Newsletter

of the

International Association of GeoChemistry

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Mel Gascoyne, Newsletter Editor

NEWS FROM THE ASSOCIATION

- **Recent awards**
- **New IAGC Officers & Council**
- **Attila Demény moves on (and up)**
- ***IAGS 2009* in New Brunswick**
- **Obituary: Hitoshi Sakai**

ASSOCIATION NEWS

IAGC – Recent News



Russell Harmon, IAGC President

The past few months have been a busy time for IAGC.

The second set of IAGC PhD student grants were announced in May, with awards going to Ibrahim Barrie of the Department of Isotope Geochemistry at the Free University of Amsterdam (Netherlands), Bryn Kimball of the Department of Geosciences at Pennsylvania State University (USA), Lindsay MacKenzie of the Department of Geosciences at the University of Montana (USA), and Alejandro Villalobos-Aragón of the Department of Geological Sciences at University of Texas at El Paso (USA). Congratulations to these four outstanding young geochemists.

IAGC had a strong presence at the 33rd International Geological Congress, held from 6-14 August in Oslo, Norway. As a part of the "International Year of Planet Earth", IAGC members Andrew Parker, Andrew Herczeg & Russell Harmon organized a special Major Geoscience Program on *"Contribution of Gochemistry to the Study of the Planet"* that consists of two parts – a session *"Historical Perspectives"* that reviewed various facets of geochemistry as they have developed over the past half-century and a session on *"Today and Tomorrow"* which considered future developments in geochemistry and its potential to solve environmental problems in the 21st century. IAGC members were also involved in the organization of three other disciplinary symposia under the Environmental Geochemistry track: EGC-04: *"Geochemical Mapping from the Global to the Local Scale: The Arthur Darnley Symposium"*, co-chaired by David B. Smith, Clemens Reimann, Jane Plant, Reijo Salminen; EGC-06:*"Geochemical Proxies of Palaeoenvironmental Change in Terrestrial Environments"*, co-chaired by Ian Fairchild and Attila Demény; and EGC-07: *"Frontiers of Stable Isotope Analysis for Environmental Science and Biogeochemistry"* co-chaired by Martin Novak and Peter Wynn. Thanks to these IAGC members for their hard work on behalf of the geochemistry community.

IAGC continued its presence and involvement in the Geological Society of America Annual Meeting. Mel and Sim Gascoyne staffed the IAGC booth at the 2008 GSA Annual Meeting in Houston, Texas, and IAGC sponsored two topical sessions at the meeting: "*Sources, Transport, Fate and Toxicology of Trace Elements in the Environment"* co-chaired by LeeAnn Munk, Dave Long, and Berry Lyons and *"Real-Time, In-Field Geochemical Analysis: Current Capabilities and Future Prospects"* co-chaired by Nancy McMillan, Russell Harmon, and April Ulery. Your flying the IAGC flag at the GSA meeting is appreciated.

IAGC announced its awards for 2008 at the 33rd International Geological Congress in Oslo, Norway on 9 August 2008 during the IAGC-sponsored 'Arthur Darnley Symposium'. IAGC Vice President, Dr. Clemens Reimann of the Norwegian Geological Survey, presided over the awards ceremony. Congratulations to the award recipients!

- The *Vernadsky Medal* was awarded to **Bjørn Bølviken** (Norwegian Geological Survey, Norway), see citation on p. 6)

- **Thure E. Cerling** (University of Utah, USA) and **Gunter Faure** (Ohio State University, USA) were elected as *IAGC Fellows*,
- The *IAGC Hitchon Award* went to **Ralph Seiler**, **Ken Stollenwerk**, and **John Garbarino** of the US Geological Survey for their 2005 paper "Factors Controlling Tungsten Concentrations in Ground Water, Carson Desert, Nevada" that appeared in volume 20 of Applied Geochemistry,
- *Certificates of Recognition* were presented to **Rosa Cidu** (University of Cagliari, Italy), **John Gray** (US Geological Survey, USA), **David Long** (Michigan State University, USA), **Jodie Miller** (University of Stellenbosch, South Africa), and **LeeAnn Munk** (University of Alaska – Anchorage, USA).

Officers & Council for 2008-12

Finally, the Association elected its Officers and Council Members for the 2008-12 term and extended its thanks to **John Gray** (USA), **Jan Kramers** (Switzerland), **Berry Lyons** (USA), and **Kenji Notsu** (Japan) for their service as IAGC Council Members from 2004-08.

