



Mineralogical Association of Canada

www.mineralogicalassociation.ca

2016 AWARDS

The Mineralogical Association of Canada (MAC) is pleased to announce its award winners for 2016. Presentations will be made 2 June 2016 at the annual MAC luncheon in Whitehorse, Yukon (Canada).

Peacock Medal to Peter C. Burns



The Peacock Medal, the highest award bestowed by the Mineralogical Association of Canada, is awarded to Peter C. Burns of the University of Notre Dame (Indiana, USA) for his outstanding contributions to the mineral sciences.

Peter C. Burns is the Henry Massman Professor of Civil and Environmental Engineering and Earth Sciences and a Concurrent Professor of Chemistry and Biochemistry at the University of Notre Dame. He is also the director of the Center for Sustainable Energy at Notre Dame, and the director of the Materials Science of Actinides–Energy Frontier Research Center in Knoxville (Tennessee, USA), which has been funded by the US Department of Energy since 2009. He earned an undergraduate degree in geology from the University of New Brunswick (Canada), an MSc in geology from the University of Western Ontario (Canada), and a PhD in mineralogy from the University of Manitoba (Canada). Following postdoctoral appointments at University of Cambridge (UK) and the University of New Mexico (USA), Burns joined the faculty of the University of Illinois–Urbana (USA) in 1996. He moved to the University of Notre Dame in 1997. His research focuses on aspects of actinide materials, including uranium and thorium mineralogy and geochemistry, actinide environmental chemistry, actinide solid-state chemistry (especially of uranium and neptunium), and the nanoscale control of actinides. Starting in 2005, he developed a family of more than 100 nanoscale uranium–oxygen cage clusters that self-assemble in water. He is developing applications of these that take advantage of their unique properties. His research has produced more than 360 published archival journal contributions, as well as three books.

Young Scientist Award to Jacob Hanley



The young scientist award is given to a young scientist who has made a significant international research contribution in a promising start to a scientific career. This year's awardee is Jacob Hanley, an associate professor in the Department of Geology, Saint Mary's University (SMU) in Halifax, Nova Scotia. Jacob received his BEng (1999), MSc (geology, 2001), and PhD (geochemistry, 2005) from the University of Toronto (Canada) and was a Natural Sciences and

Engineering Research Council (NSERC) postdoctoral fellow at the Eidgenössische Technische Hochschule (ETH) Zürich (Switzerland) from 2005 to 2007. He currently heads the Mineral Exploration and Ore Fluids Laboratory at SMU. His group's research focuses on the application of fluid inclusion microanalysis—using such techniques as laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS), Raman spectroscopy, and microthermometry—to characterize the sources and *P–T*-composition evolution of mineralizing fluids in ore-forming systems in magmatic and metamorphic settings, and the development of novel exploration tools for the mineral resources industry. He received the William Harvey Gross Medal from the Mineral Deposits Division of the Geological Association of Canada (GAC) in 2011, and he was the GAC Howard Street Robinson Lecturer in 2013.

Berry Medal to Jim Nicholls



The MAC recognizes the long-term dedication of individuals to our association through awarding of the Berry Medal (named after Len Berry, a professor of mineralogy at Queen's University in Kingston, Ontario, and editor of *The Canadian Mineralogist* from 1955 until 1975). This year's winner is Dr. James Nicholls, Professor Emeritus at the University of Calgary (Canada).

Jim Nicholls graduated from Texas Christian University in Fort Worth (Texas, USA) in 1964 with a BSc in geology. He received his PhD from the University of California, Berkeley (USA), in 1969. That same year he joined the Department of Geoscience at the University of Calgary, where he worked for 35 years. He has helped organize and has contributed to short courses for the Mineralogical Association of Canada (MAC), the Geological Association of Canada, the Mineralogical Society of America, the Geological Society of America, and the United States Geological Survey. He served as councillor and later as vice-president, president, and past president of the MAC. He studies magmatic processes from rock, mineral, and melt (glass) compositions through thermodynamic and chemical modeling. He is currently working on projects involving Pearce element ratios and quantitative optical mineralogy.

WELCOMING NEW MEMBERS OF COUNCIL

The MAC council approved the nomination of the following candidates for the position of vice-president and the two positions of councillor for 2016–2019. As no additional nominations were received from the membership, the nominated candidates were declared elected by acclamation.

Vice-President 2016–2018



Paula C. Piilonen has been a research scientist in the Mineral Sciences Section of the Canadian Museum of Nature (CMN) in Ottawa, Ontario, since 2002. She obtained an undergraduate degree from Laurentian University (Sudbury, Ontario) and a PhD degree from the University of Ottawa (2000). This was followed by an NSERC postdoctoral fellowship at the Laboratoire des géomatériaux, Université de Marne-la-Vallée (France). Her research program has taken her to

many exotic locales, including southern Norway, where she is presently conducting research into the behavior of rare earth elements (REEs) and high field strength elements (HFSEs) in minerals from alkaline systems, and southeast Asia (Thailand, Cambodia), where she is investigating the mineralogy and geochemistry of zircon from alkaline basalts. Dr. Piilonen has also been active in the public-outreach component of the CMN and in the supervision of graduate and undergraduate students. She formerly served as a member of the MAC Council (2004–2006) and was the new-minerals editor for *American Mineralogist* (2005–2011). She currently serves as the Canadian representative on the Commission on Museums of the International Mineralogical Association (IMA) and is the Canadian voting member on the Commission on New Minerals, Nomenclature and Classification of the IMA.

