



THE GEOCHEMICAL NEWS

Newsletter of The Geochemical Society

NUMBER 90

SPRING 1996

What's New

- Society's Web Page up and running (2)
- Albrecht W. Hofmann receives 1996 V. M. Goldschmidt Award (7)
- Patricia M. Dove receives 1996 F. W. Clarke Award (7)
- First EAG-GS Geochemistry Fellows Inaugurated (7, 12)
- October 1 deadlines for Goldschmidt, Clarke and Fellows nominations (11, 12)
- August 1 deadline for additional Director nominations (10)
- 6th V. M. Goldschmidt Conference in Heidelberg a huge success (7)

SEVENTH ANNUAL



V. M. GOLDSCHMIDT CONFERENCE

June 2-6, 1997
Tucson, Arizona

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The June issue of *GSA Today*, containing housing, registration and technical/social program information for the Geochemical Society of America Annual Meeting (also, the Annual Meeting of the Geochemical Society) will be mailed to all recipients of this newsletter.



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THE GEOCHEMICAL SOCIETY

The Geochemical Society is a nonprofit scientific society founded to encourage the application of chemistry to the solution of geological and cosmological problems. Membership is international and diverse in background, encompassing such fields as organic geochemistry, high and low-temperature geochemistry, petrology, meteoritics, fluid-rock interaction, and isotope geochemistry. The Society produces a Special Publications Series, this biannual Newsletter, and (jointly with the Meteoritical Society) the journal *Geochimica et Cosmochimica Acta*; grants the V.M. Goldschmidt and F.W. Clarke Awards, and, jointly with the European Association of Geochemistry, the Geochemistry Fellows title; sponsors the V.M. Goldschmidt Conferences, held in North America in odd years and elsewhere in even years, jointly with the European Association of Geochemistry; and co-sponsors the Geological Society of America annual meeting (also the Geochemical Society's annual meeting) and the spring meeting of the American Geophysical Union. Members of the Organic Geochemistry Division are individuals with interests in studies on the origin, nature, geochemical significance, and behavior during diagenesis and catagenesis of naturally occurring organic substances in the Earth, and of extraterrestrial organic matter. GS members may choose to be affiliated with the OGD without any additional charge to their dues. The OGD presents the Alfred E. Treibs Award for major achievements in organic geochemistry, and a 'Best Paper' award in organic geochemistry.

Editor's Corner

Over the past six months, I have come to realize what a debt of gratitude we owe to outgoing Secretary and Newsletter Editor, Steven B. Shirey, for the outstanding job he has done in keeping the Geochemical Society's affairs and activities in good order over six long years of service. Steve also established a WWW Home Page for the Society (see below) and has graciously offered to maintain it for the near future. I strongly encourage all readers to explore and contribute to the Home Page as one of the primary sources of current and historical information about the Society and its activities.

In trying to fill Steve's shoes, I and my administrative assistant, Lori Warneke, are already late with this issue of the GEOCHEMICAL NEWS. In the future, we intend to mail the spring and fall issues in March and September. Therefore, input from the membership will be most needed in December-January and again in June-July. However, please do not hesitate to send me information at any time, including: (a) preliminary and subsequent announcements about conferences or sessions you are organizing or particularly interested in; (b) news of the passing away of prominent geochemists; (c) questions, comments or suggestions about the Society's activities and publications; and (d) any other information that may be of wide interest to the membership. Thank you.

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Geochemical Society Homepage address on the WWW:
http://www.ciw.edu/geochemical_society/

Greetings from the President

In the past few months we have discussed, and in some instances enacted, several important changes that will affect the future of the Geochemical Society. The plethora of issues being confronted simultaneously is a little overwhelming but we are on course. These changes include the future format and editorship of *Geochimica et Cosmochimica Acta*, the development of the Goldschmidt Conference as a major international meeting, the selection of those who should receive the new honorary title of Geochemistry Fellow, the enhancement of our contributions to GSA and AGU meetings, the expansion of the Society internationally, and the use of our funds. We are building stronger links with the European Association for Geochemistry and some of these changes are the result of ideas that were forged through this new liaison. As usual many of these developments reflect the remarkable sacrifice of persons and committees whose hard work may be largely invisible to the scientific community. So I would like to take this opportunity to detail these changes and acknowledge a few of the people who are leading the efforts.

Gunter Faure steps down as Editor of GCA at the end of this year. We are grateful to him and his team for steering the journal over many years through difficult budgetary waters, at the same as bringing about a tremendous increase in the size of the journal and developing the new Letters section. The future format of the journal may change under the new editorship. The poll we conducted in December revealed the clear strength of feeling that, with the growth of the journal, many find the papers of interest in GCA to be diluted by others that are of marginal or no interest. The recommendations on GCA and its editorship are being made by a joint committee led by Frank Podosek representing the GS and the Meteoritical Society. We are very grateful to Brian Skinner and Dennis Shaw for agreeing to be co-opted to assist with the editor search. Frank has also been leading the negotiations with Elsevier over the new contract, now ready for signing, for the next three years of publication of GCA.

The Goldschmidt Conference in Heidelberg was a tremendous success with the record number of 870 attendees. We appreciate the lengths to which the organizers went to bring this about. The next Goldschmidt Conference will be June 2-6, 1997, in Tucson, Arizona and is being organized by Mike Drake and Joaquin Ruiz (see advert elsewhere in this issue). Please plan on attending. We would like to include sessions spanning the gamut of geochemistry from cosmochemistry to organic geochemistry. It is important that the broad spectrum of geochemists meet together and discuss their research at a major international meeting once a year and we are expecting this conference to be as big as the one in Heidelberg.

Steve Shirey has stepped down as secretary after a marathon stint of six years. We are very grateful to him for all his efforts. However, he has yet to stop work! Steve, and the new secretary Dave Wesolowski and vice president Mike Drake

are going through all the committees, bylaws and procedures laid down for the Society in order to bring the organizational infrastructure up to date. Steve and Dave are also working on improving our communications with the outside world. Steve has been spearheading the development of the Web page and Dave has begun revamping the newsletter (as you can see). Don Elthon, the treasurer has been leading a small *ad hoc* committee that includes Francis Albarède and Steve Macko, whose task it has been to recommend appropriate policies for handling the financial aspects of the Society.

The new honorary title of Geochemistry Fellow, bestowed on individuals who have, over the years, made an outstanding contribution to geochemistry, is off to a flying start with an impressive list of 16 new Fellows. Stan Hart is to be thanked for chairing the selection committee who had to perform the difficult task at short notice of producing a list of names in time for the Heidelberg Goldschmidt Conference with a nomination deadline of February 15th! With this rush, most of the Fellows had to be notified by electronic mail. We apologize, but we wanted to get this process going as quickly as possible. There should be a tad more dignity attached to this in future. Please see, and respond to, the call for nominations for next year, elsewhere in this issue.

As well as being a fitting recognition of the many geochemists who have truly defined important aspects of the fields in which we now work, the new title of Geochemistry Fellow represents an additional facet to the developing collaboration between the Geochemical Society and the European Association of Geochemistry. This relationship is gradually being formalized. We have now established the Goldschmidt Forum, whose goal is the promotion of geochemistry. The Forum simply represents an organizational umbrella that allows us to develop further collaborative ventures with a clearly specified understanding between the two societies. At the moment those ventures are limited to the Goldschmidt Conference, the Geochemistry Fellows and the agreement that the President of the GS should be a member of the Urey Medal Committee and the President of the EAG should be a member of the Goldschmidt Medal Committee. We are now planning a new joint initiative, an honorary lecture to be called the Gast Lecture, in memory of Paul Gast. Paul Gast died in his early 40's and we propose that this lecture should be given by a geochemist who is of roughly the same age. The lecture would be given each year at the Goldschmidt Conference.


At the same time as being galvanized toward joint endeavors with EAG, the GS needs to be strengthening the representation of geochemistry within other organizations. These include the American Geophysical Union and the Geological Society of America. We are planning on promoting geochemistry with several "Frontiers" symposia at AGU and GSA over the next few years. We are also beginning to discuss ideas for educational endeavors in geochemistry in collaboration with the Mineralogical Society of America, and will continue to hold a joint MSA-GS reception on Tuesday evening at GSA.

Annual Meetings. This will be a ticketed event with good food and drink, so please consider signing up on the GSA registration form.

These are great days for geochemistry scientifically. Sadly the same cannot be said for the subject politically and in terms of federal funding. We should endeavor to create the opportunities to improve communication between ourselves so that we can foster a healthy and clear political voice when it comes to addressing some of the major societal issues in which we represent the most important and informed opinions.

Here's to an exciting and fruitful year ahead. See you all in Tucson, if not before.

With best wishes



Alex N. Halliday

From the Subscription/Membership Manager



If you have a problem with your membership, subscription to *GCA*, or need to change your address, please contact me:

TinaGayle Osborn	phone: 614-292-6919
283 Scott Hall	fax: 614-292-7273
Ohio State University	email: geochsoc@magnus.acs.ohio-state.edu (preferred)
1090 Carmack Rd.	
Columbus, OH 43210 USA	

New Members

Thank you for joining the Geochemical Society. We hope your association with the society is long-lived and profitable. If you have subscribed to *GCA* and are still not receiving the journal, need back issues of the journal, or have any questions or suggestions, please let me know.

Back Issues

Sometimes there are isolated problems with the mail delivery of *GCA*. If this happens to you, please contact me and I will make sure that you eventually receive all your issues. I have a very limited supply in the office and I can order issues from Elsevier for paid (on time) subscribers of the Geochemical Society and the Meteoritical Society. I can get issues for the current year and can usually get issues for the previous year. If you have been a new member for longer than three months and you still do not have your back issues, please contact me.

Renewal Process

This is by far the most confusing time for the business office. Please remember that a large number of documents (renewals, checks, letters of explanation) arrive within a short time period. This makes it very easy for mistakes to be made and for things to be overlooked. If you still require a receipt, please notify me again. I would like to explain the different stages of the renewal process. First Stage (Fall) - renewal notices go out to all members of the Geochemical Society. Second Stage (late February) - second notices go out to most members of the Geochemical Society. Because these notices must be prepared in the middle of January, many people who have already paid also receive notices. Therefore, please check your own records before sending your payment. Unfortunately, this year the members-only did not receive a second notice- if you have not renewed yet, please do so. Third Stage (early April) - final notices go out to all persons after all renewals have been processed and entered in the database. Please contact me if your records disagree and there is an error. Final notices have been mailed to subscribers to *GCA* and will be mailed to members-only very soon. Fourth Stage- unfortunately, you are no longer a member. However, you can change this status by paying late, as long as you do so by August 1.

1996 Membership Directory

The membership directory for the Geochemical Society is prepared every two years and 1996 is a membership directory year. Please look for your copy by the end of 1996 (for subscribers it will be mailed with issue 24 of *GCA*). If you need a different address or contact information for the membership directory than I have for the database, especially *GCA* subscribers, please send me the information you want in the directory by June 30, 1996.

(See membership application, page 25, and please encourage your colleagues to consider joining!)

In Memory

CLAIR C. (PAT) PATTERSON

Professor Clair C. (Pat) Patterson, Emeritus, died suddenly at his home at The Sea Ranch, California, on December 5, 1995. Family, colleagues, and friends gathered for a memorial service at the California Institute of Technology on March 8, 1996. The following is a testimonial written for the occasion by Pat's longtime colleague, Leon T. Silver.



Born June 2, 1922 in Des Moines, Iowa. A.B., Grinnell College, 1943. M.S., University of Iowa, 1944. Ph.D. (chemistry), University of Chicago, 1951. Research Fellow, California Institute of Technology, 1952-53; Senior Research Fellow, 1953-71; Research Associate, 1971-73; Senior Research Associate, 1973-89; Professor of Geochemistry, 1989-92; Professor Emeritus 1993-95. Honors: 1967, Patterson Peak dedicated, 85° 44' South, 55° 59' West, Queen

Maude Mountains, Antarctica; 1973, Honorary Doctorate, Grinnell College, Grinnell, Iowa; 1973, J. Lawrence Smith Medal, National Academy of Sciences, U.S.A.; 1975, Doctor Honoris Causa, University of Paris VII; 1980, Goldschmidt Medal, The Geochemical Society; 1981, Professional Achievement Award, University of Chicago; 1983, Asteroid (2511) Patterson dedicated; 1987, Elected to the National Academy of Sciences; 1995, Tyler World Prize for Environmental Achievement.

