

# The Lattice

## MEMBER CONTRIBUTIONS TO MSA FOR 1998

Many members contribute to MSA each year by including a contribution with their dues. Depending on the wishes of the member, the money is deposited with the principal of the MSA Endowment, MSA Mineralogy/Petrology, MSA Outreach, or Edward H. Kraus Crystallographic Research Funds. The income of these four Funds are to support MSA's research grants in crystallography, mineralogy, and petrology; publishing of the *American Mineralogist*; the *American Mineralogist* Undergraduate Awards; the Mineralogical Society of America Award; the Distinguished Public Service Award, the Roebling Medal; the website, and the lectureship program. These Funds are described in more detail in the Financial Advisory Committee Report that appears in this issue. Continued member generosity has permitted the two Funds that support student research grants to each give a \$3500 student research grant yearly. However, the need is obviously

greater. For the two 1999 grants, MSA received a total of 35 proposals. More than likely the Grant Committees will again determine that more than 2 proposals deserve funding.

For 1998, 191 MSA members contributed \$6197.50 as of July 24: Endowment (\$2222), Kraus (\$944.50), and Mineralogy/Petrology Fund (\$2715.50), and Outreach (\$310). The MSA Benefactor Committee, chaired by Dave London and comprising Rodney C. Ewing, George E. Harlow, Stephen J. Guggenheim, and Donald R. Peacor, has been very active in soliciting contributions from companies and other organizations. They have raised \$5500.00 thus far in 1998, all destined for the Outreach Fund. If you have not done so previously, you might want to consider contributing at the next opportunity. Here we want to extend our gratitude to the following individuals and organizations:

### MSA Endowment Fund

Charles E. S. Arps	Benjamin F. Leonard
Charles R. Bacon	David London
Jillian F. Banfield	Daniel J. Milton
Peter R. Buseck	Duane M. Moore
Ian S. Carmichael	Louis Moyd
Bryan C. Chakoumakos	Robert Neiman
Joan R. Clark	Cyril J. Perusek
Roy S. Clarke	Richard A. Robie
Brian J. Cooper	Peter Robinson
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(continued as contributors on p. 6)

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## *From the President*

### *Musings of a lame-duck president*

At the time I'm writing this I have about two months left in my term as MSA president, so this is my last contribution to the Lattice. In a way I'm really looking forward to turning over the gavel to John Ferry at GSA in October, anticipating (among other freedoms) a roughly factor-of-two overall decrease in e-mail communications. On the other hand, I feel like my term just began and a great deal remains to be done. I don't intend to drop out of sight completely, but I will miss the direct involvement with a conscientious and thoughtful Council, energetic Am. Min. staff, and very able MSA administrator (not to mention the input from some individual members who have let me know their views!).

All in all, it's been a very interesting year. Like other Council members, I've had to think a lot about the nature and goals of our science and participate in decisions that may significantly affect the future of our society. This has been not always been easy, partly because I've been aware all along that I was elected by only about 15% of the MSA membership, and that my particular scientific orientation does not encompass all of MSA's constituencies. Having held minor administrative positions here at RPI, I'm not completely ill at ease with the idea of planning for the future in a philosophically diverse group (or of meeting a budget!), but in many respects the directions taken by the MSA have a more far-reaching impact than choices made with in a single academic department. Fortunately (or maybe unfortunately), our society also has a lot more inertia than most academic departments, so no single president or Council is likely to bring about precipitous or even irreversible change.

One of the strongest impressions of the MSA that I will take into my "retirement" is the diversity of our membership. We are diverse not only in terms of the nature of the science that we practice—which encompasses crystallography, spectroscopy, mineral physics, descriptive mineralogy, petrology, geochemistry, materials science, and geomicrobiology at the very least—but also in terms of the way in which we perceive the bigger context of what we do. Most of us are specialists. Some of us like to "market" our specialized skills and perspectives in the broader community of earth scientists, while others feel a closer kinship with physicists, chemists, materials scientists or biologists. Still others of us prefer to confine our activities within a close-knit community of like-minded specialists. A major worry as I step down from office concerns the incipient tensions that have surfaced among the various "kinds" of us. I believe that our extraordinary diversity is a great asset of our society *if* we can continue to communicate and make decisions that have a positive impact on as many members as possible, and at the same time elevate our image in the broader scientific community. If, on the other hand, our disciplinary diversity leads to breakdown in communication and factionalism in a society as small as the MSA, it becomes a serious liability. I think the MSA has always been different from large "umbrella" societies like the GSA and the AGU, which were intended from the start to be all-encompassing, consisting of sections or divisions that might interact among themselves relatively little. The MSA, in contrast, began as a small society of similarly-trained specialists, unified by a common interest in minerals, whose differ-

ences were reflected mainly in the types of minerals studied. Over the decades, the tools, applications and goals of mineralogy have evolved such a degree, and specialization has been so extensive, that it is sometimes difficult to see what holds us together today—or even if there is a compelling reason why we should look to the future as a unified society. Indeed, a few MSA members (non-members, too) have asked me not only that question but also "What *is* mineralogy these days, anyway?" From my vantage point as departing president, I see the discipline of mineralogy as healthy and vigorous, even if we don't all know or agree upon what it is. I also think that despite the strain caused by evolving scientific philosophies and methodologies, the MSA can continue to thrive. As one member recently observed to me "Any society that can produce the MSA shortcourses and RiMs series obviously has a lot going for it."

In spite of the enormous diversification of the ways in which mineralogy is practiced, and the major differences in our perceptions of the frontiers of mineralogical science, we MSA members really do remain bound together by our interest in the properties and uses (scientific and otherwise) of naturally-occurring crystalline compounds. The key to hanging together—which I think is important to maintaining our visibility as Earth scientists—is involvement of MSA members in meetings and conferences of all types (specialized and general alike) and voting in our elections. Above all, we need to maintain (in some cases establish) communications among individual members and groups having different perspectives and aspirations.

*E. Bruce Watson*

*Bruce Watson*

*MSA President*

## Notes from Washington

At its 1998 Spring Meeting, MSA Council voted to keep 1999 member dues at the 1998 cost of \$40. Student dues will also remain unchanged at \$30, as does the cost of a member subscription to *American Mineralogist* at \$30. Institutional subscriptions to the journal are increased to \$430 for subscribers with U.S. address and to \$440 for subscribers with non-U.S. addresses. This large (for MSA) increase in the institutional rate is a result of a planned 8, rather than 6, issues for 1999. MSA membership renewals will be mailed during October, 1998. You can save your Society money by renewing early. If you reside overseas and are interested in faster delivery of *American Mineralogist*, consider ordering International Surface Airlift service (ISAL) for the journal when you renew your member subscription. It will cost \$40 additional. This is an increase over previous years because there will be 8 rather than 6 issues in 1999; however, ISAL will reduce shipping time from several months to 2-3 weeks, depending on your location.

• At its Spring meeting, the Council voted to have 7 issues of *American Mineralogist* in 1998, and 8 issues in 1999. The seventh 1998 issue is a special issue on Geomicrobiology, and tentatively planned to be mailed with the November/December issue.

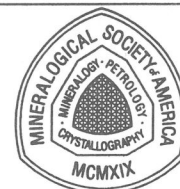
• By time you read this, the last of the membership update information received from the second and third renewals notices should be incorporated into the online MSA Membership Directory. Additionally, a printed version of the MSA Membership Directory is now available to MSA members only at a cost of \$15. Use the order form that appears in this issue. The online Directory will be continuously updated. The print Directory

will be updated yearly and available about this time at about cost. These replace the Directory previously sent free to all members every 3-4 years.

• Astute readers may see that the new MSA publication order form requires that additional postage be paid on orders to Canada comprising more than 2 books. This is not because MSA wishes to discriminate against its Canadian members or customers. Rather, about a year ago Canada Post required that any books over 4 pounds (about 2 Review volumes) shipped into Canada cannot be sent by book post, but only by much more expensive parcel post. This requirement makes it significantly more expensive to send large book mailings to Canada than to anywhere else in the world. It is turning out to be much more costly than we anticipated. Canadian members and customers can save by placing single book orders.

• The Business Office opens all MSA renewals, ballots, orders, and other correspondence. We also read the rather large number marginal notes and comments made on these. Most are specific to the individual writing them, but a surprisingly large number have to do with general MSA issues. A few years ago, the most common comment was questioning MSA charging an additional fee for credit card users. The surcharge was to reimburse the fees charged MSA by the credit card companies. As a result of these comments MSA dropped the surcharge, with a corresponding increased use of credit cards and a decrease in, what were probably

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The *Lattice* is published quarterly (February, May, August, November) by the Mineralogical Society of America. It is distributed to MSA members as a service. Articles and letters from readers are welcome.

The Mineralogical Society of America is composed of individuals interested in mineralogy, crystallography, and petrology. Founded in 1919, the Society promotes, through education and research, the understanding and application of mineralogy by industry, universities, government and the public.

