



# Newsletter

of the

# International Association of GeoChemistry

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## Society Partnership – IAGC and the EAG

We are happy to report that the IAGC now has a Memorandum of Understanding with the European Association of Geochemistry (EAG). IAGC members now enjoy the same terms and conditions for registering at European Goldschmidt conferences as EAG members. EAG members will in turn receive IAGC member registration rates when attending IAGC Working Group meetings such as Water Rock Interaction 15 (WRI-15) in Évora, Portugal, 16-21 October 2016.

<http://www.eag.eu.com/about/partnerships/iagc/>

## Association News

### 2016 IAGC Awards Nominations Extended

The IAGC will continue accepting award nominations for 2016 **through December 31**.

**The Vernadsky Medal** - awarded for a distinguished record of scientific accomplishment in geochemistry over the course of a career:

<http://www.iagc-society.org/vernadsky.html>

**The Kharaka Award** - bestowed to two deserving scientists (which may include senior graduate students) from developing countries. The award consists of a framed certificate plus an IAGC membership and *Applied Geochemistry* subscription for a term of three years.

[http://www.iagc-society.org/kharaka\\_award.html](http://www.iagc-society.org/kharaka_award.html)

**The Harmon Distinguished Service Award** - bestowed on a deserving candidate to recognize outstanding service by an IAGC member to the Association or to the geochemical community that greatly exceeds the normal expectations of voluntary service:

[http://www.iagc-society.org/distinguished\\_service.html](http://www.iagc-society.org/distinguished_service.html)

**IAGC Fellow** - bestowed to a scientist who has made significant contributions to the field of geochemistry:

[http://www.iagc-society.org/iagc\\_fellows.html](http://www.iagc-society.org/iagc_fellows.html)

**Certificate of Recognition** - awarded to IAGC Members for outstanding scientific accomplishment in a particular area of geochemistry, for excellence in teaching or public service, or for meritorious service to the Association or the international geochemistry community:

[http://www.iagc-society.org/certificate\\_recognition.html](http://www.iagc-society.org/certificate_recognition.html)

## GSA 2016 Session Proposals

The next Geological Society of America Annual meeting will be in Denver, Colorado, 25-28 September, 2016. The IAGC routinely sponsors several sessions at GSA, so if you have an idea for a session for next year, please send a proposal / description of the session to the IAGC Business Office Manager ([IAGeoChemistry@gmail.com](mailto:IAGeoChemistry@gmail.com)). The IAGC council will then approve that session prior to official IAGC sponsorship. The session proposal deadline is 1 February, 2016.

## Renew Your Membership for 2016!

Don't forget to renew your IAGC membership for 2016 by January so you don't miss any issues of *Elements* magazine! Our annual membership fee is STILL only \$25 and includes a hard copy subscription to *Elements* as well as online access. Membership also rewards you with lower cost registration rates at IAGC-sponsored working group conferences. Online access to our journal, *Applied Geochemistry*, is also available.

[Renew with a credit card](#)

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[Check your membership status](#)

## Membership Demographics

We have 376 dues-paying IAGC members for 2015. Last year at this time, that number was only 650. This large decrease in membership is the result of gaining new members from the AIG-10 (138 new members) and WRI-14 (209 members) working group meetings in 2013. The number of continuous annual IAGC members remains around 350 each year. If you pay IAGC dues at a working group meeting, please consider continuing your membership in odd years, it's only \$25!

## Presentation of 2014 and 2015 Awards

We make every effort to present our awards at international meetings in the year the awards are announced. This year, former IAGC Secretary Tom Bullen presented **Sophie Opfergelt** her 2014 Ebelmen Award at Goldschmidt2015 in August in Prague, Czech Republic:



(Tom Bullen and Sophie Opfergelt)

Later in September, at the 11<sup>th</sup> Applied Isotope Geochemistry meeting (AIG-11) in Orleans, France, IAGC President Ian Cartwright presented **Tom Bullen** with his 2015 Distinguished Service Award:



(Tom Bullen and Ian Cartwright)

## Charitable Giving

Members can make a charitable gift to IAGC, either for general fund support or for special initiatives during online membership renewal. You may donate at any time online, either during your membership renewal or separately.