Clair Patterson, forever an Iowa farm boy, pioneered three major areas of geochemical research. (1) He provided the first reliable ages of the earth and meteorites (33 years ago), utilizing elegant microchemical and precise mass spectrometric techniques for the analysis of the isotopic compositions and concentrations of lead in terrestrial materials and meteorites. This age of 4.55 billion years, observed in different materials of the solar system and confirmed subsequently by others using other techniques and isotopic systems, has been a benchmark for researches by geochemists, geologists, planetary scientists, astronomers, and cosmologists. It ranks among the greatest achievements in geochemistry. (2) He established the fundamental basis for modeling the patterns of isotopic evolution of terrestrial lead by radiogenic addition, through thoughtful selection and analysis of critical rocks, sediments and waters of the planet. This created a powerful tool for identifying, tracing and evaluating the nature of the major geochemical reservoirs in the crust, mantle, and oceans. (3) He provided the first and still most

rigorous analysis of both the natural background and the anthropogenic buildup of lead in man's environment. He did this by further extending analytical capabilities for cleanly extracting and analyzing nanogram quantities of lead, and by the design of clever, exhaustive sampling experiments in remote regions of the earth, in various sea water environments, and in ancient archeological material. We owe to these experiments most of our present understanding of the natural lead levels and distributions and of the magnitude and origins of anthropogenic lead pollution. His work established that the body burdens of lead in contemporary humans were elevated 1000 fold above those in prehistoric people. Such levels of lead have been shown to be within 3 to 6 fold of poisoning and that significant dysfunctions (some perhaps unrecognized) may result from even present levels. He investigated the concentrations of lead relative to other trace toxic and benign metals in natural food chains. This work yielded important insights into the mechanisms of biopurification of toxic elements in various natural biological processes.

Patterson's work has had a profound effect on all technological utilization of lead (and other metals) and on the design of remedial steps to minimize lead insult to society. Not content just to publish the results of his studies he went to great efforts to bring them to the attention of responsible government agencies. He encountered a great deal of criticism and many challenges initially, from industrial and government laboratories. Particularly controversial was his contention that conventional analytical techniques were inadequate to characterize the increased lead insult above natural backgrounds. Subsequent work showed him to be correct on all major points. The quality of human life has been directly and positively impacted by the elimination of lead pipes, lead soldered cans and lead in gasoline.

Clair Patterson was a scientist of uncompromising standards and unflinching character who made a difference. He recruited, trained, collaborated with and/or inspired many able students and colleagues who carry on his efforts in several fields. His early mentor, Prof. Harrison Brown, who brought him to Caltech deserves recognition for his insight and this gift. After his retirement, he undertook a writing effort to educate young people about the vital linkages among scientific understanding, personal integrity, and responsibility to human society. He was as dedicated to this project as to all of his preceding endeavors when he passed away.

The Clair C. Patterson Prize for Graduate Studies in Geochemistry Research at Caltech was initiated by a generous gift from the Patterson family. Contributions to honor Pat's memory and achievements may be sent to Clair C. Patterson Memorial Fund, California Institute of Technology, Mail Code 105-40, Pasadena, CA 91125.

BARTHOLOMEW NAGY

Among the many accomplishments in his life, Bart Nagy, along with Wilson Orr, was instrumental in creating the Organic Geochemistry Division of the Geochemical Society, and served as its first Chairman in 1959 and 1960. The memorium below was contributed by his student, colleague and friend, Michael Engel:

Bartholomew Nagy passed away on November 11, 1995. He was Professor of Geosciences at The University of Arizona in Tucson. While best known for his work in organic geochemistry, Bart was a mineralogist, economic (ore) geologist and chemist by training, having received his M.A. degree at



Columbia University and his Ph.D. at Pennsylvania State University. After graduating from Penn State, he worked as a research engineer in reservoir mechanics for Amoco before becoming Manager of Geophysical and Geochemical Research at Cities Service Oil and Gas Corp. in Tulsa, Oklahoma. Subsequently, he joined the faculty at Fordham University, after which he joined the University of California at San Diego by invitation of Harold C. Urey.

He was one of the Apollo lunar sample principal investigators and served as a member of the Advisory Board for the Lunar and Planetary Science Institute.

Bart organized the Organic Geochemistry Division of the Geochemical Society and served as its first chairman. He served as a councilor of the Geochemical Society and was chairman of the Geological Sciences Division of the New York Academy of Sciences. Bart served as a member of the Advisory Board for the NASA Lunar and Planetary Science Institute. In 1979 he received the NASA Special Recognition Certificate and in 1985 the Special Recognition of the Organic Geochemistry Division, Geochemical Society. In 1983 he was elected as an associate board member of the Institute of Fundamental Studies of Sri Lanka. In 1985 he was elected to serve as a member of the Vatican Meteorite Collection Sample Allocation Committee by the Vatican Observatory at Castel Gandolfo. In 1987 he became a member of the IGCP Project 254 entitled "Metalliferous Black Shales" and in 1991 was appointed to the steering committee of the "Oklo as a Natural Analogue for Radionuclide Migrations in the Geosphere" program by the French Atomic Energy Commission. In 1993 he was appointed U.S. Chairman of the IGCP Project 357 "Organics and Mineral Deposits".

Bart had many interests, as evidenced by over 200 publications on topics such as bitumen-uranium associations, organic geochemistry, clay mineralogy, kerogen, hydrocarbons,

amino acids, meteorite and lunar sample analyses as well as analytical and biochemistry. He was co-editor of the books *Fundamental Aspects of Petroleum Geochemistry* and *Developments and Interactions of the Precambrian Atmosphere, Lithosphere and Biosphere* and was author of the book *Carbonaceous Meteorites*, all published by Elsevier Publishing Company. He was a contributing author to numerous other books, including *Organic Geochemistry* (Plenum). He also served for many years as the Executive Editor of the journal *Precambrian Research*.

I was very fortunate to have had Bart Nagy as my advisor and friend. He was a gifted scientist with a superior work ethic. He was always open to new ideas and never feared the consequences of questioning "conventional wisdom". Bart provided his students with ample opportunities to explore new avenues of research. He even let us commandeer his bedroom for a year to measure temperature fluctuations inside a tree growing beside his window. Although known to few, Bart was an accomplished painter. He also had an interest in fencing, although I must admit that I fared much better in his classroom than from his backyard fencing lessons. I cherish the time I had with Bart, and I am certain that I speak for all of his students, colleagues, family and friends when I say that we will miss him terribly.

His "Esteemed Colleague"

Michael Engel
School of Geology & Geophysics
The University of Oklahoma

Calendar of Meetings

May 20-24, 1996: American Geophysical Union, Spring Meeting, Baltimore, MD, USA. Contact: AGU Meetings Dept., 2000 Florida Ave., N.W., Washington, DC 20009, Tel. 202-462-6900, or 800-966-2481 (USA only), Fax 202-328-0566, Email: meetinginfo@kosmos.agu.org; URL: http://earth.agu.org/kosmos/sm96c1_1.html

May 27-29, 1996: Geological Association of Canada/Mineralogical Association of Canada, Winnipeg, Manitoba, Canada. Contact: G. S. Clark, Dept. of Geol. Sciences, University of Manitoba, Winnipeg, Manitoba R3T 2N2, CANADA, Tel. 204-474-8857, Fax 204-261-7581.

May 30-June 1, 1996: PACROFI VI: Pan-American Current Research on Fluid Inclusions, Dept. of Geology and Geophysics, University of Wisconsin-Madison. Contact: Philip E. Brown or Steffen G. Hagemann, Dept. of Geology and Geophysics, University of Wisconsin-Madison, 1215 W. Dayton, Madison, WI 53706, USA, Tel. 608-262-5954, Fax 608-262-0693, Email: pbrown@geology.wisc.edu; URL: <http://geology.wisc.edu/flines>

(continued on page 9)

6th V.M. Goldschmidt Conference

March 31 to April 4, 1996

Heidelberg, Germany

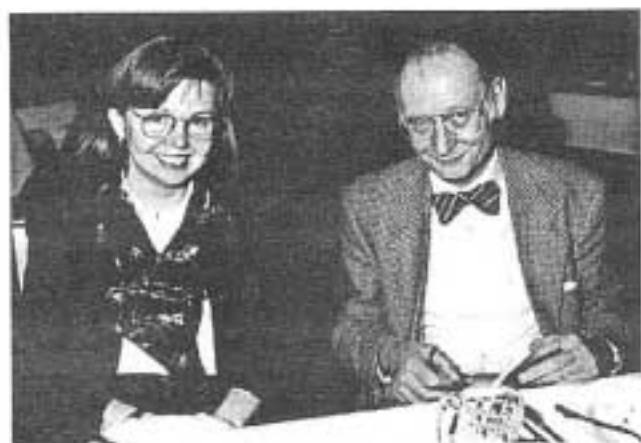


Approximately 870 scientists attended this year's Goldschmidt Conference, hosted by Rupert-Karls Universität, Heidelberg, and the Max Planck Institut für Chemie, Mainz, Germany, making it the largest one yet. The organizing committee included Hans J. Lippolt (Chairman), Rainer Altherr (Technical Program), German Müller (Social Program) and Volker Brzezinski (Secretary). 352 oral and poster presentations were made in 16 symposia and 9 open sessions with subjects ranging from cosmochemistry to mantle plumes to terrestrial aquatic systems. The conference was held in the beautiful city of Heidelberg, which celebrates its 800th anniversary this year. The original medieval architecture and charm of the old city, as well as the warmth of the people and the excellent local cuisine provided many pleasant diversions during the week.



Geochemical Society President Alex Halliday (top, left), and Claude Allègre (top, right), President of the European Association of Geochemistry, announced the formation of the Goldschmidt Forum, a joint effort of the two societies to promote geochemistry worldwide, and to oversee and facilitate the organization of future Goldschmidt Conferences. They also inaugurated the first 16 joint EAG-GS Geochemistry Fellows (for a listing, see the call for 1997 Fellows

nominations in this issue). At the same ceremony, Patricia M. Dove of the Georgia Institute of Technology (center, left, with Eberhard Usdowski of Göttingen), was awarded the F.W. Clarke Medal for her outstanding work on mineral surface/aqueous solution interactions; and Albrecht W. Hofmann of the Max Planck Institut für Chemie (center, right) was awarded the V.M. Goldschmidt Medal for his lifetime contributions to Earth's evolution through the study of isotope and element ratios



in mantle-derived materials. Al is shown here wearing the traditional cap of the Bergkapelle der Südwestdeutschen Salzwerke Ag, a brass band composed of miners from a major salt mine near Heidelberg, which performed during the conference banquet, held in the ruins of the ancient Heidelberg Castle. Other attendees of this delightful event included lifetime Geochemical Society Member Peter Deines of Penn State University and Ben



Harte of the University of Edinburgh and Chairman of the 1994 Goldschmidt Conference (bottom left); and Tony and Evelyn Lasaga (bottom right). Tony, of Yale University, is Past President of the Geochemical Society.





Geochemical Society Minutes of the Spring, 1996 Meeting of the Board of Directors

Heidelberg Renaissance Hotel, Weisbaden-Berlin Room, Heidelberg, Germany, 31 March, 1996

Present: Alex Halliday (President), Mike Drake (Vice President), Dave Wesolowski (Secretary), Don Elthon (Treasurer), Chris Hawkesworth (International Secretary), Gunter Faure (Executive Editor), Tony Lasaga (Past President), Francis Albarède (Director), Terri Bowers (Director), Don Dingwell (Director), Jacques Schott (Nominations Committee Chair), Lukas Baumgartner (Program Committee Chair), Tina Gayle Osborn (Subscriptions Manager), Lee Mobley (GCA Managing Editor). The Meeting came to order at 8:10 A.M. with a quorum present.

1. Approval of Minutes of Fall, 1995 Board Meeting
2. Goldschmidt Forum: The Board approved, by a unanimous vote, *To agree to join with the EAG (European Association of Geochemistry) in the establishment of the Goldschmidt Forum, and to accept the Goldschmidt Forum By-Laws as presented by Claude Allègre in the President's Report, with minor modifications.* The suggested revised text is as follows:
GOLDSCHMIDT FORUM BYLAW (DRAFT)
Article 1. A Goldschmidt Forum is organized between the Geochemical Society (GS) and the European Association of Geochemistry (EAG). Its goal is to promote, initiate, and coordinate initiatives that are favorable for the development of geochemistry worldwide.
Article 2. The Goldschmidt Forum is managed by an Executive Committee composed of four people, the President and Vice President of the GS, and the President and President-Elect of the EAG. They represent their society / association according to their own individual bylaws.
Article 3. The Goldschmidt Forum organizes every year a Goldschmidt Conference. The location alternates between North America and Europe. The decision as to the location as well as the person(s) responsible and comprising the organizing committee are designated by the Goldschmidt Forum Executive Committee on the basis of a proposal made by GS when meeting is in North America, and EAG when meeting is held in Europe.
Article 4. The Goldschmidt Forum designates every year a number of Geochemistry Fellows. A Selection Committee is appointed by the Executive Committee, to propose the geochemical fellows according to a number defined by the Executive Committee. The nominations are ratified by the Boards of the two societies. In the case of conflicts, the final result is decided by the Executive Committee.
Article 5. The financial support/logistics for the Goldschmidt Conference will be set up by the organizing committee under the guidance of the GS when the conference is in *North America*, and the EAG when the conference is in Europe. Other problems will be handled by the Executive Committee.
3. Enhancing GS Contributions to GSA and AGU: The Board approved by a unanimous vote *To have Geochemical Society Booths, staffed whenever possible, with journal subscription, membership application, and special publications materials displayed at all GSA annual meetings, spring and fall AGU*

meetings, and Goldschmidt Conferences. Much discussion also revolved around enhancing GS-sponsored sessions at GSA and AGU meetings. The Board endorsed the concept of holding "Frontiers" symposia, similar to the Frontiers in Geochemistry symposium held at the 1995 GSA meeting in New Orleans, composed of 30 minute invited talks by prominent geochemists, at as many large meetings as possible.

