



BROADENING THE DIVERSITY OF EXCELLENCE

Seemingly we have a long time before the nominations deadline for the Geochemical Society's highest competitive honors (October 15, 2014). The vision and work begin long before, however, as the chair of the Awards Nominations Committee and its members work to establish an outstanding pool of candidates for consideration. Awardees symbolize the highest achievement in our field. They inspire all of us, and especially those at an early-career stage, to do our best science. They become among the most visible spokespersons for our profession.



Barbara
Sherwood Lollar

The Geochemical Society needs your help. The past record of winners reflects scientific excellence and achievement of the highest level. The development of a large and competitive pool of excellent nominees is critical to the success of the award competitions. Continue to send in suggestions to the Awards Nomination Committee. Even better, decide to lead the nomination yourself. There can be no more important role in leading and mentoring scientific accomplishments and recognition in the field of geochemistry.

I bring to your attention a second important issue that we can address by mobilizing the collective resources of our community. The record of achievement the Geochemical Society recognizes through awards, plenaries, and keynotes at Goldschmidt has been exemplary. We

congratulate this year's winners and are proud of the diversity of our community and the science they reflect. But a quick look at past statistics reveals that historically the awardees and invited speakers have been heavily concentrated in our European and North American membership. This has been the case despite the fact that more than 20% of our membership is drawn from outside these regions and the fact that the community membership reflects a much wider range of diversity of all descriptions (gender, heritage, and discipline). At a recent Goldschmidt, more than 30% of the suggested keynote speakers had been keynote speakers at one of the last few Goldschmidts—a remarkably high repeat rate.

We would like to urge you now to get involved to help ensure all aspects of the Geochemical Society's activities, including awards, fellows, plenaries, and keynotes, reflect the full diversity of scientific excellence and professional achievement in our community. It is a normal human tendency to self-replicate. If I were asked to brainstorm a list of names for recognition of scientific excellence, my initial list would no doubt contain too many groundwater geochemists, likely too many women, and certainly too many Canadians! Those who have studied this issue suggest a simple step can help us broaden our collective perspective. Draw up your initial brainstorming list, then step back and think again—more broadly this time. Consider excellent scientists you know who are significantly different from yourself and from those you studied with, and add their names to your nomination list. Our goal this year is to have no fewer than 5 strong nominees to consider for each award and 30 in the consideration pool for GS fellows.

We can do better in the nominations phase. We need your expert judgment and creative vision. Get involved this year. Make a resolution to continue your involvement annually and nominate one excellent candidate each year for something, whether it is within GS or elsewhere. We are counting on your leadership and vision to ensure we have a conference that reflects scientific excellence drawn from the full spectrum of our diverse community of scholars and researchers, and that continues to provide room for new as well as traditional voices. Your role as a scientific mentor and supporter can change the world.

Barbara Sherwood Lollar
GS President

THE GEOCHEMICAL SOCIETY AWARDS

The **V. M. Goldschmidt Award** is given for major achievements in geochemistry or cosmochemistry, consisting of either a single outstanding contribution or a series of publications that have had great influence on the field.

The **F. W. Clarke Award** is made to an early-career scientist for a single outstanding contribution to geochemistry or cosmochemistry, published either as a single paper or a series of papers on a single topic.

The **Clair C. Patterson Award** recognizes an innovative breakthrough of fundamental significance in environmental geochemistry, particularly in the service of society, consisting of either a single outstanding contribution or a short series of papers published within the last decade.

The Geochemical Society's Organic Geochemistry Division **Alfred Treibs Award** is given

for major achievements, over a period of years, in organic geochemistry.

The **Organic Geochemistry Best Paper Award** is presented annually by the Organic Geochemistry Division to the authors of a paper published in the previous year with a significant contribution to organic geochemistry.

Geochemical Fellows. In 1996, the Geochemical Society and the European Association of Geochemistry established the honorary title of Geochemistry Fellow, to be bestowed upon outstanding scientists who have, over some years, made a major contribution to the field of geochemistry. Former and new Urey, Goldschmidt, and Treibs medal winners become Fellows automatically.

Distinguished Service Award. This award is given at the discretion of the GS Board of Directors. The award recognizes and documents

outstanding service to the Geochemical Society and/or the geochemical community that greatly exceeds the normal expectations of voluntary service to the Society. The award does not have to be given each year.

The **F. Earl Ingerson Lecture Series** honors the Geochemical Society's first president. The recipient is selected annually by the GS Board of Directors to present the Ingerson Lecture at the GSA Annual Meeting and Exposition.

