

# Newsletter

## of the International Association of GeoChemistry

Number 59, November 2013

### In This Issue

From the President .....	1
Association News.....	1
Award Nominations Deadline.....	2
GSA 2014 Session Proposals .....	2
Membership.....	2
PhD Students Research Grants.....	3
2013 Awards.....	3
Charitable Giving.....	5
News from Elsevier .....	5
2013 Meeting Reports .....	7
AIG-10.....	7
WRI-14 .....	9
2014 Meetings .....	14
GES-10 .....	14
BIOGEMON-8.....	14
Urban Geochemistry .....	15
MinWat2014 .....	15
Goldschmidt 2014.....	16
Governance .....	17
Membership Information .....	18

Chris Gardner, Newsletter Editor  
IAGeoChemistry@gmail.com

### From the President



As we approach the end of the year, we're all busy trying to finish projects, get papers out, maybe get students through graduation, and all kinds of other demands on our time. This is also the time of year when IAGC is asking for nominations for our awards, detailed on the next page. IAGC awards are designed for almost everyone, from the young researcher (Ebelman Award) to recognizing an illustrious career (Vernadsky Award). Colleagues of any age can be nominated for Certificates of Recognition or Distinguished Service, and mid-late career scientists are considered for IAGC Fellows. Need some inspiration? Have a look at the membership list, which is available to all IAGC members through our website (although non-members can also be recognized by an award): [Click here to view the member list](#) - Just enter your member number or email address.

Please take a small bit of time to nominate someone who might deserve one of these awards. It's a marvellous way to recognize the significant achievements of our colleagues, whether a scientific advancement, or service to our field or Society. Our motivations to succeed are deep seated within each of us, but it's an added bonus when recognized by an award. -Rich Wanty

## Association News

### 2014 IAGC Awards Nominations Deadline Extended

The deadline for the 2014 IAGC awards nominations has been extended to 15 December. Please nominate a deserving colleague through the links below. The awards to be bestowed this year include:

**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 Ebelmen Award** - awarded to a geochemist of particular merit and outstanding promise less than 35 years old at the time of nomination:  
<http://www.iagc-society.org/ebelman.html>

**The 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 2014 Session Proposals

The next Geological Society of America Annual meeting will be in Vancouver, British Columbia, Canada 19-22 October, 2014. 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.

### Renew Your Membership for 2014!

Don't forget to renew your IAGC membership for 2014 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 (remember, we have 3 working group meetings coming up in 2014). Online access to our journal, *Applied Geochemistry*, is available in 2014 for \$79 for professional members and \$59 for student members.

[Renew with a credit card](#)

[Renew with a check](#)

[Check your membership status](#)

### Membership Demographics

As of the time of this writing, we have 360 IAGC members in 42 countries (although this number

constantly increases this time of year as people renew). We will have many more joining us in 2014 who joined as part of their registration at the WRI-14 meeting in Avignon, France or the AIG-10 meeting in Budapest, Hungary.

### Last Minute Call for Elsevier PhD Student Research Grants

Generously supported by Elsevier, the PhD Student Research Grants help support the cost of analytical needs of geochemistry PhD students.

Applications for Student Research Grants for 2014 will be accepted through **1 December 2013**. The recipients of each Student Research Grant will be profiled in *Elements*, on the IAGC website and in the spring edition of the IAGC Newsletter. Recipients will also receive a one-year complimentary IAGC membership. For application instructions and to download the necessary forms, please visit:

[www.iagc-society.org/phd\\_grants.html](http://www.iagc-society.org/phd_grants.html)

## 2013 IAGC Awards

We are pleased to announce our Society Awards for 2013. These winners were originally profiled in the August 2013 issue of *Elements*. Congratulations again to all the recipients, and thank you for your service to the IAGC and the geochemical community!

### Ron Fuge, University of Aberystwyth (UK) – Distinguished Service Award



IAGC Member Dr. Ron Fuge is receiving the Distinguished Service Award for excellence and dedication as Executive Editor of the IAGC journal *Applied Geochemistry* from 1994-2012.

During these 19 years, Ron exhibited total dedication and selflessness to this responsibility. As a consequence, the journal has flourished under Ron's leadership and editorial excellence. The annual number of published papers has increased steadily during his tenure and the impact factor increased continually throughout the past decade, so that today *Applied Geochemistry* is held in high regard within the geochemistry community.

### Heinrich Wänke, Max Planck Institute, Mainz (GERMANY) – IAGC Fellow



The honor of IAGC Fellow for 2013 is awarded to Past-IAGC President Heinrich Wänke for outstanding research contributions in applying the principles and techniques of geochemistry to the study of the extra-terrestrial domain. Prof. Wänke is a prominent

German geochemist who pioneered the application of the tools and approaches of geochemistry to study the formation history of the solar system and its inner planets. As documented in more than 200 research publications, he developed techniques and applied geochemistry to the analysis of samples of solar system objects, producing diagnostic tools for the geochemical study of meteorites that lead to a better understanding of the history of irradiation processes and cosmic rays in the solar

system and to important constraints on the identification of parent bodies of meteorites. Other research contributed to understanding the formation of the Moon and the accretion history of terrestrial planets. Through his personal work and as Director of the Cosmochemistry Division of the Max-Planck-Institute für Chemie in Mainz from 1967-96, he provided major contributions to the development of geochemical techniques for the in-situ analysis of planetary surfaces via space missions, especially Mars. He also played a major role in the development and implementation of the European planetary exploration program at ESA. Prof. Wänke is a member of the Academia Europaea, the International Academy of Astronautics, a member or an associate member of several national Academies of Sciences, and a former President of IAGC from 1988-92. He is the recipient of many awards and honors including the Jean-Dominique Cassini Union Medal of the EGU in 2005, and the EGS Runcorn-Florensky Medal in 1999.

