



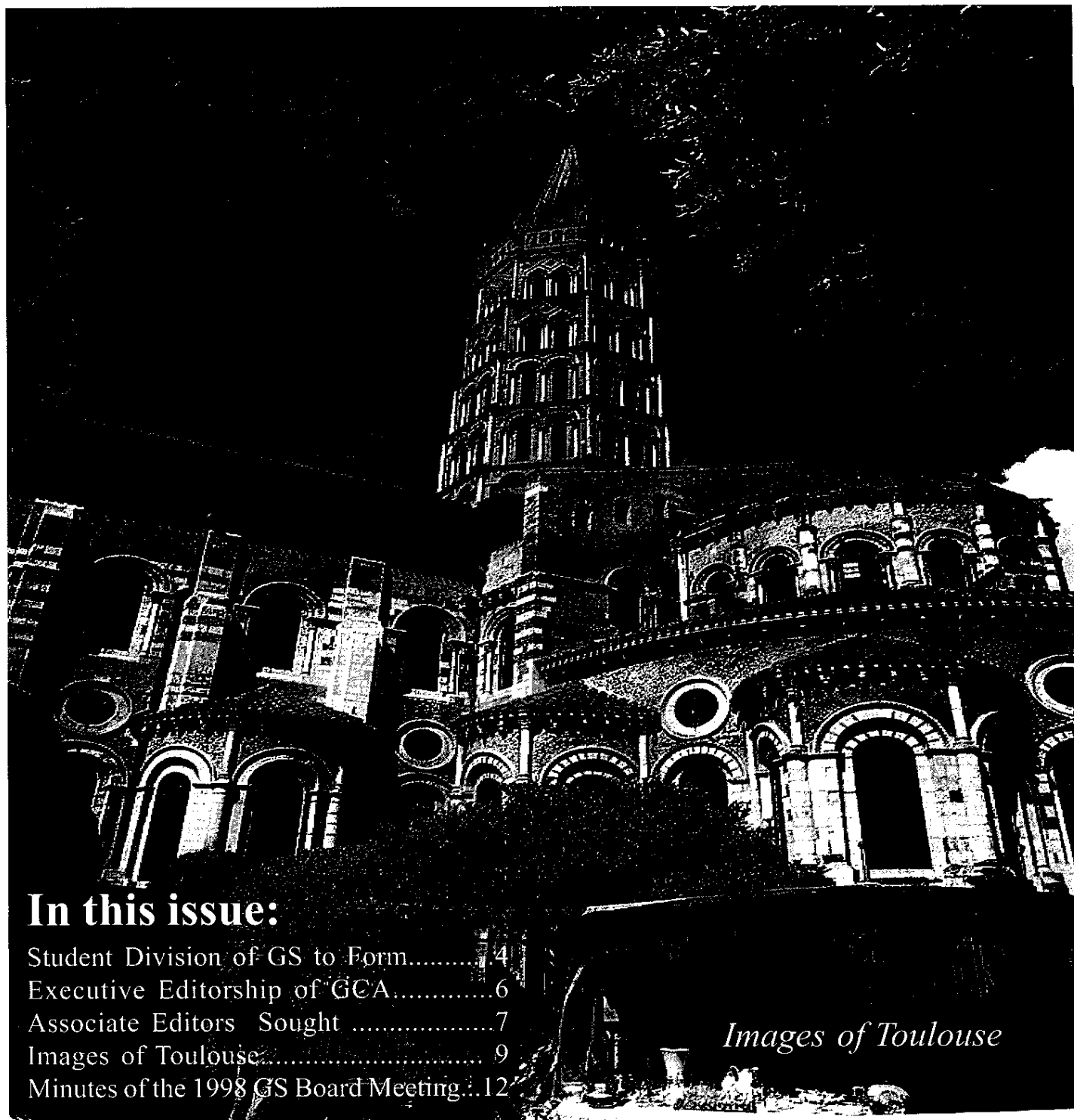
THE GEOCHEMICAL NEWS

Quarterly Newsletter of The Geochemical Society

NUMBER 97

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OCTOBER 1998



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Images of Toulouse



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GEOCHEMICAL NEWS
Neil C. Sturchio, Argonne National Laboratory

INTERNET COORDINATOR
Mark Bloom, rocketGeoscience

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**, *The Geochemical News* (this quarterly newsletter), and (jointly with the Meteoritical Society) the journal *Geochimica et Cosmochimica Acta*; grants the **V.M. Goldschmidt, F.W. Clarke and Clair C. Patterson 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 and the spring meeting of the American Geophysical Union. The Society honors the memory of our first President, F. Earl Ingerson, and our first Goldschmidt Medalist, Paul W. Gast, with the **Ingerson and Gast Lectures**. The Geochemical Society is affiliated with the American Association for the Advancement of Science and the International Union of Geological Sciences.

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 dues. The OGD presents the **Alfred E. Treibs Award** for major achievements in organic geochemistry, and **Best Paper** awards (student and professional) in organic geochemistry.

Editor's Corner

Dear Readers:

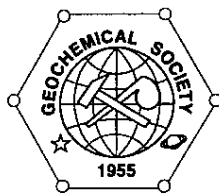
Our hawk-eyed Past President noticed what may indeed be the first citation of *The Geochemical News* (see *Nature* 395, p. 148)! This shows that our brief review articles are not without impact. Please contact us with your ideas for more.

Neil C. Sturchio, Editor Phone: 630-252-3986
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Assistant Editors: *John Hanchar, Dolores Sturchio*

visit the new Geochemical Society website:

<http://www.geochemsoc.org>



From the Coordinator of Internet Resources

We are pleased to announce the first of several geochemical data resources planned for the "DataBag" area of our web site – the searchable thermodynamic database. It is accessible from the pull-down menu on our abbreviated home page or, if you're inclined to use bookmarks, at "<http://www.geochemsoc.org/databag/shares/databag.shtml>".

The database can be searched for crystalline and amorphous solids, inorganic and organic aqueous species, liquids, and gases. Options for defining or refining search terms include dataset(s), name, classification (for crystalline solids), and elements/components (with an exclusions list to help limit search results).

