



# International Association of GeoChemistry

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## ELSEVIER PHD STUDENT RESEARCH GRANT WINNERS

The IAGC is happy to announce the recipients of the 2014 Student Research Grants, sponsored by Elsevier and the IAGC. Every year, we receive many strong research proposals from students from around the world, and this year we had a record 27. Thanks to Vice-President Ian Cartwright and the Awards Committee, the proposals were ranked and four were chosen for funding. This is a particularly difficult decision to make, but IAGC is happy to help these four excellent students and is grateful to Elsevier for providing much of the funding for the awards. Congratulations to our grantees! We wish all the students the best of luck as they complete their studies, and look forward to welcoming all of them into the research community.

### *Lee Corbett, University of Vermont, USA – “High-Latitude Landscape Evolution and Sediment Transport”*



Lee earned her BA in geology from Middlebury College in 2007 and her MS in geology from the University of Vermont in 2011. She is currently three years into her PhD at the Rubenstein School of Environment and Natural Resources, University of Vermont. Most of Lee's work focuses on the long-term history of the Greenland ice sheet and the subglacial evolution of landscapes. She is particularly interested in “ghost glaciers,” which are frozen to the bed, incapable of performing erosion, and thus able to preserve ancient landscapes.

To study ice-sheet history and subglacial erosion, she analyzes concentrations of cosmogenic beryllium-10 and aluminum-26 in glacially deposited boulders, ice-bound cobbles, marine sediments, and dirty basal ice.

### *Charlotte Riggs, University of Minnesota, USA – “Soil Organic Matter Cycling Under Anthropogenic Global Change”*



Charlotte received her bachelor's degree in biology from Wesleyan University in 2008. She is currently a PhD candidate in ecosystem ecology at the University of Minnesota, Twin Cities, and is advised by Dr Sarah Hobbie. Charlotte studies how ecosystems respond to anthropogenic global changes, including elevated carbon dioxide and nutrient deposition. She is particularly interested in soil biogeochemical processes, specifically, carbon and nitrogen cycling in soil. Her PhD dissertation research explores the biological,

physical, and chemical processes controlling the cycling of soil organic matter under global change. Charlotte also enjoys engaging others in the practice of science through teaching and training undergraduates.

### *Benjamin Butler, Bangor University, UK – “Mineral Dynamics in Sea Ice”*



Benjamin graduated from Bangor University, Wales, in 2011 with a BSc in ocean science. After completion of an MS in environmental chemistry in 2012, he embarked on a career in marine geochemistry, via a PhD in the School of Ocean Sciences at Bangor University. Benjamin's research involves working with highly concentrated seawater brines at subzero temperatures. Aside from the brines, his research centers around

the behavior of cryohydrate minerals in the sea-ice environment. To develop our understanding of the dynamics of these minerals, the brine-composition analysis is coupled with high-resolution powder X-ray diffraction studies. The project ultimately aims to investigate the dynamics of sea-ice minerals and how their behavior relates to the physical properties of sea ice in the environment.

### *Li Yang, Durham University, UK – “Ultra-precise Geochronology in Ore-Forming Processes”*



Li received his bachelor's degree in economic geology at the China University of Geosciences, Wuhan, and is currently a PhD student at Durham University, UK. His PhD research focuses on the development and application of ultra-precise geochronology for ore-forming processes with an emphasis on the time gap between magmatism and mineralization, the duration of mineralization, and fluid evolution associated with porphyry copper systems (PCS). To address these questions, Li has chosen to carry out

detailed fieldwork and conduct novel geochemical analyses on China's largest porphyry Cu-Mo system, Qulong, in Tibet. The absolute time frame of this deposit will be constructed with ultra-precise ID-TIMS U-Pb zircon and N-TIMS Re-Os molybdenite geochronology, with the origin of the metals and P-T-X paths of metalliferous fluids being evaluated using Os and O isotopes, respectively. This research will permit an improved understanding of mechanisms of metal origin and enrichment in the Qulong deposit and possibly insights into all PCS.

## IAGC COSPONSORED SESSIONS AT THE GEOLOGICAL SOCIETY OF AMERICA ANNUAL MEETING

The IAGC is cosponsoring three sessions at the GSA Annual Meeting, 19–22 October 2014, in Vancouver, BC, Canada.

### **T124. Sources, Transport, Fate, and Toxicology of Trace Elements and Organics in the Environment**

Cochairs: David T. Long, LeeAnn Munk, W. Berry Lyons

Basic and applied research on trace elements and organics in the environment are encouraged. Topics include those related to understanding and modeling sources, transport, and fate; human and ecosystem health; and environmental assessment and remediation.

### **T127. Urban Geochemistry**

Cochairs: W. Berry Lyons, David T. Long

This session encourages presentations that qualify and quantify the geochemical and biogeochemical impacts (temporal and spatial) of urbanization and urban activities on soil, water, and air resources as well as on human and ecosystem health.

### **T197. Deep-Time Paleosols and Sediments from the Boundary Events (Flood Basalt Eruptions and Bolide Impacts): Their Applications and Limitations as Geological Proxies in Understanding the Paleo-Environmental Conditions during Mass Extinctions**

Cochairs: M. R. G. Syyed, Kunio Kaiho

A variety of approaches to obtain paleo-environmental information from boundary sediments and paleosols are welcome. This session encourages future work in reconstructing climatic extremes during the periods of mass extinctions through critical and constructive discussions.