

# goldschmidt 2013



## WELCOME TO GOLDSCHMIDT 2013 25-30 AUGUST



Scan this code to access the Goldschmidt 2013 mobile app.

Florence, birthplace of the Renaissance and a UNESCO World Heritage Site, will host the Goldschmidt Conference in August 2013. Set in one of the most beautiful cities in the world, Goldschmidt 2013 boasts cultural delights and an excellent science program. The Goldschmidt Conference, cosponsored by EAG and GS, is now the foremost conference in geochemistry.



### AWARDS TO BE PRESENTED AT GOLDSCHMIDT 2013

#### EUROPEAN ASSOCIATION OF GEOCHEMISTRY



2013 Urey Medal:  
**Igor Tolstikhin**  
(Russian Academy of Sciences, Russia)



2013 Houtermans Award:  
**James Day**  
(Scripps Institution of Oceanography, USA)



2013 Science Innovation Award in climatology (Shackleton Medal):  
**Jérôme Chappellaz**, (CNRS and University of Grenoble, France)

#### GEOCHEMICAL SOCIETY



2013 Goldschmidt Medal:  
**Harry Elderfield**  
(University of Cambridge, UK)



2013 Patterson Medal:  
**Joel D. Blum** (University of Michigan, USA)



2013 Clarke Medal:  
**Blair Schoene**  
(Princeton University, USA)

#### GS/EAG



2013 Gast Lecturer:  
**Sujoy Mukhopadhyay**  
(Harvard University, USA)

#### 2013 GS/EAG GEOCHEMICAL FELLOWS:



**Vickie Bennett**  
(Australian National University)



**Jérôme Chappellaz** (CNRS and University of Grenoble, France)



**John Eiler**  
(California Institute of Technology, USA)



**Kenneth Farley**  
(California Institute of Technology, USA)



**Yingwei Fei**  
(Carnegie Institution of Washington, USA)



**Guillaume Fiquet**  
(Université Pierre et Marie Curie, France)



**Kliti Grice** (Curtin University, Australia)



**Peter Kelemen**  
(Lamont-Doherty Earth Observatory, Columbia University, USA)



**Richard Pancost**  
(University of Bristol, UK)

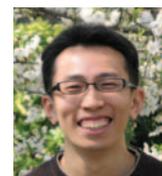


**Frank Richter**  
(University of Chicago, USA)



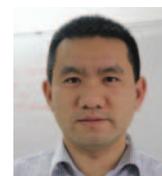
**Hisayoshi Yurimoto**  
(Hokkaido University, Japan)

#### GEOCHEMICAL SOCIETY OF JAPAN



2013 Geochemical Journal Award:  
**Yusuke Nakagawa**  
(Kyoto University, Japan)

#### OTHER AWARDS



2013 Shen-su Sun Award:  
**Fang Huang** (University of Science and Technology of China)



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## THE PRESIDENT'S CORNER

### *The Geochemistry Identity*



Chris Ballentine

With the Goldschmidt geochemistry conference in Florence looming in August and the abstract deadline of April 12 now passed, it is an appropriate time to reflect on how far the geochemical community has come in the last decade. The starting point – defining what geochemistry is and what makes a geochemical community – is not simple. We are, and have, a mixture of backgrounds that are defined by the areas we work in: from planetary and deep-mantle systems, the ocean and climate sciences, and resource discovery to waste remediation. The scale of the systems we investigate range from the atomic structures of minerals and bacteria genetics to planetary accretion and continental change. Nor are the tools we use necessarily common ground, with the huge array of instrumentation and techniques available to probe the natural systems around us.

As a community we used to be divided by the fields of study and techniques employed. But it is exactly this diversity and the continuum of interaction that allows us to be identified as 'geochemists'. Historically, geochemists have formed niches within learned societies, contributed to conferences organised by others, but have had little voice of their own. This is no longer true. The attendance at the European Goldschmidt conferences has more than doubled in the last ten years, reaching over 3300 delegates in Prague in 2011. Some of this has been due to increasing the attendance in subject areas that have long been presented at the Goldschmidt meetings. More has been due to an expanding diversity of geochemistry topics represented at the meetings. EAG has often discussed just how many geochemists are 'out there'. It is hard to see, with today's economic difficulties, that the total number of scientists is growing, but the proportion who identifies as geochemists, measured by Goldschmidt attendance, clearly has. We expect that the Florence Goldschmidt will be larger yet.

**There is a serious point to this soft discussion.** With identity comes community, and a large organised community has influence. The success of the fall AGU in attracting the international media and major North American politicians has benefited all the geo and space sciences in the US and beyond. In Europe, the EGU meetings are not as large, but they have similarly attracted press coverage and European funding agency attendance. The Goldschmidt meetings are just now reaching a size that has the potential to attract similar interest and, I am confident, more funding to our science. Europe is nevertheless a unique beast. Its national interests, institutes, funding bodies and societies are many. The challenge for EAG now is to consolidate our community, to grow it further by working with other societies, and to find ways of attracting the international press and funding agencies to our meetings. We particularly want these decision makers to see first-hand the inspirational and society-relevant science our community calls geochemistry.