4. Enhancing the Society's support for earth science research and education: The Board approved by a unanimous vote *To authorize the Geochemical Society to join the American Geological Institute and to participate in NSF-sponsored efforts to influence the Congress and the President of the United States regarding scientific, and particularly earth science, issues.*
5. Goldschmidt Conferences: Mike Drake (organizer) discussed the 1997 Conference, to be held in Tucson, Arizona, June 2-6, 1997. Jacques Schott (organizer) discussed the 1998 conference to be held in Toulouse, France, in late August of 1998. The 1999 meeting will be organized by Stein Jacobsen and held in Boston. The tentative site of the 2000 meeting is Oxford, England.
6. Revisions to the Society's By-Laws were approved by a unanimous vote. The updated text will soon be available on the Society's WWW Homepage and can be obtained from the Secretary. Significant changes included addition of the Goldschmidt Forum and Fellows selection Committees, and description of the Geochemistry Fellows title. In other action, the deadline for nominations for Goldschmidt and Clarke Medals and geochemistry Fellows was set at October 1, for awards at the following year's Goldschmidt Conference. The deadline for additional officer/director nominations is now August 1 of each year.
7. The Use of GS Funds: The Board unanimously voted *To accept the annual report of the Treasurer* (summarized elsewhere in this issue). The Society's reserves are approximately \$255,000 and are growing by at least \$30,000 per year, due largely to royalty payments from institutional subscriptions to *Geochimica et Cosmochimica Acta*. These funds are currently invested in bank certificates of deposit. There was extensive discussion of the development of an endowment and/or funding of new programs for the members. The Board unanimously voted *To provide \$10,000 of Society funds to the organizing committee of the 1997 Goldschmidt Conference in Tucson, Arizona, for the establishment of a student travel grant fund to be administered by the organizing committee.*
8. Geochemical Society Publications: There was extensive discussion of the Joint Publications Committee's report regarding a new Executive Editor for *Geochimica et Cosmochimica Acta*. Negotiations are still in progress involving the Geochemical and Meteoritical Societies, potential candidates, and Elsevier Science Ltd. The Meteoritical Society, at its spring Board of Directors meeting, agreed to accept Elsevier's proposed subscription price schedule for the new *Geochimica* contract extension for 1997-1999 (the GS Board had already approved this contract at its fall, 1995 meeting). Before this contract is signed by the society officers, however, it remains to agree on an added clause giving the societies the option to implement the proposed subject-oriented "split" whereby members could subscribe to only half the issues at a correspondingly reduced price.
9. The Spring Meeting of the Geochemical Society Board of Directors adjourned at 11:55 A.M.

**1996 Treasurer's Report
Geochemical Society
(1741 Active Members, 3/31/96)**



Summary of report presented at the Spring Board of Directors Meeting, Heidelberg, Germany, March 31, 1996. The full report is available from Treasurer Donald Elthon, elthon@uh.edu, Dept. Chemistry, University of Houston, Houston, TX 77204, USA.

Approximate Net Balance.....\$360K (Cash and Certificates of Deposit, after all expenses are paid)	Meteoritical Society.....\$4K (Cost sharing of Business Office)
Value of Unsold Special Publications Inventory.....\$54K (103 volumes sold in 1995)	Approx. Current Gross Income.....\$102K
Approximate current annual income: Members' dues.....\$30K (after GCA member subscription costs of approx. \$100K)	Last Year's Expenses: Banking and Accounting Fees.....\$4.2K Columbus Business Office.....\$22.5K Honoraria and Medals.....\$1.4K Insurance.....\$2.5K Meetings and Travel.....\$10.9K Miscellaneous.....\$5.6K (Postage, printing, book returns, etc.) Total 1995 Expenses.....\$44.6K
Interest.....\$15K Royalties.....\$50K (GCA institutional subscriptions)	Approx. Current Net Annual Income.....\$57K
Special Publication Sales.....\$3K	

Meetings (contd.)

June 9-12, 1996: GEORAMAN-96: Raman Spectroscopy Applied to the Earth Sciences, Nantes, France. Contact: David C. Smith, Museum National d'Histoire Naturelle, Lab. de Minéralogie, 61 Rue Buffon, 75005 Paris, France, Tel. 33-1-4079-3527, Fax 33-1-4079-3524.

June 10-14, 1996: EUROGRANITES '96, Intrusive Igneous Rocks of S. Norway, South Norway. Contact: Bernard Bonin, Laboratoire de Petrographie-Volcanologie, Dept. des Sciences de la Terre, Batiment 504, Université de Paris-Sud, F-91405 ORSAY CEDEX FRANCE, Tel. 33 1 69 41 67 66, Fax 33 1 69 41 67 72, Email: bbonin@geol.u-psud.fr

June 11-13, 1996: Latin American Petroleum Show, Maracaibo, Venezuela. Contact: LAPS '96, c/o International Exhibitions, 1635 W. Alabama, Houston, TX 77006-4196 USA; Tel. 713-529-1616; Fax 713-529-0936

June 15-20, 1996: The Clay Minerals Society, 33rd Annual Meeting, Gatlinburg, TN, USA. Contact: S. Y. Lee, Tel. 423-574-6316, Fax 423-576-8646. Email: syl@ornl.gov

June 16-20, 1996: The Seventh Pacific Congress on Marine Science and Technology, Honolulu, Hawaii. Sponsors: PACON; NOAA; USGS; others. Contact: N. Saxena, University of Hawaii at Manoa, PACON International, c/o Dept. of Civil Engineering, 2540 Dole Street, Holmes 383, Honolulu, HI 96822; Tel. 808-956-2580; Email: saxena@wiliki.eng.hawaii.edu

June 17-21, 1996: Second International Scientific Conference on the Global Energy and Water Cycle, Washington, D.C. USA. Contact: International GEWEX Project Office, 409 Third St. SW, Suite 203, Washington, D.C. 20024 USA; Tel. 202-863-0012; Fax 202-488-5364; Email: gewex@cais.com; URL: <http://www.cais.com/gewex/conf.html>

June 17-21, 1996: Mid Atlantic Ridge Symposium, University of Iceland. Contact: The InterRidge Office, Dept. of Geological Sciences, University of Durham, South Road, Durham, DH1 3LE, ENGLAND, Tel. +44-191-374-2532, Fax +44-191-374-2510, Email: intridge@durham.ac.uk (use FARA-IR Symposium as subject)

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Newsletter of The Geochemical Society

THE GEOCHEMICAL SOCIETY

Slate of 1996 Officer and Director Candidates



The Geochemical Society has a 16-member Board of Directors composed of 8 Officer-Directors and 8 Non-officer Directors. The terms of Directors are either two years (President, Vice-president, Past-president) or three years (all other officers) and are staggered. Any one year will see the nomination and election of only about one-third of the Board. Officer-Directors carried over for 1996 are Alex Halliday (President), Michael Drake (Vice-President), David Wesolowski (Secretary), Donald Elthon (Treasurer), Chris Hawkesworth (International Secretary), Gunter Faure (GCA Executive Editor), Scott McLennan (Special Publications Series Editor), Antonio Lasaga (Past-President). Non-officer Directors carried over are Steven Macko, Dimitri Sverjensky, Donald Dingwell, Susan Brantley, Michael Hochella, and John Hedges. Departing Directors are Francis Albarede and Teresa Bowers.

The By-Laws of the Geochemical Society require that its members be notified of the candidates for new Officers and Directors, who are proposed by the Nominations Committee and approved by the Board of Directors of the Society at their spring meeting. The By-Laws further require that the members be notified of these nominations well before the Annual Meeting of the Geochemical Society, held in conjunction with the Annual Meeting of the Geological Society of America, which this year is October 28-31, 1996, in Denver, Colorado. The purpose is to allow the general membership to nominate additional candidates for those positions that are up for election. Please consider these candidates carefully and propose others only if you so desire. Remember that they must be Geochemical Society members and they must agree to serve if nominated. Additional candidates must be nominated by at least ten (10) members of the society, either by returning this nominations notice to the Secretary of the Geochemical Society (Dr. David J. Wesolowski, Chemical and Analytical Sciences Division, Oak Ridge National Laboratory, P.O. Box 2008, Oak Ridge, Tennessee 37831-6110 USA) or by contacting the Secretary directly (T: 1-423-574-6903, F: 1-423-574-4961, E: dqw@ornl.gov). Only return this form if you wish to nominate additional candidates in writing. If you are satisfied with the slate of officers and directors for 1996, do nothing. To be valid, the names of additional nominees must be received by the Secretary prior to August 1, 1996. If additional candidates for any position are nominated, election of officers must be by the general membership and ballots will be sent to all GS members. If no additional candidates are proposed, the slate of officers will be considered elected by the Board of Directors and will assume their duties immediately after the 1996 Annual Meeting. In this case no ballots will be sent to the membership.

Notice of 1996 Nominations of new Officers and Directors of the Geochemical Society

DIRECTORS:	Lynn M. Walter (1996-1999) Dept. Geological Sciences University of Michigan Ann Arbor, Michigan USA	Joachim Hoefs (1996-1999) Geochemisches Institut der Universität Göttingen Göttingen, Germany
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ADDITIONAL NOMINEES (nominations must be received by August 1, 1996)

 Signature _____
 Name (printed) _____
 Address _____

 Date _____

Meetings (contd.)

June 24-27, 1996: Third International Radioecological Conference: The Fate of Spent Nuclear Fuel: Problems and Reality, Krasnoyarsk, Russia. Sponsors: Krasnoyarsk Kray Administration; Research Institute of Physics and Engineering, Krasnoyarsk State University; others. Contact: V. Mikheev, ul. Lenina, 41, room 5, Krasnoyarsk 660049 Russia; Tel. 7-3912-27-87-52; Fax 7-3912-27-54-19; Email: kras@glas.apc.org

(continued on page 12)

THE GEOCHEMICAL SOCIETY 1997 AWARDS, NOMINATION PROCEDURES

V. M. Goldschmidt Award

The V. M. Goldschmidt Award, consisting of a gold medal and a certificate, shall be made for major achievements in geochemistry or cosmochemistry. Such achievements may consist of either a single outstanding contribution, or a series of publications that have had great influence on the field.

1972 P. W. Gast	1984 A. O. Nier
1973 R. M. Garrels	1985 J. B. Thompson
1974 H. E. Suess	1986 C. J. Allègre
1975 H. C. Urey	1987 W. S. Broecker
1976 H. P. Eugster	1988 H. C. Helgeson
1977 S. Epstein	1989 K. K. Turekian
1978 G. J. Wasserburg	1990 E. Anders
1979 H. Craig	1991 A. E. Ringwood
1980 C. C. Paterson	1992 S. R. Hart
1981 R. N. Clayton	1993 S. R. Taylor
1982 K. B. Krauskopf	1994 H. D. Holland
1983 S. S. Goldich	1995 R. Berner
	1996 A.W. Hofmann

Nominations for the 1997 V. M. Goldschmidt Award should be submitted before October 1, 1996, to:

Dr. Claude J. Allègre
Géochimie et Cosmochimie
Institut de Physique du Globe
4 Place Jussieu Tour 14-24
Paris Cédex 05 F-75005
France
Tel: 33-1-44274915
Fax: 33-1-44273752
E-mail: allegre@ipgg.jussieu.fr

F. W. Clarke Award

The F. W. Clarke Award, consisting of a silver medal and a certificate, shall be made to a young scientist for a single outstanding contribution to geochemistry or cosmochemistry, published as either a paper or a series of papers on a single topic. Candidates must have held a recognized doctorate or its equivalent for no more than six (6) years, or be not more than thirty-five (35) years of age, whichever anniversary date is later on December 31st of the year in which the award is approved by the Board of Directors. Independence and originality shall be important factors.

1972 D. A. Papanastassiou	1984 A. Mackenzie
1973 H. Ohmoto	1985 E. M. Stolper
1974 L. Grossman	1986 M. D. Kurz
1975 D. Walker	1987 E. Takahashi
1976 J. R. Wood	1988 F. M. Phillips
1977 B. Mysen	1989 no award
1978 D. J. DePaolo	1990 R. J. Walker
1979 A. C. Lasaga	1991 D. Sherman
1980 R. W. Potter	1992 E. Klein
1981 J. F. Minster	1993 Y. Zhang
1982 P. J. Patches	1994 C. Agee
1983 E. B. Watson	1995 R. Lange
	1996 P.M. Dove

Nominations for the 1997 F. W. Clarke Award should be submitted before October 1, 1996, to:

Dr. Barb Dutrow
Dept. Geology and Geophysics
Louisiana State University
Baton Rouge, LA 70803-4101 USA
Tel: 504-388-2525

Fax: 504-388-2302

E-mail: dutrow@hermes.geol.lsu.edu

The Goldschmidt and Clarke awards will normally be given annually at the V.M. Goldschmidt Conference, but may be reserved at the discretion of the Board of Directors. Neither award is normally shared, except in highly unusual cases, such as independent discoveries or joint work where the contributions of the co-workers are essentially equal. Members of the Board are ineligible for the duration of their terms. Past medalists are permanently ineligible.

