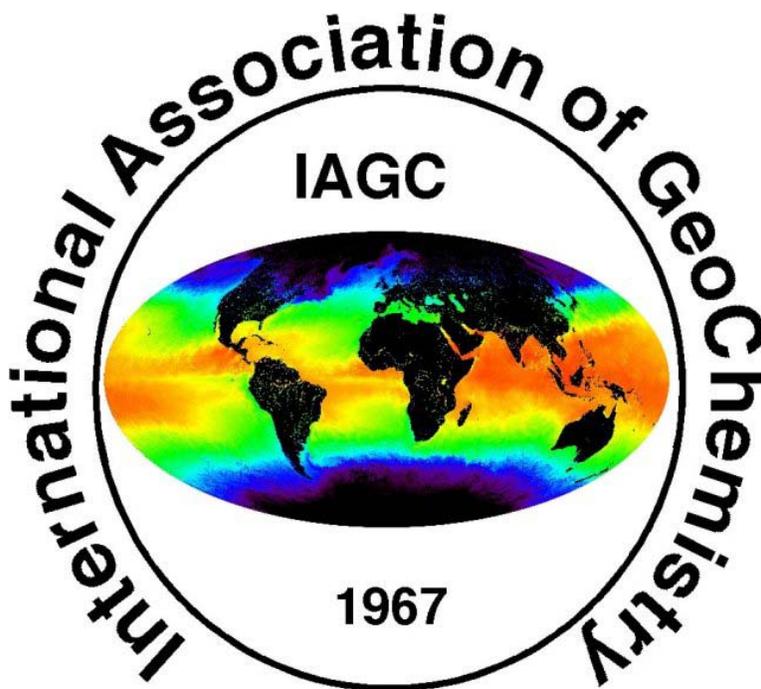


# Newsletter

of the  
International Association of GeoChemistry  
Number 53, November 2010



## \*\*\* Issue Highlights \*\*\*

- ✧ New IAGC Business Office Manager.....C Gardner
- ✧ Award Nominations.....30 Nov Deadline
- ✧ Membership Renewal.....Do It Now
- ✧ New IAGC Working Group.....Biogeochemistry
- ✧ IAGC on LinkedIn & Facebook.....Don't Be Left Out
- ✧ IAGC Plans CO<sub>2</sub> Sequestration Special Publication

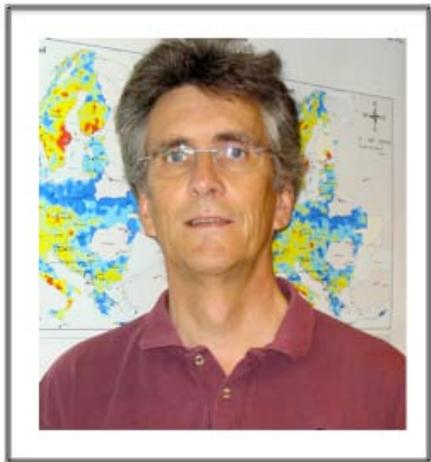
# Number 53, November 2010

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IAGC Award Nomination.....	30 November 2010
PhD Student Research Grant Applications.....	30 November 2010

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## FROM THE PRESIDENT



IAGC Members:

2010 is a year of change for the IAGC. Our long time President Russ Harmon is by now a still quite active Past President. Our Association has not only a new President, but also a new Vice-President (Rich Wanty) and 6 new Council Members (Ian Cartwright, Janet Herman, Thomas Kretschmar, Philippe Negrel, Martine Savard and Teodora Szcoacs). I want to start with thanking Russ for the long years of leadership he provided and the departed

Council Members (Norbet Clauer, Shaun Frape, Andrew Herczeg, Martin Novak, Andrew Parker, and Alakendra Roychoudhury) for the years of service to the IAGC. And, of course, I want to extend a warm welcome to Rich and the new Council Members. In addition, after more than a decade of service, Mel Gascoyne is no longer running our business office. Many thanks to Mel – he was probably “the face of the IAGC” to many of you. Mel’s tasks have been taken over by Chris Gardner (christopherbgardner@gmail.com), who will be working in close cooperation with our Treasurer Berry Lyons. We are just now in the phase of restructuring the diverse committees that the IAGC has and should be fully functioning by the time you read these lines. The new IAGC web site will follow shortly thereafter.

One change that you will notice in the near future is that no longer will Elsevier collect your membership dues. Instead, that will be done by the IAGC Business Office, separately from your subscription to *Applied Geochemistry*. You will be able to use your credit card and even PayPal to pay your dues. A very substantial part of these dues presently go into your subscription of

Elements. Even with an additional subscription of *Applied Geochemistry*, we continue to be one of the “least expensive” learned societies on the market in terms of membership dues and journal subscription. Elsevier informed us recently that fewer and fewer members continue to have a personal subscription of *Applied Geochemistry* (only 138 at present). As one consequence, it is likely that there will be no longer any printed version of *Applied Geochemistry* available quite soon, which I personally regret very much – personally I do not like to read the papers either on the computer or in the form of a print-out getting lost within days of printing it.