There are a few caveats that you should note. [1] Netscape Navigator (preferred) or Microsoft Internet Explorer 4.0 or greater are required. You'll be presented with a browser download page if you're using an earlier version, but will not be able to access the database. JavaScript must also be enabled. [2] The available data is limited (K-Al-Si-O-H solids from the SUPRCRT92 dataset on September 30). The entire dataset, and one or more additional datasets, should be on-line when this issue of The Geochemical News is delivered to your door. [3] Some html quirks still exist if you request individual properties from multiple datasets.

Data entry is labor-intensive. The flat file database you use to perform your favorite calculations becomes multiple tables in a normalized, relational on-line database. We're appealing to GS members, as well as seeking collaborative efforts with other organizations, to help re-format datasets. Can you help? Contact me (msbloom@geochemsoc.org) if you can assist in preparing datasets.

The database will also contain data from studies published in the geochemical literature, but not included in existing compendia. Toward this end we're exploring an interactive, web-based data entry page on which authors can add information from their published works. Our goal is to keep the GS database abreast of new and revised data.

This thermodynamic database is our entry-level contribution to on-line data resources. It sets the stage for future data resources that include, but are not limited to, petrology (igneous, metamorphic, sedimentary, lunar, and planetary), isotopes, mineral surface/interface (or environmental) chemistry, water chemistry, and a new download page. We hope to collaborate with other organizations and initiatives such as GERM to structure and populate these databases. Suggestions for other resources are welcome!

Mark Bloom, Coordinator of Internet Resources
Rocket geoScience, Inc.
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2000 International Congress Rio de Janeiro 2000

Volunteers needed for Symposia co-ordinators

The Geochemical Society is sponsoring the following Special Symposium at this meeting (*two coordinators are needed for this symposium*):

1. Evolution of the atmosphere-hydrosphere-biosphere

The Geochemical Society is co-sponsoring the following Special Symposia at this meeting (*one Coordinator is required for each from our ranks*):

2. New results from Mars Pathfinder and Mars Global Surveyor (with CCP)
3. Weathering and climate (with INQUA)
4. Geochemistry of the mantle (with IUGG-IAVCEI)

The Geochemical Society is co-sponsoring the following General Symposia at this meeting (*one Coordinator is required for each from our ranks*):

5. Fission tracks, thermoluminescence and cathodoluminescence (with IAGC)
6. Recent advances in mass spectrometry for geological research (with IAGC)
7. Regional geochronology (with IAGC)
8. Stable and radiogenic isotopes in metallogenesis (with IAGC)
9. New trends in stable isotope geology (with IAGC)
10. Chronology of the early solar system (with CCP)

Anyone wishing to volunteer for these interesting, important, and rewarding tasks in an exotic location should get in touch with the International Secretary, Ross Taylor.

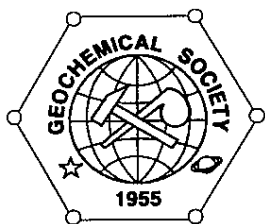
email: Ross.Taylor@anu.edu.au
Fax: 61-26-249-0748

9th V.M. Goldschmidt Conference
Harvard University, Cambridge, MA,
U. S. A.
August 22-27, 1999

Contact:

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Department of Earth and Planetary Sciences
Harvard University
Cambridge MA 02138
Phone: 617-495-5233
Fax: 617-496-4387
E-mail: goldschmidt@eps.harvard.edu

(see page 11 for more information)



Notes from the Business Manager

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Renewal Reminder!

Renewals for 1999 Geochemical Society Membership and GCA subscriptions have been e-mailed to all members having e-mail addresses. Members without e-mail addresses will receive invoices in the mail.

Call for ideas and interest in the formation of a Student Division of the Geochemical Society

The Geochemical Society is extremely interested in the involvement of earth science students in its activities, and in enhancing their educational experience. For several years, we have been providing funds to Goldschmidt Conference Organizers (\$10K per year) to provide student travel grants to attend the Society's Annual meeting. Last year, the Board agreed to heavily subsidize the membership dues and subscription cost to *Geochimica et Cosmochimica Acta* for student members, with rates set at \$5 and \$45, respectively, as compared with \$25 and \$122 for professional dues and subscription rates. We think this is an exceptional bargain, and we are already seeing a significant increase in student involvement in the Society as a result.

Our Business Manager, Lee Mobley, who staffs the GS booth at international meetings such as GSA, AGU and Goldschmidt, has indicated that many students have expressed an interest in playing an active role in the Society. Toward that end, we would like to invite interested student and professional geochemists to send us your ideas of how a Student Division of the Society might be organized. A possible scenario could be the formation of an organizational structure including officers and committees, who might communicate electronically as well as at international meetings. A Student Division could address issues such as the appropriateness of earth science curricula, the problems encountered by students in the pursuit of their degrees and ultimately their job searches, financial support and working conditions, international communications, and recognition for research accomplishments. One possibility is for a student representative to attend the annual GS Board of Directors meetings and take an active role in helping identify ways in which the Society can better serve its student members.

The Organic Geochemistry Division of the GS confers an annual Best Student Paper Award. However, there is no current award or honor in general geochemistry that is conferred upon students by their peers, and this is another issue that might be addressed by a Student Division. Furthermore, the establishment of our new web site and newsletter offer unprecedented opportunities for students to develop chat groups, search for jobs, advertise their qualifications for employment, and air their ideas and problems before the international geochemical community.

We encourage students and professionals to send in your ideas and/or expressions of interest to our Business Manager, Lee Mobley, 1350 West Fifth Avenue, Suite 219, Columbus, Ohio 43212, USA; Fax 1-614-486-7065; email - geochsoc@pubcon.com



American Chemical Society Symposium
Role of Water in Organic Reactions

March 21-25, 1999

Anaheim, CA

Interest in the special role of water as a solvent, catalyst, and reagent in organic reactions has grown enormously over the past decade. Nevertheless, this field of study is still new with a great deal remaining to be learned. A wide range of applications in the areas of fossil fuel refining, conversion, cleaning and upgrading is being explored. In the field of organic geochemistry, it is quickly becoming clear that an understanding of the role of water in controlling the molecular thermal evolution of kerogen, hence the timing and extent of oil and gas generation, is crucial. In industrial applications, the potential use of water as an environmentally benign solvent and reagent is promising. The symposium on the Role of Water in Organic Reactions seeks to bring together a wide range of chemists and geochemists to present papers bearing on this exciting and emerging subject. Papers covering both experimental and theoretical aspects, with either fundamental or applied scope, are solicited.