US members who need an additional tax deduction for 2015 should make their contribution prior to 31 December.

Please donate right now through the IAGC web site ([www.iagc-society.org/donate.html](http://www.iagc-society.org/donate.html))

*IAGC is a 501(c)3 non-profit organization and donations to the Society are tax-deductible in the U.S. (EIN: 48-0943367).*

## News from Michael Kersten, *Applied Geochemistry* Executive Editor



In this autumn edition of the IAGC newsletter, I would like to share with you some important journal updates.

Since I have thoroughly enjoyed working on the journal over the past 3 years, I just signed for another three years term. We were all a bit disappointed about the 2014 Impact Factor release (© Thomson Reuters' Journal Citation Reports® 2014, published 2015) to see no significant rise to the 2013 Impact Factor. It appears now consolidated just at above two (2.27) as calculated based on the performance (citations) in 2014 of papers published in 2012 and 2013. Nonetheless, our journal is still ranked in the top 50% of journals in the category Geochemistry & Geophysics, by Impact Factor, 5 year Impact Factor and Article Influence Score, and in the top quartile based on Eigenfactor, so remains in a strong position which I accept as my main task to develop further in the next future.

Next year, we will have the WRI-15 in Portugal and a hopefully well-attended chance for a visible presentation of our journal. First, I plan to convene a workshop for early-career authors on

writing and publishing scientific papers, featuring a presentation and Q&A session. Paul Cumine from Elsevier is also invited thereby providing both Editor and Publisher insights. A similar workshop already held at WRI-14 turned out to be well-received. At that event, we enjoyed our interactions with our young fellows, hearing feedback and answering questions about the journal. In addition, I am planning to convene an Editorial Board meeting to discuss news about journal processing, in particular the new EVISE system soon to replace the outdated current Elsevier electronic submission system. This will bring the second major change in manuscript processing in history of our journal. The first one was the change from hard-copy submission to the electronic submission system (EES) now 13 years ago.

This ending year, we have had a new record in number of 20 reviews (check out the list here: <http://www.journals.elsevier.com/applied-geochemistry/review-articles/>) and 4 special issues. For the latter, the themes were quite broad reaching from a more theoretical (nonetheless, important in particular for hydrogeologists) issue about "[Geochemical Speciation Codes and Databases](#)", to the good practices of responsible environmental geochemistry research in "[Modern Mining](#)" and "[Shale Gas Extraction](#)". The last issue in row is a [tribute to the geochemical contribution of D. Kirk Nordstrom](#). Already in press and to be published early next year is a special issue on use of metal isotopes in studies about contamination by ore processing and smelting. Clearly, it was quite a tremendous piece of work for all our guest editors, and I am full of gratitude to see our journal well enriched with all those attractive volumes.

All the best,  
Michael Kersten  
Editor-in-Chief  
*Applied Geochemistry*

## News from Elsevier

It has been my pleasure to work with Michael Kersten and the Associate Editors of *Applied Geochemistry* for two years now, so we thought it timely we update you on how the journal is performing.

### 2014 Impact Factor

Released in July this year, the 2014 Impact Factor, calculated on the performance (citations) in 2014 of papers published in 2012 and 2013, increased by 12% to its highest ever level of 2.27. This is great news and means *Applied Geochemistry* is ranked 30 out of 79 in the Geochemistry & Geophysics subject category.

### Submissions and Editorial Speeds

As of the end of October the journal had received 534 submissions. Looking at the last 12 months (Nov 2014 – Oct 2015) the journal received 649 submissions, demonstrating that *Applied Geochemistry* remains a prime destination for authors.

Of course high submission numbers mean a lot of work for the EiC Michael Kersten and the team of excellent Associate Editors. It is a testament to their hard work that the overall editorial speed (time to final disposition) is now only 24 weeks, 6 weeks quicker than this time last year, and the time to first decision is only 7 weeks. Further reducing turnaround times for papers is one of our main aims, and a sure way to make the journal an even more attractive place to submit for authors.

