

Mineralogical Association of Canada

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



Highlights

In our March issue, we feature eight brand new minerals; just when you'd finished memorizing the existing list! Find out about alterite and magnesioalteraite (oxalate minerals from Arizona, USA), perchiazziite (a rosasite-malachite group mineral from Italy), four new minerals from the Redmond Mine, North Carolina, USA (two thiosulfates, and two OPb₄-chain-based minerals), and finally ronpetersonite (BaWO₄) from Canada's Yukon, named for the very same Ron Peterson we featured in a special thematic issue of the

CJMP in July 2023. In addition, we learn about the exploration implications of columbite-group minerals from the Chinese Altai, inclusions in placer Pt–Fe alloys in Ecuador, hollow bulbous gypsum structures reported from Alberta (Canada), and clarification on the status of the mineral testibiopalladite (PdSbTe); spoiler alert: it's a Sb-analogue of michenerite, but a valid mineral in its own right. In addition, we feature regional geology, in the form of a study of the tectono-metamorphic evolution of the Kluane Schist, from the northern cordillera of the Yukon.

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

Still number one, *Growth and Stability of Stratiform Carrollite (CuCo₂S₄) in the Tenke-Fungurume Ore District, Central African Copperbelt,* by Bjorn Von Der Heyden, Jeffrey Dick, Ryan Rosenfels, Luke Carlton, Kristina Lilova, Alexandra Navrotsky, Tamilarasan Subramani, Brian Woodfield, and Alexis Gibson, in vol. 62 (1).

Running neck and neck in second place are a pair of tourmaline papers: Trace Element Characteristics of Tourmaline in Porphyry Cu Systems: Development and Application To Discrimination and Recognizing Tourmaline in Mineralized Porphyry Cu Systems: Textures and Major-Element Chemistry, both papers by Christopher Beckett-Brown, Andrew McDonald, and Beth McClenaghan, and featuring in 2023's volume 61, issue 1.

After them, we find, already working up the charts like a Beyoncé country hit, in spite of its release only in late March 2024, *Types and Evolution of Columbite-Group Minerals from Pegmatites in the Chinese Altai, NW China: Implications for Regional Petrogenesis and Rare-Element Mineralization* by Qifeng Zhou, Kezhang Qin, and Dongmei Tang.

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 (AEs). In this issue, we feature two more of our long-standing contributors from our expertise-base.

Emanuela Schingaro



Professor Schingaro is a native of Bari, Italy, where she obtained her first degree in physics and a PhD in Earth sciences, and where she is currently a professor of mineralogy at the Università degli Studi di Bari Aldo Moro (Bari, Italy). Her research interests include crystal chemistry and crystallography in a wide range of applications and environments, from the structural variations of minerals in geologic context to the thermal

behavior of minerals and their solid-state transformations, from the

studies of modified and unmodified sorbent materials (layered minerals) for industrial and environmental applications to the use of clay minerals in waste valorization. She has over 1300 citations, an h-index of 23, and has served as a *CJMP* associate editor since 2019. She is head of the Crystallographic X-ray facilities (including single crystals and powder diffraction) at the Earth and Geoenvironmental Sciences Department of the University of Bari.

Luca Medici



Professor Medici is based at the Institute of Methodologies for Environmental Analysis (IMAA-CNR), National Research Council of Italy (CNR), at Tito Scalo (PZ), Italy, where he has been employed since 2008, and as an associate professor since 2014.

He studies mineral chemistry and crystallography and has published over 70 papers to date. Professor Medici has a special interest in phyllosilicates in

particular in a wide range of contexts, from waste management to igneous petrology. He also studies mineral chemistry associated with biomineralization, from conodonts to cucumbers to kidney stones, and specializes in the application of microXRD to mineral structure and compositional implications thereof.

He has served as a CJMP associate editor since 2014.

Our Editors

In addition to the vital contributions of our Associate Editors, we depend on the time and dedicated effort of our editorial staff to function. For the last two years, the journal has been managed by the scientific editorial team of Andy McDonald (Laurentian University, Canada) and Steve Prevec (Rhodes University, South Africa), along with our managing editor Mackenzie Parker, and technical editor Hexiong Yang (University of Arizona, USA). As of March this year, Andy has stepped down from his editorial post, with our thanks for all of his considerable efforts on our behalf over the past two years. The editorial team has now been joined by Greg Shellnutt (National Taiwan Normal University, Taipei), whom we introduce professionally in this context below.



J. Gregory ('Greg') Shellnutt is a professor in the Department of Earth Sciences, National Taiwan Normal University. His research focuses on the geochemistry, petrology, and geochronology of igneous rocks from large igneous provinces, Precambrian mafic dyke swarms, the Central African Orogenic Belt, the Seychelles microcontinent, and the Northern Appalachians. Greg graduated from Saint Mary's University with

his BSc (Hons) in 1998 and from University of Western Ontario with his MSc in 2000.