This symposium is sponsored jointly by the Geochemistry and Fuel Chemistry divisions of the American Chemical Society. Short abstracts must be submitted to us by October 18, 1998. Electronic forms can be obtained at www.acs.org/meetings/abstract. It is also mandatory for presenters to submit an expanded abstract by November 16, 1998. These extended abstracts will be published in an ACS Division of Fuel Chemistry Preprint volume and typically are no more than two to four pages of text which may include one or two optional tables or figures and a bibliography of cited references.

The ACS Books Department has expressed significant interest in publishing the proceedings of this symposium as one of their symposia proceedings volumes and presenting authors and co-authors will be invited to contribute to what promises to be an important volume.

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THE EXECUTIVE EDITORSHIP OF *GEOCHIMICA ET COSMOCHIMICA ACTA*

Karl Turekian, Executive Editor of *Geochimica et Cosmochimica Acta*, has announced that he will not seek or accept reappointment beyond his current term, which runs through the end of calendar year 1999.

Sponsorship of a professional journal is one of the most important functions of a scientific society, and editorship of the journal is accordingly one of the most important ways in which an individual may serve the scientific community. The job is time-consuming, sometimes involves hard choices, requires attention to both detail and the big picture, but is not thankless or without gratification. On behalf of the Geochemical Society and the Meteoritical Society, which jointly co-sponsor *Geochimica et Cosmochimica Acta*, I would like to extend our sincere gratitude and appreciation to Karl for his effort, sacrifice and leadership in performance of this critical responsibility.

Nominations are now invited for Karl's successor as Executive Editor of *Geochimica et Cosmochimica Acta*, for a term formally beginning January 1, 2000. Any member of either society may submit a nomination, including self-nomination, through December 31, 1998. Nominations should be sent to the undersigned, preferably by e-mail (fap@levee.wustl.edu) but, if more convenient for the nominator, by mail (Department of Earth and Planetary Sciences, Washington University, St. Louis, MO 63130, USA), fax (314-935-7361) or phone (314-935-7367). All candidates will be given serious consideration, and there are no restrictions on race, gender, disciplinary specialization or geographic location. Candidates will initially be evaluated by the Joint Publications Committee of the two societies, which will present recommendations to the societies' governing boards; the societies will then propose the new Executive Editor to the publisher, Elsevier.

The Executive Editor will receive a modest honorarium from Elsevier, along with financial support for office assistance and journal-related travel. Although the formal term of office begins on January 1, 2000, in order to allow an orderly transition it is expected that the new Executive Editor will begin to assume responsibilities in the latter part of 1999.

Frank A. Podosek, Chairman
Joint Publications Committee of the Geochemical Society and the Meteoritical Society

The Patterson Medal **in Environmental Geochemistry**

Call for Nominations

The Patterson Medal, named after the late Clair C. Patterson, will be bestowed annually, at the V.M. Goldschmidt Conference, upon scientists who have recently made a particularly important and innovative breakthrough in environmental geochemistry, considered to be of fundamental significance. The research must be highly original and contribute in a significant fashion to our understanding of the natural behavior of the earth's environment. Such a contribution must be in the form of a widely recognized important piece of innovative scientific research published in a peer-reviewed journal. There is no age limit associated with this honor. Nominations should be accompanied by a citation of no more than two pages describing the contribution the individual has made to geochemistry, a two-page condensed resume that includes education and employment history together with details of service to national and international scientific and educational organizations, a list of no more than 20 selected peer-reviewed publications with full references, and up to three letters of support.

The inaugural 1998 Patterson Medal was awarded to Dr. Michael L. Bender of Princeton University for his landmark studies of the history of changes in the isotopic compositions and the concentrations of atmospheric gases in glacial ice and fern, and the implications of these discoveries for paleoclimate reconstructions.

Nominations for the second Patterson Medal should be sent to Ed Boyle, Department of Earth, Atmospheric and Planetary Sciences, Rm. E34-258, Massachusetts Institute of Technology, Cambridge MA 02139; Tel: (617) 253-3388, Email eaboyle@mit.edu; by January 15th 1999.

Associate Editors Sought for Geochemical News

The status of *The Geochemical News* is in the process of being enhanced through more frequent publication and expanded content. This newsletter, which is also available in electronic format at the new and improved Geochemical Society website, is one of the principal services provided to Geochemical Society members, and it clearly has significant untapped potential as a medium through which geochemistry and geochemists worldwide can grow and prosper. The vitality of *The Geochemical News* depends largely on the input of Geochemical Society members. To increase the rate and quality of this input an Editorial Board will be created. It will consist of an Executive Editor and six Associate Editors, each representing somewhat different subdisciplines of the field. Associate Editors will serve terms of three years, will solicit contributions (on the order of two or three per year) and (when appropriate) reviews thereof, and will work with the Executive Editor and staff to help generate high quality, timely content for *The Geochemical News*.

With this announcement, we seek candidates who are willing to volunteer for a term as an Associate Editor. Editorial activities are to begin immediately once candidates have been approved by the search committee. This is an important service to the geochemical community. Candidates should be fluent in English, computer literate with standard word-processing and graphics software packages, on line with electronic mail and Internet, and be interested in joining a creative team that will bring forth a new vision of *The Geochemical News* into the next millenium. Positions are open to all geochemists, from graduate students through professors emeriti, regardless of geographic location. Please contact the Editor, Neil Sturchio (sturchio@anl.gov), if you are interested in participating.

ANNOUNCING A TOPICAL CONFERENCE

The Origin of the Earth and Moon

December 1-3, 1998 ✧ Monterey, California

<http://cass.jsc.nasa.gov/meetings/origin98/>SPONSORS

Geochemical Society
 Lunar and Planetary Institute
 National Aeronautics and Space Administration

The 1988 conference *The Origin of the Earth* was an excellent meeting that produced a classic, frequently cited text on the subject. The 1984 conference *The Origin of the Moon* was arguably the most successful conference ever held in planetary geology, bringing together the key players who then and there formulated, debated, refined, and established the giant impact theory of lunar origin. In recent years there have been major advances in these areas, particularly in the fields of geochemistry and petrology. It has become very apparent that a meeting that focuses on the origin of the Earth and Moon, as coupled problems, would be invaluable. For example, discussions about the development of the Earth's atmosphere or hypotheses concerning magma oceans and core formation are esoteric unless constraints on the nature of the interactions that generated the Moon are incorporated. As such, we believe that this conference should focus on the very earliest histories of these bodies, so that nearly everyone present will share a common interest in all aspects of the discussion.