## Special Issues

So far in 2015 *Applied Geochemistry* has published four excellent Special Issues, with four more on the way in 2016. I'd like to take this opportunity to encourage you to contact Michael Kersten or myself if you have any Special Issue proposals you would like us to consider. You can see a full list of the Special Issues published in the journal [here](#).

### Author Workshops

At Goldschmidt 2015 Michael Kersten joined Elsevier and Heather Stoll of *EPSL* to deliver an author workshop, aimed at early career researchers looking for advice and insight on how to get their papers published. This session went down extremely well with delegates and in the back of this we hope to undertake a half-day course of a similar nature in Yokohama next year.

Finally, if you are attending this year's AGU please do come along to the Elsevier stand and we'd be happy to speak with you about any matters you'd like to discuss, be they specific to the journal or relating to publishing in general.

All the best,  
Paul Cumine  
Publisher, Geophysics & Geochemistry Journals  
[p.cumine@elsvier.com](mailto:p.cumine@elsvier.com)

## 2015 Meeting Report

### 11<sup>th</sup> Applied Isotope Geochemistry (AIG-11)

The Applied Isotope Geochemistry (AIG) Working Group of the International Association of Geochemistry (IAGC) organizes a series of highly successful biennial conferences focused broadly on the emerging field of applied isotope geochemistry and biogeochemistry.

The 11<sup>th</sup> International Symposium on Applied Isotope Geochemistry (AIG-11) was held from 21 to 25 September 2015 in Orléans, France. The venue was the French Geological Survey (BRGM). The organizing and scientific committees were chaired by Christophe Innocent and Romain Millot, respectively. Some 75 manuscripts were submitted to AIG-11 by scientists from 20 countries. These contributions were published in a special issue of *Procedia Earth and Planetary Science*:

<http://www.sciencedirect.com/science/journal/18785220/13>

The oral and poster presentations were distributed among six main sessions: 1- Isotope Biogeochemistry, 2- Advances in Methodological and Instrumental Developments, 3- Isotope Geology (climate change and geo-resources - residence times - critical zone - groundwater flow), 4- Isotopes in Underground Energy Resources, 5- Environmental Forensics, and 6- Isotope Forensics.

A special focus had been placed on water resources, as the downstream Loire River which flows through Orléans is listed as a UNESCO World Heritage site and belongs to the Natura 2000 network. Furthermore, the famous Festival de Loire, the most important event dedicated to

river sailing in Europe, took place during the conference.

More than 90 participants arrived from 20 countries, and participants delivered 47 oral and 30 poster presentations. The conference started with an icebreaker party on Sunday where the participants could enjoy the local atmosphere, food and drinks, the view of the golf course, and lively conversation.

The Keynote Speakers for AIG-11 are well known scientists and their expertise covers the many different fields of Applied Isotope Geochemistry. Alphabetically, they were: Ramon Aravena (University of Waterloo, Canada), Ian Cartwright (School of Geosciences, Monash University, Australia), François Chabaux (Ecole et Observatoire des Sciences de la Terre, Strasbourg University, France), Martin Kralik (Environment Agency Austria & University of Vienna, Vienna, Austria), Bernhard Mayer (Department of Geoscience, University of Calgary, Canada), Teodora Szocs (Geological and Geophysical Institute of Hungary, Budapest, Hungary), Jeroen Sonke (GET, Géosciences Environnement Toulouse, France) Rich Wanty (USGS, Lakewood, CO, USA).