### Michael Hochella, Virginia Tech (USA) – IAGC Fellow



The second IAGC fellow honor for 2013 is awarded to Dr. Michael Hochella, University Distinguished Professor at Virginia Tech, for outstanding research contributions in applying the theory and techniques of geochemistry to the study of the nanoscale domain and creating the field of nano-bio-geochemistry. He received his Ph.D. from Stanford University in 1981, and over the past 23 years has been a faculty member at Stanford and Virginia Tech. Prof. Hochella's research interests include: elucidating the role that nanoscience and mineral surface geochemistry/biogeochemistry plays in major aspects of the earth sciences, especially including environmental issues and biogeochemical cycling of the elements; studying mineral–microbe

interactions from both geochemical and biochemical perspectives; understanding the behavior of nutrients and toxic elements in the environment and their mobility; characterizing aqueous partitioning reactions at oxide and silicate surfaces; understanding interactions between mineral surfaces and species in solution with applications to aqueous system transport. He was a pioneer in the emerging field of nano-bio-geochemistry and was the first in his field to use atomic-force, scanning-tunneling, and high-resolution transmission electron microscopy to study surface properties of nanomaterials of geological interest at the atomic level. Prof. Hochella has been a Fulbright Scholar, a Humboldt Award winner, and Virginia Scientist of the Year. He is a Fellow of six international scientific societies, a Dana Medal winner (Mineralogical Society of America), and a former president of the Geochemical Society. He has also won the Brindley Lecture Award (Clay Minerals Society) and the Distinguished Service Medal of the Geochemical Society. He has served on high-level advisory boards at the National Science Foundation and the Department of Energy, including presently an appointment to the Basic Energy Sciences Advisory Committee of the US Department of Energy.

### Certificates of Recognition

**Dr. Gwendolyn Macpherson** (*University of Kansas, USA*) is Associate Professor of Geochemistry at the University of Kansas in Lawrence, KS (USA) and Director of the university's Plasma Analytical Laboratory. Her primary research interest is in weathering and the consequences of global climate change on groundwater chemistry in continental interior grasslands. Gwen incentivized a team of students in her department at KU to create the IAGC Facebook page and has been instrumental in helping the Association reach out to students and its young members.

The IAGC would also like to bestow our Certificate of Recognition to our outgoing council members. Thank you for your hard work serving the Society for the last four years!

**Dr. Zhonghe Pang** (*Chinese Academy of Sciences, CHINA*) is a faculty member in the Institute of Geology and Geophysics at the Chinese Academy of Sciences.

**Dr. Harue Masuda** (*Osaka City University, JAPAN*) is the chair of the Department of Geosciences at Osaka City University.

**Dr. Nancy Hinman** (*University of Montana, USA*) is a professor in the Department of Geosciences at the University of Montana.

**Dr. Rona Donahoe** (*University of Alabama, USA*) is a professor of Environmental Geochemistry and Director of the Geochemistry Analytical Lab at the University of Alabama.

## Charitable Giving

### Ignacio Torres

Our friend and colleague Ignacio Torres passed away unexpectedly on January 15, 2012. Ignacio S. Torres Alvarado, or "Nacho" as called by his friends, leaves behind his wife Gaby and two children. The IAGC is happily collecting donations on behalf of his family through the end of the year. Please visit our website to make a donation. All major credit cards are accepted:



[www.iagc-society.org/Ignacio\\_Torres\\_Donation.html](http://www.iagc-society.org/Ignacio_Torres_Donation.html)

### Other Donations to the IAGC

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 2013 should make their contribution prior to 31 December. One IAGC initiative for which additional income is required is the Y. K. Kharaka Award. This award will be bestowed annually on 3 deserving scientists from developing countries and will consist of a framed certificate plus an IAGC membership and *Applied Geochemistry* subscription for a term of three years. However the IAGC Board has decided that the initiation of the award would be delayed until a fund of \$5000 was raised. Thus, donations are particularly sought so that this award can be implemented without delay.

Please donate right now through the IAGC web site ([www.iagc-society.org/donate.html](http://www.iagc-society.org/donate.html)) so this fundraising goal will be realized.

*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 Elsevier

By Katherine Eve

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

### Water-Rock Interaction 14

As mentioned in the spring newsletter, Elsevier was in attendance at WRI-14, Avignon back in June where we held a very successful *Applied Geochemistry* Editorial Board meeting. In addition we held a well-attended and well-received workshop for early-career authors on writing and publishing scientific papers, featuring a presentation and Q&A session, co-hosted by

Michael Kerstin and Katie Eve thereby providing both Editor and Publisher insights. Moreover, we enjoyed our interactions with the delegates in attendance; hearing feedback and answering questions about the journal. We hope to attend future working group meetings to connect with different communities within the broader field of Applied Geochemistry.