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Committee Assignments

AWARDS: Chair C. Reimann & Members R. Donahoe, H. Masuda, & A. Roychoudhury

The Awards Committee has the sole responsibility of preparing a slate of recommendations each year for the IAGC awards. With the exception of the Faure Award, which is decided on a recurring basis as IAGC-sponsored meetings take place, the Awards Committee shall (i) submit its recommendations to the Board annually for the IAGC Distinguished Service Award, IAGC Fellows, Certificates of Recognition, and the Hitchon Award (which is received from the Publications Committee to the Chair) and (ii) submit its recommendations for the Venadsky Medal, Ebelemen Award biennially.

STUDENT RESEARCH GRANTS:
Chair: R. Harmon & Members J. Ludden, A. Parker, & Z. Pang

This Committee annually reviews the Student Research Grant applications and selects the recipients.

PUBLICATIONS: Chair N. Clauer & Members A. Herczeg & H. Masuda

The Publications Committee shall negotiate the IAGC member subscription rate to *Applied Geochemistry* with Elsevier in 3-year increments, annually select the recipient of the Hitchon Award for a distinguished paper in

Applied Geochemistry during the previous two years, and provide a nominate to Council for the Executive Editor of *Applied Geochemistry* should a vacancy arise.

NOMINATIONS: Chair S. Frape & N. Hinman, with two Regular IAGC Members to be selected by the Chair and endorsed by Council.
This Committee shall have the sole responsibility of preparing a slate of IAGC Officer and Council Member nominees every four year in advance of the Quadrennial Business Meeting.

PLANS & PROGRAM: Chair N. Hinman, Members M. Novak, & H. Masuda.

This Committee shall have five responsibilities, all of which should be undertaken with the view of enhancing the position of IAGC in the greater geochemistry community.

a. To develop ideas for IAGC for new initiatives to increase IAGC membership.
b. To generate long-range plans for meeting participation and sponsorship.
c. To assist the IAGC Working Group Leaders to develop Working Group meeting support applications.
d. To work cooperatively with the designated representatives of the Association of Applied Geochemistry (AAG) to develop and conduct the triennial AAG-IAGC International Applied Geochemistry Symposium.
e. To select the Organizing Committee for any conference or meeting that IAGC might undertake, excluding those of its Working Groups.

Attila Demény: Appointed Director, Hungarian Academy of Sciences Institute of Geochemistry



IAGC Secretary Attila Demény recently was named as the new Director of the Institute of Geochemistry of the Hungarian Academy of Sciences and commenced his duties in this position in August 2008.

Attila is a stable isotope geochemist who holds a PhD from the Eötvös Loránd University in Hungary and a DSc from the Hungarian Academy of Sciences. He is a Member of the Hungarian Geological Society, has served as Vice-Chairman, Chairman of the International Isotope Society and leader of the Hungarian working group of IGCP project 314, and as a member of the IAGC Council from 2000-04 and as IAGC Secretary from 2004-08. . In 2007, Attila received the Academy Award of Hungarian Academy of Sciences.

We wish Attila all the best for his new position and thank him for his years of service to the IAGC.

IAGC-Sponsored Sessions at IAGS 2009

IAGC will be sponsoring and organizing four thematic sessions at next year's International Applied Geochemistry Symposium, which will take place at the University of New Brunswick in Fredericton, New Brunswick, Canada, from 1-4 June 2009. IAGC members are encouraged to participate in this important conference, at which the IAGC Ingerson International Lecture for 2009 will be delivered and the IAGC awards for 2009 will be presented. Session details and descriptions are given below. The conveners will begin to develop their sessions soon. So, don't delay and please contact a convener if you are interested in making a contribution to one of these sessions. Abstracts of not more than 200 words in length, which can be sent by e-mail to "dlentz@unb.ca", will begin to be accepted on 15 January 2009. Please refer to the IAGS2009 web site: (http://www.unb.ca/conferences/IAGS2009/program.html) for further information.

1. Session Title: Groundwater and the Global Carbon Cycle
   Conveners: Gwen L. Macpherson - University of Kansas (glmac@ku.edu) & W. Berry Lyons - Ohio State University (lyons.142@osu.edu)
   Groundwater stores CO_2 in the form of dissolved inorganic carbon. The delivery rate of CO_2 to unconfined aquifers depends upon CO_2 partial pressures in soil, gas flow rate, water flow rate, and chemical reactions converting CO_2 (and carbonic acid) to alkalinity. CO_2 is released from produced groundwater, the amount of which depends upon the groundwater chemistry as well as the atmospheric CO_2 partial pressure. Papers submitted to this session can address either the delivery and storage of CO_2 in groundwater or the release of CO_2 from groundwater because of its removal from the ground.