Membership benefits include: *American Mineralogist*, published bi-monthly; 25% discount on volumes in the *Reviews in Mineralogy* series; *The Lattice*; Membership Directory; special subscription rates for *Mineralogical Abstracts*, *Physics and Chemistry of Minerals*, *Journal of Petrology*, and *Journal of Metamorphic Geology*; reduced registration fees at MSA short courses; member rates for the MSA/Geological Society of America annual meeting and member rates at MSA's spring meeting with the American Geophysical Union; participation in a Society that supports the many facets of mineralogy.

Dues for 1998 are \$70 for professional members who elect to receive *American Mineralogist* and \$40 for those who elect not to receive the journal, but who do receive all other membership benefits; membership is \$30 for students. Membership is on a calendar year basis. Individuals who join after January 1, 1998 will be sent all back issues of the journal for volume 83, 1998.

For additional membership information and an application, and/or to receive a price list of the Society's publications, contact the Business Office.

Institutions may subscribe to the 1998 volume of *American Mineralogist* for the annual rate of \$350 in the US, and \$360 in all other countries. The subscription price includes any new volumes of the *Reviews in Mineralogy* series published during the calendar year of the subscription. Payment must be received in full before a subscription will be started.

**1998 President:** E. Bruce Watson  
Rensselaer Polytechnic Institute

**Past-President:** David R. Veblen  
The Johns Hopkins University

**Vice President:** John M. Ferry  
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for members, their use of much more costly forms of reimbursement. The change seems to have made for a smoother operation, though at some expensive for MSA.

Recently the most common marginal comments have been about MSA committees and candidates for elected MSA office. MSA is a largely volunteer organization and successful operation of the Society depends on [1] willingness and competence of members to serve in various capacities and [2] MSA knowing of that willingness and competence. Both the Committee to Nominate Officers and the Committee on Committees are eager for input from the membership. They become even more eager as the deadline for their Reports containing recommendations for Council approaches for the Spring and Fall Council Meetings. You can contact the Chairs of these Committees at any time about your concerns and suggestions. The make-up of these committees is given on the MSA website. However, do not expect immediate results, plans are usually made a year or more in advance so that the volunteer committee members and officers have plenty of opportunity to plan for their MSA responsibilities in their otherwise busy schedule. If you would like to eventually run for MSA office, and do not want to be seen as a self-promoter or run a write-in campaign, talk with present or past officers about how they came to be in that position. In most cases you will find that they had previously served MSA in a variety of capacities so that they became familiar with the workings of MSA and the many MSA members became familiar with them.

More specific comments have been received about MSA having more overseas members serving in appointed and elected posts. This makes sense in that about 40% of

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MSA do not reside in the USA. Efforts have been made in the recent past to have more overseas members serve on MSA committees. The advent of e-mail makes this practical. Finding overseas members willing to run for elected office is more challenging. MSA is an active scientific society and business entity. While some Council business can be done by e-mail, we are learning that much more cannot. This means that those elected to office must be able to travel on their own to twice yearly Council meetings for the duration of their terms. This can be a challenge for US members, let alone overseas members. MSA has long thought that paying for the travel expenses of Council members to attend meetings is not an appropriate use of member dues (dues would nearly double to do so). If you know of overseas members who could travel to meetings, and you believe that they would make good elected officers, please tell the Committee to Nominate Officers about them.

• By time you read this, MSA will have published its next *Reviews in Mineralogy*, volume 36, on Planetary Materials. This is the largest single volume yet at about 1056 pages, but it will not have the physical size of the Boron volume (862 pages). It will be printed on thinner but more opaque paper. The *Reviews* volume accompanying the Ultrahigh Pressure Mineralogy short course will be available in December. In the meantime, MSA will publish its next monograph on the life of Norman L. Bowen (1937 MSA President) and his role in the development of petrology. Aside from President, Bowen served on many MSA committees throughout the years, and was instrumen-

tal in incorporating the Society in 1937. Apparently MSA was incorporated in response to a New York State Court ruling denying MSA the money left to MSA in the will of George Frederick Kunz in 1936. They ruled that portion of the will invalid on the basis of MSA not being incorporated.

• The MSA Awards Luncheon, MSA Presidential Address, Annual Business Meeting, and joint MSA-Geochemical Society Reception at the Annual Meeting with GSA in Toronto, ON will all be on Tuesday, October 28, 1998. The Luncheon and Reception are ticketed functions. Tickets are sold by GSA and can be bought either when you register for the meeting or up to 24 hours before the event in the meeting registration area. Luncheon cost is \$23. Reception cost is \$10 for professionals and \$5 for students. MSA will not have a booth in the Exhibit Hall for the first time since 1985. It was decided not to do so because MSA had a booth at the IM<sup>A</sup> meeting in Toronto two months previously.

• A book review on *Reviews in Mineralogy*, Volume 31, *Chemical Weathering Rates of Silicate Minerals* edited by A. F. White and S. L. Brantley appeared in *Bulletin of the International Society of Soil Science* 92, pp. 105-106. If the review persuades you that you should own a copy, use the publication order form that appears in this *Lattice*.

J. Alex Speer

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### *In Memoriam*

We regret to announce the passing of the following MSA Members. The Society extends its condolences to the family and friends of these scientists.

**Julian G. Blakely, Member, 1972**

**Laszlo Dudas, Life Member, 1952**

**Donald R. Lewis, Fellow, 1956**

**Koji Ono, Member, 1965**

**Ward Conwell Smith, Life Fellow, 1942**

August, 1998

## **OUTSTANDING STUDENTS IN MINERALOGY FOR SOCIETY'S UNDERGRADUATE AWARD**

MSA members have taken advantage of the Society's American Mineralogist Undergraduate (AMU) Award program to recognize outstanding students who have shown an interest and ability in the discipline of mineralogy. Each student was cited by his or her department for outstanding achievement in mineralogy-related courses. The AMU Awards allow MSA to join with the individual faculty to formally recognize outstanding students. Each student is presented a certificate at an awards ceremony at his or her university or college. In addition, each recipient receives a complimentary student

**Jamie Danielle Barnes**

University of Texas at Austin

*Sponsored by Dr. William D. Carlson*

**Sara E. Kaps**

University of Missouri-Rolla

*Sponsored by Dr. Richard Hagni*

membership, including the *American Mineralogist*, for 1998.

Deadlines for nominating students are January 1 and July 1 of each year. Mark these dates on your calendars and let us know about your exceptional student. If you are interested in presenting the award at a particular ceremony, please remember that time is required to produce certificates. To nominate a student, send a letter on departmental letterhead to Dr. J. Alexander Speer, MSA Business Office, 1015 Eighteenth St. NW Ste. 601, Washington, DC 20036-5274, USA. With the

**Andrew S. Madden**

Michigan State University

*Sponsored by Dr. Michael A. Velbel*

**Ha Thanh Nguyen**

University of Oklahoma

*Sponsored by Dr. David London*

nomination, please include the student's full name that would be suitable for the certificate, the student's address that will be current at the time the award will be made (we receive returned mail from AMU awardees who have moved on), year in school, the MSA sponsor's name, and the date and brief description of the award ceremony at which the certificate will be presented. The letter must be signed or co-signed by the department chair.

The Society welcomes the following exceptional students to the program's honor roll and wishes to thank the sponsors for enabling MSA to recognize these outstanding individuals.

**Stuart Venables**

Acadia University

*Sponsored by Dr. Sandra M. Barr*

### **Members in the News**

**Frank Hawthorne** (University of Manitoba), MSA Fellow, was awarded the Hawley Medal of the Mineralogical Association of Canada at the 1998 GAC/MAC Meeting in Quebec City for his paper "Short-Range Order in Amphiboles: A Bond-Valence Approach".

**Bruce Watson** (Rensselaer Polytechnic University), MSA President, was awarded the 1998 Day Medal by GSA. The Day Medal was established in 1948 by Arthur L. Day to be awarded annually for outstanding distinction in contributing to geologic knowledge through the application of physics and chemistry to the solution of geologic problems.

### **New MSA Fellows!**

At its spring meeting the 1998 MSA Council elected the following 6 individuals to Fellow status in the Society: **Masaki Akaogi, Gilberto F. Artioli, Philippe A. V. Gillet, Carlo Maria Gramaccioli, Joel D. Grice, and Björn Winkler.**

#### **Advertisements in *The Lattice***

*The Lattice* accepts paid advertisements. Rates:

Ad frequency:	1 time	4 times
<u>Ad type</u>	<i>(per insertion)</i>	
<b>Full page:</b>	<b>\$500</b>	<b>\$400</b>
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<b>Eighth page:</b>	<b>\$75</b>	<b>\$50</b>

Details may be obtained from the MSA Business Office: J. Alex Speer, Mineralogical Society of America, 1015 Eighteenth Street, N. W., Suite 601, Washington D. C. 20036, Telephone: 202-775-4344, Fax: 202-775-0018, E-mail: [business@minsocam.org](mailto:business@minsocam.org). Only camera-ready copy of advertisements can be accepted, and should be sent directly to the MSA Business Office.

#### **DEADLINE FOR THE NOVEMBER ISSUE OF THE LATTICE IS NOVEMBER 1**

Contributions may be sent to Darrell Henry via surface mail at Department of Geology and Geophysics, Louisiana State University, Baton Rouge, LA 70803 or via E-mail at [glhenr@unix1.sncc.lsu.edu](mailto:glhenr@unix1.sncc.lsu.edu).