Therefore, this conference is being planned just prior to the 1998 Fall AGU Meeting in San Francisco to encourage interested scientists worldwide to attend and contribute to what we hope will be the third in a series of highly successful topical conferences on origins of planets.

For further information concerning the conference, and to be added to the mailing list for future announcements, please send your request to:

The Origin of the Earth and Moon Conference

Lunar and Planetary Institute
 3600 Bay Area Boulevard
 Houston TX USA
 E-mail: simmons@lpi.jsc.nasa.gov

CONVENERS

Alex N. Halliday
 ETH Zürich
 E-mail: halliday@erdw.ethz.ch

Michael Drake
 University of Arizona
 E-mail: drake@lpl.arizona.edu

SCIENTIFIC ORGANIZING COMMITTEE

Alan P. Boss
Carnegie Institution of Washington

Everett Shock
Washington University

A. G. W. Cameron
Harvard College Observatory

David J. Stevenson
California Institute of Technology

John H. Jones
NASA Johnson Space Center

G. Jeffrey Taylor
University of Hawai'i

H. Jay Melosh
University of Arizona

S. Ross Taylor
Australian National University

R. Keith O'Nions
Oxford University

Images of Toulouse
Eighth Annual V.M. Goldschmidt Conference
August 30 - September 3, 1998
Toulouse, France



Research Issues in Petroleum and Environmental Organic Geochemistry

*Organic Geochemical Division (OGD) of the Geochemical Society (GS) Symposium:
Geological Society of America Annual Meeting, Toronto, Canada, October 25, 1998*

Co-chaired by Barbara Sherwood-Lollar (bsl@quartz.geology.utoronto.ca) and
Michael D. Lewan (mlewan@usgs.gov)

This day-long symposium will host ten speakers to present current research issues in petroleum and environmental organic geochemistry. With employment opportunities continuing to grow in both of these disciplines, the symposium will provide students and the geological community with a comprehensive review of research challenges that lie ahead. Sufficient time after each presentation will be allotted for open discussion.

Environmental Geochemistry Research Issues

Geochemical ecology and biogeochemistry of contaminated groundwater:

Phil Bennett, University of Texas at Austin

Isotopic signatures as tracers of petroleum contamination in marine environments:

Michael Whiticar, University of Victoria

Stable carbon isotopes: Tools for detection of the origin and fate of organic contaminants:

Barbara Sherwood Lollar, University of Toronto

Atmospheric methane flux from coals related to mining and natural geologic processes:

Jerry L. Clayton, J. S. Leventhal, D. Rice, USGS, and M. Kotarba, University of Mining & Metallurgy/Krakow

Sunlight induced reactions in organic matter in natural waters- impacts on availability/mobility of metals:

Dave Sedlak - University of California/Berkeley

Petroleum Geochemistry Research Issues

Petroleum Source Rock Assessment-Analytical Methods, Sampling, and Volumetric Assessments:

Barry Katz, Texaco

Research Issues Concerning Kinetics and Mechanisms of Petroleum Generation and Expulsion:

Michael Lewan, USGS

Oil Maturity, Oil Mixes, and the Nature of Reservoir Boundaries- Recurring Issues in Exploration and Development Geochemistry:

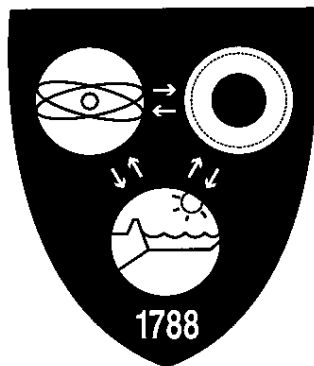
Mark McCaffrey, ARCO

Molecules and Mazes-Geochemical Approaches to Understanding Petroleum Migration and Entrapment:

Steven Larter, University of Newcastle

Natural Gas Formation and Occurrences-Status and Outlook:

Martin Schoell, Chevron; Yongchun Tang, Chevron; and Lawrence Cathles, Cornell University



Ninth Annual V. M. Goldschmidt Conference

August 22–27, 1999 Cambridge, Massachusetts

<http://cass.jsc.nasa.gov/meetings/gold99/>

Sponsors

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



The Ninth Annual Goldschmidt Conference will be held at Harvard University, Cambridge, Massachusetts, August 22–27, 1999. The conference will be hosted by the Department of Earth and Planetary Sciences. Professor Stein B. Jacobsen is the Conference Chair.

The Goldschmidt Conference is an annual international conference of 400–600 geochemists, and is held alternately in Europe and North America. The meeting is a forum for presenting and discussing new chemical and isotopic measurements, experimental and theoretical results, and discoveries in geochemistry and cosmochemistry.



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 goldschmidt@eps.harvard.edu.

Schedule

December 10, 1998	Indication of Interest forms due at LPI
March 5, 1999	Second announcement mailing, including logistical and registration information and call for abstracts
May 21, 1999	Abstract deadline
June 28, 1999	Final announcement mailing
August 22–27, 1999	Ninth Annual Goldschmidt Conference
August 28–29, 1999	Field trips

Contact

Stein B. Jacobsen, Department of Earth and Planetary Sciences, Harvard University, Cambridge MA 02138
(phone: 617-495-5233; fax: 617-496-4387; e-mail: goldschmidt@eps.harvard.edu).



The Geochemical Society

Abbreviated Minutes: Board of Directors Annual Meeting

The meeting was convened at the Holiday Inn Crowne Plaza, Toulouse, France, August 29, 1998, and came to order at 1:20 PM

Present: Mike Drake (President), Mike Hochella (Vice President), Dave Wesolowski (Secretary), Ross Taylor (International Secretary), Scott McLennan (Special Publications Editor), Mike Lewan (OGD Chair), Alex Halliday (Past President), Sue Brantley (Director), Jochen Hoefs (Director), Al Hofmann (Director), Everett Shock (Director), Lynn Walter (Director), Lee Mobley (GS Business Manager), Mabel Peterson (GCA Manuscript Manager), Jacques Schott (8th V.M. Goldschmidt Conference Organizing Committee), Stein Jacobsen (9th V.M. Goldschmidt Conference Organizing Committee), Hubert Staudigel (representing GERM electronic journal proposal committee).