2. Session Title: Current Capabilities and Future Prospects of Real-Time, In-Field Geochemical Analysis
   Conveners: Russell S. Harmon - North Carolina State University (rsharmon@ncsu.edu) & Nancy McMillan - New Mexico State University (nmcmilla@ad.nmsu.edu)
   A long-term goal in analytical geochemistry has been a capability for real-time analysis in the field. This capability is being realized gradually by technology developments in instrumentation that have occurred over the past decade. This session will highlight current and emerging analytical technologies for real-time field-portable geochemical analysis including but not limited to x-ray fluorescence analysis, chromatography and spectrometry techniques, optical spectroscopy, and scintillometry.

3. Session Title: Sources, Transport, and Fate of Trace and Toxic Elements in the Environment
   Conveners: Lee Ann Munk -University of Alaska-Anchorage (aflm@uaa.alaska.edu) & Sarah Fortier - Ohio State University (fortner.27@osu.edu)
   The environmental chemistry of trace and toxic elements is an important and growing field of research in applied geochemistry. The session will examine the sources, transport, and fate of trace and toxic elements in different environments, both natural settings and those areas impacted by anthropogenic activities. Of particular importance is understanding the processes that affect the release, transport, and uptake of these elements and making connections between the presence of trace elements in the environment and their toxicology.

4. Session Title: North American Soil Geochemical Landscapes Project
   Conveners: David Smith - US Geological Survey (dsmith@usgs.gov) & Andy Rencz - Geological Survey of Canada (rencz@NRCan.gc.ca)
   The focus of the session will be the North American Soil Geochemical Landscapes Project. This is a collaborative project among the Geological Survey of Canada, the Mexican Geological Survey, and the U.S. Geological Survey. The long-term goal of the project is to establish (i) a soil geochemical data base for North America and interpretive products based on the data base and (ii) an archive of samples for future investigators. This effort represents North America's contribution to the IUGS/IAGC Working Group on Global Geochemical Baselines.

Please see this announcement concerning the 24th International Association of Geochemistry Symposium (IAGS2009), which will be held in Fredericton, New Brunswick, during June 1-4, 2009. Your participation in this important IAG initiative is encouraged.

The Vernadsky Medal

IAGC Vernadsky Medal was presented to Bjørn Bølviken (Norwegian Geological Survey, Norway - retired), shown here accepting the Medal from IAGC`s Clemens Reimann



Bjørn Bølviken - 2008 IAGC Vernadsky Medalist

Prof. Bjørn Bølviken, 80, formerly with the Geological Survey of Norway, was the 2nd recipient of the IAGC's Vernadsky Medal. The IAGC Vernadsky Medal is awarded biennially to a single person for a distinguished record of scientific accomplishment in geochemistry over the course of a career. Dr. David Smith of the US Geological Survey and Leader of the IAGC Working Group on 'Global Geochemical Baselines' was the citationist for the award.

Bjørn Bølviken had a more than 50-year long career as a geochemist. He has published more than 100 scientific articles covering the full breadth of applied geochemistry, including a geochemical atlas. In 1954, he began a remarkable career with the Geological Survey of Norway (NGU) where, until 1980, he worked as a geochemist, and from 1980 to1991, he served as the Director of the Geochemistry Department. He retired from NGU in 1991, but has remained extremely active in geochemical research as a consultant to NGU to the present time. Bjørn spent leaves of absence from NGU as a United Nations expert on geochemical exploration in Ecuador from 1965 to1967 and as a Visiting Professor at Purdue University in Lafayette, Indiana (USA) from 1989 to 1990. He was Adjunct Professor of Applied Geochemistry at the Norwegian University of Science and Technology from 1991 to 1999. He has served as a superior mentor to many young geochemists both in Norway and other countries. Bjørn has authored or coauthored more than 100 scholarly works addressing a wide range of issues such as geochemical exploration for metals, medical geology, natural heavy-metal poisoning of soils, electrogeochemistry, regional geochemical mapping, and statistical treatment of geochemical data.

Among other achievements, he recognized the important connection between geochemistry and health long before most of his colleagues. He must be seen as one of the founding fathers of the emerging field of "Medical Geology". For many years, he advocated for low-density geochemistry and for geochemical mapping of the globe, before this became a recognized necessity. The IAGC sponsored 'Arthur Darnley Symposium' at IGC33 was thus a fitting venue for awarding the Vernadsky medal to Bjørn Bølviken.

Faure Awards

The IAGC Faure Award is given at each large (>150 participants), IAGC-sponsored conference, for the best student poster presentation. A student poster presentation is defined as one with a student as senior author that is presented at the meeting by the student. The award consists of a certificate, a cash prize of $250 (US), and the recipient is cited in the IAGC Newsletter and website. The Faure recipients for their posters presented at the GSA in Houston are Ryan Vannier and Laura Nielsen. A summary of their biographies follows.