The **Paul W. Gast Lecture Series** honors the Geochemical Society's first Goldschmidt medalist. The award is made to a mid-career scientist (under 45 years old), and the lecture is presented at the GS/EAG annual Goldschmidt Conference. Lecturer selection alternates between the GS Board of Directors and the EAG Council, depending on the location of the Goldschmidt Conference.



2014 AWARDS TO BE PRESENTED AT GOLDSCHMIDT

Sacramento, California
8 – 13 June 2014

GEOCHEMICAL SOCIETY



GOLDSCHMIDT MEDAL: **Timothy Grove** (Massachusetts Institute of Technology)



PATTERSON MEDAL: **Christopher Reddy** (Woods Hole Oceanographic Institution)



CLARKE MEDAL: **Matthew Jackson** (University of California, Santa Barbara)

EUROPEAN ASSOCIATION OF GEOCHEMISTRY



UREY MEDAL: **Edward Boyle** (Massachusetts Institute of Technology)



SCIENCE INNOVATION AWARD (SAMUEL EPSTEIN MEDAL): **James Farquhar** (University of Maryland)



HOUTERMANS MEDAL: **Liping Qin** (University of Science and Technology of China)

GS/EAG



GAST LECTURER: **Tim Elliott** (University of Bristol)

GEOCHEMICAL SOCIETY OF JAPAN



GEOCHEMICAL JOURNAL AWARD: **Hiroshi Amakawa** (National Taiwan University)

SHEN-SU SUN FOUNDATION



SHEN-SU SUN AWARD: **Peng Peng** (Chinese Academy of Sciences)

2014 GS/EAG GEOCHEMICAL FELLOWS



Yuri Amelin (Australian National University)



Richard Arculus (Australian National University)



Shan Gao (China University of Geosciences)



Robert Hazen (Carnegie Institution for Science)



Marc Hirschmann (University of Minnesota)



Rebecca Lange (University of Michigan)



Bernard Marty (CRPG Nancy)



Hiroko Nagahara (University of Tokyo)



Martin Palmer (University of Southampton)



Adina Paytan (University of California, Santa Cruz)

The GS and EAG are also pleased to announce that all current and future recipients of the Geochemical Society's C.C. Patterson Award and the EAG's Science Innovation Award will also be named GS/EAG Geochemical Fellows. Past recipients who have not yet been named Geochemical Fellow will be presented with the honor during a ceremony at the Goldschmidt2014 conference. These honorees are:

GS/EAG GEOCHEMICAL FELLOWS BY PATTERSON AND SCIENCE INNOVATION AWARDS



Robert F. Anderson (Columbia University)



Kenneth Bruland (University of California, Santa Cruz)



R. Lawrence Edwards (University of Minnesota)



William F. Fitzgerald (University of Connecticut)



George W. Luther III (University of Delaware)



Stefan Schouten (Royal Netherlands Institute for Sea Research)



Jeffrey P. Severinghaus (University of California, San Diego)



William Sunda (National Oceanic and Atmospheric Administration)



Kei Hirose (Tokyo Institute of Technology)



Daniel Sigman (Princeton University)

ORGANIZING A GOLDSCHMIDT

The Goldschmidt Conferences™ were started 25 years ago by the Geochemical Society to provide a forum for its members to discuss their latest research. The European Association of Geochemistry became involved early on, and since then the conference has also benefited from the involvement of other societies, notably the Geochemical Society of Japan, the European Mineralogical Union and the Mineralogical Society of America. By 1996 the conference had grown to 1000 delegates, and in 2013 the meeting attracted over 4000 delegates.

The goal of this piece is to provide a look at the details of the hard work that is done each year. Typically this work goes on seamlessly and so much behind the scenes that our community is largely unaware of it. For instance, many may not realize that the standard pattern now is that odd-year meetings are organized by the EAG at European venues, while even-year conferences are organized by the GS at venues elsewhere in the world; so after Sacramento this year we will visit Prague (2015) and Yokohama (2016).

From previous years' experience, we have learned that to make a great conference we need to choose a great scientist to lead it, book an appropriate venue, employ a good conference administrator, and arrange an outstanding science program. An organizing committee is appointed to make all the key decisions on the arrangements for the meeting, and a science committee manages the conference program. The Goldschmidt Conferences have been fortunate to have had a succession of senior scientists willing to serve on these committees. Even with the most effective support provided by a professional conference-management company, these roles still take up a significant amount of time in the run-up to the conference. Now that Goldschmidt works to a standard pattern, these roles are much less demanding than they used to be, but no less critical.