**Chris Ballentine**, EAG President

## 2013 EAG MEDALLISTS

### *Urey Medal to Igor Tolstikhin*



**Igor Tolstikhin** is a pioneer, arguably *the* pioneer, of terrestrial noble gas geochemistry. The noble gas community now acknowledges him as 'the father of helium isotope geochemistry' (Al Hofmann, 2012). His discovery of primordial  $^3\text{He}$  in the mantle and subsequent modelling of mantle processes and evolution using  $^3\text{He}$  and other noble gases are a fundamental contribution to understanding the origin of terrestrial volatile elements and the basic structure and evolution of the deep Earth. Igor Tolstikhin also discovered the tritium- $^3\text{He}$  water-dating technique, one of the key tools used in ocean circulation model verification and groundwater resource and process investigations. EAG is proud to award the Urey Medal to Igor Tolstikhin, in recognition of his status as a world-class geochemist whose discoveries and subsequent work have had a profound impact across all the Earth sciences.

### *Houtermans Award to James Day*



**James Day** is currently an assistant professor at Scripps Institution of Oceanography, after postdoctoral positions at the University of Tennessee and the University of Maryland. He completed his doctorate at the University of Durham. He has worked mainly on the geochemistry of highly siderophile elements, and he has shown in a series of papers, thanks to precise analysis of these very low-level elements, that the concept of late accretion (after the formation of a metallic core) could be extended to the Moon and other bodies in the Solar System. The Houtermans Award is bestowed annually on a scientist no more than 35 years of age or within 6 years of the PhD for a single exceptional contribution to geochemistry.

### *Science Innovation Award to Jérôme Chappellaz*



**Jérôme Chappellaz** is among the leaders in ice-core science and analytical geochemistry. He has contributed pioneering instrumental developments and iconic data sets to the Earth system science community. He has made the fundamental contribution of pointing out that the atmospheric methane concentration, and by implication low-latitude rainfall, changed abruptly at the same time as Greenland underwent an abrupt temperature change. He has continued to innovate, working closely with experts in laser spectroscopy to develop precise, low-volume laser analyzers specifically adapted to measure atmospheric methane and nitrous oxide concentrations in trapped air in ice cores. Now he is taking this a step further with a project to make measurements with an autonomous probe that will melt its way through an ice sheet, measuring trace gases and water isotope ratios as it goes and sending data back to the surface. The 2013 EAG Science Innovation Award has been named in honour of Nicholas Shackleton for his work in climatology.

**"ON THE TARMAC": A BRIEF REPORT BY THE EAG'S 2012 DISTINGUISHED LECTURER ON HIS TOUR OF EASTERN EUROPE**



Tim Elliott

I was both delighted and surprised when I was asked to be the EAG Distinguished Lecturer in Eastern Europe. "Distinguished" is not an adjective that has ever been closely associated with my activities, so I readily accepted the job.

My odyssey started in a chilly, misty Warsaw. My host was Pr. Ewa Slaby (University of Warsaw and Polish Academy of Sciences), who brought to life the complexities of Polish history during a fascinating trip around the sights of the city. In dubious return, I presented two talks the next day at the University of Warsaw. I was very pleased to be able to address a large group of students, who graciously smiled through the imperfections of my presentation's first airing.

On Tuesday, I was the guest of the Department of Experimental Petrology in the University of Wrocław, housed atmospherically in weathered Bauhaus splendour. Dr. Anna Pietranik ably coordinated my trip and rallied a full house for my talk. Afterwards, we strolled among the gnome-strewn charms of central Wrocław and then returned for a perfect evening of tales, food and beverages.

Next stop, Sofia. I arrived in time to give a late-afternoon presentation in the magnificent, Neo-Baroque home of the Faculty of Geology and Geography. My host, Dr. Momchil Dylgerov, then showed me around the city centre, which bustled with life in the still balmy November evening. I had not expected



Warsaw, first stop of the Distinguished Lecturer tour

the feel of a Mediterranean promenade in the late autumn of Bulgaria, but such discoveries are what makes travelling such a pleasure.

Sadly my relentless schedule drove me on the next morning to Cluj-Napoca via Bucharest. The first leg of this trip found me in a plane largely occupied by the singer Macy Gray and her entourage. Clearly the EAG were not the only people to think a November tour of Eastern Europe a good idea. I noted, however, that the level of logistical support offered to a "Distinguished" Lecturer was considerably less than that of an internationally renowned *chanteuse*.

Dr. Dan Nita was my guide in Romania's second city, navigating me between the faculties of Environmental Science and Geology of the Babes-Bolyai University, where I was warmly received by Pr. Alexandru Ozunu and Dr. Nicolae Har, respectively. I was glad of the opportunity to give talks in both faculties and enjoyed a too brief glimpse of the lively ambience of this university city in the intervening evening.

I am very grateful for the warm hospitality afforded to me during my illuminating and enjoyable week of distinction. I much appreciate the interest shown in the abstruse brand of isotope geochemistry I peddle.

**Tim Elliott**, University of Bristol, UK  
EAG Distinguished Lecturer 2012

Information about the Distinguished Lecturer 2013 is available at [www.eag.eu.com/education/dlp](http://www.eag.eu.com/education/dlp).



The EAG is pleased to announce that its one-year old journal, *Geochemical Perspectives*, is now available on GeoScienceWorld (GSW), a nonprofit collaborative and comprehensive Internet resource for research and communications in Earth sciences. Through GSW, *Geochemical Perspectives* will be able to reach a wider audience and readers will have access to tools such as mobile optimization and GeoRef indexing. Please visit [perspectives.geoscienceworld.org](http://perspectives.geoscienceworld.org).