Nominations should specify the name, address, citizenship, and chief fields of specialization of the nominee, and be accompanied by a curriculum vitae and bibliography of the nominee, limited to two pages each, and up to three supporting letters. Nominations should also be accompanied by a letter from the nominator giving name, address, phone number, signature, and a few paragraphs summarizing why the candidate is suitable for the award.

Nominations for the Clarke Award should be accompanied by a copy of the paper(s) for which the nominee is to be considered for the award, together with a statement explaining the significance of the work. Nominators should also specify the nominee's final degree, the degree advisor's name, the year granted, and the name of the granting institution.

All nominations will be considered by the Award Committees and will remain active for three years, unless the candidate becomes ineligible due to time limitations (Clarke), or on grounds of membership on the Board or on one of the Award Committees. Such nominations will then be tabled for the duration of this nominee's term, then reactivated for the balance of the three year period after expiration of the term.

Award winners are chosen by the Board of Directors, normally from between a nominee and an alternate recommended by each Award Committee. The awards are based solely on scientific merit, without regard to citizenship or membership in the Society.

Alfred E. Treibs Award

This award, consisting of a gold-filled medal and a certificate, shall be awarded for major achievements, over a period of years, in organic geochemistry. Such achievements shall consist of pioneering and innovative investigations which have made highly significant contributions to the understanding of the origin and fate of organic materials in the geosphere and/or in extra-terrestrial environments.

1979 G. T. Philippi	1985 P. Albrecht
1980 B. Tissot	1987 T. C. Hoering
1981 G. Eglinton	1989 J. R. Maxwell
1982 J. M. Hunt	1991 J. W. de Leeuw
1983 D. H. Welte	1993 I. R. Kaplan
1984 W. K. Seifert	1995 K.A. Kvenvolden

The Alfred E. Treibs Award is now given every two years at the Gordon Research Conference on Organic Geochemistry. An award will be made in 1996, but the nominations deadline has passed. This award is subject to approval by the Board of Directors of the Geochemical Society. For the 1998 Alfred E. Treibs Award, nominations information may be obtained from, and the completed package should be sent by November 15, 1997, to:

Dr. Richard M. Mitterer
Department of Geosciences
University of Texas at Dallas
Richardson, TX 75083-0688 USA
Tel: 214-883-2462
Fax: 214-883-2537
E-mail: mitterer@utdallas.edu

THE GEOCHEMICAL SOCIETY



Call for Nominations for 1997 Joint EAG-GS Geochemistry Fellows

The European Association of Geochemistry (EAG) and the Geochemical Society (GS) established in 1996 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. Existing and new Urey, Goldschmidt and Treibs Medal winners become Fellows automatically. In addition, up to 0.5% of the total combined membership of the two societies should be elected as Fellows each year. This corresponds to approximately 15 honorees per year at current enrollment levels, and allows for growth in the societies. Nominations will be sought and recommendations for election made by a committee (Fellows Selection Committee) of 8 persons, 4 from GS, and 4 from EAG.

Any member of either society may nominate Fellows by right. No individual may be elected a Fellow, except as a result of having previously won the Urey, Goldschmidt or Treibs Medal, while they are serving either on the Fellows Selection Committee or as a Council / Board member of EAG / GS. The Selection Committee may not themselves nominate individuals, but may actively solicit nominations from others. Members of the Selection Committee and Council / Board may not vote on any nomination where there is a clear conflict of interest. Final approval of all nominees will be made by the EAG Council and the GS Board of Directors. In the event that the EAG Council and the GS Board differ over the ratification of a nomination, the Executive Committee of the Goldschmidt Forum (the Presidents and Vice Presidents of EAG and GS) will resolve the issue. Fellows will be inaugurated at the 7th V.M. Goldschmidt Conference in 1997.

Nominations should include the name, address, and telephone number of the nominee, a citation of no more than two pages describing the contributions the individual has made to geochemistry, and up to three letters of support from members of either society. The nomination should also include the nominator's name, address, telephone number, and signature.

Nominations should be sent no later than October 1, 1996 to:

Dr. Albrecht W. Hofmann (Chair, Fellows Selection Committee)
Max Planck Institut für Chemie
Postfach 3060
55020 Mainz, Germany

T: 49-6131-305280
F: 49-6131-371051
E: hofmann@geobar.mpch-mainz.mpg.de

1996 Geochemistry Fellows (excluding Urey, Goldschmidt and Treibs Medalists) William Compston, Willi Dansgaard, John Edmond, John M. Hayes, Marc Javoy, Ho-Kwang Mao, Stephen Moorbath, John Reynolds, Jean-Guy Schilling, Nick Shackleton, Mitsunobu Tatsumoto, Werner Stumm, George Tilton, Grenville Turner, Heinrich Wänke, William White

Meetings (contd.)

June 30-July 4, 1996: Composition, Structure, and Dynamics of the Earth's Interior, Plymouth State College, Plymouth, New Hampshire. Sponsor: Gordon Research Conferences, University of Rhode Island. Contact: G. Schubert, University of California, Los Angeles, Dept. ESS, 3806 Geology Bldg., Box 951567, Los Angeles, CA 90095-1567, USA; Tel. 310-825-4577, Fax 310-825-2779, Email: gschubert@mgnvax.ess.ucla.edu; URL: <http://artemis.ess.ucla.edu>

July 8-11, 1996: The Oceanography Society's 1996 Meeting, The Role of the Ocean in Global Change Research, Highlighting Oceanographic Aspects and Importance of the Global Change Research of WCRP, IGBP, and HDP, Amsterdam, The Netherlands. Contact: TOS Headquarters, 4052 Timber Ridge Dr., Virginia Beach, VA 23455; Tel. 804-464-0131; Fax 804-464-1759; Email: jrhopdes@ccpo.odu.edu; see TOS Web Site (http://www.tos.org/conferences/amsterdam_1996.html) (abstract deadline: May 6, 1996)

July 12-20, 1996: Long Lava Flows, James Cook University, Townsville, Australia. Contact: Ms. D. Casey, Department of Earth Sciences, James Cook University, Townsville, Australia 4811; Tel. 61-77-814726; Fax 61-77-251501; Email: glpww@jcu.edu.au; see AGU WWW Home Page (<http://www.agu.org>) (Abstract deadline: April 30, 1996)

July 14-17, 1996: Watershed Restoration Management: Physical, Chemical, and Biological Considerations, Syracuse, New York. Sponsor: AWRA. Contact: K. L. Curtis, American Water Resources Association, 950 Herndon Parkway, Suite 300, Herndon, VA 22070-5528 USA; Tel. 703-904-1225; Fax 703-904-1228; Email: awrahq@aol.com

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Special Session GS01 1996 Spring AGU
Innovative Applications of $^{40}\text{Ar}/^{39}\text{Ar}$ Microanalytical Research
(joint with VGP)

Recent technical improvements in microanalytical methods for $^{40}\text{Ar}/^{39}\text{Ar}$ dating permit the study of increasingly smaller volumes of geological materials. Laser and improved resistance-furnace methods now make it possible to obtain precise age information on microvolumes of materials as diverse as volcanic rock, aggregates of clay minerals, and single crystals. Moreover, laser methods have demonstrated the ability to recover information on spatial variations within single crystals, such as diffusive gradients. These sophisticated analytical capabilities are driving advances in all areas of argon isotopic research, including extending the frontiers for dating very young volcanic rocks, radically improving the age resolution in older volcanic systems, enhancing studies of detrital mineral provenance, and testing of the concepts for closure temperature and episodic argon loss. Papers are invited for this session which focus on recent developments and applications of $^{40}\text{Ar}/^{39}\text{Ar}$ microanalytical methods to various geological materials and processes, as well as the theoretical considerations of argon retention in complex systems.

Conveners: Willis E. Hames, Department of Geology, Auburn University, Auburn, Alabama 36849, tel: 334-844-4881, fax: 334-844-4486, email: Hameswe@mail.auburn.edu

Simon P. Kelley, Department of Earth Sciences, Open University, Walton Hall, Milton Keynes, MK7 6AA, U.K., tel: +44 1908 653009, fax: +44 1908 655151, email: S.P.Kelley@open.ac.uk



Geochemical Society Symposium at 1996 GSA Annual Meeting
Geochemical Constraints on Seawater Composition and the Coupled Ocean-Atmosphere
System: The Precambrian Revisited

October 28-31, 1996
Denver, CO

Co-conveners: Timothy W. Lyons (Primary Contact)
 Department of Geological Sciences
 University of Missouri, Columbia
 101 Geological Sciences Bldg.
 Columbia, MO 65211
 Tel: (314) 882-6328
 Fax: (314) 882-5458
geoltl@showme.missouri.edu

Tracy D. Frank
 Department of Geological Sciences
 University of Michigan
 2534 C. C. Little Building
 Ann Arbor, MI 48109-1063
 Tel: (313) 764-1435
 Fax: (314) 763-4690
tdfrank@umich.edu

Recent innovative, multidisciplinary investigations of the Precambrian geologic record have sparked a renewed interest in Earth's early history. This symposium will examine new geochemical and isotopic data, and will explore the latest generation of ideas concerning the evolution of the coupled ocean-atmosphere system and its interrelation with biotic and abiotic processes during Precambrian time.

1996 Gordon Research Conference - Organic Geochemistry



Holderness School, New Hampshire, USA

August 11-16, 1996

Robert Alexander, Chair
Kenneth E. Peters, Vice Chair

POSTERS

Abstracts for poster presentations should be sent to:

Dr. Ken Peters
Mobil Exploration and Producing Technical Centre
3033 Irving Boulevard
Dallas, TX 75247 USA
Phone: 214-951-3272
Fax: 214-951-2265

How to Get GRC information:

GRC@GRCMAIL.GRC.URLEDU
Phone: 401-783-4011
Fax: 401-783-7644

MOLECULAR AND ISOTOPIC INDICATORS OF PALEOOCEANOGRAPHIC CONDITIONS

Robert R. Bidigare, *Field and laboratory studies of factors controlling the molecular and isotopic compositions of phytoplankton.*

Heidy van Kaam-Peters, *Environmental controls on the molecular and isotopic composition of organic matter deposited in a Kimmeridgian euxinic shelf sea.*

COMPARATIVE ORGANIC GEOCHEMISTRIES OF SOILS AND SEDIMENTS

Richard Keil, *Relationships between organic matter reactivity, molecular structure and depositional milieu in modern marine sediments.*

Ingrid Kogel-Knabner, *Soil organic matter structure in relation to formation conditions in different soil types.*

TOWARDS AN UNDERSTANDING OF ORGANIC GEOCHEMISTRY ON THE PREBIOTIC EARTH

Geoffrey Blake, *Observational studies of organic chemistry in protoplanetary nebulae.*

James Ferris, *Prospecting for organics on the primitive Earth.*

RESERVOIR PROCESSES

William England, *Geochemical evaluation of reservoir filling and mixing.*

Alain Hoc, *The origin and distribution of bitumen in reservoirs.*

Ken Peters, *Selective biodegradation of hopane epimers to 25-norhopanes in petroleum.*

BIOMARKER RESEARCH AND APPLICATIONS

Pierre Albrecht, *Extensively cyclized regular polyprenoids in geological samples.*

Andrew Murray, *Oleananes in oils and sediments: evidence of marine influence during early diagenesis.*

Torren Peakman, *Terrigenous triterpenoids: synthesis and applications.*

GASES AND LIGHT HYDROCARBONS

J. Michael Moldowan, *New applications of diamondoids in petroleum geochemistry.*

Alan Prinzboffer, *Gas generation and migration in sedimentary basins: segregation, leakage, and associated chemical and isotopic fractionation.*

ENVIRONMENTAL ORGANIC GEOCHEMISTRY

Robert P. Eganhouse, *Organic geochemists are from Mars and environmental chemists are from Venus: making the marriage work.*

Hauke Harms, *The bioavailability of organic pollutants—influences of sorption and mass transfer on bacterial transformation rates.*

Robert Gilham, *Enhanced degradation of chlorinated hydrocarbons using zero valent metals.*

NOVEL MOLECULAR ISOTOPIC ANALYSES: APPLICATIONS IN ORGANIC GEOCHEMISTRY

Mike Engel, *Compound specific stable nitrogen isotope analysis of terrestrial and extraterrestrial materials.*

Tim Englinton, *Radiocarbon ages of individual sedimentary biomarkers.*

PALEOCLIMATE

James White, *Fractionation of carbon isotopes in terrestrial plants: paleoenvironmental applications.*

Michael Arthur, *Climatic and oceanographic influences on preservation of organic matter in the mid-Cretaceous Western Interior Seaway, North America: A holistic approach.*

Bernd Mycke, *Climate controlled deposition of Barremian lacustrine source rocks in West Africa.*

TREIBS MEDAL PRESENTATION

Newsletter of The Geochemical Society

Organic Geochemistry—Linking the Biosphere and Geosphere



Date: Sunday, October 27, 1996

Location: OGD Symposium, GSA Annual Meeting, Denver, Colorado,

Conveners: Keith A. Kvenvolden, U. S. Geological Survey, 345 Middlefield Road, MS-999, Menlo Park, CA 94025
phone: 415-354-3213; fax: 415-354-3191; email: kk@octopus.wr.usgs.gov
Michael D. Lewan, U.S. Geological Survey, Denver, CO
Joseph A. Curiale, Unocal Corporation, Sugar Land, TX

Organic geochemistry is an interdisciplinary geoscience that describes many chemical linkages between highly complex processes of the biosphere and geosphere. This tutorial symposium considers fundamentals, applications, and latest advances of organic geochemistry spanning much of geologic time from pre-earth origin to modern environmental change.