(contributors - continued from p. 1)

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- Rigaku USA Inc., *Sustaining*

# Annual Report of the Financial Advisory Committee to the MSA Membership

The Society finds itself in a stable financial position, thanks to a booming bull market. Table 1 compares fund balances from June 30, 1997, to June 30, 1998.

**Description of MSA Funds:** (from 1997 *Lattice*, written by D.A. Hewitt, former FAC Chairman)

## 1. Roebling Fund

- a. Purpose: To provide support for the publication of the *American Mineralogist* and for the advancement of the mineralogical sciences.
- b. This new fund was restructured by Council in 1996 and is composed of all unrestricted funds that have accumulated in the old Endowment Fund since its inception. Because the major source of those funds was the \$45,100 donated by Col. Roebling in 1925 and 1926 the new fund is named the "Roebling Fund".
- c. A substantial portion of the Roebling Fund has been "Board Restricted" by Council and will thereby be treated as permanently restricted by the Society. The "Board Restricted" portion of the Roebling Fund will be calculated annually. If that balance shows an excess over the previous inflation plus an inflation adjustment, the excess is to be transferred to the unrestricted portion of the Roebling Fund.
- d. All remaining money in the Roebling Fund is unrestricted for use by vote of Council with the following specific expenses to be charged to the Roebling Fund annually.
  1. American Mineralogist Undergraduate Awards
  2. Life Memberships
  3. Roebling Medal Awards
  4. MSA Awards
  5. MSA Public Service Awards
  6. The MSA lecture Series and the MSA Web Site expenses until such time as these can be funded by the Outreach Fund.

## 2. MSA Endowment Fund

- a. Fund Purpose: *To provide support for the publication of the American Mineralogist and for the advancement of the mineralogical sciences*
- b. This Fund is composed of the inflation adjusted sum of all past documented contributions to the

**Table 1: The MSA Funds**

	June 30, 1997	June 30, 1998
<b>Edward H. Kraus Crystallography Fund</b>	\$125,935	\$153,088
<i>Permanently Restricted</i>	\$88,567	\$90,979
<i>Temporarily Restricted</i>	\$37,367	\$62,109
<b>Mineralogy and Petrology Fund</b>	\$200,395	\$243,565
<i>Permanently Restricted</i>	\$62,207	\$65,974
<i>Temporarily Restricted</i>	\$138,188	\$177,591
<b>MSA Endowment Fund</b>	\$145,036	\$163,134
<i>Permanently Restricted</i>	\$130,719	\$135,109
<i>Temporarily Restricted</i>	\$14,317	\$28,025
<b>Roebling Fund</b>	\$1,375,771	\$1,492,182
<i>Board Restricted</i>	\$887,655	\$1,016,843
<i>Unrestricted</i>	\$488,116	\$475,338
<b>Outreach Fund</b>	\$7,932	\$11,167
<i>Permanently Restricted</i>	\$0	\$11,167
<i>Temporarily Restricted</i>	\$0	\$0

old Endowment Fund, except for the original contributions from Col. Roebling. The 12/31/95 balance and all future contributions to this Fund, adjusted for inflation, are permanently restricted.

- c. The Fund balance will be calculated annually. If that balance shows an excess over the previous balance plus all contributions and an inflation adjustment, the excess is to be transferred to the unrestricted Roebling Fund. If in any year, or series of years, the adjusted balance of the MSA Endowment Fund should decrease, no money shall be transferred until such time as the balance of the Fund reaches or exceeds the balance that existed at the most recent transfer of funds to the Roebling Fund plus the accumulated contributions and the inflation adjustment since that time.

## 3. Mineralogy and Petrology Fund

- a. Purpose: To provide financial assistance toward future research in the fields of Mineralogy and Petrology.
- b. All past and future contributions to this fund plus an inflation adjustment are permanently restricted.
- c. All accumulated income to the Fund in excess of contributions and the inflation adjustment is temporarily restricted until January 1, 2030.

## 4. Edward H. Kraus Crystallography Fund

- a. Purpose: To provide financial assistance toward future research in the field of crystallography.

- b. All past and future contributions to the Fund plus an inflation adjustment are permanently restricted.
- c. All accumulated income to the Fund in excess of contributions and an inflation adjustment is temporarily restricted until March 31, 2016.

**5. Outreach Fund**

- a. Purpose: To support the Society's public service activities.
- b. The principal and all contributions plus an inflation adjustment are permanently restricted. The Fund will be totally restricted until the balance reaches \$100,000. Once this balance has been reached all accumulated income to the Fund in excess of the contributions and an inflation adjustment is temporarily restricted until January 1, 2050.

**Policies and Definitions relating to MSA Funds**

- 1. Unless otherwise specified, all contributions to the Society will be treated as permanently restricted

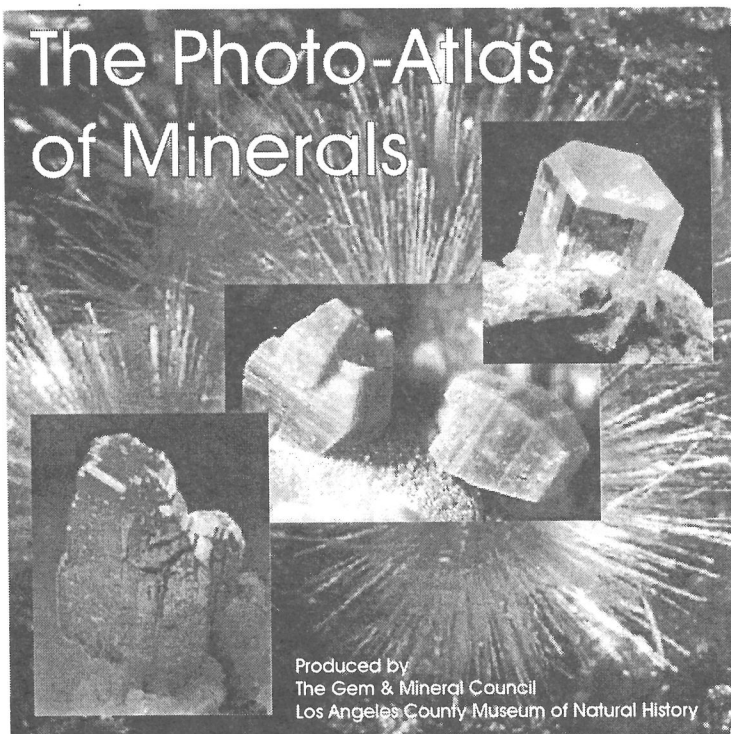
and placed in the MSA Endowment Fund. All contributions designated for the MSA Endowment, Kraus, Mineralogy and Petrology, and Outreach Funds will be placed in the permanently restricted portions of those Funds. Contributions made specifically to the Roebling Fund will be treated as unrestricted.

**2. Definitions**

- a. Permanently Restricted: Funds are part of the permanent endowment and are unavailable for spending.
- b. Temporarily Restricted: Funds are restricted from being spent for purposes other than the prescribed purpose of the fund until the date specified.
- c. Unrestricted: Funds may be spent by vote of the MSA Council.

Respectfully submitted,

*D. Rumble*, Chair  
*B. Hanson*, MSA Treasurer  
*J. R. Holloway*  
*C. V. Guidotti*  
*M.J. Holdaway*



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## Treasurer's Report - Brooks Hanson, MSA Treasurer

The Society's books and operations are essentially maintained continually by Alex Speer in the business office. The thorough and detailed records he has kept make this report possible.

**1997 Budget.** The Society's books for 1997 were audited again by the firm of Rubino & McGeehin at the end of February, 1998. The books were found to be in order. Primarily because of a continued successful return on investments, the Society's overall financial status grew again from \$1,782,170 at the end of 1996 to \$2,191,834 at the end of 1997 (fair market value), an increase of 23% (see Table 1). These assets are distributed across several funds (Table 1), many of which are restricted or designated for specific purposes (e.g., awards). The Society's operating budget is primarily contained within the General Operating and Roebling funds. By council action, the restricted portion of the Roebling fund (that which cannot be used) was increased to \$1,000,000.

Overall, the society ran an operating deficit of \$24,967 for 1997 in terms of its business activities. The main cause of the deficit was a loss of about \$100,000 on the calendar. Sales simply did not meet expectations. As a result of this loss, along with lack of a confirmed large sales contract for 1998 and other projected expenditures for 1998; the council decided not to continue production of a 1999 calendar. This deficit was covered by funds from the General Operating Fund. The other major expenditure from the Operating fund is for support of our www site (about \$25,000; not included in the deficit above because it is earmarked). Matching support is provided by the National Science Foundation in a 3-year grant, and some additional support is being provided by the Geochemical Society. This site is administered by Mark Bloom and its major goal is increasing K-12 education in mineralogy. As noted above, these expenditures (deficit and www site) were easily covered by investment revenues such that the overall value of all the funds and the Society's assets grew.

The Geomicrobiology short course, which ran just before the GSA Annual Meeting, was highly successful and ran slightly in the black. Although income from sales of *Reviews in Mineralogy* volumes dropped slightly in 1997; sales of textbooks continued to increase steadily. Together, these brought in about \$130,000 to the Society in 1997. In all, the Society

had 1942 members in 1997, and 1019 institutional subscribers (libraries mostly).