### 2012 Impact Factor

Unfortunately the 2012 Impact Factor release did not bring good news for **Applied Geochemistry** and we were all disappointed to see a drop in the 2012 Impact Factor\* to 1.708, calculated based on the performance (citations) in 2012, of papers published in 2010 and 2011. However, the 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.

Michael Kersten, Rich Wanty and I discussed the latest Impact Factor in detail, and supported by analysis of the papers contributing to the 2012 Impact Factor, found that the drop could be attributed largely to a single supplemental issue, "Ninth International Symposium on the Geochemistry of the Earth's Surface (GES-9)", published in June 2011, which contributed nearly a quarter of the papers included in the 2012 Impact Factor calculation. Of the 109 papers in this issue, 54% received no citations and a further 28% received only 1 citation (citations taken from Scopus data). As a result, our strategy moving forwards for conference/meeting related special issues will be to work closely with the Guest Editors to select sets of 15-20 best papers emanating from the meeting, rather than the entire proceedings.

\*© Thomson Reuters' Journal Citation Reports® 2012, published 2013

### Change of Publisher

Finally, it is with great sadness, I inform you that this will be the last newsletter piece I write; effective 28 October 2013 I will move over to another portfolio within Elsevier. Responsibility for the Geochemistry & Geophysics portfolio, including **Applied Geochemistry**, will be handed over to Paul Cumine. Paul is a very experienced Publisher - most recently he worked at Wiley in a similar journal management role and I have every confidence that the journal will be in safe hands with him.

I have thoroughly enjoyed working on the journal over the past 3+ years, and will be very sad to leave it behind. I will of course continue to follow the journal's progress with interest and wish the journal, the IAGC, and last but not least each member of the **Applied Geochemistry** community, the very best for the future!

All the best,  
Katie  
Executive Publisher, Elsevier Limited  
[k.eve@elsvier.com](mailto:k.eve@elsvier.com)



Katie Eve

Paul Cumine

## 2013 Meeting Reports

### 10th Applied Isotope Geochemistry Conference (AIG-10)

The Applied Isotope Geochemistry (AIG) Working Group of the International Association of GeoChemistry (IAGC) has organized a series of highly successful biennial conferences focused broadly on the emerging field of applied isotope geochemistry and biogeochemistry. The 10th



rendition of the Applied Isotope Geochemistry Conference series was held from September 22 to 27, 2013, in Budapest,

Hungary. The venue was the marvellous main building of the Hungarian Academy of Sciences. The lecture room has 250 seats, comfortable enough to sit and participate for several days. The icebreaker party, conference dinner, coffee breaks and poster sessions were held in the same building so that only minimal time was needed to move between conference activity sites. The lecture room and the local service were generously provided by the Hungarian Academy of Sciences at discounted rates. The conference's programmatic calls attracted many participants to the sessions, so finally 180 abstracts were received. The presentations were distributed in ten sessions:



- BIOGEO – Biogeochemistry and ecological applications
- DENDRO – Recent applications and developments in dendroisotopes

- ENVI – Isotope techniques in environmental geochemistry
- GASES – Isotope geochemistry of natural gases
- GEOL - Isotope geochemistry of sedimentary to high temperature geological processes and ore deposits
- HYDRO – Isotope hydrology as a tool for water supply policy
- HYDROCARB – Isotope studies in hydrocarbon exploration
- NON-GEO – Non-geoscience applications (archeometry, forensic studies, food authenticity, medical studies, doping investigations etc.)
- ORG-CONT – Isotopic tools to study the fate of organic contaminants
- PALEO – Paleoclimatology and paleoenvironmental changes

More than 150 participants arrived from 38 countries, and participants

delivered 73 talks and presented 80 posters. Among them were eight keynote speakers: Chuan-Chou Shen (National Taiwan University, Taipei, Taiwan), Shaun Frape (University of Waterloo, Waterloo, Canada), Arndt Schimmelmann (Indiana University, Bloomington, U.S.A.), Ramon Aravena (University of Waterloo, Waterloo, Canada), Russell S. Harmon (USACE, Blenheim Crescent, UK), Ian Cartwright (Monash University, Clayton, Australia), Daniel Hunkeler (University of Neuchâtel, Neuchâtel, Switzerland), Bernhard Mayer (University of Calgary, Calgary, Canada).



Poster Session

The conference took place from Sunday through Friday when the programme ended at 7 p.m. The conference started with an icebreaker party on Sunday held at the venue where the participants could enjoy the local atmosphere, food and drinks, the view of the Buda castle and lively chats with fellows together. The scientific programme started on Monday with conventional geological research subjects then sessions on paleoclimate, dendrochemistry and finally non-geoscience applications followed. The paleoclimate session continued on Tuesday along with presentations on environmental research and studies on hydrocarbon gases. In the middle of the week, Wednesday was a "social day" when many of the participants visited the little historic town of Eger, tasted local wines and visited the travertine terraces formed by carbonate precipitation from hot water that flows out from a drill hole.