About six months ago, Elsevier informed the IAGC that they had decided to cancel our contract with them for the publication of the Association journal *Applied Geochemistry* at the end of this year so that a new business model (internet publication, bundle subscriptions to libraries) could be implemented. We are not the only association affected by this new Elsevier business model. Lately, several contracts with learned societies that use Elsevier as “their” publisher have been cancelled. The core issue with this situation is that Elsevier owns the rights to the name *Applied Geochemistry*, thus we cannot just walk away and look for a new publisher for the society journal. Some of you may recall that the Association of Applied Geochemistry (then Association of Exploration Geochemistry) “lost” their *Journal of Geochemical Exploration* as the consequence of an unsuccessful contact renewal negotiation with Elsevier. Initial indications were that this new situation had the potential to result in a significant royalty reduction to IAGC since, at present, IAGC is almost completely dependent on these royalties as they amount to about 2/3 of our yearly budget. Negotiations with Elsevier

over the new contract led by Russ Harmon began in the late spring, continued through the summer, and were turned over to me in September. Since then Ron Fuge and I have been in discussion with Elsevier in order to reach an agreement that is acceptable to both parties. In late October, Elsevier proposed to the IAGC an offer whose terms are generally favorable. This offer is being taken to the IAGC Board for its endorsement as this issue of the Newsletter goes to press. I will keep you informed about these developments, either here in the Newsletter, on our member page in *Elements*, and on the new IAGC web site (as soon as it is operational). Whatever the outcome of these negotiations, it is clear that we will need to restructure the IAGC in the coming years to become financially more independent. Russ has started to work on the establishment of an IAGC Foundation, but that will take time. Good ideas are really needed, so please contact either Russ, Tom, Berry or me if you have suggestions or just want to share your thoughts.

To end on a positive note: The WRI Working Group had a very successful conference in Guanajuato, Mexico this past August and two other Working Groups (AIG& GES) have their conferences in 2011 and a new working group in Biogeochemistry has been established and will have its conference in 2012. The very active working groups for many years have been one of the real assets of the IAGC, they provide excellent chances for interactions with colleagues having similar interests. These conferences at still not as large as many others, in my eyes these somewhat smaller conferences offer the better experience in terms of networking and discussions, and last but not least, for making new friends.

The 9<sup>th</sup> International Symposium on Geochemistry of the Earth's surface will take place in Boulder, Colorado in June 2011 (website: <http://instaar.colorado.edu/GES-9/>) and the 9<sup>th</sup> AIG (International Symposium on Applied Isotope Geochemistry) will be held in Tarragona (Spain) from 19-23 Sept. 2011 – a website should be up soon. You will have a chance to meet me at the latter.

*Clemens Reimann  
Trondheim*

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## ASSOCIATION NEWS

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### WELCOME CHRIS !

Chris Gardner assumed the responsibility for the operation and management of the IAGC Business Office in September 2010, following Mel Gascoyne's retirement (see Newsletter #52). Chris received a BA in geology from Miami University (Oxford, Ohio, USA) in 2001, followed by a MS in Geological Sciences from The Ohio State University (Columbus, Ohio, USA) in 2003.



Chris' Master's research focused on the geochemistry of trace metal inputs into an urban river from an urban highway "sewershed" after precipitation events. Following graduate school, he served as the Information Manager for the Long Term Ecological Research (LTER) program for the McMurdo Dry Valleys, Antarctica. In this position, he continued to pursue his

interest in geochemistry through four field deployments to Antarctica to collect geochemical samples, perform sample analyses and oversee sample tracking procedures. Chris was also responsible for the large relational database containing all the data collected by the LTER since its inception in 1993, during which time he designed and maintained the website and cyberinfrastructure for the project. In early 2009, he accepted a research position in the private sector where he worked as a geochemist on a variety of projects relating to environmental restoration, long-term geochemical monitoring at active carbon sequestration sites, and environmental technology verification for the US Environmental Protection Agency. Chris is currently pursuing a PhD in geochemistry at Ohio State University, where he is a Senior Research Associate in the School of Earth Sciences and concurrently serving as the Business Office Manager for the IAGC and working closely with the IAGC Treasurer, Berry Lyons. Since Chris took responsibility for the Business Office in September, he has been working to modernize the Association's operation and developing ways to better communicate with the membership. If you have any questions for Chris, ideas about how to improve the operation of the Business Office, or just wish to introduce yourself, please feel free to contact him by phone at 1-614-688-7400 or by e-mail at [iageochemistry@gmail.com](mailto:iageochemistry@gmail.com). Please see the last page of this newsletter for his full contact information.