**Brief update on 1998 budget:** Several changes have occurred in 1998 or are anticipated for the rest of the year that will affect this year's budget. The main challenge for 1998 is that it is necessary to reprint several of the *Reviews in Mineralogy* volumes, in addition to printing several new books. On the one hand, this is good because it is indicative of continued strong sales of many of the volumes; on the other, it is a strain on the budget when many volumes must be reprinted in one year. The other change is that because of the efforts of the editors of *American Mineralogist* to expand the journal's scope, an additional volume

*(continued next page)*

### MINERALOGISTS:

**WANTED:** We are aggressively seeking new or unusual mineral species to add to our extensive inventory of over 200,000 mineral samples. If you are engaged in research that uncovers unusual minerals by utilizing microprobe, X-ray or other techniques, we are interested in acquiring your samples or duplicates of any material that may be available! Size and aesthetics are *not* important. Call, write, E-mail or fax us your offers!

**AVAILABLE:** Our inventory includes over 200,000 mineral specimens that encompass more than 3000 species from worldwide localities. If you are conducting research that requires reliably identified, common or unusual minerals, we and our predecessor companies have been *the* source since 1950. Please call, write, E-mail or fax us for specific quotes, or view [www.bestweb.net/~excalmin](http://www.bestweb.net/~excalmin) for brief list.

**Excalibur Mineral Company**  
*Rare Minerals, Meteorites & Analytical Services*  
1000 N. Division Street - Peekskill, NY 10566  
Tel: (914)739-1134 Fax: (914)739-1257  
E-mail: [excalmin@bestweb.net](mailto:excalmin@bestweb.net)

will be printed this year, and more extra volumes are anticipated for 1999. These costs will be covered by expenditures from the Operating Fund, and for *American Mineralogist*, some increase in institutional subscription rates. In addition, the society will be starting an on-line journal with editors John Brady and Frank Spear. The costs for startup will be minimal (about \$10,000 or less). It is fortunate that these additional expenditures are impacting at a time when investments are still returning at an outstanding rate.

In sum, primarily because of a favorable investment climate (thanks to Doug Rumble and outgoing manager Dave Hewitt), and management in the business and editorial office, the society is doing well financially; expectations are that the assets will continue to grow in 1998 despite some strain on the budget caused by the need to reprint many of the RIMs volumes and print several new books.

**Table 1. Summary of the financial status of MSA as of December 1997 by fund**

Items	Fund						1997 Total	1996 Total
	General operating	Roebling	Mineral. & Petrol.	Kraus Crystal.	Endowment	Outreach		
<b>Assets</b>								
Cash	\$189,799						\$189,799	\$7,777
Accounts receivable	28,458						28,458	33,631
Prepaid expenses	23,663						23,663	12,526
Interfund borrowings	(24,905)	\$12,926	\$1,944	\$788	\$1,315	\$7,932		
Investments	365,759	987,074	217,815	139,185	153,424		1,863,257	1,635,899
Furniture and equip.	59,489						59,489	58,254
Deposit	7,923						7,923	8,4
Assets held for others	19,245						19,245	25,658
<b>Total assets</b>	<b>669,431</b>	<b>1,000,000</b>	<b>219,759</b>	<b>139,973</b>	<b>154,739</b>	<b>7,932</b>	<b>2,191,834</b>	<b>1,782,170</b>
<b>Liabilities and net assets</b>								
Accounts payable	39,806						39,806	48,281
Deferred dues	1,270						1,270	30,600
Deferred subscription	218,980						218,980	25,565
Rent abatement	12,254						12,254	10,462
Assets held for others	19,245						19,245	25,658
<b>Total liabilities</b>	<b>291,555</b>						<b>291,555</b>	<b>140,566</b>
<b>Net Assets</b>								
Unrestricted	377,876	1,000,000					1,377,876	1,239,030
Temporarily restricted			157,552	51,406	24,020		232,978	132,489
Permanently restricted			62,207	88,567	130,719	7,932	289,425	270,085
<b>Total net assets</b>	<b>377,876</b>	<b>1,000,000</b>	<b>219,759</b>	<b>139,973</b>	<b>154,739</b>	<b>7,932</b>	<b>1,900,279</b>	<b>1,641,604</b>
<b>Total liabilities and net assets</b>	<b>669,431</b>	<b>1,000,000</b>	<b>219,759</b>	<b>139,973</b>	<b>154,739</b>	<b>7,932</b>	<b>2,191,834</b>	<b>1,782,170</b>

## ***20th FM - TGMS - MSA Mineralogical Symposium - Call for Papers***

The 20th Mineralogical Symposium sponsored jointly by the Friends of Mineralogy, the Tucson Gem and Mineral Society, and the Mineralogical Society of America will be held in conjunction with the 45th Tucson Gem and Mineral Show, Saturday February 13, 1999. The topic of the symposium will be Minerals of Mexico, the theme of the mineral show. The 1999 symposium is also dedicated to the honor of Dr. Miguel Romero for his outstanding efforts in the advancement of studies and preservation of Mexican Mineral specimens. Papers on descriptive mineralogy, paragenesis, classic and new locations, etc. are invited. An audience of knowledgeable amateurs as well as professional mineralogists and geologists is expected.

If you wish to present a paper, please write or call immediately James A. McGlasson, Symposium Co-chair ( The

Collector's Stope, 9641 East Hickory Tree Dr, Tucson, Arizona 85749 phone: (520) 760-1501, e-mail: jmcglasson@theriver.com) or Peter K. M. Megaw (President, IMDEX, Inc., P. O. Box 65538, Tucson, Arizona 85728 phone: (520) 529-02231, e-mail: pmegaw@imdex.com) with your topic, a few sentences describing the paper and your address, phone number, and e-mail. Presentations will be 15 or 20 minutes in length followed by a period for questions. Upon acceptance of topics all authors will be required to submit a 200 to 300 word abstract by September 15, 1998 (firm date). Those abstracts will be published in the January-February issue of the Mineralogical Record (subject to approval of the editor), which will be available for sale at the 45th Tucson Gem and Mineral Show.

### ***AGI seeks reviewers for high school curriculum project***

The American Geological Institute seeks earth scientists to review chapters of its NSF-funded high school curriculum project. The project, Earth System Science in the Community - Understanding Our Environment (EarthComm), targets the inquiry and earth science standards of the National Science Education Standards. Chapters of the curriculum project are ready to be sent out to high school earth science teachers for pedagogical review and to earth scientists for content review.

Content reviewers will be asked to review a chapter for content currentness, completeness and accuracy. Each reviewer will be sent a packet containing a copy of the chapter, review form to guide the evaluation process, invoice (a small consulting fee is provided) and postage paid envelope. Reviewers will need to annotate the chapter, sign the invoice, complete the review form, and submit these items to AGI within 10 days of receiving the chapter. The review should take less than a day to complete.

This is a great opportunity to become involved in the reform of precollege science education. Only 5% of our nation's 12 million high school students enroll in an earth science course. Given the presence of earth science as a separate domain within the National Science Education Standards, we in the geoscience community have a unique opportunity to establish earth science as a course at the high school level.

Interested individuals should contact Dr. Michael Smith, AGI's Director of Education and EarthComm Project Director at [msmith@agiweb.org](mailto:msmith@agiweb.org).

A list of current EarthComm chapter titles includes:

#### **EARTH SYSTEMS**

1. Your Wants, Needs, and Expectations

August, 1998

2. Matter, Energy, and Change in Your Community
3. Extraterrestrial Influences on Your Community

#### **DYNAMIC GEOSPHERE**

4. Volcanoes and Your Community
5. Earthquakes and Your Community
6. Plate Tectonics and Your Community

#### **DYNAMIC LANDSCAPES**

7. Physical Geology Beneath Your Community
8. Surficial Processes Changing Your Community
9. Coastlines and Your Community

#### **EARTH RESOURCES**

10. Energy Resources and Your Community
11. Mineral Resources and Your Community
12. Water Resources and Your Community

#### **FLUID EARTH**

13. Weather, Climate, and Your Community
14. Oceans and Your Community
15. Cryosphere and Your Community

#### **EARTH SYSTEM EVOLUTION**

16. Changing Environments and Your Community
17. Evolution of Life and Your Community
18. Historical Geology and Your Community

### ***Volunteer Organization sponsored by AAAS***

If you are a retired scientist or engineer or if you are about to retire, you are invited to join the Senior Scientists and Engineers (SSE). SSE finds retired scientists and engineers who are willing to give their time and expertise to their community. For more information, please contact Anna Ewald at [SSE@aaas.org](mailto:SSE@aaas.org) or call (202) 326-6602.

## Mineralogical Society of America Short Course Announcement

# ULTRAHIGH PRESSURE MINERALOGY

**Dates:** December 4-6, 1998 (preceding the American Geophysical Union Fall meetings in San Francisco, California)

**Location:** Short Course sessions are December, 5 & 6 between 8:00 am - 5:00 pm. There is a reception Friday, December 4 from 7:00-9:00 pm. The sessions, reception, and meals will be held at the University of California, Davis Conference Center, 423 First Street, Davis, CA 95616, ph: (530) 757-3259 fax: (530) 757-7943.