Thursday was dominated by environmental research and isotope hydrology, whereas on Friday biogeochemistry and isotope studies on organic compounds were the main focus. For the end of the conference a session on hydrocarbon exploration was organized, with special emphasis on non-conventional hydrocarbon reserves and the potential impact of hydraulic fracturing on the environment. The meeting was closed with a wine tasting at the venue with more than 50 participants persisting up to the very end ("and indeed the wine was very good", Tom Bullen, *pers. comm.*).

Based on the reflections that the organizers received during and after the conference, the participants were satisfied, and had a happy and successful one week in Budapest. The number of presentations was sufficient to organize specialized sessions that reached the critical mass needed to have colleagues interact effectively within the same topic that makes a meeting successful for the individual participants.



The AIG-10 Group

The meeting was supported by the Hungarian Academy of Sciences by providing the venue, by the International Association of GeoChemistry as main sponsor and by financial contributions from analytical companies (Thermo Fischer Scientific, Elementar Analysensysteme GmbH., IVA Analysentechnik e. K., OEA Laboratories Limited), all of them contributing to the success. Thanks to the sponsors, financial support to 27 young colleagues was possible by providing their registration fee that made the conference a lively meeting with a good number of researchers at their starting career phase.

-Attila Demény and István Fórizs

#### **Faure Award winners**

The IAGC Faure Award is given to the best student research presentation at each IAGC-sponsored conference. The award consists of a certificate and a complimentary 1 year membership to the IAGC. Faure award were recently presented to deserving students at AIG-10 in Budapest, Hungary:





**Xiaohui Tang** from the Karlsruhe institute of technology for her presentation "Method development for the determination of  $\delta^{18}\text{O}$  values in arsenic oxyanions in natural waters". This talk outlined method development for the determination of  $\delta^{18}\text{O}$  values and fractionations in arsenic oxyanions using a novel series of experiments that will help understand the origins and mobility of this toxic element.

**Marco Ratti** from the Swiss Federal Institute of Aquatic Science (EAWAG) and Tehnology for his presentation "Tracking photochemical transformation of chloroanilines in aquatic environments by compound-specific isotope analysis". This talk presented a detailed study that determined isotopic fractionations associated with the photochemical transformation of chloroanilines in aquatic environments and illustrated the potential of compound-specific isotope analysis to distinguish this process from other potential transformation pathways.



## The 14<sup>TH</sup> International Symposium on Water-Rock Interaction

The IAGC's Water Rock Interaction working group hosted its 14th International Water Rock Interaction Symposium (WRI-14) at the *Palais des Papes* in Avignon (France) from 9-14 June 2013. Overall, 301 registrants from 37 countries participated in WRI-14, including 30 PhD students from 20 countries. The *Palais des Papes* is one of the largest standing medieval

monuments in Europe and this palace and fortress was the seat of western Christianity in the 14<sup>th</sup> century. The main room where we had our plenary lectures and held the WRI general assembly was the room used to hold the papal conclaves, where the College of Cardinals elected the Pope.



Chairman Pierpaolo Zuddas opening WRI-14 in Conclave Hall of the Palais des Papes

These triennial meetings are designed to bring together top scientists, students, early-career scientists, professional earth scientists from academia, industry and government agencies in a setting that fosters communication and participation. Several aspects of WRI-14 contributed to furthering personal and professional scientific interaction. First, the conference was of modest size but sufficiently diverse to provide a wide array of expertise, yet small enough for fruitful plenary sessions. Plenary lectures were limited to a relatively small number of invited speakers, selected for their communication skills and leadership in their fields. Three parallel specific sessions took place every day. As is our tradition, the Symposium themes were not imposed by the WRI 14 organizing committee, but rather chosen from among the scientific papers submitted in advance by Symposium participants. This participative process ensures that our scientific community feels "ownership" of the meeting and encourages participants to share their most recent research with the community. WRI-14 technical sessions included 217 presentations, 7 plenary lectures, 135 talks and 75 posters.



Previous WRI-14 Symposium Secretaries General present at WRI-14 (left to right: Luca Fantoni, WRI-10 Cagliari, Italy 2001; Yousif Kharaka, WRI-7 Park City, USA 1992; Haldor Armannson, WRI-5 Reykjavik, Iceland 1986; Pierpaolo Zuddas, WRI-14 Avignon, France 2013; Mike Edmunds, WRI-6 Malvern, UK 1989; Tom Paces, WRI-1 Prague Czechoslovakia 1974; Sue Brantley, WRI-11 Saratoga Springs, USA 2004; Thomas Kretschmar WRI-13 Guanajuato, Mexico 2010; Oleg Chudayev, WRI-8 Vladivostock, Russia 1995; not shown: Yanxin Wang, WRI-12 Kunming, China 2007)

The program also provided time for younger participants to network and develop a peer group during the Symposium. Time for social interaction with colleagues was built into the official meeting program by including lunches, a choice of five full-day field trips to visit local geological landscapes in the Provence region of southern France around Avignon, and the one banquet. A post-symposium field trip was also offered that focused on water-rock interaction and French wine and cheese across the wonderful Languedoc Roussillon Region of southwestern France. A special excursion and guided tour of the region's lavender fields and of the medieval town of Avignon for were organized for the accompanying participants.