Topics and Speakers (Exact titles of topics subject to change):

Morning

Organic Geochemistry in Earth System Science—Introduction, Keith Kvenvolden, U. S. Geological Survey

Organic Cosmogeochimistry, Jeffrey Bada, Scripps Institution of Oceanography

The Early Earth, David DesMarais, NASA-Ames

Break

The Cycling of Carbon, John Hayes, Indiana University

Marine-Terrestrial Interactions, John Hedges, University of Washington

Paleo-Oceanography and Paleolimnology, Philip Meyers, University of Michigan

Afternoon

Petroleum Geoscience, Michael Lewan, U. S. Geological Survey

Coal Geoscience, Pat Hatcher, Pennsylvania State University

Geochemical Record of Ancient Man, Marilyn Fogel, Carnegie Institution of Washington

Break

Environmental Geochemistry, Bob Eganhouse, U. S. Geological Survey

Forensic Geochemistry, Ian Kaplan, Global Geochemistry Corporation

Summation, Joe Curiale, Unocal Corporation

1997 GSA and AGU Meetings!

The Geochemical Society holds its official annual meeting in conjunction with the Geological Society of America annual meeting, and is a co-sponsor of this meeting. Our Organic Geochemistry Division normally organizes an all-day symposium on the Sunday before the meeting, at which it also conducts its Business Meeting. In addition, the Geochemical Society is guaranteed a half-day symposium or theme session slot during the GSA meeting.

As co-sponsor of the Spring American Geophysical Union Meeting, the Society can submit an unlimited number of symposia and theme sessions. The Society is not allocated any official time at the Fall AGU meetings, but the Volcanology-Geochemistry-Petrology Section of AGU organizes special geochemical sessions at these.

Our Society's special session's at the 1996 GSA and spring AGU meetings are described elsewhere in this issue. Now is the time to start thinking about the 1997 meetings. Deadlines for special session proposal submittals generally fall around the first of the year for both GSA and AGU for that year's meetings. If you want more information, or have an idea for GS-sponsored symposia (invited) or theme sessions (volunteered) at these meetings, please get in touch with our 1997 Program Committee Chairperson:

R. Lawrence Edwards
University of Minnesota
Shepherd Labs
100 Union Street SE
Minneapolis, MN 55455 USA

T: 612-626-0207
F: 612-625-3819
E: edwar001@maroon.tc.umn.edu

**SEVENTH ANNUAL V. M. GOLDSCHMIDT
CONFERENCE
June 2-6, 1997
Tucson, Arizona**



Hosted by:

Department of Planetary Sciences/Lunar and Planetary
Laboratory and Department of Geosciences
The University of Arizona

Sponsors:

Geochemical Society
European Association of Geochemistry
Lunar and Planetary Institute
The University of Arizona
National Aeronautics and Space Administration

Contact:

Dr. Michael J. Drake
Department of Planetary Sciences
Lunar and Planetary Laboratory
The University of Arizona
Tucson AZ 85721 USA
Phone: 520-621-6962
Fax: 520-621-4933
E-mail: goldconf@lpl.arizona.edu

Program Committee:

Chair: J. Ruiz
General and Isotope Geochemistry: J. Patchett
Surficial Processes and Hydrology: J. Quade and M. Zreda
Geochronology: G. Gehrels and S. Baldwin
Planetary: T. Swindle
Experimental: J. Ganguly
Hydrothermal: M. Barton

The Seventh Annual Goldschmidt Conference will be held at the Tucson Convention Center in Tucson, Arizona, from June 2-6, 1997. The conference will be hosted by the University of

Arizona's Department of Planetary Sciences/Lunar and Planetary Laboratory and Department of Geosciences. Dr. Michael J. Drake is the Conference Chair, and Dr. Joaquin Ruiz is the Program Committee Chair. Current sponsors include the Lunar and Planetary Institute, The University of Arizona, and the National Aeronautics and Space Administration.

The Goldschmidt Conference is an international conference of 400-600 geochemists, and is held alternatively in Europe and North America. The content of the meeting reflects to some extent the host institution(s). The Department of Planetary Sciences/Lunar and Planetary Laboratory is dedicated to the goal of research and teaching about the formation and evolution of the planetary system and its constituent objects and processes. The Department of Geosciences focuses on research and education dealing with the nature, genesis, and history of the Earth and its crust.

The city of Tucson is located in Pima County, Arizona. It is 116 miles south of Phoenix, the state capital, and is about 65 miles north of the U.S.-Mexico border. Located in the Basin and Range province near the Colorado Plateau, the southern Rocky Mountains, and the Gulf of California, Tucson offers a remarkable natural setting for field studies. Arizona is famous for its warm, dry climate, with an average June minimum temperature of 67 degrees Fahrenheit (19 degrees Celsius), an average June maximum temperature of 99 degrees Fahrenheit (37 degrees Celsius), a relative humidity of 13%, and almost no chance of rain (June average = 0.22 inches).

The program committee welcomes your suggestions for potential symposia topics, and solicits volunteers to act as symposia organizers. Please send your suggestions for topics and offers to organize to: goldconf@lpl.arizona.edu.

In order to remain on the mailing list, please complete the Indication of Interest Form and return it by November 8, 1996, to Goldschmidt Conference, Lunar and Planetary Institute, 3600 Bay Area Boulevard, Houston TX 77058-1113.

Deadlines:

November 8, 1996 Indication of Interest forms
due at LPI

early January 1997 Second announcement,
including logistical
and registration
information

February 21, 1997 Abstract deadline

early April 1997 Final announcement

June 2-6, 1997 Seventh Annual
Goldschmidt Conference

Name: _____

Address: _____

Phone: _____

Fax: _____

Email _____

Topic of my potential
contribution: _____

Indication of Interest Form:

Seventh V.M. Goldschmidt Conference

June 2-6, 1997
Tucson, Arizona**PLEASE RETURN BY NOVEMBER 8, 1996 TO:**Goldschmidt Conference
Lunar and Planetary Institute
3600 Bay Area Boulevard
Houston, Texas 77058-1113 USA
Phone: 713-486-2166
Fax: 713-486-2125**8th V.M. Goldschmidt
Conference**Toulouse, France
August 30-September 3, 1998Organizing Committee

L. Charlet (Grenoble), R. Delmas (Toulouse), B. Dupré (Toulouse), C. Fouillac (Orléans), A. Huc (Rueil Malmaison), J. Lancelot (Montpellier), J. Ludden (Nancy), J.-F. Minster (Toulouse), E. H. Oelkers (Toulouse), M. Polvé (Toulouse), J. Schott (Chairman, Toulouse)

For Information Contact: Jacques Schott, Lab. Géochimie, Univ. Paul Sabatier CNRS, 38 Rue 36 Ponts, Toulouse, 31400 France, T: 33-615-56518, F: 33-615-20544, E: schott@lucid.ups-tlse.fr

Meetings (contd.)

July 18-19, 1996: 1996 Mars Symposium: Mars Revisited: A Forward Look, Washington, DC, USA. Sponsored by NASA; The Planetary Society, Lockheed Martin Corporation. Contact: J. Cole, Science and Technology Corp., 101 Research Drive, Hampton, VA 23666, Tel. 804-865-7604, Fax 804-865-8721, Email: cole@stenet.com

July 18-21, 1996: History of Oil and Gas Exploration in North America, Titusville, PA. Contact: W. R. Brice, Dept. of Geology, University of Pittsburgh, Johnstown, PA 15904, Tel. 814-269-2901, Email: bbrice@upj.pitt.edu (abstracts deadline: April 10, 1996)

July 21-28, 1996: Fourth International Symposium on Geochemistry of the Earth's Surface, Inkley, Yorkshire, England. Contact: GES-IV Conference Secretariat, Dept. of Continuing Professional Education, Continuing Education Bldg., Springfield Mount, Leeds Univ., Leeds LS2 9NG ENGLAND. Tel: 0113 233 3236, Fax: 0113 233 3240.

(continued on page 19)

Geochemistry of Crustal Fluids

Sponsored by the European Science Foundation and the European Community

Seefeld, Tyrol, Austria
December 6-11, 1996

Chairperson: K. Vala Ragnarsdottir (Bristol)

Vice-Chairperson: Eric H. Oelkers (Toulouse)

Natural fluids control a large number of natural phenomena including formation of economic ore deposits, the quality of petroleum reservoirs, and the transport of toxic and radiogenic wastes in groundwater. Similar fluids are used in a variety of industrial processes, for example electrical power generation and hydrometallurgy. Also fluid/atmosphere interaction has been demonstrated to be an essential part of the global CO₂ cycle.

The purpose of this European Research Conference series is aimed at the understanding of the consequences and influence of fluids in surficial and crustal processes. Emphasis will be placed on characterizing the thermodynamic properties of geologic fluids, application of stability of aqueous and surface complexes, calculation of coupled chemical mass transport and fluid flow over geologically relevant timescales, organic/inorganic interaction, and the influence of fluids on mineral surface chemistry.

A poster session will also be organized.

A list of scientists who have thus far accepted to give presentations include:

J. Brodholt, University College London, UK

K. Bucher, University of Freiburg, Germany

S. Gislason, University of Iceland, Iceland

B. Jamveit, University of Oslo, Norway

N. Rose, University of Copenhagen, Denmark

J. Schott, University of Toulouse, France

T. Seward, ETH, Zurich, Switzerland

D. Sherman, University of Bristol, UK

K. Shmulovich, Institute of Experimental Mineralogy, Chernogolovka, Russia

C. Steefel, University of Southern Florida, Tampa, Florida, USA

R. Wogelius, University of Manchester, UK

B. Yardley, University of Leeds, UK

All European scientists under the age of 35 are welcome to apply for support for attendance. The conference presentations will be held in the mornings and evenings, giving ample time for scientific discussions on/in ski-slopes and lifts...

For further information:

Vala.Ragnarsdottir@bris.ac.uk;

<http://www.gly.bris.ac.uk/www/research/geochem/expt.htm>

oelkers@lucid.ups-tlse.fr

CGrimont@csf.org; <http://www.csf.org/euresco>

The meeting will be advertised in *Nature* and all major Geochemical Journals.

Future of Marine Geosciences (Fumages)

A Workshop and Report Sponsored by the U.S. National Science Foundation

The organizing committee solicits the input of the entire United States and international community of marine geoscientists in the process of formulating a long-term (greater than 5 years) vision of the future of our science. In order to obtain the widest possible community involvement, we are asking you to please take the time to send us a statement of no more than 2 pages in length with one reference (if appropriate) describing one or two of what you perceive to be the most important scientific themes for the future in this area. What are the most important scientific problems that we need to address? What sort of scientific infrastructure will be needed to solve these problems in an efficient manner?

Responses should be addressed to:

Professor Paul A. Baker, Duke University
Department of Geology, Box 90227
Durham, NC 27708-0227 USA

To simplify assembly into a draft document, please e-mail ASCII text files to: pbaker@geo.duke.edu. Also, please send a hard copy via mail or fax to (919) 684-5833.

56th Annual Meteoritical Society Meeting

Berlin, Germany
July 22-29, 1996

Contact: Dr. Dieter Stoeffler, Museum für Naturkunde
Humboldt-Universität, D-10115, Berlin
Germany, phone: +49 30 2897 2544
fax: +49 30 2897 2561
email: dieter-stoeffler@museum.hu.Berlin.de

MSA Short Course Announcement

Sponsored by the Mineralogical Society of America

REACTIVE TRANSPORT IN POROUS MEDIA: General principles and applications to geochemical and biogeochemical processes

October 25-27, 1996, Golden, CO, USA

(preceding Geological Society of America Annual Meeting in Denver, Colorado)

Conveners: Peter C. Lichtner, Southwest Research Institute, 6220 Culebra Road, San Antonio, TX 78238-5166; e-mail lichtner@swri.edu

Carl I. Steefel, Department of Geology, University of South Florida, Tampa, FL 33620, e-mail steefel@margaux.cas.usf.edu

Eric H. Oelkers, Laboratoire de Geochimie, CNRS/Universite Paul Sabatier, 38 rue des Trente Six Ponts, 31400 Toulouse, FRANCE; e-mail oelkers@cix.cict.fr

The focus of the short course will be to present the physical, chemical, and mathematical basis for reactive transport in geological systems and the application of these mathematical models to describing natural systems. This involves developing techniques and approximations to integrating mass conservation equations over the long time spans appropriate to such processes as well as short time scales such as characterize environmental problems related to contaminant migration. The course will include discussions of numerical/computational, experimental, and field issues relating to reactive transport in the Earth Sciences. In addition, the course will include a one day computer software jamboree at the Colorado School of Mines.