Current and Future Goldschmidt Conferences:

Jacques Schott reported on final preparations for the 8th V.M. Goldschmidt Conference (Aug. 30-Sept. 3), indicating that although the response was somewhat overwhelming (nearly 1,000 participants!), the organizing committee was delighted and ready to offer an exciting meeting. Stein Jacobsen reported on planning for the next Conference in Boston (Aug. 22-27, 1999), and the first circular was distributed in Toulouse. Keith O'Nions was not present to discuss planning for the 2000 Conference in Oxford, UK, but reports indicate that it is well in hand. Mike Hochella presented a proposal for the 2001 Conference to be organized by himself and Bob Bodnar of Virginia Tech and sited in Roanoke, Virginia, USA. The proposal was favorably received by the Board. Tentative future sites might include a joint Conference with ICOG in Switzerland, and a Pacific Rim venue.

Report of the Business Manager:

Lee Mobley reported that the society experienced a modest drop in regular professional members, which was more than offset by significant increases in student members and professional members in the Organic Geochemistry Division of the GS. A significant drop in professional subscriptions to *Geochimica* was partially offset by a large increase in student subscriptions. Lee indicated that she had received a number of inquiries about the possibility of developing a student division of the GS, and an announcement inviting suggestions is listed elsewhere in this newsletter. The 1999 dues and GCA

subscription rates were set at \$25 and \$122 for professionals, and \$5 and \$45 for students. It is the intention of the Board to seek ways in which future increases in the price of subscription to GCA can be held to a minimum.

Geochimica Editorial Office Report:

Mabel Peterson, GCA Manuscript Manager, read a report from Executive Editor, Karl Turekian, which indicated that GCA is in excellent shape and functioning smoothly with the new Editorial Advisory Board. The review time and revision time for new manuscripts is averaging about 3 months each, and the rejection rate has increased somewhat, to about 50%, in line with some other top earth science journals. The number of pages printed in 1998 will decrease slightly from last year. Two special issues of the journal, dedicated to Claude Allègre and Werner Stumm, will appear in the near future. Karl took this occasion to announce that he would not continue as Editor beyond the end of his current term (December 31, 1999), but would maintain an editorial office at Yale into 2000 to help with the transition to a new Editor.

Treasurer's Report:

Don Elthon was unable to attend the meeting, but his report indicates that the GS's revenue, consisting of member dues, royalties from institutional subscriptions to GCA, and interest on investments, exceeds our current expenditures by a comfortable margin, and that selected new ventures can be entertained. Our current reserves after expenses, are approximately \$530K, and the Society will initiate a more aggressive investment policy in order to generate a flow of returns that will enable even more services to members and the scientific community.

Secretary's Report:

Dave Wesolowski summarized Board actions taken subsequent to last year's meeting, which included: approval of Dave Wesolowski as Secretary, Scott Wood as Special Publications Editor, and Everett Shock and Vala Ragnarsdottir as Directors for the period 1999–2001 (these candidates have subsequently been approved by the GS membership); granting of the Business Office Management contract to Lee Mobley; extension of the web site coordinator's contract with Mark Bloom; approval of a new Special Publication dedicated to the career of Francis R. (Joe) Boyd; authorization of a student travel grant for the Toulouse Goldschmidt Conference of \$10K; approval of Everett Shock and Susan W. Kieffer as the 1998 Gast and Ingerson Lecturers.

International Secretary's Report:

Ross Taylor will serve as GS representative to the International Geological Congress in Rio de Janeiro in 2000. Approximately six symposia will be co-sponsored by the Society, and we will be sole sponsors of a symposium on the Evolution of the Atmosphere, Hydrosphere and Lithosphere. Taylor will take an active role in identifying opportunities for

the GS to foster geochemical meetings outside Europe and North America.

Proposal for an electronic database journal:

Hubert Staudigel presented a proposal formulated by a subset of the scientists involved in establishing the Geochemical Earth Reference Model (GERM), for the creation of an all-electronic publication geared toward archival and peer-review of large geochemical databases and other material that does not fit well in standard geochemical hardcopy journals. Several other institutions and organizations are being approached for start-up funds as well. The Board requested a more detailed proposal, specifying the dollar amount requested from the GS, how our web site coordinator's activities might mesh with this effort, how the publication would be managed and archived in the future, and several other issues.

Joint Publications Committee Report:

JPC Chairman Frank Podosek was not present, but the Board discussed his report, which included the JPC's plans for seeking a replacement for Karl Turekian as Executive Editor of GCA (see ad elsewhere in this issue). The report also describes the efforts of the JPC to address concerns raised by a number of geochemists about the new editorial policies of GCA. The JPC is supportive of the new policies and also satisfied with certain adjustments that were made, including the addition of an aqueous geochemist (Terry Seward) to the Editorial Advisory Board.

Board Internal Communications:

Much of the Board's communications are now done via email. It has become increasingly difficult to conduct business without flooding individuals with messages, and accidentally broadcasting personal comments. A very restrictive protocol, involving the Secretary as point contact, proved unwieldy. A new approach involving self-discipline, but free interaction among Board members will now be tried.

Proposal for Joint MSA/GS Reviews Series:

Mike Hochella presented a proposal, previously approved in principle by the Mineralogical Society of America Council, for the replacement of the highly successful "Reviews in Mineralogy" series, with a jointly-sponsored publication "Reviews in Mineralogy and Geochemistry". The Board approved the preparation of a formal merger contract, with a target date of 2000. Scott Wood is proposed as the Executive Editor of the GS contributions to this series, and Managing Editors of the joint publication will be Paul Ribbe and Jodi Junta Rosso.

Patterson Medal:

Alex Halliday proposed that, due to the large number of outstanding candidates identified for the first Clair C. Patterson Award in environmental geochemistry, the award be granted annually, rather than biennially as originally planned. The Board

approved this proposal and a call for 1999 medallists is included elsewhere in this issue.