After an internship at the Instituto de Geología, Universidad Nacional Autónoma de México in 2003, he pursued his doctoral degree at the University of Hong Kong and graduated in 2007. Greg moved to Taipei after his PhD and conducted post-doctoral research at the Institute of Earth Sciences, Academia Sinica (2007–2011) before being hired by National Taiwan Normal University (2011) in Taipei where he currently resides.

Greg has published more than 120 peer reviewed SCI papers, is Co-Editor-in-Chief of *Lithos* (2019–present), Associate Editor of *Journal of the Geological Society of India* (2023–present), and served on the editorial boards of *Lithos* (2013–2019), *Journal of Asian Earth Sciences* (2016–2019), *Scientific Reports* (2019–2024), *Geology* (2016–2021), and *Frontiers*

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in Earth Sciences (2016–present). He has guest edited special issues in Lithos (2010), American Journal of Science (2014), International Journal of Earth Sciences (2018), Frontiers in Earth Sciences (2020, 2023), and the book "Methods and Applications of Geochronology" (2024). He was awarded Young Scientist awards from the Mineralogical Association of Canada (2015) and Academia Sinica (2017), the 2015 and 2022 Ministry of Science and Technology (Taiwan) Outstanding Research Award, and the Ma Ting Ying (2017) and Wang Hanzhuo (2020) awards from the Geological Society of Taiwan.

Greg is honoured to join the team of *Canadian Journal of Mineralogy* and *Petrology* in service to the Canadian and international geosciences community.

GAC-MAC-PEG BRANDON 2024 MEETING HIGHLIGHTS



(LEFT TO RIGHT)
Dan Marshall
(MAC President), Robert
(Bob) Linnen (professor
emeritus and adjunct
research professor at the
University of Western
Ontario, Chief Geologist,
Lithium at KoBold Metals,
and winner of the MAC 2024
Peacock Award), and Fred
Ford (MAC Vice President).

FIGURE 2 (LEFT TO RIGHT)
Dan Marshall
(MAC President), Jenine
McCutcheon (assistant
professor at the University of
Waterloo and winner of the
2024 Young Scientist Award),
and Fred Ford (MAC Vice
President).





MAC 2024 Travel Grant winners who presented at GAC-MAC-PEG Brandon 2024 meeting (LEFT TO RIGHT): Keirsty Malay (PhD, MUN), Sheila Ballantyne (PhD, uToronto), Carson Kinney (PhD, Waterloo), Alix Osinchuk (PhD, UBC), Kelsey Krossa, (MSc, UBC), Nicolas Prieto-Moreno (MSc, Memorial), and Lot Koopmans (PhD, Oxford)



FIGURE 4 2024 Hawley Medal winners for their paper, "Trace
Elements Characteristics of Tourmaline in Porphyry Cu Systems Development and Application to Discrimination." (Left to Right) Andrew McDonald of Laurentian University, Chris Beckett-Brown of the OGS, and Beth McClenaghan of the GSC.

MINERALOGICAL ASSOCIATION OF CANADA AWARDS

Young Scientist Award: Dr. Jenine McCutcheon



Jenine McCutcheon is an assistant professor at the University of Waterloo. She completed her HBSc and MSc at Western University, PhD at the University of Queensland (Australia), and postdoctoral fellowship at the University of Leeds (UK). She studies microbe–mineral–fluid interactions in natural and engineered environments. She aims to understand how small-scale bio geochemical processes influence large-scale systems and

utilizes these reaction pathways to solve environmental challenges in settings such as mine sites, wetlands, and polar habitats.

Peacock Award: Dr. Robert Linnen

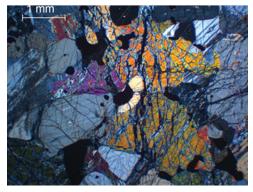


Dr. Robert (Bob) Linnen, PGeo, combines research on experimental studies of the solubilities of metals in granitic melts with field studies on intrusion-related critical metal (Li, Ta, Nb, W, and REE) and precious metal (Au and PGE) deposits. He obtained a BSc at Queen's University, MSc and PhD degrees from McGill University, and was a post-doc in France and Germany. He held positions at the University of Waterloo and as the Robert

Hodder Chair in Economic Geology at Western University. He is currently a professor emeritus and adjunct research professor at Western University and the Chief Geologist, Lithium at KoBold Metals.

FEATURED MINERAL/TEXTURE

The accompanying 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 amoeboidal 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: SIYASANGA DYAN.

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