



Mineralogical Association of Canada

www.mineralogicalassociation.ca

MAC FOUNDATION SCHOLARSHIP WINNERS

Mélanie Cousineau (University of Ottawa) and Luke Hilchie (Dalhousie University) are the recipients of the 2010 MAC Foundation Scholarships. Congratulations to these deserving students!



Mélanie Cousineau completed her BSc (honors) in environmental science at the University of Ottawa in 2001, graduating with the highest standing in the program. During these studies, she worked as a research assistant in soil science research at the Central Experimental Farm in Ottawa and as an environmental officer at the Thurso Pulp Mill. In 2001 she enrolled in the MSc (environmental science) program at

Memorial University of Newfoundland under the supervision of Drs. Moire Wadleigh and David Schneider. Her research there focused on the use of sulfur isotopes in lichens to trace atmospheric sulfur sources. After graduating in 2003, Mélanie moved to Québec City, where she worked for Environment Canada's Canadian Wildlife Service and was responsible for the national coordination of a program on the impact of wind turbines on migratory birds and a research project on the use of radar to track bird migrations. In 2008, she returned to the University of Ottawa to begin a PhD in Earth sciences under the supervision of Drs. Danielle Fortin and Boswell Wing (McGill University). In her research, she uses pure cultures of acid-tolerant strains of sulfate-reducing bacteria to determine the role of pH in sulfur fractionation during bacterial sulfate reduction (BSR). This has implications for understanding geochemical conditions prevailing in ancient ocean and freshwater environments. Archean oceans, which are believed to have been acidic, supported the beginning of life on Earth and the appearance of BSR metabolism. Additionally, because sulfate-reducing bacteria have the potential to remediate acid mine drainage, understanding the metabolism of these organisms at low pH conditions may benefit research into large-scale bioreactor applications for remediation purposes.



Luke Hilchie received his BSc with first class honors in Earth sciences from Dalhousie University in 2009, earning him the University Medal in Earth Sciences. He studied experimentally generated surface textures of diamond oxidized in chloride-bearing fluids under the supervision of Dr. Yana Fedortchouk. He then began his MSc at Dalhousie under the supervision of Drs. Yana Fedortchouk and Sergei Matveev

(University of Alberta). Luke is comparing the hydrogen-related infrared spectra of olivine in xenoliths and diamond surface morphologies produced in fluid-bearing and fluid-free experiments to determine the linkage between hydrogen in olivine, diamond quality, and the presence or absence of aqueous fluid. This investigation will establish whether the hydrogen-related infrared spectra of xenocrystic or phenocrystic olivine in kimberlites can be reliably used as proxies for diamond quality and magmatic water oversaturation. This study may also elucidate the causes of variations in diamond quality among kimberlites.

ADVANCES IN EARTH SCIENCES RESEARCH CONFERENCE 2010

This year's AESRC conference, "Geosciences: A World beyond Textbooks," was held at the University of Ottawa, Ontario, on March 26–28, 2010. It had a record attendance of 83 people, including 61 students, 12 faculty, 5 industry sponsors, and 5 keynote speakers. This bilingual, graduate student-run conference is the only one of its kind in central Canada and attracted students from eight universities across Ontario

and Quebec. Participating universities included the University of Ottawa, Carleton University, Queen's University, the University of Toronto, the University of Montreal, the Université du Québec à Montréal, the University of Waterloo, and McMaster University.

The conference began with a welcoming reception and poster session, where 13 graduate and undergraduate posters were on display. Over the following two days, 31 oral presentations were given by students, who discussed their latest research findings covering a variety of geoscience topics. Each session began with a lecture by a prominent keynote speaker; these were Drs. Jeffrey Hedenquist, Bill Arnott, Alexandre Poulain, Liam Keiser, and Ian Clark. The MAC was the official cosponsor of two coffee breaks. Saturday-night attendees enjoyed a conference dinner hosted by Jazzy Restaurant at the University of Ottawa. During the closing ceremony, several awards were announced. The AESRC 2010–CSEG best undergraduate poster award was given to Jamie Cutts (Carleton University). The first and second runners-up were Allison Enright and Nicole Williamson (both from the University of Ottawa). The AESRC 2010–CSPG award for best graduate poster went to Leena Davis (University of Ottawa). The first and second runners-up were Viktor Terlaky and Jamil Sader (both from the University of Ottawa). The AESRC 2010–Imperial Oil award for best MSc talk honored Mélanie Mercier (Carleton University). The first runner-up was Kristen Feige (University of Ottawa) and the second runner-up was Joanna Northover (Carleton University). Finally, the AESRC 2010–CSPG award for best PhD oral presentation was given to Deanne van Rooyen (Carleton University). The first and second runners-up were Erika Revesz and John Jamieson (both from the University of Ottawa). This conference benefited greatly from MAC's generous contribution.

Leena Davis and Matt Herod (University of Ottawa)

MAC UNDERGRADUATE AWARD WINNERS

The MAC Undergraduate Awards are given annually to undergraduate students for excellence in one of the fields covered by MAC (mineralogy, crystallography, petrology, geochemistry, and economic geology). The award consists of a gift certificate for MAC publications and one-year subscriptions to *Elements* and the online version of *The Canadian Mineralogist*. We congratulate the 2009–2010 awardees:

MICHAEL A. ANTONELLI, University of Alberta
JESSICA BALDWIN, Memorial University
ANNE-MARIE BEAUCHAMP, Université Laval
ANNE C. BÉLANGER, Dalhousie University
MATTHEW BRZOWSKI, University of Windsor
KEVIN M. CANNON, Queen's University
MARTINE CHABOT, Université du Québec à Chicoutimi
BRADY KEVIN CLIFT, UBC Okanagan
ADAM CLOUGH, Carleton University
KENDALL L. CULLIGAN, University of British Columbia
MATEA DRLJEPAN, Brock University
ASHLEY MARIE EMMS, Mount Royal University
STEPHANIE FRIEDRICH, Acadia University
EVAN R. GLADNEY, St. Mary's University
AMY M. KENWELL, University of Waterloo
ELLEN LEASK, McGill University
JASON LÉVESQUE, University of New Brunswick
RYAN BREAU LIBBEY, The University of Western Ontario
TRAVIS J. A. McCARRON, St. François Xavier University
JALISSA C. McMULLEN, University of Regina
GREG F. PAJU, Lakehead University
DANICA FRANCINE PASCUA, University of Toronto
MEGHAN C. TOMLIN, University of Victoria
PETER A. TSCHIRHART, McMaster University