GS Web Site and Newsletter:

Mark Bloom (web site coordinator) and Neil Sturchio (newsletter editor) were not present at this meeting, but progress reports on their activities were reviewed by the Board. The web site is rapidly developing into a highly useful resource for members, the scientific community, and the general public. The newsletter, which is now distributed quarterly, continues to generate many positive comments and is playing a vital role in bringing the geochemical community together. Both of these individuals enthusiastically encourage the participation of GS members in the development of these services. Monitors and developers are badly needed for the web site discussion groups and database projects, and the newsletter needs material in the form of short articles, announcements, letters to the editor, and items of general interest to the community.

Miscellaneous Items:

The Board approved a recommendation to the European Association for Geochemistry that the two Societies institute a cap on the number of new joint Geochemistry Fellows of approximately 10 individuals per year, in order to preserve the stature of the title.



GeoSoilEnviroCARS

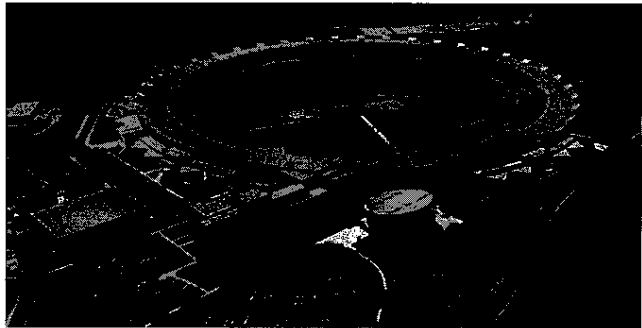
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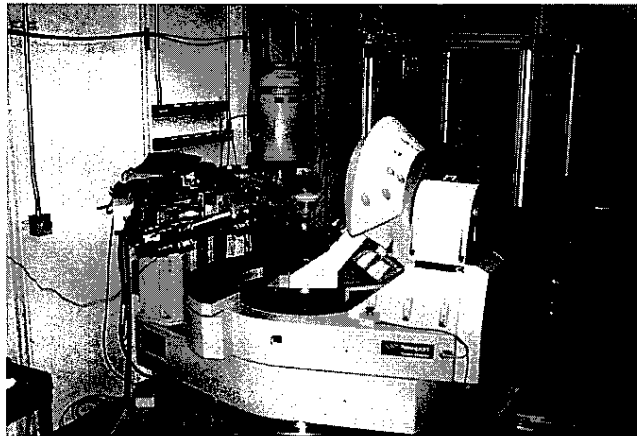
Argonne National Laboratory • Advanced Photon Source

GeoSoilEnviroCARS is a synchrotron-based, earth science research facility under development at the Advanced Photon Source, Argonne, IL. A variety of techniques will be made available to the general scientific community for state-of-the-art research on earth materials. These include but are not limited to:

- high pressure research with the laser-heated diamond anvil cell and multi-anvil press
- x-ray absorption fine structure spectroscopy
- x-ray fluorescence microprobe
- microtomography
- microcrystallography
- powder diffraction
- surface diffraction



APS Aerial View



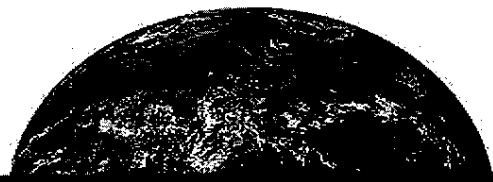
Diffractometer (foreground) and x-ray fluorescence microprobe (background) in experimental station 13-ID-C on the undulator beamline at GeoSoilEnviroCARS

Although construction and commissioning activities are still in progress, we are initiating our user program in a limited fashion for three techniques that are currently operational: microprobe/microspectroscopy, microtomography and energy dispersive diamond anvil cell with laser heating. To apply for beamtime, visit our web site (<http://cars.uchicago.edu>, follow the GSECARS link) and complete the online application form. If you have any questions, particularly with regard to experimental feasibility, please contact Steve Sutton (sutton@cars.uchicago.edu) or Mark Rivers (rivers@cars.uchicago.edu)

GeoSoilEnviroCARS online at <http://cars.uchicago.edu>

GeoSoilEnviroCARS

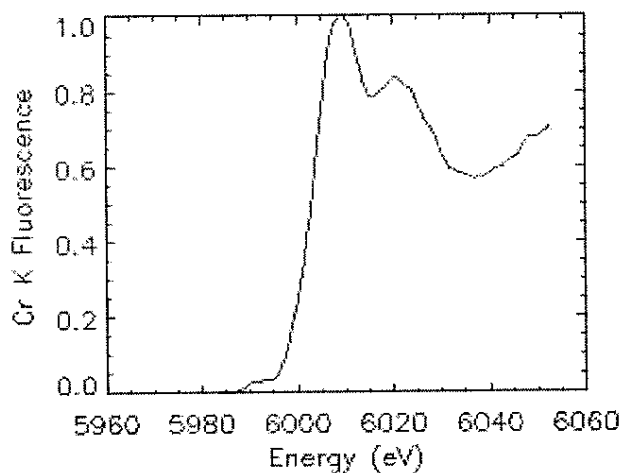
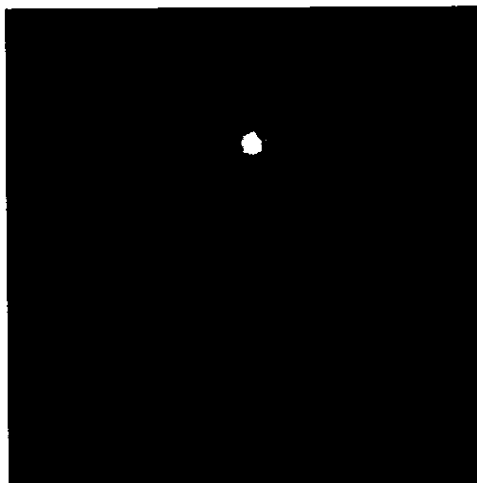
The University of Chicago



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Microdistribution and Valence State of Chromium in Contaminated Soil using the X-ray Fluorescence Microprobe and MicroXANES