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## CALL FOR IAGC 2011 AWARD NOMINATIONS

Now is the time for 2011 IAGC award nominations!

The window of opportunity for nomination submission will extend through 30 November. Nominations should be sent by e-mail to IAGC Secretary Tom Bullen ([tdbullen@usgs.gov](mailto:tdbullen@usgs.gov)).

Awards to be bestowed in 2011 are the IAGC Distinguished Service Award, IAGC Fellow, and IAGC Certificate of Recognition. Please note that no current IAGC Officer, Council Member, Standing Committee Member, Working Group Leader, the Journal Executive Editor, or Business Office Manager may be nominated for an award.

Nominations for the *Distinguished Service Award* shall consist of an e-mail nomination not more than one page in length from any IAGC member in good standing that describes why the nominee is deserving of the award. The nomination should contain the suggested citation text.

Nominations for *IAGC Fellow* shall consist of an e-mail of nomination of one paragraph from any IAGC member in good standing that describes why the nominee is deserving of this special honor. The nomination should contain the suggested citation text.

Nominations for *IAGC Certificate of Recognition* shall consist of an e-mail of nomination of a single short paragraph in length that explains why the nominee is deserving of IAGC recognition as follows: (i) to any scientist for outstanding scientific accomplishment in a particular area of

geochemistry, (ii) to other geochemists for excellence in teaching or public service, or (iii) to an IAGC member for meritorious service to the Association or the international geochemistry community. The nomination should contain the suggested citation text.

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## CALL FOR IAGC 2011 PHD STUDENT RESEARCH GRANT APPLICATIONS

Up to three *IAGC Student Research Grants* may be awarded annually, based upon receipt of deserving proposals sent by e-mail to the IAGC Secretary prior to 30 November 2010.

The objective of the IAGC Student Research Grant program is to assist PhD students in geochemistry with undertaking and acquiring geochemical data and analyses in support of the student's Dissertation research. IAGC Student Research Award consist of a grant of up to \$3000 (US) to support the analytical and data acquisition needs of a geochemistry PhD student and a 1-year membership to IAGC for the year following receipt of the award. The proposal form, which must be completed in full and signed by the PhD student's research advisor, is available from Business Office Manager Chris Gardner ([iageochemistry@gmail.com](mailto:iageochemistry@gmail.com))

## NEW BIOGEOCHEMISTRY WORKING GROUP

IAGC is pleased to announce a new Working Group in Biogeochemistry. A petition prepared by IAGC Member Martin Novak and supported by more than 20 IAGC members to form a new Working Group on Biogeochemistry was approved by

the IAGC Council during the August business meeting in Guanajuato. This new Working Group will be focused on all aspects of modern biogeochemical research, including cycling of nutrients, toxic elements and other environmentally relevant substances in ecosystems. Research aimed at sustainable management of soil resources and adaptive measures in response to global climate change also will be covered.

As its primary activity, the Working Group on Biogeochemistry will organize an international symposium on ecosystem biogeochemical behavior every three years, continuing the tradition of already existing symposia, known as BIOGEOMON. This series of meetings originated in 1987 in Prague, Czech Republic. The founder of the BIOGEOMON concept was Prof. Tomas Paces of the Czech Geological Survey, an internationally recognized environmental scientist, who, two decades earlier, was a member of the group that formed the IAGC Working Group on Water-Rock Interaction. (WRI). It is expected that the Biogeochemistry meetings, the first of which is planned for 2012 in the United States, will routinely draw in excess of 300 participants. So, stay tuned during 2011 for more information. IAGC members wanting to be placed on the mailing list for the 2012 Biogeochemistry Working Group meeting in 2012 should send an e-mail message to Martin Novak (*martin.novak@geology.cz*).

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## UPGRADES TO IAGC's WEB PRESENCE

### 1 - THE IAGC WEBSITE

The IAGC website is being totally redesigned (complete with a new domain name) to be more up-to-date, dynamic,

and useful for our members. The new web site will include dedicated space for each of the IAGC Working Groups to communicate, conduct business, share photographs, etc. The new site is on track to go *live* in the next couple months, and everyone will be notified with the details via email as soon as this happens.

### IAGC Website Photo Request

Although the new website is coming along, it's looking pretty sparse. Photographs are needed that illustrate the diversity of the work performed by IAGC members. If you'd like to contribute an image to be included on the website, please send a maximum of 2 photos (at original resolution) to Chris Gardner at the new IAGC Business Office address: *iageochemistry@gmail.com*. The following information is requested: (i) the photographer credit, (ii) the location the photos were taken, and (iii) a very brief description of the project (if applicable). Thanks!