Social responsibility is a fast-growing area of focus for the WRI community. Plenary lectures focused on two themes in that area: (i) How natural systems respond to human perturbation involving water rock interaction processes and (iii) Energy supply and environmental issues.

The Energy-Water Nexus was a subject of choice throughout WRI 14. *Pierre Toulhoat*, an old friend of WRI and member of the National Academy of Technologies of France, underlined the need for safety in the nuclear industry and proposed new basic-science research orientations for understanding confinement-contamination issues. Today, it is still not possible to fully evaluate the thermodynamic and kinetic aspects of water-rock interaction in situations where significant transport of toxic inorganic and organic contaminants and high-salinity fluids are encountered. This is particularly applicable to issues of strong current interest such as waste storage in deep aquifers or mitigating the toxicity of mining operations. *Yousif Kharaka (USGS)*, illustrated real situations connected with potential ground-water-quality degradation associated with exploration and production of unconventional natural gas and oil in his plenary lecture. The water-energy link was present, drew a full house for the talk by *Avner Vengosh (Duke University)* on the effects of shale gas exploration and hydraulic fracturing on the quality of water resources in the United States. WRI-14 offered an opportunity, rare in France and in the EU, to openly debate the scientific aspects of the politically sensitive issue of shale gas and oil exploration.

*Tianfu Xu (Jilin University, China)*, gave a plenary lecture on 'Advancements in Predictive Reactive Transport Modeling Applied to the Geological Sequestration CO<sub>2</sub>'. Although today this is generally considered a subject for applied science, it has in fact been a focus for fundamental geochemistry over the past 40 years. From its creation, WRI, the oldest of the 7 IAGC working groups, has focused on identifying fluid transport mechanisms in the upper crust, which are responsible for many geological processes that have significant effect on mineral deposits and geothermal energy.

*Noriyoshi Tsuchiya (Tohoku University, Japan)* gave a plenary lecture on 'New Advancements in

Understanding the Physical Characteristics of Supercritical CO<sub>2</sub> and H<sub>2</sub>O.' Noriyoshi reported new in-situ experimental spectroscopic measurements clarifying the real state of these fluids with emphasis on the properties of interfacial water on solid surfaces.

The critical role played by water-rock interaction processes in the origin, existence and prospects of life was underlined by *Nancy Hinman (University of Montana, USA)*. Distinguishing bio-signatures from abiotic-signatures, Nancy presented new ideas on how life uses aqueous chemical gradients to access and use minerals.

Patricia Dove (*Virginia Tech, USA*) and member of the US National Academy of Science, addressed the biogeochemical aspects of water-rock interaction by describing the effect of carboxylates on the Mg content of calcites, generated from the amorphous calcium carbonate transformation. Returning to WRI after a lengthy absence, Patricia showed how high-Mg calcites (up to 42 mol% MgCO<sub>3</sub>) can be formed in the apparent absence of other polymorphs, demonstrating that the calcite compositions formed by this process are similar to ACC intermediate phases. She advocated that Mg content increases according to systematic relationship with the chemistry of organic acids.



*Berry Lyons (Ohio State University, USA)* gave the Ingerson International Lecture at WRI-14 on 'Water-Rock Interaction in Polar Environments'. Berry showed that - contrary to common beliefs, chemical weathering does occur in Antarctic environments. In

fact, weathering is significant in restricted polar desert environments, such as hyporheic zones, supraglacial channels or cryoconite holes. Moreover, weathering also takes place in maritime Antarctica, where there is abundant

liquid water throughout the landscape during the austral summer.

The lecture by *Yves Travi (University of Avignon, France)* commemorated the human and scientific contributions of the late Giovanni Maria Zuppi of the University of Venice, Italy. Prof. Gian Maria Zuppi had a distinguished international academic career in Italy, France, and Austria. As an isotopic hydrogeochemist, he worked in several African developing countries on estimating and preserving water resources in areas where water is scarce. The University of Venice created several grants in his honor to allow young colleagues from developing countries to participate in WRI-14.

An ad-hoc jury selected two students to receive an award for the best research presentation posters at WRI-



14. Recipients Irina Ivanova, Russia (photo) for her poster 'Geochemistry of Iron in Fresh Groundwater of the Sredneobs koy Basin (Russia) and Junxia Li, China for the poster 'Factors Controlling Spatial Variation of Iodine Species in Groundwater of the Datong Basin, northern China'. The judges noted that many of the student presentations were award-worthy and commended them for their impressive research.

Irina Ivanova receives WRI-14 best student paper award

No successful meeting is complete without a good party or two. On Wednesday evening, an official mid-conference banquet was held in the Lirac vineyards and on Friday evening we had the closing



Pont du Avignon

dinner that was held on Barthelasse Island. The outdoor pavilion was next to the famous *Pont d'Avignon* popularized by the famous French medieval song (*Sur le pont d'Avignon on y dance, on y dance....*). These parties were excuses for two rousing good times, as the photos of the evening suggest.