**Convenors:** *Ho-kwang Mao* and *Russell J. Hemley*, Geophysical Laboratory, Carnegie Institution of Washington, 5251 Broad Branch Rd NW, Washington DC 20015-1305, USA e-mail: mao@ctpsun.ciw.edu and hemley@ctpsun.ciw.edu.

<b>Fees:</b>		on or before 10/16/98	after 10/16/98
Professional Registration:	Member	\$170	\$220
	Non-member	\$250*	\$300*
Student Registration:	Member	\$85	\$135
	Non-member	\$115*	\$165*
Speaker		none	none

\* includes MSA membership dues for 1999.

**Registering:** Registration forms are available from the MSA Business Office, 1015 Eighteenth Street, N.W., Suite 601, Washington, D.C. 20036-5274, USA. ph: 202-775-4344 fax: 202-775-0018 e-mail: business@minsocam.org; or from the MSA Home Page [www.minsocam.org](http://www.minsocam.org). Registration forms must be returned to the MSA Business Office with payment. Registration is limited to 100 participants. All participants and speakers must register.

**Practical:** Registration fee includes MSA short course sessions, all meals including refreshments at breaks and the Saturday evening banquet, and the *Reviews in Mineralogy* volume. There is welcoming reception Friday evening, December 4, 1998. Registration fee does not include room, other incidentals, or transportation costs to or from Davis. Both participants and speakers must make and pay for their own lodging arrangements:

<u>Lodging</u>	<u>phone</u>	<u>price range</u>	<u>distance</u>
Aggie Inn	530-756-0352	\$66-95	1 block
EconoLodge	530-756-1040	\$52-63	4 blocks
The Davis Inn	530-756-0910	\$44-66	15 minute walk
Motel 6	530-753-3777	\$30-42	?
Ramada Inn	530-753-8406	\$59-130	5 blocks
University Lodge	530-756-7890	\$60-75	1 block
Best Western (Dixon)	530-678-1400	\$60-85	10 minute drive
Palm Court	530-753-7100	\$95-125	4 blocks
Motel 6 (Woodland)	530-666-6777	\$32-44	10 minute drive
Holiday Inn Express	530-666-3800	\$46-66	10 minute drive
Comfort Inn (Woodland)	530-666-3050	\$45-66	10 minute drive
Davis Bed & Breakfast	530-753-9611	\$50-60	1 block
Univ. Inn Bed & Breakfast	530-756-8648	\$48-65	1 block

Transportation from San Francisco International Airport (SFO) will be provided by University of California at Davis (UCD) Fleet Services. Scheduled departure times 3, 5 and 7 pm December 4, 1998. Pick up will be on the arrivals level of each terminal. To ensure transportation, flight number and arrival time must be provided to [mcwilding@ucdavis.edu](mailto:mcwilding@ucdavis.edu) before November 1, 1998. Additional ground transportation can be provided for later flights. Participants who choose to fly to Sacramento Airport (SAC) can contact [mcwilding@ucdavis.edu](mailto:mcwilding@ucdavis.edu) for transport options. Transportation from UC Davis to San Francisco Moscone Center will be provided on the evening of 6th December for the Fall AGU meeting. Cost of transport is \$15 one way (\$30 round trip)

## Short Course Description

Knowledge of the mineralogy of the deep interiors of the Earth and other planets requires information on a great variety of chemical and physical properties of pertinent materials measured under high P-T conditions. Important chemical properties include multi-component phase equilibrium, crystal structure, liquid-state and amorphous structure, site occupancy, melting, solution, phase separation, major and minor element partitioning, thermochemical parameters, diffusivity, crystal-field energy and reaction kinetics. Important physical properties include P-V-T equations of state, single-crystal and aggregate elasticity, compressional and shear acoustic velocity, molecular and lattice vibrational frequencies, anelasticity, viscosity, strength, thermal conductivity, electrical conductivity, dielectric parameters, optical parameters, electronic structure, and magnetism. Chemical and physical transitions include oxidation-reduction, hydration-dehydration, amorphization-crystallization, order-disorder, high-low electronic spin, insulator-metal, and magnetic transitions. Each of these may be profoundly different under high P-T conditions as a result of fundamental alterations of the bonding and interatomic interactions induced by these extreme conditions.

Recent advances in high-pressure experimentation with diamond cells, multi-anvil apparatus, and dynamic compression have greatly extended the attainable P-T range, and properties of materials over the entire range of conditions of the Earth's interior can now be measured. Static high pressures of several hundred gigapascals can now be reached with diamond cells in the laboratory. Physical and chemical properties of materials can be characterized in-situ at high pressures. More significantly, the measurement accuracy has been greatly improved. To cover the vast range of properties of minerals is a large undertaking that requires a community effort. The aim of the short course is both to introduce new scientists (especially students) to this very active and challenging area of modern mineralogy and to provide much needed reviews of the current topics in the field.

### Topics and Speakers/Authors

#### I. Overview

*Overview:* Ho-Kwang Mao and Russell J. Hemley, Carnegie Institution of Washington & CHiPR

#### II. Earth's Deep Interior

*Ultrahigh-P Metamorphic Samples and Mantle-Crust Interaction:* Juhn (Louie) G. Liou, Stanford University, Douglas Rumble, III, Carnegie Institution of Washington; Ru-Yuan (Ruth), Stanford University

*Mantle Transition Zone:* Carl B. Agee, Harvard University

*Lower Mantle:* Craig R. Bina, Northwestern University

*Core/Mantle Interactions:* Raymond Jeanloz, University of California - Berkeley

*Core:* Thomas J. Ahrens, California Institute of Technology

*Global Models:* Guy Masters, University of California at San Diego

#### III. High-Pressure Mineral Chemistry

*Comparative Crystallography:* John B. Parise, State University of New York at Stony Brook

*Crystal Chemistry:* Charles T. Prewitt, Carnegie Institution of Washington & CHiPR

*Thermodynamic Properties/Phase Diagrams:* Alexandra Navrotsky, University of California - Davis & CHiPR

*Element Partitioning:* Yingwei Fei, Carnegie Institution of Washington

*High-Pressure Melting:* Dion L. Heinz and Guoyin Shen, University of Chicago

#### IV. High-Pressure Mineral Physics

*P-V-T Equations of State:* Thomas S. Duffy, Princeton University

*Elasticity:* Robert C. Leibermann, State University of New York at Stony Brook & CHiPR

*Anelasticity/Rheology:* Donald J. Weidner, State University of New York at Stony Brook & CHiPR

*Vibrational and Electronic Properties:* Philippe Gillet, ENS Lyon (Geologie) and Russell J. Hemley, Carnegie Institution of Washington & CHiPR

*Condensed-Matter Theory: Silicates, Oxides, Metals:* Ronald E. Cohen, Carnegie Institution of Washington & CHiPR

For further short course information and registration, contact the MSA Business Office, 1015 Eighteenth Street, N.W., Suite 601, Washington, D.C. 20036-5274, USA. ph: 202-775-4344. fax: 202-775-0018 e-mail: [business@minsocam.org](mailto:business@minsocam.org) or visit the MSA Home Page: [www.msa.org](http://www.msa.org)

Registration Form

Mineralogical Society of America Short Course  
**ULTRAHIGH PRESSURE MINERALOGY**  
Davis, California — December 4-6, 1998

Complete and return this registration form to the MSA Business Office, 1015 Eighteenth St NW Ste 601, Washington, D.C. 20036-5274, USA. ph: 202-775-4344. fax: 202-775-0018. e-mail: business@minsocam.org Please type or print. Use one form per registrant. Registration is limited to 100 people on a first-come, first-served basis. Payment must accompany this form, which will be fully refunded if cancellation is received in writing prior to October 16, 1998.

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(city) (state) (zip/postal code) (province) (country)

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Registration fee includes MSA short course sessions, all meals including refreshments at breaks and the Saturday evening banquet, and the *Reviews in Mineralogy* volume. There is welcoming reception Friday evening, December 4 at the University of California - Davis Conference Center. Registration fee does not include room, other incidentals, or transportation costs to or from Davis. Both participants and speakers must make and pay for their own lodging arrangements. Available lodging and ground transportation are described in the accompanying announcement. Information on the short course, lodging, ground transportation, and further course updates are on the MSA Home Page ([www.minsocam.org](http://www.minsocam.org)).

**Registration.** Mark the appropriate registration category [X] and write the appropriate fee on the cost line:

	on or before 10/16/98	after 10/16/98	cost
Professional Registration:			
[ ] Member	\$170	\$220	_____
[ ] Non-member	\$250*	\$300*	_____
[ ] Speaker	no cost	no cost	_____
Student Registration:			
[ ] Member	\$85	\$135	_____
[ ] Non-member	\$115*	\$165*	_____
Ground Transportation:			
[ ] from San Francisco International Airport (SFO), 12/4/98		\$15	_____
[ ] to San Francisco Moscone Center, 12/6/98		\$15	_____
* includes MSA membership dues for 1999.		Total Due	\$ _____

**Amount Enclosed** (Indicate payment method and amount of payment enclosed)

[ ] Enclosed is a check (in US \$ drawn on a US bank) or money order in the amount of \$ \_\_\_\_\_

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# NATIONAL ACADEMY OF SCIENCES COLLOQUIUM "GEOLOGY, MINERALOGY AND HUMAN WELFARE"

**NOVEMBER 8-9, 1998**

The Arnold and Mabel Beckman Center, Irvine, California  
Organized by Peter R. Buseck, Malcolm Ross, and Joseph V. Smith

**Jillian F. Banfield**, *University of Wisconsin, Madison*

"Biological impact on silicate mineral dissolution - application of the lichen model to understanding mineral weathering in soils."