The scientific program started on Monday with a session focused on Isotope Biogeochemistry, followed by sessions on Advances in methodological and instrumental developments, and then an Isotope Geology session more precisely dealing with climate change and geo-resources. The Isotope Geology session continued on Tuesday and dealt with groundwater residence times, critical zone processes and groundwater flow studies. Tuesday evening AIG-11 participants were invited to a reception at the City hall of Orléans. Wednesday was dedicated to the traditional mid-conference field trip, this time to the Fontainebleau region, which was attended by most participants. The field trip began with a visit of the ancient quarry of the Bois de l'Abbesse showing spectacular exposure of white

sandstones interspersed with quartzite pans. This portion of the trip was guided by Médard Thiry, emeritus Research Director of the Ecole des Mines de Fontainebleau, who worked for more than 25 years on the origin of the famous Fontainebleau sands and sandstones. Then, after an excellent lunch in the charming village of Barbizon, famous worldwide for its pre-impressionist and impressionist painting school, the afternoon was dedicated to the visit of the well-known castle of Fontainebleau. Wednesday evening, some of the AIG-11 participants enjoyed a nice evening in Orléans at the Festival de Loire. Thursday was dominated by scientific sessions concerning isotopic applications in underground Energy Resources and Environmental forensics, whereas on Friday non-geological applications were the main focus in a session on Isotope Forensics. On Thursday evening the Conference Gala Dinner took place at le Château de la Ferté St Aubin with traditional hunting-horn welcome and good French food and wines. Following the dinner Tom Bullen was awarded the IAGC Distinguished Service Award by society President Ian Cartwright for his outstanding career and contributions to the applied isotopic geoscience. And we also did celebrate Avner Vengosh's birthday.

At the end of the conference, an Award Ceremony was held and the best Student presentation went to Camille Bouchez (CEREGE, Aix Marseille Univ., France) for her oral presentation "Investigation of  $^{36}\text{Cl}$  distribution: towards a new estimation of groundwater residence times in the confined aquifer of the LCB" and Kelley Swana (Stellenbosch Univ., South Africa) for her poster presentation "Comparing the residence time of deep vs shallow groundwater in the Karoo Basin, South Africa using  $^3\text{H}$ ,  $^{14}\text{C}$ ,  $^{36}\text{Cl}$  and  $^4\text{He}$  isotopes."

Based on the feedback received by the organizers during and after the conference, the participants had a happy and successful week in Orléans. The number of presentations was sufficient to organize specialized sessions that reached the

critical mass needed to have colleagues interact effectively, thus making the meeting a success for the individual participants. Also, the conference schedule offered sufficient time for in-depth discussions with colleagues during numerous breaks and poster sessions. Participants have probably already marked their calendar for the next AIG, which will be held in September 2017. After 3 successive conferences held in Europe (Tarragona, Budapest, Orléans), the AIG will come back to North America, more precisely to Colorado, USA and will be chaired by past IAGC President Rich Wanty.

The AIG-11 meeting was supported by the BRGM, by the International Association of GeoChemistry as the main sponsor, and by financial contributions from institutions (the European Association of Geochemistry, the City of Orléans, la Région Centre Val de Loire, French Ministry of Research, Science and Education, French Ministry of Industry, French Ministry of Environment) and several companies (Ambrosia Technologies, Elementar group. Elementar / isoprime, Opheleia Instruments, Sercon, Thermo Scientific) This support and sponsorship was critical to the success of AIG-11.

-Romain Millot and Christophe Innocent  
BRGM, Orléans France



The best student poster presentation was awarded to Kelley Swana, Stellenbosch Univ., South Africa. (from left: Chairman Romain Millot, Kelley Swana, IAGC President Ian Cartwright)



BRGM auditorium



The best student oral presentation was awarded to Camille Bouchez, CEREGE, Aix Marseille Univ., France. (from left: Chairman Romain Millot, Camille Bouchez, IAGC President Ian Cartwright)



AIG-11 participants at le Château de la Ferté St Aubin

## 2016 Meetings

### Water Rock Interaction 15 (WRI-15)

16-21 October, 2016

Évora, Portugal

Abstract submission: 14 September, 2015 -  
29 January, 2016

Early registration deadline: 31 May, 2016.