Following the successes of past Goldschmidts, we are now looking for venues for the Goldschmidts in 2017, 2018 and 2019. The ideal venue would be one that delegates will want to visit, where the conference centre has an appropriate size, configuration and cost, and where accommodation is plentiful, varied and affordable. The cost of the conference centre is important but is not the only important factor. The biggest cost delegates have in attending a meeting occurs before they first enter the conference centre: it is the time they take away from their labs, jobs and families. Flights, accommodation and food can easily add up to more than €1000, especially for those who need an intercontinental flight. The chosen venue must therefore allow delegates to take full advantage of the investment they

make in attending the meeting. Choosing an attractive venue is therefore vital in arranging a successful meeting.

The EAG and GS want Goldschmidt Conferences to be great meetings at a reasonable cost. It is important that a meeting be as effective scientifically and as enjoyable socially as possible, and we aim to ensure that sufficient monies are spent to ensure that a meeting is well resourced. However, we bargain hard to contain costs and we negotiate strongly with all suppliers. This approach seems to have the approval of our community. More than 85% of those who responded to the Goldschmidt2013 survey said that the conference was a good or excellent meeting, and fewer than 15% would support a policy of making the meeting cheaper if it would reduce its quality.

Putting on a high-quality conference is not cheap and forces a range of strategic choices. These include:

- For a conference centre to host a Goldschmidt successfully it needs to have approximately 15–20 rooms each with space for about 150 seats, a plenary venue of at least 1000 seats and 7500 m² of open space for the posters, exhibition and catering. There are very few such venues in Europe, and most are not cheap. In the US it is common for a city to offer a convention centre for a low price knowing that the city can recoup this through more expensive hotels and restaurants, and in many venues food and drink can be very expensive.
- The Goldschmidt Conferences are serious about educating younger members of our community. Goldschmidt does this by enabling a significant fraction of them to speak at the conference. While at most international conferences students and most post-docs and junior faculty are allocated posters, at Goldschmidt the majority of delegates who wish to can speak, and approximately half the presentations are given orally. This is great for communication and education, but it is much more expensive to hire another lecture theatre for 15 minutes than it is to hire an additional 2 m² of floor space for one more poster.
- Goldschmidt also puts on a range of workshops which are administered centrally to make it as easy as possible for their organizers to gather together all the early-career workers in their field and educate them together. This is efficient and economical for the students, as they can follow the course during their first experience at a major international conference. Goldschmidt also provides field trips for those whose interests are based outside the lab.

- Significant effort and resources are put into a media program to reach out to future decision makers for funding, but also to the general media which influence politicians and their electorates. At Goldschmidt2013 this resulted in an enormous amount of coverage in the scientific and public media, culminating in a live broadcast on the UK's most listened to radio station.
- Goldschmidt wants to make the conference as affordable as possible both for students and for delegates from low-income countries, and therefore allocates substantial funds to support students and delegates from these countries.

The major investment related to the conference is the time of some of our community's top scientists, and the science program is key to the value of the conference. If the science program is poor then there is little point optimizing everything else. Over 500 scientists are involved in optimizing the science content and designing the science program and conference schedule. Once about 200 sessions have been designed, they are allocated time and space in a way that optimizes the flow of information, and the programming ensures that the inevitable clashes between sessions are kept to an absolute minimum.

The Goldschmidt Conferences invest seriously in poster sessions, as they are the prime events for informal scientific interchange, and also because presenting a poster is typically the first opportunity graduate students have to show their work. Scientific interaction is sustained by the relaxed and social atmosphere at the iconic Goldschmidt-style poster sessions. This encourages scientists at all stages of their careers to spend time with others interested in the same topic. We suspect that many important new ideas emerge here.

Goldschmidt also ensures that the conference centre is a welcoming place by providing tea, coffee and snacks throughout the day – because you're worth it! Goldschmidt also incorporates a series of social events so that the conference experience is varied and enjoyable for all.

Professional conference administration is a critical element in the success of Goldschmidt. While a few companies have been involved over the years, no single company has organized more Goldschmidt Conferences, been more involved during the period in which attendance has quadrupled, and done more to embody and promote the Goldschmidt spirit and brand than Cambridge Publications. Cambridge Publications, founded in 1994, is an independent professional conference-organizing company spearheaded by geochemist and entrepreneur Paul Beattie. Cambridge Publications make all the information easily available on an efficient website and provide

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www.eag.eu.com

2014 EAG MEDALLISTS

Urey Award to Edward Boyle



Edward Boyle (Massachusetts Institute of Technology) combined chemistry, biology and physics to understand oceanographic processes. Ed developed two fields of low-temperature geochemistry: trace metal oceanography and chemical palaeo-oceanography. Ed's meticulously clean methods proved that the ocean indeed had consistent patterns of trace metals. He and

his colleagues determined the marine cycling of Cd, Fe, Ni, Al, Cu, Zn and Pb, using them as tracers of oceanographic processes. He pioneered new methods, including isotope dilution by ICP-MS. Ed determined that shells incorporate the chemistry of the ocean using Cd/Ca and carbon isotopes in forams to determine different circulation regimes in the deep ocean during the Last Glacial Maximum. In estuarine science he introduced the concept of salinity as a reference frame for chemical mass balance.