*From: Chris Gardner  
IAGC Business Office Manager*

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### 2 - IAGC ON FACEBOOK.COM

On 25 September 2010, 15846 days after IAGC was founded on 8 May 1967, the IAGC *Facebook* page went "public". The number 15846 is the same number in the minor planet "15846 Billfyfe", named after the eminent geochemist, William Sefton Fyfe. Although a New Zealander by birth, Dr. Fyfe is Professor Emeritus in the Department of Earth Sciences at the University of Western Ontario, Canada, and of course Canada is the home country of the IAGC.

The *Facebook* page will contact “fans” about upcoming meetings, availability of newsletters, and other relevant opportunities and events. There is the opportunity for discussion, links to the IAGC website and other important geochemical connections, and a place to post digital images in “albums”. We hope to post virtual fieldtrips soon, beginning with some of the International Water-Rock Interaction Conference field trips. We welcome your input!

If you have a *Facebook* account, please become our “fan”! Search for us under the full name of the organization (International Association of GeoChemistry), as the acronym is not unique to our organization.

*From: Gwen Macpherson (Associate Professor of Geochemisry at the University of Kansas) with input from graduate students Aimee Scheffer and Misha Tsy-pin.*

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### 3 - IAGC ON LINKEDIN

IAGC is pleased to announce the launch of a new LinkedIn website, which geochemists can use to exchange professional information. This networking site can be used to announce upcoming meetings, update colleagues on research and professional activities, post job announcements and resumes, ask questions about geochemistry, and any other items of interest to the geochemistry community. Those who subscribe are sent a notice whenever something new is posted and the person making the posting requests that a notice be sent. To date, we have 31 members in our group. To join, simply visit the group site:

<http://www.linkedin.com/groups?mostPopular=&gid=3065837>

where IAGC and related activities will be posted. We hope this networking tool will grow with the Association and provide a valuable means of communication among Association members and other geochemists.

Visit the website and join the group!

*From: Nancy Hinman  
Chair, IAGC Statutes, Plans & Program  
Committee*

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### MEMBERSHIP RENEWAL & IAGC AWARD FUNDRAISING

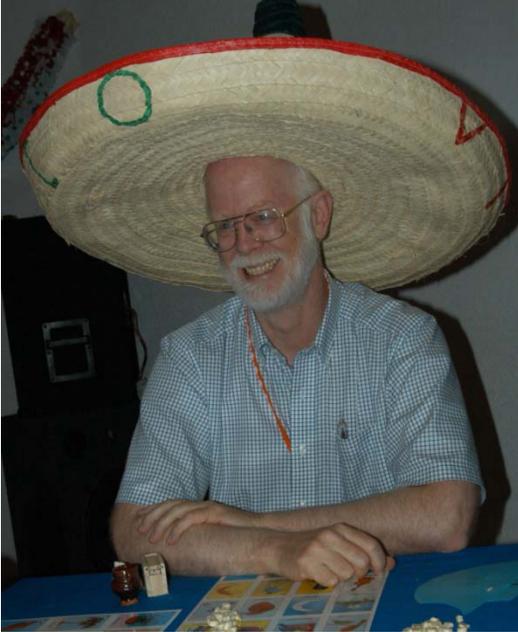
As you will see from the Membership renewal form at the back of this Newsletter, IAGC has embarked two new initiatives, one directed toward membership and the other toward charitable giving in support of the IAGC awards program.

From 2011, IAGC membership can be renewed for a single year and in 2012 and thereafter renewal will be possible for a single year or for multiples years. Stayed tuned for details in future Newsletters. Also, multiple options are being offered for dues payment: personal check, credit card, or by PayPal account.

One of the many consequences of the current global economic downturn has directly affected IAGC. For many years, the return on IAGC investments produced the income required for the IAGC awards that carry a cash prize. No longer is that true. Thus, the IAGC Council approved a fundraising initiative for this purpose at the Guanajuato business meeting. So, when you renew your membership for 2011, please refer to Section 2 of the Membership Form and make a charitable gift (\$10 US or more) to the award program of your choice.

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## IAGC INTERNATIONAL INGERSON LECTURER VISITS EUROPE



Darrel Kirk Nordstrom, this year's IAGC International Ingerson Lecturer, was invited to Europe by the Norwegian Geological Survey (NGU) to present the International Ingerson Lecture in NGU's Goldschmidt-lecture series in September 2010. NGU informed the network of the European Geological Surveys (EuroGeoSurveys - EGS) that Dr. Nordstrom would be in Europe and available for further talks early in 2010. In response, the French Geological Survey (BRGM) reacted and invited Dr. Nordstrom to Orleans for a whole series of talks. On the way there, Dr. Nordstrom also visited Freiburg, Germany and gave another Ingerson International Lecturer presentation at the Technical University in Freiburg.