October 25-26, 1996 Table Mountain Inn,
Golden, CO
October 27, 1996 Computer Jamboree,
Colorado School of Mines

Fee:	Professionals:	\$320 MSA member \$380 Nonmember
	Students:	\$220 MSA member \$280 Nonmember

Register directly with the Mineralogical Society of America (contact: Alex Speer: jalexsppeer@aol.com)

Meetings (contd.)

July 22-26, 1996: Lunar and Planetary Institute, 59th Annual Meteoritical Society Meeting, Humboldt University, Berlin, Germany (Abstracts due May 1, 1996). Contact: D. Stöffler, Museum für Naturkunde, Invalidenstrasse 43, D-10115 Berlin, GERMANY, Tel. +49-30-2897-2544, Fax +49-30-2897-2561, Email: dieter-stoeffler@museum.hu-Berlin.de; URL: <http://cass.jsc.nasa.gov/htbin/ols/ann-meetings.sh>

July 23-27, 1996: Western Pacific Geophysics Meeting, American Geophysical Union, SEDI Fifth International Symposium, SG2 Symposium: Structure and Dynamics of the Australian Lithosphere, Brisbane, Australia. Topics: Living with Large Eruptions: Lessons from Recent Volcanic Events; Magmatic Volatiles: Timing of Release and Role in Explosive Eruptions; Lava Flow Emplacement Mechanisms; Adesitic Volcanism and Petrogenesis of Subduction-Related Magmas; Hydrothermal Activity and Its Setting in Marginal Basins of the Western and Southwestern Pacific (Joint with Tectonophysics); <http://www.agu.org>

July 24-26, 1996: The Seventh International Symposium on Rapakivi Granites And Related Rocks (IGCP 315), Helsinki, Finland. Contact: Ilmari Haapala & O. Tapani Ramo, Dept. of Geology, University of Helsinki, P.O. Box 11, FIN-00014, FINLAND, Email: ilmari.haapala@helsinki.fi (abstract deadline: April 15, 1996).

July 28-31, 1996: American Association of Petroleum Geologists Rocky Mountain Section Meeting, Billings, MT. Contact: L. D. Vern Hunter, 2903 Parkhill Dr., Billings, MT 59102, Tel. 406-656-5197.

July 29-31, 1996: TIEES '96: First Trabzon International Energy and Environment Symposium, Trabzon, Turkey. Contact: Energy and Environment '96, Conference Chair, Department of Mechanical Engineering, Karadeniz Technical University, Trabzon 61080, Turkey; Tel. +90-462-325-3223; Fax +90-462-325-7405; Email: energy96@risc01.bim.ktu.edu.tr

(continued on page 20)

**Chapman Conference on Crater Lakes, Terrestrial
Degassing, and Hyper-Acid Fluids
in the Environment**

September 5-9, 1996, Crater Lake, Oregon
Abstract Deadline: May 31, 1996

Contacts: Johan Varekamp
Dept. of Earth and Environmental Sciences
Wesleyan University
Middletown, CT 06459-0139
Tel. 860-685-2248, Fax 860-685-3651
Email: jvarekamp@wesleyan.edu

or

Gary Rowe
U.S. Geological Survey, Water Res. Division
975 W. Third Ave.
Columbus, OH 43212
Tel. 614-469-5553 ext. 133
Fax 614-469-5626
Email: glrowe@dohclb.er.usgs.gov or
glrowe@usgs.gov



We invite volcanologists and geochemists with an interest in crater lakes, volcanic degassing, geothermal/ore forming environments and the chemistry of acid fluids to submit abstracts and to participate in this meeting. Please contact the conveners if you would like to receive future information.

Meetings (contd.)

July 29-Aug. 2, 1996: Proterozoic Evolution in the North American Realm, Goose Bay, Labrador, Canada. Contact: C. F. Gower, Newfoundland Dept. of Natural Resources, P.O. Box 8700, St. John's, New Foundland A1B 4J6, Canada, Tel. 709-729-2118, Fax 709-729-3493, Email: cfg@zeppo.geosurv.gov.nf.ca (abstract deadline: March 31, 1996)

July 30-Aug. 2, 1996: Integrated Management of Surface and Ground Water, San Antonio, Texas USA. Sponsor: The Universities Council on Water Resources. Contact: W. R. Jordan, Texas Water Resources Institute, Texas A&M University, College Station, TX 77843-2118 USA; Tel. 409-845-1851; Fax 409-845-8554; Email: twri@twri.tamu.edu

Aug. 4-14, 1996: 30th International Geological Congress, Session 10-7, Organic Geochemistry of Fossil Fuels, Beijing, China. Contact: Z. Xun, Deputy Secretary General, 30th International Geological Congress, PO Box 823, Beijing 100037, Peoples Republic of China, Tel: 86-1-832-7772, Fax: 86-1-832-8928. (Abstracts due Nov. 1, 1995)

Aug. 8-17, 1996: XVII Congress and General Assembly of the International Union of Crystallography, Washington, D.C. Sponsors: American Crystallographic Association; U.S. Academy of Sciences/National Research Council; others. Contact: W. L. Duax, Hauptman Woodward MRI, 73 High St., Buffalo, NY 14203 USA; Fax 716-852-4846; Email: duax@hwi.buffalo.edu

Aug. 9-15, 1996: 17th General Meeting of the International Mineralogical Association, Toronto, Canada. Contact: A. J. Naldrett, Dept. of Geology, University of Toronto, Toronto, Canada M5S 3B1; Tel: 1-416-978-3030; Fax: 1-416-978-3938; Email: ima98@quartz.geology.utoronto.ca

Aug. 10-11, 1996: Mineralization and Alkaline Magmatism in the Deccan Igneous Province and in other Parts of the World, (Workshop WB03 of 30th IGC; see IGC entry beginning Aug. 4, 1996).

Aug. 11-15, 1996: Coronal Mass Ejections: Causes and Consequences, Bozeman, Montana. Contact: AGU Meetings Dept., 2000 Florida Ave., Washington, D.C. 20009; Tel. 202-462-6900.

Aug. 12-15, 1996: International Symposium on Representation of the Cryosphere in Climate and Hydrological Models, Victoria, British Columbia, Canada. Sponsors: Atmospheric Environment Service; Institute of Ocean Sciences; Centre for Earth and Ocean Research, University of Victoria. Contact: Secretary General, International Glaciological Society, Lensfield Road, Cambridge CB2 1ER, UK; Tel. +44 1223 355974; Fax +44 1223 336543; Email: 100751.1667@compuserve.com; URL: <http://www.dow.on.doe.ca/CRYSYS/igs96.htm>

Aug. 12-16, 1996: 11th International Congress for Thermal Analysis and Calorimetry, Philadelphia, PA USA. Sponsor: International Confederation for Thermal Analysis and Calorimetry. Contact: H. G. McAdie, H. G. McAdie Associates, Suite 340, 245 Eglinton Ave. E., Toronto, Ontario, Canada M4N 2B7; Tel. 416-489-7067; Fax 416-489-5799

Aug. 20-24, 1996: Platinum-Group Element Geochemistry—The State of Art and Future Direction, Geochemistry Division of the American Chemical Society. Chicago, IL, USA. Contact: Scott A. Wood. Tel: 1-208-885-5966, Fax: 1-208-885-5724, Email: swood@idui1.csrw.uidaho.edu. (Abstracts due May 1, 1996)

Aug. 25-30, 1996: 212th American Chemical Society (ACS) National Meeting, Application of Molecular Markers in Environmental Geochemistry, Orlando, FL, USA. Sponsors: Divisions of Environmental Chemistry and Geochemistry. Contact: Dr. Robert Eganhouse, U.S. Geological Survey, 432 National Center, Reston, VA 22092, Tel. 703-648-5879, Fax 703-648-5832; Email: eganhou@usgs.gov

Aug. 29-31, 1996: Colston Research Symposium on the History of Degassing of the Earth, Bristol, England. Deadline for expressing interest in presenting: Oct. 31, 1995. Contact: Margaret Wilkins, Dept. of Geology, University of Bristol, Bristol BS8 1RJ England. Email: Margaret.D.Wilkins@bris.ac.uk

Sep. 2-4, 1996: Society for Geology Applied to Mineral Deposits, International Conference on Cathodoluminescence and Related Techniques in Geosciences and Geomaterials, Nancy, France. Contact: M. Pagel, Fax 33-83-440029; Email: pagel@cregu.cnrs.fr

Sep. 3-4, 1996: Chemical Containment of Wastes in the Geosphere, British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, UK NG12 5GG. Contact: Dr. Richard Metcalfe, Fluid Processes Group, British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottinghamshire, NG12 5GG, UK; Tel. 0115 936 3539; Fax 0115 936 3261; Email: r.metcalfe@bgs.ac.uk (titles of talks must be submitted by May 31, 1996; extended abstracts deadline: July 31, 1996)

Sep. 3-7, 1996: 13th Annual International Pittsburgh Coal Conference, Pittsburgh, PA. Contact: Adrian DiNardo, Pittsburgh Coal Conference Office, University of Pittsburgh, 1140 Benedum Hall, Pittsburgh, PA 15261, Tel. 412-624-7440, Fax 412-624-1480, Email: dinardo@engrng.civ.pitt.edu

Sep. 4-11, 1996: Age and Isotopes of South American Metallogenic Provinces, Final Meeting of IGCP Project 342; Salvador, Bahia, Brazil. Contact: Aroldo Misi, IGEO, Univ. Fed. Da Bahia, Rua Caetano Moura, 123 Federação, Salvador, Bahia 40210-340 Brazil; Tel. 55 71 2356789; Fax 55 712473004; Email: misi@ufba.br

Sep. 7-9, 1996: Second International Meeting on Global Continental Paleohydrology, Toledo, Spain. Contact: Gerardo Benito or Alfredo Pérez-González, CSIC-Centro de Ciencias Medioambientales, Serrano 115 bis, 28006 Madrid, Spain, Fax 34-1-564-08-00, Email: benito@cc.csic.es

Sep. 8-12, 1996: Contaminated Land and Groundwater, Future Directions, 32nd Annual Conference of the Engineering Group of the Geological Society, Portsmouth, UK. Contact: D. N. Lerner, Department of Civil and Environmental Engineering, University of Bradford, Bradford BD7 1DP, UK; Tel. 01274 3854; Fax 01705 842 244

Sep. 10-13, 1996: Third International Symposium and Exhibition on Environmental Contamination in Central and Eastern Europe: Warsaw '96, Warsaw, Poland. Sponsors: U.S. Department of Energy, U.S. Environmental Protection Agency, Technical University of Wrocław; others. Contact: Warsaw '96 Symposium, Florida State University, 2035 East Paul Dirac Drive, 226 HMB, Tallahassee, FL 32310-3700 USA; Tel. 904-644-5524; Fax 904-574-6704; Email: warsaw96mailer.fsu.edu

Sep. 11-13, 1996: Subsurface Biogeochemistry: An International Workshop on Directions for Future Research, Reading, England. Sponsors: Pacific Northwest National Laboratory; U.S. Department of Energy; others. Contact: M. Coleman, Post-

graduate Research Institute for Sedimentology, University of Reading, PO Box 227, Whiteknights, Reading, RG6 6AB U.K., Tel. +44 1734 316627 (316713, secretary); Fax +44 1734 310279; Email: m.l.coleman@reading.ac.uk

Sep. 11-13, 1996: What Drives Metamorphism and Metamorphic Reactions: Heat Production, Heat Transfer, Deformation and Kinetics, Kingston University, Surrey, UK. Contact: Dr. Peter J. Treloar, School of Geological Sciences, Kingston University, Penrhyn Road, Kingston upon Thames, Surrey, UK KT1 2EE, Tel. 44 181 547 7525, Fax 44 181 547 7497, Email: p.treloar@kingston.ac.uk or Dr. Paddy O'Brien, Geologisches Institut, Universität Bayreuth, Postfach 101251, D-95440 Bayreuth, GERMANY, Tel. 49 921 55 3735, Fax 49 921 55 3769, Email: Patrick.O'Brien@uni-bayreuth.de

Sep. 15-19, 1996: Society for Organic Petrology 13th Annual Meeting, Carbondale, IL. Contact: John Crelling, Dept. of Geology, Southern Illinois University, Carbondale, IL 62901, Tel. 618-453-7361, Fax 618-453-7393, Email: jcrelling@geo.siu.edu

Sep. 16-19, 1996: Deep Geological Disposal of Radioactive Waste Conference, Winnipeg, Manitoba, CANADA. Sponsor: Waste Management and Environmental Affairs Division of the Canadian Nuclear Society. Contact: K. Nuttall, AECL-Whiteshell Laboratories, Pinawa, Manitoba, R0E 1L0, Tel. 204-345-8625, Fax 204-345-8868, Email: oronas@url.wl.aecl.ca

Sep. 16-20, 1996: Nitrogen Cycling in Forested Catchments, Sun River, Oregon, Contact: Robins Church, Tel 541-754-4424; Email: church@heart.cor.epa.gov

Sep. 22-24, 1996: Petroleum Geology and Hydrocarbon Potential of the Black Sea Area, 2nd Symposium, Sile, Turkey. Contact: S. Derman, TPAO Turkey, Tel. 90 312 286 9040; Fax 90 312 286 9049

Sep. 29-Oct. 2, 1996: Geothermal Resources Council 1996 Annual Meeting, Geothermal Development in the Pacific Rim, Portland, Oregon, Portland Marriott Hotel. Contact: Geothermal Resources Council, P.O. Box 1350, 2001 Second Street, Suite 5, Davis, California 95617-1350 USA, Tel. 916-758-2360, Fax 916-758-2839, Email: geores@wheel.dcn.davis.ca.us

Sep. 29-Oct. 4, 1996: Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) 23rd Annual Conference, Kansas City, MO. Contact: FACSS, 201B Broadway St., Frederick, MD 21701-6501, Tel. 301-846-4797 (deadline for 100 word brief: March 29, 1996).