Chromium elemental maps (500 x 500 microns) obtained with the x-ray fluorescence microprobe (4 micron beam) at GeoSoilEnviroCARS for a soil which had been artificially inoculated with Cr(VI) show Cr is incorporated heterogeneously. Bulk XANES (Szulczewski et. al, 1997, Environ. Sci. Technol. 31:2954.) has shown that most of the Cr(VI) has been reduced to Cr(III). A microXANES measurement obtained on the Cr hot spot in the elemental map shows a predominately Cr(III) spectrum (figure), probably deriving from small granules of a Cr(III) oxide, consistent with the bulk XANES results. (W. Bleam, M. Szulczewski, U. of Wisc.-Madison; S. Sutton, U. of Chicago)



Such data can be obtained for a wide range of geologic materials and can be used to determine elemental distributions, partition coefficients, and oxidation states. The technique allows these measurements to be done in situ on dynamic, reactive systems (e.g., solid-liquid mixtures) to elucidate transport and reaction mechanisms under a wide range of experimental conditions. In addition, it is possible to couple such measurements with X-ray diffraction and other techniques for a comprehensive characterization of the materials.

GeoSoilEnviroCARS online at <http://cars.uchicago.edu>

Meetings Calendar

Oct. 26-29, 1998: 1998 GSA Annual Meeting, Toronto, Canada. Abstract Deadline (electronic via www) July 13, 1998. Contact: GSA, 3300 Penrose Place, Boulder, CO 80301 USA. Tel: 1+303-447-2020; Fax: 1+303-447-1133; Web Site: <http://www.geosociety.org/meetings/index.htm>

Nov. 8-9, 1998: National Academy of Sciences Colloquium on "Geology, Mineralogy, and Human Welfare", Irvine, Calif., USA. Sponsor: National Academy of Sciences (NAS). Contact: E. Patte, NAS, NAS-146, 2101 Constitution Avenue, NW, Washington, DC 20418 USA. Tel: 1+202-334-2445; Fax: 1+202-334-2153; E-mail: epatte@nas.edu; Web Site: <http://www2.nas.edu/abstract/20fa.html>

Nov. 9-13, 1998: Mexican Geophysical Union Annual Meeting/La Reunion de UGM, Puerto Vallarta, Mexico. Abstract Deadline: August 31, 1998. Contact: Victor Frias, 74-45-01 (ask for UGM); email: ugm@cicese.mx; Web Site: <http://www.ugm.org.mx>

Dec. 1-3, 1998: The Origin of the Earth and Moon, Geochemical Society Topical Conference, Monterey, CA USA. Contact: LPI; 3600 Bay Area Blvd.; Houston, TX USA. Email: simmons@lpi.jsc.nasa.gov

Dec. 6-10, 1998: Fall AGU Meeting, San Francisco, CA USA. Abstract Deadline: August 27, 1998. Contact: AGU Meetings Dept., 2000 Florida Ave. NW, Washington, DC 20009 USA. Tel: 1+800-966-2481 or 1+202-462-6910, ext. 215; Fax: 1+202-328-0566; Email: meetinginfo@kosmos.agu.org (Subject: 1998 Fall Meeting).

March 15-18, 1999: 30th Lunar and Planetary Science Conference, Houston, Tex., U.S.A. Abstract Deadline: January 8, 1999. Sponsor: Lunar and Planetary Institute (LPI) and the NASA Johnson Space Center. Contact: L. Simmons, Conference Administrator, LPI Publications and Program Services Department, 3600 Bay Area Boulevard, Houston, TX 77058-1113 USA. Tel: 1+281-486-2158; Fax: 1+281-486-2160; E-mail: simmons@lpi.jsc.nasa.gov

March 28-April 1, 1999: European Union of Geosciences 10th Biennial Meeting, Strasbourg, France. Abstract Deadline: November 1, 1998. Contact: EUG Office, EOST, 5 rue René Descartes, 67084 Strasbourg cedex, France. Tel.: 33 (0)3 88 45 01 91 or 33 (0)3 88 41 63 93; Fax: 33 (0)3 88 60 38 87; E-mail: eug@eost.u-strasbg.fr

May 26-28, 1999: Geological Association of Canada-Mineralogical Association of Canada Joint Annual Meeting, Sudbury, Ontario. Contact: P. Copper, Dept. of Earth Sciences, Laurentian University, Sudbury, Ontario P3E 2C6, Canada. Tel: 1+705-675-1151, ext. 2267; Fax 1+705-675-4898; Email: gacmac99@nickel.laurentian.ca

May 31-June 4, 1999: AGU Spring Meeting, Boston, Mass., U.S.A. Sponsor: AGU. Contact: AGU Meeting Department, 2000 Florida Avenue, NW, Washington, DC USA. Tel: 1+201-462-6900; Fax: 1+202-328-0566; E-mail: meetings@kosmos.agu.org; Web Site: <http://www.agu.org/meetings>

June 21-24, 1999: International Gemological Symposium, San Diego, California. Abstract (poster) deadline: October 1, 1998. Contact: Dona Dirlam, Gemological Institute of America, 5345 Armada Dr., Carlsbad, CA 92008 USA. Tel: 1+760-603-4154; Fax: 1+760-603-4256; E-mail: ddirlam@gia.edu

July 11-16, 1999: Meteoritical Society 62nd Annual Meeting, Johannesburg, South Africa. Contact: W. U. Reimold, Dept. of Geology, University of the Witwatersrand, Private Bag 3, P.O. Wits 2050, Johannesburg, South Africa. Tel: 27 11 716 2946; Fax: 27 11 339 1697 Email: 065wur@cosmos.wits.ac.za

July 19-30, 1999: IUGG '99: The 22nd General Assembly of the International Union of Geodesy and Geophysics, The University of Birmingham, UK, Abstract Deadline: January 15, 1999. Will include programs of the International Associations of Volcanology and Chemistry of the Earth's Interior (IAVCEI), Seismology and Physics of the Earth's Interior (IASPEI), Meteorology and Atmospheric Sciences (IAMAS), Physical Sciences of the Ocean (IAPSO), Geomagnetism and Aeronomy (IAGA), Hydrological Sciences (IAHS), and Geodesy (IAG). To receive the Second Circular (May/June, 1998), Contact: IUGG99, School of Earth Sciences, The University of Birmingham, Edgbaston, Birmingham B15 2TT, UK; Fax: 44121414 4942; Email: IUGG99@bham.ac.uk; Web Site: <http://www.bham.ac.uk/IUGG99/>