All three organizations were quite excited to have Dr. Nordstrom as a guest. At NGU Dr. Nordstrom delivered two lectures on one

day, at BRGM several lectures in 4 days. Here at NGU, we used the opportunity for exiting discussions of ongoing projects and common interests with Dr. Nordstrom. Even with "only" three stops the trip was a great success and I would like to thank Dr. Nordstrom and his employer, the U.S. Geological Survey for his time and effort. As IAGC President, I wonder, however, whether there are really only two Geological Surveys left in Europe where the directors have some real interest in science and thus use this unique opportunity to invite an excellent lecturer and scientist for a short visit.

*From: Clemens Reimann  
IAGC President*

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## IAGC PLANS SPECIAL PUBLICATION ON GEOCHEMICAL ASPECTS OF CO<sub>2</sub> STORAGE

Subsurface storage of CO<sub>2</sub> in deep geologic formations is under consideration as an international strategy to reduce man-made increases in atmospheric CO<sub>2</sub> concentration. In concept, CO<sub>2</sub> would be separated from industrial flue gas, captured, and injected into geologic reservoirs for long-term storage. Feasibility studies and field pilot tests are presently underway. The notion of storing CO<sub>2</sub> in geologic formations presents a wide range of challenges that require geochemical solutions. To address these issues, IAGC is planning a special publication on the geochemistry of geologic CO<sub>2</sub> storage. Leading experts from many countries will contribute to the various aspects of this important topic. The purpose of the volume is to synthesize the most innovative and relevant geochemical research in this rapidly evolving field, and then address the path forward. It is hoped

that a compilation of important thinking and work in this area will be a useful tool for researchers as geologic carbon storage advances towards industrial implementation on a global scale.

There are a number of scenarios in which geochemistry plays a major role in understanding and implementing geologic CO<sub>2</sub> storage. The first is fluid-rock interaction. A variety of deep subsurface environments such as depleted oil and gas fields, deep brine aquifers, un-mineable coal seams, and basaltic rock reservoirs, are presently being considered for CO<sub>2</sub> storage. The wide range in mineral compositions and in-situ fluid compositions of potential reservoirs necessitates understanding and characterizing a number of supercritical CO<sub>2</sub>-fluid-rock interactions. Understanding geochemical mechanisms by which CO<sub>2</sub> might be permanently immobilized in the storage reservoir through solubility and/or mineral trapping is a major factor for estimating storage capacity and permanence. Because supercritical CO<sub>2</sub> is buoyant, geochemical interactions with overlying confining mudrocks and other fine-grained lithologies play an important role in the ability of a formation to store supercritical CO<sub>2</sub> over long time periods. Other areas of interest include the consequences of injecting CO<sub>2</sub> containing flue gas impurities (including H<sub>2</sub>S), geochemical reactions that alter reservoir properties and affect injection efficiency, and geochemical interactions along existing fault planes, fractures, and well casings that potentially could act as preferential pathways for the CO<sub>2</sub> leakage.

In addition to geochemical processes in the deep storage reservoir, it is also relevant to address the geochemistry of CO<sub>2</sub> gas in the near-surface. This is important for developing best practices for monitoring carbon storage sites for leakage and protecting natural resources such as shallow

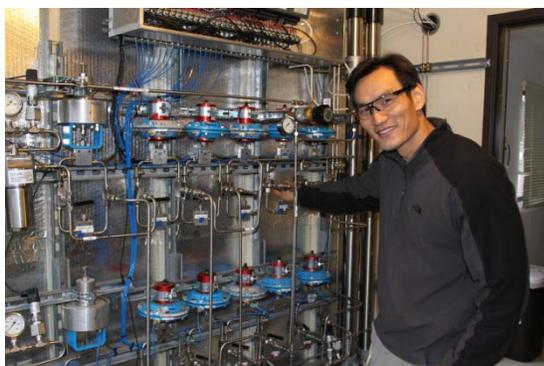
drinking water and the biosphere. Topics for geochemical research in this area include but are not restricted to; (i) mobilization and transport of toxic organics, including BTEX and PAHs, by supercritical CO<sub>2</sub> from the storage reservoir to shallow groundwater (ii) mobilization of metals in potable ground water, (iii) geochemical fingerprinting of sequestered CO<sub>2</sub> using both natural and introduced tracers, (iv) characterizing geochemical background variability above storage sites, and (v) microbial carbon cycling. All of these topics are important to our understanding of how the surrounding environment might react to a CO<sub>2</sub> leak.