Samuel Epstein Science Innovation Award to James Farquhar



By exploring the mass dependence of sulfur isotope fractionation in sedimentary rocks through geologic time, **James Farquhar** (University of Maryland) has completely revolutionized our understanding of the early history of Earth's oxygenation. Indeed, his discovery of the mass-independent sulfur isotope effect in Archaeal rocks is one of the major breakthroughs in

Earth science of the last 15 years. Not only did James discover that mass-independent sulfur isotope fractionations were preserved in the ancient sedimentary record, but he quickly appreciated what might be the cause of these fractionations. This work has become the cornerstone for discussions on the history of Earth-surface oxygenation and provides the most robust, and also quantitative, indicator of the 'Great Oxidation' of the Earth's atmosphere some 2.3 to 2.4 billion years ago.

CALL FOR BLOGGERS

Scientists wishing to share their experiences and insights are invited to join our team of bloggers. If interested, contact us at office@eag.eu.com. EAG Blog: blog.eag.eu.com.

Houtermans Award to Liping Qin



Liping Qin (University of Science and Technology of China) got her PhD from the University of Chicago, where she showed, using ^{182}Hf - ^{182}W systematics, that most iron meteorite parent bodies accreted in the first two million years of the formation of the Solar System. Iron meteorites may thus be the only remnants of a first generation of planetesimals, all of which

were molten due to the high abundance of radioactive ^{26}Al at that time. During a Carnegie Postdoctoral Fellowship at the Geophysical Laboratory in Washington, DC, she identified the elusive carrier of ^{54}Cr anomalies in planetary bodies as pre-solar nano-oxides and thus solved a problem that had been haunting cosmochemistry for two decades. During a second postdoc at Lawrence Berkeley National Laboratory, she applied her knowledge of chromium isotope geochemistry to the study of Cr(VI) reduction in terrestrial surface environments. Liping's work is characterized by a willingness to tackle the most challenging problems and to use all instrumentation and modelling tools necessary to achieve her scientific goals.

EAG Distinguished Lecturer 2014



Rachael James (University of Southampton) has been selected as EAG Distinguished Lecturer for 2014. Rachael's research focuses on the development and application of chemical and isotopic techniques to improve our understanding of Earth and planetary processes, both now and in the past.

As in previous lecture tours, institutions in Central and Eastern Europe interested in Rachael's research can invite her to present one or two lectures. Additional information is available at www.eag.eu.com/education/dlp/.

EAG PHOTO CONTEST

The EAG is excited to announce its first photo contest, open to everyone. Submission will be open until June 15, and there will be 3 geochemistry themes proposed. The winners will receive a 5-year EAG membership (including subscriptions to *Elements* and *Geochemical Perspectives*, as well as the member rate for Goldschmidt conferences), and will see their photos published on the EAG website and newsletters. Additional details will be provided on the EAG website and newsletters.

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a world-beating app for our conference so that delegates can use their time at the conference optimally. We also ask them to manage all communications, draft circulars and reply rapidly to thousands of e-mails.

Finally, Goldschmidt could not run without the dedication and commitment of a large number of senior scientists. The 500 session conveners give their time free of charge and keep to tight deadlines, for which we are truly grateful. This principle of giving time without

benefit extends all the way to the chairs of the organizing committee, the EAG Council and the GS Board: not only do they get no payment for their work, they get no assistance with travel funds and even no reduction in their registration fees. It is these people who are the true heroes of the meeting and who deserve our thanks and your appreciation.

We are really pleased with the way Goldschmidt has evolved over the last 25 years, standing on the shoulders of the giants that have gone before us. Geochemistry and its related

subjects are increasingly important for our society as a whole, and a strong subject requires both a strong meeting and strong scientific societies. It is great to see Goldschmidt playing its role for both our science and our world.

Chris Ballentine (President, EAG)
Liane G. Benning (Vice-President, EAG)
Janne Blichert-Toft (Co-Chair, Goldschmidt2013)
Rick Carlson (Past-President, GS)
Laurie Reisberg (Vice-President, GS)
Paul Renne (Chair, Goldschmidt2014)
Barbara Sherwood Lollar (President, GS)
Bernie Wood (Chair, Goldschmidt2013)