**Paul M. Bertsch**, *University of Georgia/SREL*

"Advanced characterization of complex mineral assemblages and of contaminant-mineral interactions: Implications for contaminant transport and environmental remediation."

**Gordon E. Brown, Jr.**, *Stanford University*

"Mineral surface chemistry in environmental science."

**Peter R. Buseck**, *Arizona State University*

"Airborne minerals and related aerosol particles: Effects on climate and the environment."

**Rodney C. Ewing**, *University of Michigan*

"Mineralogy: The design and selection of nuclear waste forms for actinides."

**Robert B. Finkelman**, *U.S. Geological Survey*

"The health impacts of domestic coal use in China."

**Miriam Kastner**, *Scripps Institution of Oceanography*

"Oceanic minerals and rocks, their origin, occurrence, and economic significance."

**Keith A. Kvenvolden**, *U.S. Geological Survey*

"Potential effects of gas hydrate on mankind."

**Frederick A. Mumpton**, *SUNY - College*

"Natural Zeolites."

**Robert P. Nolan**, *City University of New York*

"Asbestos minerals in the mining and occupational environment: Implications for fiber carcinogenesis."

**D. Kirk Nordstrom**, *U.S. Geological Survey*

"Negative pH, efflorescent mineralogy, extremely acidic mine waters, and the challenge of environmental restoration at the Iron Mountain superfund site, CA."

**David R. Pevear**, *Exxon Production Research Co.*

"The story of illite - How microscopic clay crystals constrain the thermal history of giant sedimentary basins and help us find oil."

**F.D. Pooley**, *Cardiff University*

"Characteristics of fibrous amphibole mineral dusts found in the human lung and their biological potential to cause disease."

**Jeffrey E. Post**, *Smithsonian Institution, National Museum of Natural History*

"Manganese oxides: Batteries and beyond."

**Joseph M. Prospero**, *University of Miami RSMAS*

"Transport of African mineral dust across North Atlantic: Impact on the environment of the eastern United States."

**John D. Sherman**, *UOP Research Center*

"Synthetic zeolites and other microporous oxide molecular sieves."

**J.V. Smith**, *University of Chicago*

"Geology, Mineralogy, and Human Welfare."

**Garrison Sposito**, *University of California, Berkeley*

"Surface geochemistry of the clay minerals."

**Samuel J. Traina**, *Stanford University*

"Geochemical controls on contaminant bioavailability in soils, sediments and aquatic environments."

Name \_\_\_\_\_

Affiliation \_\_\_\_\_ Position \_\_\_\_\_

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# 1999 Spring AGU-MSA-GS Meeting in Boston Massachusetts

## Sponsors

The *American Geophysical Union (AGU)* is a society of over 35,000 members with the purpose of advancing progress in the Earth, atmospheric, oceanic, hydrologic, space, and planetary sciences. AGU is dedicated to fostering high-quality scientific research, disseminating the results of that research, enhancing educational opportunities in science, and encouraging international cooperation in geophysics. The *Geochemical Society (GS)* encourages the application of chemistry to the solution of geological and cosmological problems. The *Mineralogical Society of America (MSA)* provides a forum for individuals interested in mineralogy, crystallography, and petrology.

## Spring Meeting

The 1999 Spring Meeting will offer 4 days of scientific programming, beginning Tuesday, June 1, through Friday, June 4. Registration and opening reception are scheduled for the evening of Monday, May 31 (Memorial Day). Hotel information will be published in January 1999. Hotel rooms sold out early in 1998, so reservations should be made promptly to ensure a hotel of your choice.

## Spring Meeting Returns to Boston!

The 1998 Spring Meeting in Boston was an overwhelming success, with a record attendance of 3,600. The scientific sessions for the 1999 Spring Meeting will again be held at the John B. Hynes Veterans Memorial Convention Center.

Boston is one of the most popular and desirable visitor destinations in the world. As an international center for education, high technology, finance, architecture, and medicine, Boston maintains its reputation as a world-class city. Boston claims the highest student population in the United States, with more than 60 colleges and universities.

Boston is also a city rich in history, culture, and excitement. Boston's role in shaping American history is unique among all other cities. Visitors are eager to see the places where the American Revolution was conceived and began; from the Boston Tea Party Ship to the Old North Church, history is on every corner in Boston. Boston's many museums, concert halls, theaters, nightclubs, and shopping areas are always buzzing with activity. With a wide array of diverse and interesting attractions, visitors to Boston are never at a loss for something to do.

## Program

This meeting provides an outstanding opportunity for researchers, teachers, and students to review the latest issues affecting the Earth, the planets, and their environment in space. You may contribute to the success of this meeting by suggesting special meeting topics or sessions, submitting an abstract, and attending the meeting. This meeting will cover topics on all areas of geophysical sciences, and therefore contributed papers on any topic in geophysics are encouraged. Because of the close ties between many aspects of geophysics, special steps are being taken to facilitate sessions involving multiple sections. These include the scheduling of Union sessions and the joint sponsorship of sessions by multiple sections.

## Call for Special Sessions

If you would like to propose special sessions for this meeting, contact the appropriate program committee member listed below by October 5, 1998, with a proposed title, descriptive paragraph about

the proposed session, and tentative convener(s). The description must be brief, 75 to 100 words to include conveners.

Special sessions will be published in *Eos* and on the AGU Web site, <http://www.agu.org>. Special sessions should in no way constrain the submission of other papers on any geophysics-related topic.

## Something for Students

We encourage students to participate in this meeting by submitting an abstract and attending presentations. A number of additional benefits are also available to students.

**Outstanding Student Paper Awards:** All first-author students presenting a paper are eligible to win. Winners will receive certificates and have their photographs and biographics published in *Eos*.

**Student Travel Grant Program:** AGU offers travel funds to a select number of AGU student members who are presenting papers at the meeting and whose research is not supported by a grant or contract. In addition to reimbursement of advance registration fees, students in the United States may receive up to \$250 and students outside the United States may receive up to \$500. For more information and an application, please contact Wynetta Singhateh by e-mail at [wsinghateh@agu.org](mailto:wsinghateh@agu.org), or call 1-800-966-2481, ext. 310, or +1-202-939-3223.

**Geoscience Career Fair:** Representatives of a select group of employers from industrial areas will be present to interact with students.

**Discount Housing:** Special discount housing at Boston University will again be available to help students keep the costs of attending the meeting more reasonable.

**Registration Discounts:** Students receive a reduced registration fee to the meeting and AGU student members pay even less! Request an AGU membership application and information by e-mail at [service@kosmos.agu.org](mailto:service@kosmos.agu.org), or call 1-800-966-2481 or +1-202-462-6900.

## Something for Everyone

In addition to providing an exciting scientific program and excellent networking opportunities, the 1999 Spring Meeting will offer these benefits:

**Job Center**, to enhance job-hunting skills and strategies. On-Site Child Care Service, located in the convention center, available for a nominal fee.

**Section Events**, for increased contacts with colleagues.

**Agency Night**, an opportunity to meet and talk with Federal agency representatives.

**Honors Ceremony**, to pay tribute to 1999 AGU medalists and fellows.

**Exhibits**, including AGU books and products.

**Geophysical Information for Teachers (GIFT)**, a workshop for high school teachers.

**Press Briefings**, an opportunity to communicate scientific accomplishments to a wider audience.

## Abstract Submissions

Abstracts may be submitted either by mail or via the AGU Web Site. Abstracts submitted by postal/express mail must be



received at AGU Headquarters by **February 18, 1999**. Abstracts submitted by the Interactive Web Form must be received at AGU by **February 25, 1999**. These deadlines are firm and there will be no exceptions. Abstract submission instructions will be published in future issues of Eos and on the AGU Web site, <http://www.agu.org>.

#### Important Abstract Policies

1. Abstracts submitted by postal/express mail must be received at AGU Headquarters no later than **February 18, 1999**. Abstracts submitted using the Interactive Web Form must be received at AGU headquarters no later than **February 25, 1999** by 11:59 P.M. (local time). Abstracts received after this deadline will be returned without consideration. Send mail submissions (original and two copies) to 1999 Spring Meeting, AGU, 2000 Florida Avenue, NW, Washington, DC 20009 USA.

2. Abstracts must be submitted in English.

3. Abstracts must be in the proper format, including text, title, and complete author information.

4. AGU staff cannot make any changes or corrections to abstracts. Proofread your abstract prior to submission. Abstracts received are considered final copy.

5. Abstracts must be accompanied by payment of the submittal fee. The abstract submittal fee is nonrefundable, including duplicate submissions (please do not submit your abstract more than once).