Aug. 4-13, 1999: XVIII International Union of Crystallography, Congress and General Assembly, Glasgow, Scotland, UK. Abstract Deadline: March 1, 1999. Sponsors: Glasgow Development Agency, International Union of Crystallography, University of Glasgow, others. Contact: G. Houston, Northern Networking Congress, Central Office, Bellway House, 813 South Street, Glasgow, G14 0BX, Scotland, UK. E-mail: crystal@glasconf.demon.co.uk; Web Site: <http://www.chem.gla.ac.uk/iucr99/>

Sept. 6-10 1999: 19th International Meeting on Organic Geochemistry, Istanbul-Turkey, Contact: Conference Chairman: Prof. M. Namik Yalcin (TUBITAK Marmara, Research Center, Gebze-Kocaeli, 41470 Turkey); Conference Secretariat: Mr. Cengiz Soylu (TPAO Research Center, Mustafa Kemal. Mah. 2. cad. No. 86, Esentepe-Ankara, Turkey. Tel: +90 (312) 2843490; Fax: +90(312)2843491; E-mail: ogc99@petrol.tpao.gov.tr); Web Site: <http://www.nemrut.mam.gov.tr>

Sept. 11-16, 1999: European Research Conference The Deep Earth: Theory, Experiment and Observation, Acquafredda di Maratea, Italy. Contacts: John Brodholt (UCL, London, UK), George Helffrich (U. Bristol, Bristol, UK). To receive first circular, register at URL: <http://slamdunk.geol.ucl.ac.uk/~brodholt/euroconference.html> See <http://www.edinet-gdp.com/villadelmare/vdm.htm> for hotel information.

Sept. 12-15, 1999: Third International Workshop on Orogenic Lherzolites and Mantle Processes, Pavia, Italy. Web Site: http://www_crystal.unipv.it

Oct. 25-28, 1999: GSA Annual Meeting, Denver, CO USA, Contact: Becky Martin, GSA Meetings Department, Box 9140 Boulder, CO 80301-9140 USA. Tel: +1-303-447-2020, ext. 164; Fax: +1-303-447-1133.

Dec. 13-17, 1999: AGU Fall Meeting, San Francisco, Calif., U.S.A. Sponsor: AGU. Contact: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USA. Tel: +1-202-462-6900; Fax: +1-202-328-0566; E-mail: meetinginfo@kosmos.agu.org; Web Site: <http://www.agu.org>

May 30-June 3, 2000: AGU Spring Meeting, Washington, D.C., U.S.A. Sponsor: AGU. Contact: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USA. Tel: +1-202-462-6900; Fax: +1-202-328-0566; E-mail: meetings@kosmos.agu.org; Web Site: <http://www.agu.org/meetings>

July 16-22, 2000: ICAM 2000: 6th International Congress on Applied Mineralogy, Gottingen & Hannover, Germany. Sponsors: International Council for Applied Mineralogy, German Mineralogical Society, Commission for Applied Mineralogy, others. Abstract Deadline: September 1, 1999. Contact: ICAM 2000 Office, P.O. Box 510153, D-30631 Hannover, GERMANY. Tel: +49-511-643-2298; Fax: +49-511-643-3685; E-mail: ICAM2000@bgr.de; Web Site: <http://www.bgr.de/ICAM2000>

July 18-22, 2000: International Association of Volcanology and Chemistry of the Earth (IAVCEI) General Assembly 2000, Bandung, INDONESIA. Abstract Deadline: February 29, 2000. Sponsor: IAVCEI. Contact: Secretariat, Volcanological Survey of Indonesia, Jalan Diponegoro 57, Bandung 40122, INDONESIA. Tel: +1-62-22-772606; Fax: +1-62-22-702761; E-mail: iavcei@vsi.dpe.go.id; Web Site: <http://www.vsi.dpe.go.id/iavcei.html>

Aug. 6-17, 2000: 31st International Geological Congress, Rio de Janeiro, BRAZIL. Sponsors: International Union of Geological Sciences (IUGS), Brazilian Geological Society, The Brazilian Ministry of Mines and Energy, others. Abstract Deadline: September 1, 2000. Contact: Secretariat Bureau, 31st International Geological Congress. Av. Pasteur, 404, Anexo 31 IGC, Urca, Rio de Janeiro, RJ, CEP 22.290-240, Brazil. Tel: +1 55 21 295 5847; Fax: +1 55 21 295 8094; E-mail: 31igc@31igc.org.br

Sept. 3-8, 2000: Goldschmidt 2000, Oxford, UK. Sponsors: Geochemical Society, European Association for Geochemistry, The University of Oxford. Contact: P. Beattie, Cambridge Publications, Publications House, PO Box 27, Cambridge UK CB1 4GL. Tel: +44 -1223 -333438; Fax: +44- 1223-333438; E-mail: Gold2000@camppublic.co.uk; Web Site: www.camppublic.co.uk/science/conference/Gold2000/

Nov. 13-16, 2000: GSA Annual Meeting, Reno, NV USA. Contact: GSA Meetings, Box 9140, Boulder, Colo. 80301-9140. Tel: +1-303-447-2020, ext. 164; Fax: +1-303-447-1133; Web Site: <http://www.geosociety.org/meetings/index.htm>

Dec. 15-19, 2000: AGU Fall Meeting, San Francisco, Calif., U.S.A. Sponsor: AGU. Contact: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USA. Tel: +1-202-462-6900; Fax: +1-202-328-0566; E-mail: meetins@kosmos.agu.org; Web Site: <http://www.agu.org/meetings>

Nov. 5-8, 2001: GSA Annual Meeting, Boston, MA USA. Contact: GSA Meetings, Box 9140, Boulder, Colo. 80301-9140. Tel: +1-303-447-2020, ext. 164; Fax: +1-303-447-1133; WWW: <http://www.geosociety.org/meetings/index.htm>

Oct. 28-31, 2002: GSA Annual Meeting, Denver, CO, USA. Contact: GSA Meetings, Box 9140, Boulder, Colo. 80301-9140. Tel: +1-303-447-2020, ext. 164; Fax: +1-303-447-1133; WWW: <http://www.geosociety.org/meetings/index.htm>

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