Russian participants at WRI-14 banquet

Abstracts from previous WRI meetings had been published in booklet form and those from the last few meetings published as books by Balkema Press, which was expensive and unsustainable. For the first time in the 39-year history of WRI, the Symposium extended abstracts were published in *Procedia Earth and Planetary Science* (v. 7: p. 1-964), an open-access electronic journal. An editorial committee, composed of Luc Aquilina, Mohamed Azaroual, Catherine Beaucaire, Olivier Bildstein, Roland Hellmann, Christelle Latrille, Philippe Négrel, Hélène Pauwels, Helmut Pitsch and Pierpaolo Zuddas assisted by 54 peer reviewers, reviewed the 260 submitted papers.

The WRI general assembly, held on the final day of the meeting, named *Thomas Kretzschmar (Mexico)* as the next WRI President and *José Marquesas (Portugal)* as Secretary General of WRI-15 to be held in Portugal in 2016.



WRI-14 Symposium Chair Pierpaolo Zuddas receives 'Friends of WRI' award from WRI-13 Symposium Chair Thomas Kretzschmar

WRI-14 received support from the CEA (Commissariat à l'Énergie Atomique), BRGM (Bureau de Recherches Géologiques et Minières), IRSN (Institut de Radioprotection et Sécurité Nucléaires), INERIS (Institut National de l'Environnement Industriel et des Risques), MESR (Ministère de l'Enseignement Supérieur et de la Recherche), the US Army Engineer Research and Development Center (ERDC), and the IAGC. In addition, 15 grants were funded by the University of Venice (Italy), the CEA, and IRSN (France). We thank these sponsors for their support.

-Pierpaolo Zuddas



WRI-14 conference participants

WRI-14



## 2014 Meetings

### 10<sup>th</sup> International Symposium- Geochemistry of the Earth's surface (GES-10)

Between Rocks and Sky: Earth's Critical  
Zone.

August 18 - 22, 2014  
Collège des Bernardins - Paris  
[www.ipgp.fr/GES10](http://www.ipgp.fr/GES10)

The next Geochemistry of the Earth's Surface meeting (GES-10) will be held in the Collège de Bernardins in Paris, France, between August 18th and 22nd, 2014. GES-10 will emphasize Critical Zone cutting edge research at all scales, from the elementary processes to global biogeochemical cycles.

The GES meeting is a small-size, friendly meeting (< 200 attendees) featuring a limited number of invited oral presentations and extensive poster sessions. Invited oral presentations will be organized in the morning and poster session will cover all afternoons. A half-day is scheduled to explore the Quartier Latin, in the footsteps of Vernadsky and Marie Curie. Social events will include wine tasting (the blood of the Critical Zone) and a relaxing, convivial banquet. Prior to the meeting, a field trip will be organized in France.

GES is a good format for students to meet established scientific leaders and participation of early career scientists is particularly encouraged. Partial support will be available for students to attend and present their work.

Contact and information:  
Jérôme Gaillardet, [gaillardet@ipgp.fr](mailto:gaillardet@ipgp.fr)

The organizing committee:

- Suzanne Anderson, *CU Boulder, USA*
- Steve Banwart, *Sheffield U., UK*
- Jérôme Gaillardet, *IPGP, France*
- Sigurdur Gislason, *U. of Iceland*
- Yves Godderis, *CNRS, France*
- Mark Hodson, *U. of York, UK*
- Gaojun Li, *Nanjing U., China*
- Kate Maher, *Stanford U., USA*
- Jean-Dominique Meunier, *Cerege, France*
- Suzan Stipp, *U. of Copenhagen, Denmark*
- Alexis Templeton, *CU Boulder, USA*
- Philippe Van Cappellen, *U. of Waterloo, Canada*

### BIOGEOMON 2014- 8<sup>th</sup> International Symposium on Ecosystem Behavior

July 13-17, 2014  
University of Bayreuth, Germany  
[www.bayceer.uni-bayreuth.de/biogeomon2014/](http://www.bayceer.uni-bayreuth.de/biogeomon2014/)

Abstract Submission:  
Starting November, 2014; Deadline: April 4,  
2014

The focus of BIOGEOMON is on the biogeochemistry of forest and natural ecosystems as influenced by anthropogenic and environmental factors. We invite empirical and modeling studies on fluxes and processes related to the turnover of major and trace elements at the ecosystem, watershed, landscape, and global scale.

Themes:

- 1) Long term trends in the functioning of ecosystems
- 2) Environmental controls on fluxes and processes in ecosystems
- 3) Fluxes between the atmosphere and ecosystems

- 4) Below ground turnover of C and nutrients in forest soils
  - 5) Linking biodiversity and biogeochemistry
  - 6) Biogeochemistry of wetlands
  - 7) Dissolved organic matter in ecosystems and at the interface to hydrosphere
  - 8) Trace element biogeochemistry
  - 9) Critical unknowns in the cycling of P in forest and wetland ecosystems
  - 10) Links between the N cycle and other elements
  - 11) Weathering and chemical processes as keys to ecosystem functioning
  - 12) Restoration and rehabilitation of ecosystems
- The conference is hosted by the Bayreuth Center of Ecology and Environmental Research (BayCEER).