Oct. 2-4, 1996: Gulf Coast Association of Geological Societies and Gulf Coast Section SEPM Meeting, San Antonio, TX. Contact: Thomas E. Ewing, Venus Exploration, 700 N. St. Mary's, San Antonio, TX 78205, Tel. 210-222-9481, Email: sa96@aol.com

Oct. 7-11, 1996: Environmental Issues and Waste Management in Energy and Mineral Production, 4th International Symposium, Cagliari, Italy. Contact: R. Cicco, Dipartimento di Geoingegneria et Tecnologie Ambientali, Università degli Studi di Cagliari, Piazza d'Armi; 09 123 Cagliari, Italy; Tel. 39 7022 2317; Fax 39 7027 2031

Oct. 13-15, 1996: 27th Underwater Mining Institute Conference, Washington, D.C., USA. Sponsors: International Marine Minerals Society; Marine Minerals Technology Center; Hawaii Natural Energy Institute, University of Hawaii. Contact: K. C. Morgan, Underwater Mining Institute, c/o Marine Minerals Technology Center, 811 Olomehane St., Honolulu, HI 96813 USA; Tel. 808-522-5611; Fax 808-522-5618; Email: 70673.534@compuserve.com

Oct. 21-24, 1996: 11th Annual Conference on Contaminated Soils: Analysis, Fate, Environmental and Public Health Effects and Remediation, Amhurst, MA, USA. Sponsors: U.S. Department of Energy, Association for the Environmental Health of Soils; others. Contact: L. Rosen, Environmental Health and Sciences, N344 Morrill, University of Massachusetts, Amhurst, MA 01003; Tel. 413-545-2934; Fax 413-545-4692.

Oct. 21-24, 1996: National Institute of Oceanography, International Symposium on Geology and Geophysics of the Indian Ocean, Goa, India. Contact: Ch. M. Rao, Tel. 91-832-221380, Fax 91-832-223340; Email: msrao@bgoa.ernet.in

Oct. 25-27, 1996: Mineralogical Society of America, Short Course: Reactive Transport in Porous Media: General Principles and Application to Geochemical Processes, Golden, CO, USA. Contact: P. C. Lichtner, Email: lichtner@swri.edu; C. I. Steefel, Email: steefel@margaux.cas.usf.edu; E. H. Oelkers, Email: oelkers@cix.cict.fr

Oct. 27-31, 1996: Geological Society of America Annual Meeting, Denver, CO, USA. Contact: GSA Meetings Dept., P.O. Box 9140, Boulder, CO 80301, Tel. 303-447-2020 or 800-472-1988 (USA only), Email: meetings@geosociety.org, URL: <http://www.aescon.com/geosociety/index.html> (abstract deadline: July 9, 1996)

Nov. 10-16, 1996: AGU Chapman Conference on Shallow-Level Processes in Ocean Island Magmatism: Distinguishing Mantle and Crustal Signatures, Tenerife, Canary Islands. Contact: Wendy Bohrsen, Dept. of Geological Sciences, Univ. of CA, Santa Barbara, Santa Barbara, CA 93106, Tel. 805-893-8782, Email: bohrson@magic.geol.ucsb.edu; URL: <http://earth.agu.org/kosmos/canaries.html> (abstract deadline: July 16, 1996).

Dec. 2-5, 1996: The Third Marine and Estuarine Shallow Water Conference: The Interrelationship Among Habitats and Their Management, Atlantic City, N.J., USA. Contact: E. Ambrogio, Tel. 215-597-3697; Fax 215-597-1850; Email: ambrogio.edward@epamail.epa.gov

Dec. 6-11, 1996: European Research Foundation, 1st Euroconference on Geochemistry of Surficial and Crustal Fluids, Seefeld, Tyrol, Austria. Contact: K. V. Ragnarsdottir, Email: vala.ragnarsdottir@bris.ac.uk; E. H. Oelkers, Email: oelkers@cix.cict.fr; J. Hendekvik, Email: euresc.@esf.c-strasbourg.fr

Dec. 15-19, 1996: AGU 1996 Fall Meeting, San Francisco, CA (Moscone Center). Additional information will be published in *EOS*, May 1996 and available on the AGU Web Site (<http://www.agu.org>).

Jan. 19-24, 1997: IAVCEI General Assembly, High-Level Silicic Magmatism and Related Hydrothermal Systems, Puerto Vallarta, Mexico. Contact: R. Seltmann, Dept. of Earth Sciences, Carleton University, 1125 Colonel By Drive, Ottawa, ON, K1S 5B6 CANADA, Fax 613-520-4490, Email: seltm@gsc.emr.ca; or B. Lehmann, Technische Universitaet Clausthal, Adolph-Roemer-Str. 2A, 38678 Clausthal-Zellerfeld, GERMANY, Fax 49 5323 72 2321, Email: lehmann@immr.tu-clausthal.de; or J. Lowenstern, US Geological Survey, Volcanic Hazards Team, Mail Stop 910, 345 Middlefield Road, Menlo Park, CA 94025, USA, Fax 415-329-5203, Email: jlwnstrn@usgs.gov (abstract deadline: September 1, 1996).

Feb. 2-7, 1997: Third Conference on Atmospheric Chemistry, Long Beach, CA, USA. Sponsors: American Meteorological Society, AGU. Contact: Chris Walcek, ASRC, State University of New York at Albany, 100 Fuller Rd., Albany, NY 12205, Tel. 518-442-3840, Fax 518-442-9071; Email: walcek@conrail.asrc.albany.edu (abstract deadline: July 1, 1996)

Feb. 12-13, 1997: Composition and Structure of the Continental Lithosphere: Constraints from Petrology and Geophysics, Joint Meeting with the Joint Association for Geophysics, Burlington House. Contact: Drs. Richard England and Richard Hobbs, BIRPS, Byullard Laboratories, Madingley Road, Cambridge CB3 0EZ; Tel. 01223 360376; Fax 01223 360779; Email: england@esc.cam.ac.uk

March 23-27, 1997: European Union of Geosciences (EUG 9), Strasbourg, France. Contact: EUG 9 Office, EOPG, 5 rue René Descartes, 67084 Strasbourg Cedex, FRANCE, Tel. 33 88 41 63 93 or 33 88 45 01 91; Fax 33 88 60 38 87; Email: eug@eopg.u-strasbg.fr (abstract deadline: November 15, 1996)

April 14-18, 1997: Plumes, Plates and Mineralization, Pretoria, South Africa. Contact: PPM'97, c/o Prof. S. A. de Waal, Dept. of Geology, University of Pretoria, Pretoria 0002, South Africa, Tel. 012 4202454; Fax 012 433430; Email: ppm97@scientia.up.ac.za

April 28-29, 1997: Volcanoes and Archaeology, Burlington House. Contact: Dr. Bill McGuire, Dept. of Geography and Geology, Cheltenham & Gloucester College of HE, Francis Close Hall, Swindon Road, Cheltenham GL50 4AZ; Tel. 01242 543496; Fax 01242 532997; and Dept. of Geological Sciences, University College London, Gower Street, London WC1E 6BT; Tel. 0171 387 7050 x2383; Fax 0171 388 7614; Email: w.mcguire@ucl.ac.uk

May 19-21, 1997: Geological Association of Canada/Mineralogical Association of Canada, Ottawa, Canada. Contact: GAC, Room 757, 601 Booth St., Ottawa, Ontario K1A 0E8, Tel. 613-947-7649, Fax 613-947-7650, URL: <http://www.emr.ca/~ottawa97/>; Special symposium: *Extraction, Transport, and Emplacement of Granitic Magmas: Physical Processes and Structural Signatures*; Contact: Keith Benn, Email: kbenn@aix1.uottawa.ca, or Alexander Cruden, Email: cruden@credit.erin.utoronto.ca, or Edward W. Sawyer, Email: edward_w_sawyer@uqac.quebec.ca

May 25-30, 1997: Geochemical Exploration, 18th International Symposium of AEG, Jerusalem, Israel. Contact: IGES Secretariat, PO Box 50006, Tel Aviv, 61500 Israel; Fax 972 3 5140000; Email: igcs@mail.igs.gov.il

Aug. 19-20, 1997: I.M.A. Working Group on Mineral Equilibria and Data Bases International Meeting, Helsinki, Finland. Contact: Pentti Holttä, Geological Survey of Finland, SF-02150 Espoo, FINLAND, Tel. 358-0-46932312, Fax 358-0-462205, Email: pentti.holttä@gsf.fi (abstract deadline: November 31, 1996)

Aug. 24-29, 1997: Second International Symposium on Granites and Associated Mineralizations, Brazil. Contact: General Secretariat, SGM-ISGAM, Av. 3, 390 Plataforma IV, CAB, 41.746-900 Salvador, BA, Brazil, Tel. 55-71-370-6274 (14:00-18:00 local time), Fax 55-71-231-5655, Email: ISGAM@NPD.UFPE.BR (Abstract Deadline: February 28, 1997)

Aug. 30-Sept. 1997: Lunar and Planetary Institute, Second International Conference on Large Meteorite Impacts and Planetary Evolution, Sudbury, Ontario, Canada. Contact: Burkhard Dressler, Tel. 713-486-2112, Fax 713-486-2162; Email: dressler@lpi.jsc.nasa.gov; <http://cass.jsc.nasa.gov/lpi.html>

Sep. 1-5, 1997: Challenges to Chemical Geology, 10th Meeting of the European Geological Societies, Carlsbad, Czech Republic. Contact: Dr. Martin Novak, Czech Geol. Survey, Geologická 6, 15200 Prague 5, Czech Republic, Tel. 422-581-71-20, Fax 422-581-87-48, Email: Novak@cgu.cz

Sep. 2-6, 1997: International Symposium on Geology and Environment, Istanbul, Turkey. Contact: Secretary GEOENV '97, P. K. 464 K. z. lay, 06424 Ankara, Turkey, Tel. 90-312-4343601, Fax 90-312-4342388, Email: jdogan@et.cc.hun.edu.tr

1998: Canadian Institute of Mining, Metallurgy and Petroleum, 100th Annual General Meeting, Quebec, Canada. Contact: John Gaydos, Meetings Manager, Canadian Institute of Mining and Metallurgy, 1 Place Alexis Nihon, 1210-3400 de Maisonneuve Boulevard West, Montreal, Quebec H3S 3B8, Canada; Tel. 514-939-2710; Fax 514-939-2714.

1998: 10th IAGOD Symposium, Australia. Contact: Professor I. R. Pliner, University of Melbourne, Parkville, VIC 3052, Australia; Tel. 613 3446520; Fax 613 3447761.

June 29-July 18, 1998: 8th International Platinum Symposium (IAGOD/CODMUR), Johannesburg, South Africa. Contact: Dr. C. A. Lee, PO Box 68108, Bryanston, South Africa; Tel. 2711 411 2253; Fax 2711 692 3693.

Aug. 9-15, 1998: International Mineralogical Association: IMA '98, 17th General Meeting, Toronto, Canada. Contact: Professor A. J. Naldreli, Department of Geology, University of Toronto, Canada M5S 3B1; Tel. 461-978-3030; Fax 416-978-3938; Email: ima98@quartz.geology.utoronto.ca

Oct./Nov. 1998: Physical, Chemical and Biological Aspects of Aquifer—Stream Sediment Interrelations, 28th IAH Congress. Contact: Dr. J. Rosenschein, USGS, MS 414, National Center, Reston, VA 22092, USA; Fax 703-648-5722.

Geochemical Society Special Publications

In 1986, the GS began publishing a "Special Publications" series. These are significant collections of related, original papers that are intended to honor important geochemists.