6. Abstracts will not be accepted by fax or telecopier.

7. Abstracts must be submitted by members of AGU or a cosponsoring society unless they are sponsored by a member of AGU or accompanied by an AGU membership application (with payment).

8. For the Spring Meeting, an author may submit more than one abstract with his or her name as first author to all sections except for Space Physics and Aeronomy (SPA). The SPA section will accept

only one contributed abstract by the same first author for presentation in SPA sessions, except that additional first authored abstracts will be considered if they are: (1) invited by a SPA Program Committee Member, or (2) contributed to a SPA special session in the "Education" or "Public Policy" area. These special sessions will be announced in the Call for Papers. The Program Committee for the Meeting retains authority to accept or reject any paper submitted for the meeting.

9. Abstracts submitted via the web will receive an electronic confirmation. Electronic abstract submission instructions will be published in Eos and the AGU Web site, <http://www.agu.org>, by December 1998.

10. Submission of an abstract carries with it the obligation to present the paper in the mode of presentation (oral or poster) and on the day and time assigned by the Program Committee. Abstracts will be scheduled Tuesday through Friday. Your paper could be scheduled on any day of the week. Once scheduled, presentations may not be moved. (Please make your airline and hotel reservations accordingly.)

11. Acceptance letters will be provided to the corresponding author in mid-April 1999.

12. All accepted abstracts will be published in Eos. Submission of an abstract for the meeting is presumed to carry with it permission for AGU to reproduce the abstract in Eos, the AGU Web Site, meeting programs, and reports related to the meeting. It is also presumed to permit the free copying of the abstract. Although Eos is a copyrighted publication, authors are not required to transfer copyright for abstracts submitted to meetings. Copyright, where it exists, will be reserved by the authors.

#### 1999 Spring Meeting Program Committee

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**Geochemical Society (GS)**, Bill McDonough, Earth and Planetary Sci., Harvard University, 20 Oxford St., Cambridge, MA 02138 USA; Tel: +1-617-496-2010; Fax: +1-617-496-0434 or +1-617-495-8839; E-mail: [mcdonough@eps.harvard.edu](mailto:mcdonough@eps.harvard.edu)

**Hydrology (H)**, Gerilynn R. Moline, Environmental Sci. Division, Oak Ridge National Laboratory, PO Box 2008, MS-6400, Oak Ridge, TN 37831-6400 USA; Tel: +1-423-576-5134; Fax: +1-423-574-7420; E-mail: [g21@ornl.gov](mailto:g21@ornl.gov)

**Mineralogical Society of America (M)**, Pamela C. Burnley, Dept. of Geology, Georgia State Univer-

sity, 24 Peachtree Center Ave., Atlanta, GA 30303 USA; Tel: +1-404-651-2700 or 2272; Fax: +1-404-651-1376; E-mail: [burnley@gsu.edu](mailto:burnley@gsu.edu)

**Ocean Sciences (OS)**, Paul A. Baker, Division of Earth and Ocean Sci., Box 90227, Duke University, Durham, NC 27708-0227 USA; Tel: +1-919-684-6450; Fax: +1-919-286-5833; E-mail: [pbaker@geo.duke.edu](mailto:pbaker@geo.duke.edu)

**Planetology (P)**, Laurie A. Leshin, Dept. of Earth and Space Sci., University of California, Los Angeles, 595 Circle Drive, East, Los Angeles, CA 90095-1567 USA; Tel: +1-310-825-5505; Fax: +1-310-325-2779; E-mail: [laurie@oro.ess.ucla.edu](mailto:laurie@oro.ess.ucla.edu)

**Seismology (S)**, Robert Van der Hilst, Dept. of Earth, Atmospheric, and Planetary Sci., MIT, Cambridge, MA 02139 USA; Tel: +1-617-253-6977; Fax: +1-617-253-7651; E-mail: [hilst@mit.edu](mailto:hilst@mit.edu)

**Space Physics and Aeronomy (SPA)**, Chair: William C. Feldman, Los Alamos National Laboratory, MS D-466, Los Alamos, NM 87545 USA; Tel: +1-505-667-7372; Fax: +1-505-665-7395; E-mail: [wfeldman@lanl.gov](mailto:wfeldman@lanl.gov); **Section Committee Members:**

Thomas Cravens, Dept. of Physics and Astronomy, University of Kansas, Lawrence, KS 66045 USA; Tel: +1-785-864-4739; Fax: +1-785-864-5262; E-mail: [cravens@kuphsx.phsx.ukans.edu](mailto:cravens@kuphsx.phsx.ukans.edu); Terrance G. Onsager, NOAA R/E/SE, 325 Broadway, Boulder, CO 80303 USA; Tel: +1-303-497-5713; Fax: +1-303-497-3645; E-mail: [tonsager@sel.noaa.gov](mailto:tonsager@sel.noaa.gov)

**Tectonophysics (T)**, Chair: Carolyn Ruppel, School of Earth & Atmospheric Sci., Georgia Institute of Technology, Old C E Building, Atlanta, GA 30332-0340 USA; Tel: +1-404-894-0231; Fax: +1-

404-853-0232; E-mail: [cdr@pedmont.eas.gatech.edu](mailto:cdr@pedmont.eas.gatech.edu) \*(see below)

**Volcanology, Geochemistry, and Petrology (V)**, James Brenan, Dept. of Geology, University of Toronto, Earth Sciences Centre, 22 Russell St., Toronto, ON M5S 3B1, CANADA; Tel: +1-416-978-0281; Fax: +1-416-978-3938; E-mail: [brenan@zircon.geology.utoronto.ca](mailto:brenan@zircon.geology.utoronto.ca) \*(see below)

**\*Mineral and Rock Physics:** The sections of G, T, and V are including a member of the Mineral and Rock Physics Technical Committee to assist in planning some sessions. Pamela C. Burnley is a subcommittee member for these sections and will be organizing sessions related specifically to rock and mineral physics: Pamela C. Burnley, Dept. of Geology, Georgia State University, 340 Kell Hall, 24 Peachtree Center Ave., Atlanta, GA 30303 USA; Tel: +1-404-651-2700 or 2272; Fax: +1-404-651-1376; E-mail: [burnley@gsu.edu](mailto:burnley@gsu.edu)

**Important Dates** Special Session Proposals are due to the Program Committee: no later than **October 5, 1998** Abstract Submission Deadlines: **February 18, 1999** (Postal/express mail) **February 25, 1999** (Interactive Web Form)

**For More Information**, please contact the AGU Meetings Department 2000 Florida Avenue, NW, Washington, DC 20009 USA; Tel: 1-800-966-2481 or +1-202-462-6900, Fax: +1-202-328-0566, E-mail: [meetinginfo@agu.org](mailto:meetinginfo@agu.org) (subject: 1999 Spring Meeting), Web Site: <http://www.agu.org>

# Mineralogical Society of America Membership Application

To join the MSA, please send a completed copy of the application below, along with the required payments in U.S. funds, to the Mineralogical Society of America, 1015 Eighteenth St., NW, Suite 601, Washington, DC 20036-5274

Preferred Mailing address: \_\_\_\_\_

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 First Middle Last  
 Dr. \_\_\_\_\_ Fax: \_\_\_\_\_  
 Prof. \_\_\_\_\_ First Line of Address \_\_\_\_\_  
 Mr. \_\_\_\_\_ E-mail: \_\_\_\_\_  
 Ms. \_\_\_\_\_ Second Line of Address \_\_\_\_\_  
 Other: Specify \_\_\_\_\_ Birth Date: \_\_\_\_\_  
 \_\_\_\_\_ Third Line of Address \_\_\_\_\_

Membership Category:  Member  Life Member  Student Member \_\_\_\_\_

Areas of Interest: (Circle main, check secondary) \_\_\_\_\_  
 Mineralogy (MI),  Crystallography/Crystal Chemistry (CC),  Material Properties (PP),  Igneous Petrology (IP),  Metamorphic Petrology (MP),  Sedimentary Petrology (SP),  Geochemistry (GE),  Phase Equilibria (PE),  Economic Geology (EG),  Clay Mineralogy (CM),  Industrial Mineralogy (IM),  Environmental Mineralogy (EM),  Gems GM,  Planetary Materials (PM),  Teaching (TC),  Topologic Mineralogy (TP),  Mineral Surfaces (MS),  Biological-Mineral Interactions (BM),  Others (Please indicate)

Personal Information: \_\_\_\_\_  
 Highest Degree earned:  Doctorate  Masters  Bachelors  No College Degree  
 Institution at which Highest Degree was earned \_\_\_\_\_ Year \_\_\_\_\_  
 Employer \_\_\_\_\_ Job Title \_\_\_\_\_  
 Job Function(s): \_\_\_\_\_  
 What other professional societies do you belong to? \_\_\_\_\_

Student Certification: (Applicants for student membership must supply the following certification of status.) \_\_\_\_\_

The applicant is known to me and is a bona fide student at (Name of School): \_\_\_\_\_  
 Address of School (Please Print): \_\_\_\_\_

Faculty Member (Please print): \_\_\_\_\_ Signature (you need not be a member of the Society): \_\_\_\_\_

Payment: \_\_\_\_\_

\$ \_\_\_\_\_ enclosed (money order, check in US dollars drawn on \_\_\_\_\_ Card # \_\_\_\_\_  
 a US bank and payable to the Mineralogical Society of America) Exp. Date: \_\_\_\_\_  
 Please charge my:  Mastercard  Visa Cardholder: \_\_\_\_\_  
 \$ \_\_\_\_\_  Diners Club  American Express

Signature: \_\_\_\_\_

### 1998 Fee Schedule

Memberships are entered and renewed on a calendar basis. You will receive all publications for the year you join. Membership applications received after October 1 will be made effective January 1 of the following year unless otherwise requested. Members will receive the newsletter, *The Lattice*, as part of their dues. As an additional benefit, members may elect to receive the *American Mineralogist*, as well as some related publications, at substantially reduced rates. Please indicate all options that apply in the box to the right. Members are entitled to a 25% discount on other MSA publications given on our Publication List.