## Urban Geochemistry Working Group Meeting

August 4-7, 2014  
Columbus, Ohio, USA

[www.IAGC-Society.org/UG.html](http://www.IAGC-Society.org/UG.html)

The newly-revitalized Urban Geochemistry working group is happy to announce that the first Urban Geochemistry Working Group meeting is currently in the planning stages and will be held 5-7 August, 2014 in Columbus, Ohio, USA on the campus of The Ohio State University. The plan is to hold a three day meeting with a small number of plenary talks, a series of poster sessions, and a discussion of the future of this new group.

Look out for advertising on our website, *Elements* magazine, the IAGC Newsletter, and other venues.

If you would like to be added to our email list for this new group, please email the IAGC Business Office Manager, Chris Gardner, at: [iageochemistry@gmail.com](mailto:iageochemistry@gmail.com).

## MinWat2014 - International Interdisciplinary Conference on Mineral Waters: Genesis, Exploitation, Protection and Valorisation

September 8-11, 2014  
Karlovy Vary (Carlsbad), Czech Republic  
<http://minwat2014.vuv.cz/>

Abstract deadline: February 1, 2014

### CONFERENCE OBJECTIVES

The major objective of the conference is to bring together four groups of experts:

1. hydrogeologists and hydrogeochemists who deal with the search for, and protection of, mineral water resources. This regards hydrogeologists from universities, research institutes and private consultancy firms particularly those interested in thermal and mineral waters, who want to see up-to-date studies on the structure and functioning of such hydrosystems, who want to learn about methodologies they can use to characterise existing springs or springs to be developed in the next future
2. professionals involved in distribution of bottled mineral waters whose activities are essentially dependent on the results of hydrogeological exploration. This includes also the managers and hydrogeologists from bottling companies
3. professionals for whom the mineral water is a tool used for treatment of various diseases and their prevention. There exists a broad spectrum of issues, which are dealt with in balneology, i.e. balneotherapy and balneotechnics. Experts in this group are represented mostly by physicians who use mineral waters for medicinal procedures, for complex balneotherapy and physiotherapy
4. administrations (local, regional, national, European, etc.) that evaluate projects aimed at

development of new sources of natural mineral waters. It also includes professionals and administrators involved in designing the regulatory measures for safeguarding and protection of natural mineral water resources.

#### CONFERENCE THEMES

*Theme A:* Hydrogeology and hydrogeochemistry — origin, protection and management

*Theme B:* Bottled water — market and demand, health issues

*Theme C:* Balneology — balneotherapy and balneotechnics

- Biogeochemistry
- Environmental geochemistry
- Frontiers in Analytical and Computation Techniques
- Mineralogy and Mineral Physics
- Hydrogeochemistry
- Coastal Geochemistry
- Organic Geochemistry

## Goldschmidt Conference 2014

June 8-13, 2014  
Sacramento, California, USA  
<http://goldschmidt.info/2014/>

#### Technical Session Themes:

- Cosmochemistry
- Planetary Chemistry
- Early Earth
- Deep Earth
- Mantle to Crust
- Continental Crust
- Subduction
- Melts, glasses, magmas
- Evolution of Earth's Environment
- Geochemistry: Nano-scale to Meso-scale Results
- Emerging issues in mineral resources
- Geochemistry of volcanic systems and natural hazards
- Emerging issues in energy resources
- Climate Change: Past, Present, and Future
- Atmospheric aerosol in air quality and climate: the science and solutions
- Weathering, Climate, Tectonics and Surface Processes
- Oceans and Atmosphere
- Geobiology



## IAGC Executive Officers

### **PRESIDENT** (2012-2014)

Richard Wanty  
US Geological Survey  
MS 964d Denver Federal Center  
Denver, CO 80225  
USA  
Email: [rwanty@usgs.gov](mailto:rwanty@usgs.gov)

### **PAST-PRESIDENT** (2012-2014)

Clemens Reimann  
Dept. of Geochemistry  
Norwegian Geological Survey  
Trondheim N-7491  
NORWAY  
Email: [clemens.reimann@ngu.no](mailto:clemens.reimann@ngu.no)

### **VICE-PRESIDENT** (2012-2014)

Ian Cartwright  
Monash University  
School of Geosciences  
Clayton, VIC 3800  
AUSTRALIA  
Email: [ian.cartwright@monash.edu](mailto:ian.cartwright@monash.edu)

### **TREASURER** (2008-2014)

W. Berry Lyons  
Department of Geological Sciences  
The Ohio State University  
Columbus, OH 43210-1398,  
USA  
Email: [lyons.142@osu.edu](mailto:lyons.142@osu.edu)

### **SECRETARY** (2008-2014)

Thomas D. Bullen  
Water Resources Division  
U.S. Geological Survey  
MS 420, 345 Middlefield Road  
Menlo Park, CA 94025  
USA  
Email: [tdbullen@usgs.gov](mailto:tdbullen@usgs.gov)