Councillors 2016–2019



Sytle M. Antao is a professor in the Department of Geoscience at the University of Calgary in Alberta (Canada). She obtained a BSc in geology and physics and an MSc from the University of Kuwait. She then moved to Stony Brook University in New York (USA) where she earned her PhD (2006) for her thesis “In-situ measurements of cation disorder in dolomite and spinel at high pressure and temperature: Effect on elasticity and stability”.

After a postdoctoral fellowship at the Advanced Photon Source, Argonne National Laboratory near Chicago (USA), she joined the faculty at the University of Calgary in 2008. She conducts research into many important rock-forming minerals, including garnet-, scapolite-, and spinel-group minerals. In 2009, she received an Alberta Ingenuity New Faculty Award and, in 2012, she won MAC’s Young Scientist Award. Dr. Antao is a very active researcher, a review editor for *Earth and Planetary Materials*, and lead reviewer for proposals submitted to the Canadian Light Source.



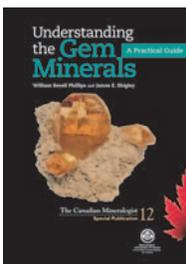
Antonio Simonetti is a professor and the Director of Graduate Studies at the University of Notre Dame. He earned BSc (Hons.) and MSc degrees from McGill University in Montreal (Canada) and a PhD from Carleton University in Ottawa (Canada) for research into the radiogenic isotope systematics of alkaline rocks from East Africa. He conducted research as a postdoctoral fellow at Carleton

University, at the Geotop Research Centre in Geochemistry and Geodynamics, the Université du Québec à Montréal (GEOTOP-UQAM), and the Max-Planck Institute in Germany. Prof. Simonetti has been an invited professor and lecturer at a number of international institutions, including Université Pierre et Marie Curie–Paris IV (France), the University of São Paulo (Brazil), Masaryk University (Czech Republic), and the China University of Geosciences. His research program applies radiogenic isotope systems to solve problems in the Earth sciences, anthropology, and the new area of nuclear forensic science. Dr. Simonetti is an editorial board member of *Minerals* and an associate editor of *Lithos*, and he has served as a guest editor for special issues published by *Mineralogy & Petrology* and the *Journal of Petrology*.

We extend our thanks to outgoing past-president Lee A. Groat for his services to the MAC for the last 6 years—Lee will continue as editor of *The Canadian Mineralogist*—and to outgoing councillors Heather E. Jamieson and Stephen Piercey, who have served the MAC for the last 3 years.

COMING SOON

Understanding the Gem Minerals: A Practical Guide
Special Publication 12 of *The Canadian Mineralogist*



Gemstones have fascinated people for thousands of years because of their beauty, rarity, and monetary value. However, a true understanding of gemstones and their properties has only come about in the past two centuries resulting from the developing science of geology and mineralogy and an increasing need to distinguish natural gemstones from those that are treated or grown in the laboratory. Numerous books describe minerals, and a number of them report on the distinctive properties of gemstones, but there are almost no books that present a more detailed mineralogical description of the gem minerals, along with a clear explanation of basic concepts of interest from both mineralogy and geology. Written by William Revell Phillips and James Shigley, *Understanding the Gem Minerals: A Practical Guide* bridge this gap.

**AN INVITATION TO ATTEND WHITEHORSE 2016,
1–3 JUNE 2016**

**Join us for the first-ever GAC–MAC meeting
in Whitehorse, Yukon!**

Attend the special sessions sponsored by the MAC:

“Tantalum, tin, and tungsten at the margins”

CONVENORS: Lee A. Groat (University of British Columbia) and Bill Mercer (Avalon Rare Metals Inc.)

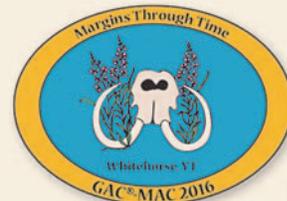
“Cratons, kimberlites, and diamonds”

CONVENORS: Thomas Stachel (University of Alberta), D. Graham Pearson (University of Alberta), and Bruce Kjarsgaard (Geological Survey of Canada)

**“Canadian contributions to the planetary sciences:
Missions, materials, and analogues”**

CONVENORS: Livio Tornabene (University of Western Ontario), Roberta Flemming (University of Western Ontario), and Catherine Neish (University of Western Ontario)

For information about the conference, visit www.whitehorse2016.ca.



**\$5000
Scholarships**

The Mineralogical Association of Canada Foundation

will award two \$5000 scholarships to graduate students, one to a student enrolled in an MSc program and one to a student in a PhD program. The applicable fields of study are:

- Mineralogy
- Crystallography
- Geochemistry
- Mineral Deposits
- Petrology

**Deadline to apply:
May 2, 2016**

Eligibility

- Students entering the second year of an MSc program or the second or third year of a PhD program at a Canadian university in September 2016.
- Canadian citizens enrolled in the above or equivalent programs at any university.

For more information, contact the business office:

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Application form available at
www.mineralogicalassociation.ca