Mr. Vannier has a broad background in the geological sciences. In 1997, he earned his degree in Hydrogeology from Western Michigan University. Following graduation, he moved to the Seattle area to work as a consulting hydrogeologist with an international environmental consulting agency.

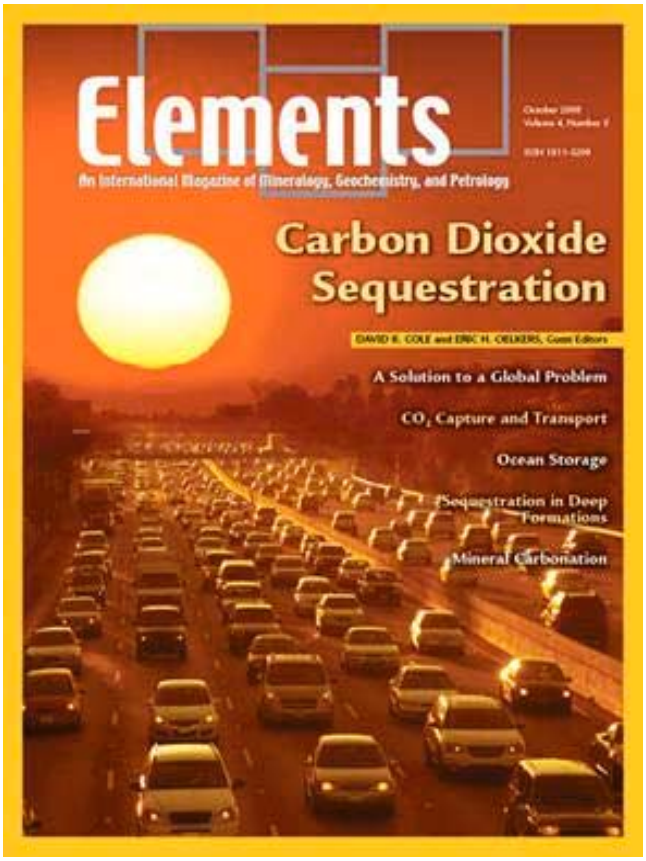
He developed skills in soil and groundwater assessments for a variety of contaminants and worked with contaminated site remediation hazardous materials assessments, environmental health and safety monitoring, and qualitative property assessment throughout the Pacific Northwest, Alaska and the South Pacific.

In 2005, he began work on his doctorate at Michigan State University in the Aqueous Environmental Geochemical Laboratories under advisor, Dr. David Long. His research is in geochemical reference conditions in inland lakes through high-resolution multi-element analysis of sediment cores. This project is funded by Michigan Department of Environmental Quality.



Laura Nielsen is a first year PhD student at UC Berkeley. A Summa Cum Laude graduate of Dartmouth College (2008), she majored in the Earth Sciences with a focus on geochemistry. She completed her senior honors thesis on the geochemistry of uranium species in groundwater at the Nuclear Metals, Inc. superfund site. She conducted this research as a student of Dr. Benjamin Bostick at Dartmouth. She is currently beginning research related to nuclear waste storage in Hanford, Washington. Her advisors are Dr. Donald DePaolo and Dr. John Christensen, the director and principal investigator of the Center for Isotope Geochemistry at Lawrence Berkeley Labs, respectively.

Elements: The next issue !



Obituary: Hitoshi Sakai



Prof. Hitoshi Sakai, internationally renowned geochemist, and former President of IAGC, died in Japan on 30 September 2008 after a protracted illness. He was 78 years old and is shown above with his wife, Sadako, at their 50th wedding anniversary. The geochemistry community mourns his passing.

Over the course of a long career, Hitoshi Sakai made important contributions to understanding the fractionation of stable isotopes and behavior of thermal fluids in various geological/geochemical environments. He served as Vice President of IAGC from 1988-92 and then as its President from 1992-96. Hitoshi began his professional career at Okayama University at Misasa, where he organized and hosted the 4th International Symposium on Water-Rock Interaction in 1983. He then moved to the Ocean Research Institute of the University of Tokyo in 1983 and undertook research worldwide on submarine hydrothermal systems. During this time he was Co-Chief Scientist of Leg 111 of the Ocean Drilling Program at the important Site 504B on the flank of the Costa Rica rift near the Galapagos spreading center, one focus of which was hydrothermal circulation in oceanic crust. Hitoshi then taught at Yamagata University, until his retirement in 1996.

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