### **JOURNAL EDITOR**

Michael Kersten  
Johannes-Gutenberg-Universität  
Mainz  
GERMANY  
Email: [kersten@uni-mainz.de](mailto:kersten@uni-mainz.de)

### **BUSINESS OFFICE MANAGER**

Chris Gardner  
275 Mendenhall Laboratory  
125 South Oval Mall  
Columbus, OH 43210  
USA  
Ph: +1-614- 688-7400  
Fax: +1-614-292-7688  
Email: [iageochemistry@gmail.com](mailto:iageochemistry@gmail.com)

## Council Members

Martine Savard (through 2014)  
NRC/GSC  
CANADA  
[msavard@nrcan.gc.ca](mailto:msavard@nrcan.gc.ca)

Philippe Negrel (through 2014)  
BRGM  
FRANCE  
[p.negrel@brgm.fr](mailto:p.negrel@brgm.fr)

Janet Herman (through 2014)  
Department of Environmental  
Sciences  
USA  
[jherman@virginia.edu](mailto:jherman@virginia.edu)

Teodóra Szócs (through 2014)  
Geological Institute of Hungary  
HUNGARY  
[szocst@mafi.hu](mailto:szocst@mafi.hu)

Thomas Kretzschmar (through 2014)  
Geology Department CICESE  
MEXICO  
[tkretzsc@cicese.mx](mailto:tkretzsc@cicese.mx)

Halldor Armannsson  
(Water-Rock Interaction Chair)  
Iceland Geosurvey  
ICELAND  
[Halldor.Armannsson@isor.is](mailto:Halldor.Armannsson@isor.is)

Steven Banwart  
(Geochemistry of the Earth's Surface  
Chair)  
The University of Sheffield  
UNITED KINGDOM  
[s.a.banwart@sheffield.ac.uk](mailto:s.a.banwart@sheffield.ac.uk)

Attila Demeny  
(Applied Isotope Geochemistry  
Chair)  
Hungarian Academy of Sciences  
HUNGARY  
[demeny@geochem.hu](mailto:demeny@geochem.hu)

Martin Novak  
(Biogeochemistry Chair)  
Czech Geological Survey  
CZECH REPUBLIC  
[martin.novak@geology.cz](mailto:martin.novak@geology.cz)

## Other Working Group Chairs (non-council)

David B. Smith  
(Global Geochemical Baselines)  
U.S. Geological Survey  
USA  
[dsmith@usgs.gov](mailto:dsmith@usgs.gov)

David Long  
(Urban Geochemistry)  
Michigan State University  
USA  
[long@msu.edu](mailto:long@msu.edu)

Ron Fuge  
(Environmental Geochemistry Chair)  
Aberystwyth University  
UNITED KINGDOM  
[rrf@aber.ac.uk](mailto:rrf@aber.ac.uk)

Olle Selinus  
(Environmental Geochemistry Chair)  
Linneaus University  
SWEDEN  
[olle.selinus@gmail.com](mailto:olle.selinus@gmail.com)

## Renew Your IAGC Membership for 2014!

Don't forget to renew your IAGC membership for 2014 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 (remember, we have 3 working group meetings coming up in 2014):

[8th BIOGEMON, 13-17 July, 2014 in Bayreuth, Germany](#)  
[Urban Geochemistry, 5-7 August, 2014 in Columbus, Ohio, USA](#)  
[GES-10, 18-23 August, 2014 in Paris, France](#)

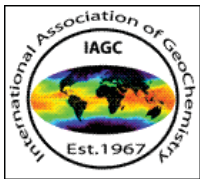
Online access to our journal, *Applied Geochemistry*, is available in 2014 for \$79 for professional members and \$59 for student members.

To renew online using a credit card through PayPal or Square Market, via check, or to simply check your membership status, follow the links below and enter either your membership number or email address:

[Renew with a credit card](#)

[Renew with a check \(also see next page for printable PDF\)](#)

[Check your membership status or look up your membership number](#)



# International Association of GeoChemistry (IAGC)

## 2014 Membership Form (For Payment by Check)

iageochemistry@gmail.com | www.iagc-society.org

### 1. Membership

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

Membership	Cost (USD)
IAGC Membership – 1 or 2 years	<input type="checkbox"/> 1yr-\$25 <input type="checkbox"/> 2yr-\$50

**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

*Applied Geochemistry* is now **online-only** at the following cost (USD):

- A.** Full Member - \$79.00 **B.** Student Member - \$59.00

**3. Sub Total** \$ \_\_\_\_\_

### 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. Grand Total

Sum of Sections 1, 2, and 3

\$ \_\_\_\_\_

## 7. Payment by Check

Check (*payable to International Assoc. of Geochemistry*)

### Instructions for Payment by Check

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

**If you would like to pay by credit card, please visit our website and click on "Society," then "Membership." We are unable to process credit cards outside of the website.**

[www.iagc-society.org](http://www.iagc-society.org)

\*Tax-Deduction valid for US Members Only

IAGC Business Office  
Attn: Chris Gardner  
275 Mendenhall Laboratory  
125 South Oval Mall  
Columbus, OH 43210 USA  
Ph +1 614 688 7400  
Fax +1 614 292 7688

[www.iagc-society.org](http://www.iagc-society.org)