Integrating carbon sequestration with energy production is another area where cutting-edge geochemical studies are needed. The use of CO<sub>2</sub> for enhanced oil recovery (EOR) and its potential use for enhanced coal-bed methane production has not only demonstrated CO<sub>2</sub> as a useful commodity for increasing oil and gas production, but it has also indicated that when introduced into the subsurface, CO<sub>2</sub> is stored via natural processes. In addition, the realization that CO<sub>2</sub> possesses useful physiochemical properties for mining heat from geothermal areas is a topic of interest. Energy security, policy decisions and public acceptance are key elements required for integrating carbon capture and storage into our political, economic and social structures. We as geochemists must know how to effectively communicate to policy-makers and the public to ensure that our research is readily accessible to a general audience.

These are only some of the many geochemical aspects that will be addressed by this IAGC special publication, which will emphasize innovative approaches presently being taken, or under consideration, that will move this science into the future. These approaches may include investigations of natural and industrial analogues, laboratory

simulations, numerical modeling, and field injection tests. A number of leading earth scientists will be asked to contribute on their topics of expertise.

Researchers interested in offering a paper to the volume are invited to submit for consideration an abstract or brief description of the potential contribution to Katherine Romanak, Gulf Coast Carbon Center, Bureau of Economic Geology, Jackson School of Geosciences, The University of Texas at Austin, Austin, TX 78712 USA (katherine.romanak@beg.utexas.edu).



Dr. Jiemin Lu, of The University of Texas at Austin's Gulf Coast Carbon Center, samples deep fluids for geochemical analysis during a DOE NETL Southeast Carbon Partnership CO<sub>2</sub> pilot injection experiment near Natchez, Mississippi.

*From: Katherine Romanak  
Austin, Texas, USA*



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## 2010 IAGC BUSINESS MEETING

As mandated by the IAGC Statutes and By-Laws, a meeting of the IAGC Officers and Council was held in Guanajuato, Mexico in on 17 August 2010 during the Water-Rock XIII Symposium. The agenda for this meeting is given below. Present at the meeting were current and incoming Officers and Council Members: Russell Harmon – President (2008-10), Rich Wanty - Vice President (2010-12), Tom Bullen – Secretary (2008-12), Shaun Frape – Council (2004-10), Martin Novak – Council (2004-10), Nancy Hinman – Council (2008-12), and Zhonghe Pang – Council (2008-12), Ian Cartwright - Council (2010-12), Thomas Kretzschmar - Council (2010-12), and Teodóra Szócs - Council (2010-12). The 2009 Annual Reports from the Officers, Standing Committees, Business Office, Journal Executive Editor and Working Groups were reviewed and approved, with one exception. The Working Group on Urban Geochemistry failed to file the required annual report for 2009. If this report demonstrating the vitality and activity of the Working Group is active is not received by 1 June 2010, and accepted by Council, the Working Group will be put on probation and, ultimately, may be disbanded. Then, the meeting reviewed IAGC activities planned for 2010, deferring any decision about Working Group meeting funding until a new agreement was reached with Elsevier over the publication of Applied Geochemistry and endorsed by Council. As described below in a separate item, the proposal to create a new IAGC Working Group was endorsed unanimously. The remainder of the meeting was given to a discussion of the situation with Elsevier and the renewal of the contract, with Council formally approving the response prepared by

the Officers to the July contract offer from Elsevier, which was to be sent to Elsevier immediately after the business meeting, understanding that this was but another step in the negotiation process. The final item of business was the formal election of the new slate of IAGC Officers and Council Members that had been brought forward by the Nominations Committee and tentatively endorsed by the Board earlier in the year. The full minutes of the Guanajuato business meeting will be posted on the IAGC web site later this year

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## UPCOMING MEETINGS

### In 2010

#### *GSA ANNUAL MEETING*

As an Affiliated Society, IAGC continued its strong presence and involvement in the **Geological Society of America Annual Meeting**, which was held in Denver, CO (USA) from 31 October - 3 November 2010. IAGC sponsored four technical theme sessions at this international conference:

Session T16. *Geochemical and Isotopic Evolution of Sedimentary and Crystalline Formation Brines*: co-chaired by IAGC Members Orfan Shouakar-Stash and Randy L. Stotler.

Description: Although formation brines have been extensively investigated, evolutionary pathways are still disputed. This session will explore new findings and evaluate different evolutionary pathways for brines based on geochemical and isotopic evidence.

Session T37. *Environmental Geochemistry for Modern Mining*: co-chaired by IAGC

Members Robert R. Seal and LeeAnn Munk.

Description: This session encourages contributions on baseline characterization, geochemical characteristics of mine wastes, ecological and human health effects associated with mine waste and drainage, pit lake geochemistry, and case studies.