<http://wri15portugal.org/>

#### Essentials of water-rock interactions

1. Recent developments on groundwater reactive transport modeling in fractured and porous media
2. Future challenges on aqueous geochemistry and biogeochemistry: from nano- to basin-scale approaches
3. New trends on isotope hydrology, isotopologues and noble gases
4. New insights into thermodynamics and kinetics of water-rock interactions
5. Developments on water-gas-rock interactions
6. Advances and technological challenges in experimental design for laboratory and field investigations of water-rock interactions

#### Particular environments

1. Water-rock interaction in volcanic systems and natural hazards
2. High- and low-enthalpy geothermal systems
3. Organic geochemistry and pore water chemistry of sediments and sedimentary basins
4. The origins and special challenges of high salinity continental fluids
5. Emerging issues related with ore deposits and ore forming processes

6. Geochemical controls and influences on the genesis of conventional and unconventional oil and gas fields
7. Insights on the evolution of karst water systems and global climate changes
8. Improvements in water-rock interaction and ecohydrology of arid and semi-arid environments
9. Advances on water-rock interactions in tropical and subtropical settings
10. Developments on water-rock interaction studies ascribed to astrobiology

#### Case studies and applications

1. Developing issues on water-rock interaction ascribed to energy resources
2. Water-energy nexus: special challenges of shale gas and other low permeability reservoirs
3. Controls and impacts on groundwater quality and quantity
4. Challenges of water-rock interaction at high temperatures and pressures
5. Alternatives for deep geological repository of nuclear waste
6. Updating gas-water-rock interaction processes for CO<sub>2</sub> geological sequestration
7. Water quality at active and abandoned mines
8. Transport, fate and tracers of contaminants in shallow and deep aquifers
9. Tracer isotopes for tracking processes and contamination: advances in stable and radiogenic isotope
10. Recent approaches on water-rock interaction and its impacts on human health
11. Water-rock interaction vs. stone decay and conservation ascribed to Cultural Heritage
12. Geomicrobiology in groundwater environments: microbe-mineral-water interactions

## 35th International Geological Congress

27 August - 4 September, 2016  
Cape Town, South Africa

**Abstract deadline:** 31 January, 2016  
<http://www.35igc.org/>

### **Hydrogeology and Hydrochemistry of Arid and Semi-Arid Africa: A Tribute to W. M. Edmunds**

Arid environments are often complex hydrogeological systems. Because of limited recharge and intense evapotranspiration, groundwater recharge rates are low and paleowaters in such regions commonly are derived from precipitation infiltration that occurred centuries or millennia in the past. Flow mechanisms and recharge rates can differ substantially as a consequence of bedrock geology and landscape. For example, infiltration occurs by piston flow on decadal to century time scales in the Sahara Desert region, whereas preferential flow paths control recharge in the old cratonic landscapes of southern Africa. Chemical and isotopic methods are tools that provide insight into the nature of recharge, its timing, and its origin. Throughout a distinguished career of nearly 50 years at the British Geological Survey, W. Mike Edmunds (1941-2015) pioneered methodologies and approaches to resolve recharge rates, quantify water-rock interaction, and elucidate climate history. By applying an array of inert chemical tracers (e.g. trace elements, chloride mass balance, and Br/Cl ratios) and various isotopic indicators (e.g. stable, cosmogenic, radiogenic, and noble gas) to study the vadose zone and examine down-gradient changes in groundwater composition, he was one of the first to demonstrate how tracer based approaches may be used to resolve recharge rates and recharge history, study water-rock

interaction, and recognize the limits of renewable groundwater across the Sahara-Sahel region. This symposium invites contributions related to measuring, monitoring, and understanding groundwater, both as a water resource and as an archive of environmental and climate change in semi-arid, arid, and hyper-arid regions of both northern and southern Africa.

#### **Abstract submission page:**

<http://www.35igc.org/Verso/211/Submit-an-Abstract>

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## Renew Your IAGC Membership for 2016!

Don't forget to renew your IAGC membership for 2016 before January so you don't miss any issues of *Elements* magazine! Our annual membership fee is STILL only \$25 and includes a hard copy subscription to *Elements* as well as online access. Membership also rewards you with lower cost registration rates at IAGC-sponsored working group conferences.

Online access to our journal, *Applied Geochemistry*, is available 2016 at \$62 for student members and \$83 for professional members. You must pay your IAGC dues in order to purchase *Applied Geochemistry*.

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