https://event.fourwaves.com/Sudbury2023>.

Meeting Format

The meeting will be delivered in hybrid format with both in-person and virtual components.

There will be three days of technical sessions, including plenary, invited, and volunteer oral presentations, dedicated times for posters, pre- and post-meeting field trips, and workshops.

21–24 May 2023 | Pre-meeting field trips, workshops, and short courses

24 May 2023 | Late afternoon registration, evening Icebreaker

25–27 May 2023 | Morning and early afternoon oral sessions, late afternoon poster sessions

28 May–1 June 2023 | Post-meeting field trips, workshops, and short courses

Sponsors and Exhibitors

Promote your organization and advance the earth sciences by supporting the effort as a sponsor or by participating in the conference as an exhibitor.

Six levels are available, with sponsorship benefits commensurate with the amount of support to maximize sponsor recognition and visibility throughout the conference. Note: Sponsorship funding supports the overall conference budget but, depending on level sponsors, may select to be recognized at specific events and on promotional items. Sponsors/Exhibitors flyer available at: <https://event.fourwaves.com/Sudbury2023/pages>.

Registration

Registration deadline for early bird, field trip, workshops, and short course: **31 March 2023**.

Request for Abstracts

ABSTRACT SUBMISSIONS will be open from **December 2022** through **1 February 2023**, with late abstracts accepted at a higher fee between **2 February and 1 March 2023**. Get more info at <https://event.fourwaves.com/Sudbury2023/pages>.

MAC Sponsored Short Course

Fundamentals and Applications of Hydrogeochemistry

LEADERS: **Matt Leybourne** (Queen's U), **Rob Howell** (SRK), and **James Kidder** (GSC)

Hydrogeochemistry encompasses the evaluation of natural water chemistry in ground and surface waters as well as anthropogenic impacts. It particularly focuses on the relationship between the chemical characteristics and quality of waters and the areal and regional geology. As it relies on the fundamental laws of chemistry, these can

be used to quantify and predict changes that may occur between water mixing and interaction with solids and gases.

Central to any hydrogeochemical evaluation is the precise analysis of water chemistry, quality assessment of the data, characterization of water characteristics and assessment of potential anomalies and changes. Identification of anomalies and particle tracking to determine their source can be used as a guide in mineral, oil, and geothermal exploration or in environmental assessment of potential impacts. Utilizing the characterization data alongside hydrology and hydrogeology data, predictions can be made of future changes that could occur and the consequence of modifying or controlling chemical input in a water body.

This two-day workshop will provide a comprehensive introduction to this topic and will cover fundamental characteristics of water and the main chemical mechanisms, sampling and analysis, interpretation, and development of numerical predictions through the use of published software packages.

MAC Sponsored Session

Cratons, Kimberlites, and Diamonds

CHAIRS: **Thomas Stachel** (U Alberta), **Yana Fedortchouk** (Dalhousie U), **Maya Kopylova** (UBC), and **Graham Pearson** (U Alberta)

This session invites presentations covering advances in the fields of:

1. Origin and evolution of cratonic lithosphere (e.g., mantle xenolith/xenocryst studies; geophysical research on cratonic mantle roots)
2. Processes of diamond formation (trace elements and stable isotopes in diamond; diamond-forming fluids/melts and reactions involving them; inclusions in diamond; diamond surface textures)
3. Kimberlite research (from petrogenesis to emplacement)
4. Advances in diamond exploration techniques (e.g., indicator mineral chemistry; geothermobarometry)

SPONSOR: **APEX Geoscience Ltd.**

Hoping to see you in Sudbury!

HALIFAX 2022 GAC-MAC-IAH-CNC-CSPG JOINT MEETING A SUCCESS

May 15–18, 2022

Halifax Convention Centre in Halifax, Nova Scotia, Canada

Riding the waves of change – Surfer sur la vague du changement

Thank you for your participation in the Halifax 2022 GAC-MAC-IAH-CNC-CSPG Joint Meeting. It was a huge success thanks to your presence and enthusiasm. A brief look at the numbers: we had 687 in-person participants (239 students), 127 virtual participants (34 students), 102 field trip participants, and 129 workshop participants, several well-attended social events and a very successful teacher's workshop. Our program encompassed all areas of geoscience with 380 live presentations, 90 posters, and 105 virtual presentations.

This event posed several unique challenges, and the Local Organizing Committee (LOC) did an amazing job with this event. They had to be extraordinarily flexible during constantly changing circumstances. Thank you to every member of the LOC and all the volunteers who made this conference a reality.

Our sponsors and exhibitors were a vital part of the event's success, and we would like to thank every one of them for their support of this event and our Canadian geoscience community.

Thank you for being a part of Halifax 2022! This event would not have been a success without your participation!