Session T51. *Neutral Mine Drainage: Release, Transport, and Attenuation of Metals and Trace Elements in Circumneutral Mining Environments*: co-chaired by IAGC Member Matthew B.J. Lindsay, David W. Blowes, and IAGC Member D. Kirk Nordstrom.

Description: This session will center on the geochemistry, mineralogy and microbiology of metals and trace elements in mining-impacted environments characterized by circumneutral-pH conditions. Topics may range from mine waste characterization to down-gradient transport and attenuation processes.

T63. *Sources, Transport, and Fate of Trace and Toxic Elements in the Environment*: co-chaired by IAGC Members LeeAnn Munk, David T. Long, and W. Berry Lyons.

Description: Relevant research dealing with trace and potentially toxic elements in the environment. Basic and applied research topics on trace elements in water, sediment, and rocks that relate to sources, transport and fate are encouraged.

A big expression of THANKS! to Orfan Shoukar-Stasch, Randy Stotler, Robert Seal, LeeAnn Munk, Matthew Lindsay, Kirk Nordstrom, Dave Long, and Berry Lyons for this important geochemical community service.

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### In 2011

#### *GES-9*

The **9<sup>th</sup> International Symposium on the Geochemistry of the Earth's Surface (GES-9)** will be held from 3-7 June 2011 at the University of Colorado in Boulder, CO (USA). The 9th International

Symposium on the Geochemistry of the Earth's Surface continues a triennial series begun 25 years ago by the IAGC Working Group on the Geochemistry of the Earth's Surface (GES). These symposia cover the geochemistry of rock, water, air and life on the surface of the Earth, in both natural and perturbed systems. The 2011 meeting theme Geochemical Landscapes in the Anthropocene - highlights human participation, both passive and active, in geochemical systems. The meeting will also serve as a gathering point for researchers interested in critical zone science. The University of Colorado campus is a leader in environmental research, and is renowned for its beautiful setting at the foot of the Colorado Front Range.

The meeting format is intended to foster scientific growth and dialogue. Invited speakers will give in-depth talks on conference themes in daily plenary sessions. Conference delegates will bring posters to stimulate discussion during focused poster sessions. A half-day mid-conference break can be used to explore the local environment on your own, or to take an optional field trip to the Boulder Creek Critical Zone Observatory (<http://czo.colorado.edu/>) or to Rocky Mountain National Park. These trips will take participants into the Colorado Front Range and will emphasize research on weathering and biogeochemistry.

GES-9 Conference themes:

- Microbial Geochemistry
- Environmental Geochemistry
- Organic Contaminants
- Critical Zone Processes
- Rivers as Landscape Integrators
- Global Geochemical Cycles

GES-9 Schedule:

June 2010: Website opens  
 October 2010: Registration opens  
 February 2011: Deadline for booking accommodations  
 February 2011: Deadline for early registration and abstract submission  
 April 2011: Deadline for standard registration  
 June 1-2, 2011: International Critical Zone students symposium  
 June 3-7, 2011: GES-9 Symposium

Abstract submission and registration will be done through the conference website starting November 2010.

Further details are on the conference web site (<http://instaar.colorado.edu/GES-9/>).

Contact Information:

Suzanne Anderson, INSTAAR & Department of Geography, University of Colorado, Boulder, CO 80309, USA.E-mail: [suzanne.anderson@colorado.edu](mailto:suzanne.anderson@colorado.edu).

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**AIG-9**

The next **International Symposium on Applied Isotope Geochemistry (AIG-9)** will be held in Spain, from 19-23 September 2011. The venue for the meeting will be the city of Tarragona, Spain, located on the Mediterranean, in the heart of the Costa Daurada (< 100 km away from Barcelona). Tarragona has many monuments that survive from the ancient Roman era, including the Tarraco archaeological complex, one of UNESCO's World Heritage Sites. Following the format of previous AIG meetings, the organizers (Dr. Albert Soler et al.) are planning to have the accommodation, conference sessions, and lunch in the same venue - Hotel Imperial Tarraco, and to hold a mid-conference field trip.