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Special Publication Volume 1 (1987) <u>Magmatic Processes: Physicochemical Principles</u> , A tribute to H.S. Yoder, edited by B.O. Mysen	45.00	65.00

Special Publication Volume 2 (1990) <u>Fluid-Mineral Interactions: A Tribute to H.P. Eugster</u> , Edited by R.J. Spencer and I-Ming Chou	45.00	65.00
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Special Publication Volume 3 (1991) <u>Stable Isotope Geochemistry: A Tribute to Samuel Epstein</u> , Edited by H.P. Taylor, J.R. O'Neil, and I.R. Kaplan	45.00	65.00
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Special Publication Volume 4 (1992) <u>V.M. Goldschmidt: Father of Modern Geochemistry</u> , Edited by H.P. Taylor, Jr., J.R. O'Neil, and I.R. Kaplan	30.00	40.00
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Special Publication Volume 5 (coming soon) <u>Mineral Spectroscopy: a Tribute to Roger G. Burns</u> , Edited by M.D. Dyar, C. McCammon, and M.W. Schaefer		
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Major changes to the Corporation's By-Laws approved at Spring, 1996 Board of Directors Meeting

Fees and Dues for Members Who Have Retired

2.05 Members who have reached the age of fifty-five years and who have retired from professional employment may request to be Retired Members. Retired Members shall have all the privileges of membership except for receiving the Corporation's journal. The Board shall set their dues, but it is expected that such dues will equal the regular dues save less that portion designated to pay for the journal.

Vice-President

5.07 If the President is absent, is unable to act, or refuses to act, the Vice-President shall perform the duties of the President. When the Vice-President acts in place of the President, the Vice-President shall have all the powers of and be subject to all the restrictions upon the President. The Vice-President shall perform other duties as assigned by the President or Board. The Vice-President shall nominate members and chairpersons of the *Auditing, Program, Nominations, V.M. Goldschmidt Award, and F.W. Clarke Award Committees listed in Sec. 6.03* and shall present these to the Board for approval at the Spring Meeting.

Geochemistry Fellows Selection Committee

6.13 *The European Association of Geochemistry (EAG) and the Geochemical Society (GS) established, in 1996, 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. Existing and new Urey, Goldschmidt and Treibs Medal winners become Fellows automatically. Up to 0.5% of the total combined membership of the two societies should be elected as Fellows each year for the first five years. This would correspond to less than 15 per annum (at 1996 membership levels) and allows for growth in numbers as the societies increase in size. Nominations will be sought and recommendations for election made by a committee (Fellows Selection Committee) of 8 persons, 4 from GS, and 4 from EAG. This Committee will include six (6) appointed members, and the President of each society as ex-officio members. The appointed members are to be jointly selected by the society Presidents from a list of names suggested by the Council / Board of each society. Each member of the Selection Committee may serve for two years. Each year four new members of the Committee will replace departing members (including Presidents). The Selection Committee should include non-Fellows, although it would be preferable if it were chaired by a Fellow. The Chair should be replaced each year by a member who has already served for one year. The Chair of the Committee will be selected by the Presidents. Any member of either society can nominate Fellows by right. No individual may be elected a Fellow, except as a result of having previously won the Urey, Goldschmidt or Treibs Medal, while they are serving either on the Selection Committee or as a Council / Board member of EAG or GS. The Selection Committee may not themselves nominate individuals, but may actively solicit nominations from others. Members of the Selection Committee and Council / Board may not vote on any nomination where there is a clear conflict of interest. In the event that the EAG Council and the GS Board differ over the ratification of a nomination, the Executive Committee of the Goldschmidt Forum (the Presidents and Vice Presidents of EAG and GS) will resolve the issue. Nominations will include: A citation of no more than two pages describing the contribution(s) the individual has made to geochemistry, and up to three letters of support from members of either society. Requests for nominations will be made in the spring and summer of each year. The inauguration of Fellows will take place at the Goldschmidt Conference immediately following election.*

Award Committees

6.14 There shall be three (3) award committees, the V. M. Goldschmidt Award Committee, the F. W. Clarke Award Committee and the Alfred Treibs Award Committee (the "Award Committees").

- (a) The V. M. Goldschmidt Award Committee and the F. W. Clarke Award Committee shall each consist of six (6) members who shall be appointed for staggered three (3) year terms. At least one (1) member of each of the V. M. Goldschmidt and F. W. Clarke Award Committees shall be from outside North America. In each of the V. M. Goldschmidt and F. W. Clarke Award Committees, one of the two members whose term is closest to expiration shall be appointed to serve as Chairperson. The Chairperson shall be eligible to vote and ties shall be resolved by the Board. Membership of these committees shall be broadly representative of the range of interests of the Corporation. *Members are not eligible to vote on a nominee if there is a conflict of interest, such as being a member of the same institution or university as the nominee, or having been or being a dissertation supervisor or graduate student of the nominee.*

Goldschmidt Forum Executive Committee

6.15 *A Goldschmidt Forum was organized on March 31, 1996 between the Geochemical Society (GS) and the European Association of Geochemistry (EAG). Its goal is to promote, initiate, and coordinate initiatives that are favorable for the development of geochemistry worldwide.*

- (a) *The Goldschmidt Forum is managed by an Executive Committee composed of the President and Vice President of the GS and the President and President Elect of the EAG. They represent their society / association according to their individual by-laws.*
- (b) *The Goldschmidt Forum organizes every year a Goldschmidt Conference. The location alternates between North America and Europe. The decisions as to the location as well as the person(s) responsible and comprising the organizing committee are made by the Goldschmidt Forum Executive Committee on the basis of a proposal made by GS when the meeting is in North America, and EAG when the meeting is held in Europe.*
- (c) *The financial support/logistics for the Goldschmidt Conference will be set up by the organizing committee under the guidance of the GS when the conference is in North America, and the EAG when the conference is in Europe. Other problems will be handled by the Goldschmidt Forum Executive Committee.*

Awards and Honorary Titles

7.01 The Board may conceive and confer such awards and titles as it deems in the best interest of the Corporation.

- (a) **V. M. Goldschmidt Award** - This award, consisting of a medal, a certificate, and an honorarium, will be conferred for major achievements in geochemistry or cosmochemistry. Such achievements may consist either of a single outstanding contribution, or of a series of publications that have had great influence on the field. The V.M. Goldschmidt Award is normally given annually, but may be omitted in a given year at the discretion of the Board.
- (b) **F. W. Clarke Award** - This award, consisting of a medal, a certificate, and a one-year subscription to the Corporation's journal, shall be conferred on a young scientist for a single outstanding contribution to geochemistry or cosmochemistry, published as a single paper or a series of papers on a single topic. Candidates must have held a recognized doctorate or its equivalent for no more than six (6) years or be not more than thirty five (35) years of age, whichever anniversary date is later on December 31st of the year in which the award is made approved by the Board of Directors. The F. W. Clarke Award is normally given annually, but may be omitted in a given year at the discretion of the Board.
- (c) **Alfred Treibs Award** - This award, consisting of a medal and a certificate, shall be conferred for major achievements, over a period of years, in organic geochemistry. Such achievements shall consist of pioneering and innovative investigations which have made highly significant contributions to the understanding of the origin and fate of organic materials in the geosphere and/or in extraterrestrial environments. The Alfred Treibs Award is given biannually, in odd even numbered years. The award is subject to approval by the Board.
- (d) **Geochemistry Fellow** - This honorary title and an accompanying certificate, shall be bestowed jointly by the European Association of Geochemistry and the Geochemical Society upon outstanding scientists who have, over some years, made a major contribution to the field of geochemistry. Existing and new Urey, Goldschmidt and Treibs Medal winners become Fellows automatically. Up to 0.5% of the membership of the two societies may be elected annually.

Award Nominations

7.02 The Award Committees shall solicit nominations for awards from the membership and shall seek out suitable nominees on their own. Awards shall not be shared, except in highly unusual cases such as independent discoveries or joint work where the contributions of the co-authors are essentially equal. All duly documented nominations considered by the Award Committees shall remain active for three (3) years, unless the candidate becomes disqualified. Current Directors are ineligible to receive an award. Past recipients of an award are ineligible to repeat as recipient. Except for the time and age restriction of the F.W. Clarke Award, there shall be no other restrictions on eligibility. Neither citizenship nor membership in the Corporation shall enter into consideration. The Award Committees shall select nominees as follows:

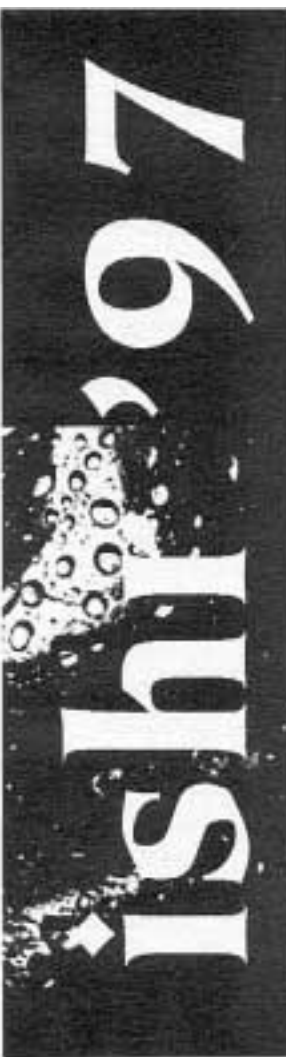
- (a) The V. M. Goldschmidt and F. W. Clarke Award Committees shall select a first and second choice for each award and present them, with adequate documentation, to the Board ~~prior to~~ well before the Spring/Fall meeting. Adequate documentation shall consist of a two-page curriculum vitae, a bibliography limited to two pages, a nominating letter with paragraph(s) detailing why the candidate is suitable for the award and up to three supporting letters. This documentation is to be made available to all Award Committee members before voting occurs. The Board shall then make its final choice ~~at the Spring Meeting~~ between the nominations or vote not to make an award in a particular year. This choice may be made by mail or e-mail voting early enough to make the awards at the Goldschmidt Conferences. No member of the Board of Directors or of the Award Committee may nominate a candidate directly.
- (b) The Alfred Treibs Award Committee shall present its first and second choices for this Award, with adequate documentation, to the OGD Executive Committee. The latter committee, if it approves a nomination, shall forward it with the documentation to the President for approval by the Board. The Board shall vote to either accept the nomination or to not make an award in a particular year.
- (c) The Corporation shall reimburse travel expenses of award recipients only in exceptional cases, as determined by the Board.

Notice by Mail, Telegram, Facsimile, or Electronic Mail

12.01 Any notice required or permitted by the By-Laws to be given to a member, Director, Officer, or member of a committee of the Corporation may be given by mail, telegram, facsimile, or electronic mail. If mailed, a notice shall be deemed to be delivered when deposited in the United States mail addressed to the person at his or her address as it appears on the records of the Corporation, with postage prepaid. If given by telegram, a notice shall be deemed to be delivered when accepted by the telegraph company and addressed to the person at his or her address as it appears on the records of the Corporation. If given by facsimile, a notice shall be deemed delivered when the transmission status sheet indicates that the message was successfully transmitted. If given by electronic mail, a notice shall be deemed delivered when the message transmission is not followed by an indication of transmission error. A request for confirmation of receipt of the notice will be included in all electronic notices. A person may change his or her address by giving written notice to the Secretary of the Corporation.

Decision Without Meeting

13.02 Any decision required or permitted to be made at a meeting of the members, Board, or any committee of the Corporation may be made without a meeting. A decision without a meeting may be made if a written consent to the decision is signed by all of the persons entitled to vote on the matter or if consent to the decision is validated by email response by all of the persons entitled to vote on the matter. The original signed consents or email responses shall be placed in the Corporation minute book and kept with the Corporation's records.



Fifth International Symposium on Hydrothermal Reactions (ISHR '97)

Gatlinburg, Tennessee, U.S.A.
July 20-24, 1997

Preliminary Sponsors:

- USDOE, Geothermal Technology Program
USDOE BES, Geosciences Research Program

Contact:

- Donald A. Palmer, Aqueous Chemistry Group
Chemical and Analytical Sciences Division
Oak Ridge National Laboratory, Building 4500S, MS 6110
Oak Ridge, TN 37831-6110 U.S.A.
Tel: (423) 576-5109; Fax: (423) 574-4961; E-mail: ddp@ornl.gov

The previous four symposia in this series were held in Japan (1982), U.S.A. (1985), Russia (1989), and France (1993). The concept for these meetings was established at the Nobel Symposium in 1979 with the intention of bringing together scientists involved in various aspects of high-pressure/temperature research on aqueous and related chemical systems. The main focus areas at the upcoming symposium will be crystal growth and mineral synthesis, kinetics of hydrothermal processes, aqueous high-temperature chemistry, solubility of minerals, speciation of solutes, modeling of hydrothermal processes, aqueous chemistry of organic solutes, interactions at mineral surfaces, thermophilic bacteria, and supercritical water oxidation.

It is also the intention of this meeting to actively recruit industrial participation in order to apprise the relevant industries of recent progress in basic research and to acquaint scientists and engineers with the current research needs of the industry.

For more information please contact Dr. D. A. Palmer by mail, fax, or e-mail.

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