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## FEG 2011

The **Frontiers in Environmental Geoscience Conference** will be held in Aberystwyth, Wales (UK) from 21-23 June 2011. This meeting will be the main Annual Meeting of the Mineralogical Society of Great Britain and Northern Ireland, and aims to cover a number of 'hot topics' that will be of interest to those working in mineralogy, environmental mineralogy, waste management and contamination clean-up. Some 120 to 150 participants are expected for the conference. Technical sessions include the following:

1. Characterization and impacts of nano- and micro-particles in both natural and contaminated environments
2. Mine drainage: geochemistry, mineralogy, and remediation
3. Shining synchrotron light on natural environments: metals, microbes, and minerals
4. Geochemical and biogeochemical behavior of radionuclides and toxic elements in the environment
6. Environmental impacts of volcanic particles
7. Biologic mineralization: paleoarchives, natural functional materials, and bacterial mineralization processes

Interested IAGC members are cordially invited to attend. Information and registration details can be found on the web page of the Mineralogical Society: (<http://www.minersoc.org/pages/meetings/frontiers-2011/frontiers-2011.html>) or from Nick Pearce ([njp@aber.ac.uk](mailto:njp@aber.ac.uk)).

### News Flash

The latest IUGS Bulletin is available at:  
<http://www.iugs.org/>

## GEOMED 2011

Now, the **4th International Conference on Medical Geology (GeoMed2011)** will be held 20-25 September 2011 in Bari, Italy.

This meeting is being organised by Prof. Saverio Fiore, Institute of Methodologies for Environmental Analysis, National Research Council, Italy. Organisation of the meeting is progressing excellently and the web-site and advertising for the conference are already up and running.

The sessions proposed include topics of mutual interest to IAGC as well as IMGA:

- Air, Soil & Water Pollution & Quality
- Minerals & Environment
- Environmental Toxicology & Epidemiology
- Biominerals & Biomaterials
- Risk Assessment & Communication in Medical Geology

Further details are on the conference web site: (<http://www.geomed2011.it/>).

### Contacting IAGC or Renewing Your Membership for 2011:

To renew your IAGC membership, subscribe to or track down errant issues of *Applied Geochemistry* or *Elements*, or to send in comments, etc., contact:

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# WATER-ROCK INTERACTION XIII

*Guanajuato (Mexico)*



Every three years, the IAGC Working Group on Water Rock Interaction meets for a week of science and collegiality in a different area of the world. This year, for the first time, a WRI symposium was held in Latin America. The **13<sup>th</sup> Symposium on Water-Rock Interaction** was held from 16-20 August 2010 at the Real de Minas hotel in the UNESCO World Heritage city of Guanajuato, Mexico. A full conference report will appear in the next issue of the Newsletter. This issue presents some photographic highlights from the meeting.



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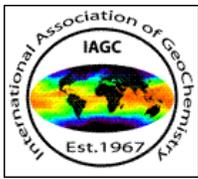
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# International Association of GeoChemistry (IAGC)

## 2011 Membership Form

iageochemistry@gmail.com

### 1. Membership

I'm a New Member -or-  I'm a Renewing Member: Member# \_\_\_\_\_

Membership	Cost (USD)
IAGC Membership	\$25 / yr

**1. Sub Total** \$ \_\_\_\_\_

### 2. Charitable Giving

I would like to make a tax-deductible donation in the following amount (in USD)\*:

**A.** Ebelmen Award \$ \_\_\_\_\_ **C.** Kharaka Award \$ \_\_\_\_\_

**B.** Distinguished Service Award \$ \_\_\_\_\_ **D.** Where most needed \$ \_\_\_\_\_

**2. Sub Total** \$ \_\_\_\_\_

### 3. Journal Subscription

At this time (October 2010), IAGC and Elsevier do not yet have a new contract in place for 2011. However, we have been informed that, going forward, *Applied Geochemistry* will be available to members **online only**, at a cost in 2011 of \$70 for professionals and \$52.50 for students. If you are interested in an online subscription to *Applied Geochemistry* for 2011, check the box below and IAGC will contact you when the new contract is in place.

**Yes** – Please have IAGC contact me later for an online subscription to *Applied Geochemistry*

### 4. Contact Information *(all fields required)*

Title: \_\_\_\_\_

First Name: \_\_\_\_\_

Middle Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Institution: \_\_\_\_\_

Department: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State/Prov. \_\_\_\_\_

Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

### 5. Demographic Information

*Please help us better understand our membership. This information will help us better allocate resources and improve communication with our members.*

How do you prefer to receive IAGC communication?

Email  Snail Mail  Social Network (*Facebook, LinkedIn*)  Other: \_\_\_\_\_

Profession:

Student  Faculty  Post-doc  
 Gov't Sector  Private Sector  Other \_\_\_\_\_

In what year were you born? \_\_\_\_\_

Please list Working Group meetings you've attended:

\_\_\_\_\_  
\_\_\_\_\_

What is your sub-discipline/personal interest in geochemistry?

\_\_\_\_\_  
\_\_\_\_\_

## **6. Payment** *(mail or fax to Business Office below)*

**a)**  Check *(payable to International Assoc. of Geochemistry)*    **b)**  Credit Card, Debit Card, or eCheck

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Mail this completed form along with your check to the IAGC Business Office (address below)

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