Member Dues	\$40.00
<i>American Mineralogist</i> (price to members)	\$30.00
International surface airlift service for above	\$30.00
Life Membership Dues (with journal)	\$1750
Student Member Dues (includes <i>American Mineralogist</i> )	\$30.00
<i>Mineralogical Abstracts</i> , published quarterly by the Mineralogical Society of Great Britain & Ireland	\$40.00
<i>Physics and Chemistry of Minerals</i> , published eight times a year by Springer-Verlag	\$424
<i>Journal of Petrology</i> , published twelve times a year by Oxford University Press	\$330
<b>TOTAL</b>	

# Mineralogical Society of America

## Publications Price List and Order Form

*Reviews in Mineralogy* (25% member discount)

- \_\_\_ v. 08: Kinetics of Geochemical Processes ..... \$20
- \_\_\_ v. 9A: Amphiboles and Other Hydrous Pyriboles - Mineralogy ..... \$20
- \_\_\_ v. 9B: Amphiboles: Petrology and Experimental - Phase Relations ..... \$20
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- \_\_\_ v. 20: Modern Powder Diffraction ..... \$28
- \_\_\_ v. 21: Geochemistry and Mineralogy of Rare Earth Elements ..... \$28
- \_\_\_ v. 22: The Al<sub>2</sub>SiO<sub>5</sub> Polymorphs ..... \$24
- \_\_\_ v. 23: Mineral-Water Interface Geochemistry ..... \$32
- \_\_\_ v. 24: Modern Methods of Igneous Petrology: Understanding Magmatic Processes ..... \$24
- \_\_\_ v. 25: Oxide Minerals: Petrologic and Magnetic Significance ..... \$28
- \_\_\_ v. 26: Contact Metamorphism ..... \$32
- \_\_\_ v. 27: Minerals and Reactions at the Atomic Scale: Transmission Electron Microscopy ..... \$28
- \_\_\_ v. 28: Health Effects of Mineral Dusts ..... \$32
- \_\_\_ v. 29: Silica: Physical Behavior, Geochemistry and Materials Applications ..... \$32
- \_\_\_ v. 30: Volatiles in Magmas ..... \$30
- \_\_\_ v. 31: Chemical Weathering Silicate Minerals ..... \$32
- \_\_\_ v. 32: Structure, Dynamics, and Properties of Silicate Melts ..... \$30

- \_\_\_ v. 33: Boron: Mineralogy, Petrology and Geochemistry .. \$32
- \_\_\_ v. 34: Reactive Transport in Porous Media ..... \$32
- \_\_\_ v. 35: Geomicrobiology: Interactions Between Microbes and Minerals ..... \$32
- \_\_\_ v. 36: Planetary Materials ..... \$40

*Monographs* (25% member discount, except on shipping)

- \_\_\_ Metamorphic Phase Equilibria and Pressure-Temperature-Time-Paths, Spear ..... \$48 + \$5 shipping
- \_\_\_ Crystallography and Crystal Chemistry, by F. D. Bloss (1971, reprinted 1994) ..... \$32
- \_\_\_ Crystal Structures, Volume I, Patterns and Symmetry, by M. O'Keeffe & B.G. Hyde ..... \$36
- \_\_\_ Teaching Mineralogy ..... \$28

*Mineralogical Society Series* (25% member discount)

- \_\_\_ v. 2: High-Temp. Metamorphism... ..... \$125
- \_\_\_ v. 3: Stability of Minerals ..... \$200
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- \_\_\_ v. 5: Mineral Surfaces ..... \$49
- \_\_\_ v. 6: Microprobe Techniques in the Earth Sciences ..... \$56
- \_\_\_ v. 7: Rare Earth Minerals ..... \$58

*Other Publications* (no member discount)

- \_\_\_ Fifth International Kimberlite Conference Proceedings (two volume set) ..... \$45 + postage: U.S.-\$3.75/set, Canada -\$12/set, Other-\$6.75/set.
- \_\_\_ Centennial History of the Geological Society of Washington, 1893-1993 ..... \$10
- \_\_\_ MSA Membership Directory (available to members only) ..... \$15

*American Mineralogist - back issues*

Vol.	Member	Nonmember
1-64	Contact Periodicals Service Company, 11 Main St., Germantown, NY 12526 (518)537-4700	
66-76	\$3/issue, \$18 vol.	\$ 5/issue, \$ 30 vol.
77-81	\$5/issue, \$30 vol.	\$45/issue, \$250 vol.
82	\$5/issue, \$30 vol.	\$55/issue, \$320 vol.

**FOR ORDERS SHIPPED TO CANADA,** Please add the following amount for postage: 1-2 books: No additional postage (via book rate), 3-5 books: \$6.00 (parcel post), 6-8 books: \$8.00 (parcel post), for more than 8 books, Please contact the MSA Business Office.

**To Order:** Indicate quantity, shipping, and cost information. Only MSA Members may take the 25% discount where noted. Prepay orders under \$300. Publications may not be returned for refund or credit. Send entire form to: Mineralogical Society of America, 1015 18th Street, NW, Suite 601, Washington, DC 20036-5274. Phone: (202) 775-4344; Fax: (202) 775-0018 E-mail: business@minsocam.org

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# Meeting Calendar 1998-2000

## 1998

### October

- 4-9 **International Association for Mathematical Geology 4th Annual Meeting**, Island of Ischia, Italy. *Details:* Antonella Buccianti, Dept. of Earth Sciences, Univ. Florence, Via G. La Pira, 4 50121 Florence, Italy, phone 39-55-275-7496, fax 39-55-284-571, E-mail: [buccianti@cesit1.unifi.it](mailto:buccianti@cesit1.unifi.it), WWW: <http://www.unina.it/dgv/iamg98.html>.
- 6-10 **GEO-BERLIN '98 - A Joint Meeting of Deutsche Geologische Gesellschaft, Deutsche Mineralogische Gesellschaft and other geoscientific societies**. Berlin, Germany. *Details:* Frau Kaiser, Tel.: 49-30-314-21457, Fax: 49-30-314-24087, E-mail: [kaiser@wtb.zuv.tu-berlin.de](mailto:kaiser@wtb.zuv.tu-berlin.de).
- 21-24 **29th Underwater Mining Institute Conference**. Toronto, Canada. Topics of interest on minerals and mining. Special sessions on "Marine diamonds" and on "Marine research meets land exploration: the contributions of ocean drilling and other seabed research to land-based mineral exploration" *Details:* K. C. Morgan, UMI Conference Coordinator, 811 Olomehani Street, Honolulu, Hawaii 96813-5513. Tel. (808)-587-5320, Fax: (808)-587-5325, E-mail: [mmtcuh@aol.com](mailto:mmtcuh@aol.com). WWW: <http://www.geology.utoronto.ca/ODP/UMI>.
- 26-29 **Geological Society of America Annual Meeting**. Toronto, Canada. *Details:* Geological Society of America, 3300 Penrose Place, Boulder, CO 80301. Tel.: (303)-447-2020, Fax: (303)-447-1133, WWW: <http://geosociety.org/meetings/index.htm>.
- 26-30 **Application of Natural Microporous Materials to Environmental Technology - NATO Advanced Research Workshop**. Smolenice Castle, Slovak Republic. *Details:* WWW: <http://nestoras.ee.auth.gr/natoarw>.

### November

- 8-9 **National Academy of Sciences Colloquium on Geology, Mineralogy and Human Welfare**. Beckman Center, Irvine, California. (*further details on p. 15 of this Lattice*) Information and Registration: Edward Patte, National Academy of Sciences, NAS-146, 2101 Constitution Avenue, NW, Washington DC 20418. Tel: (202) 334-2445; Fax: (202) 334-2153; E-mail: [epatte@nas.edu](mailto:epatte@nas.edu); Web site: <http://www2.nas.edu/abstract/20fa.html>.
- 18 **Chemical Crystallography Group Autumn Meeting 1998: Neutrons for Structural Chemistry**. Oxford, UK. *Details:* C. C. Wilson, ISIS Facility, CLRC Rutherford Appleton Laboratory, Chilton, Didcot. Oxon OX11 0QX. Tel. 01235 445 137. E-mail [C.C.Wilson@rl.ac.uk](mailto:C.C.Wilson@rl.ac.uk). WWW: <http://www.isis.rl.ac.uk/Crystallography/CCG98.htm>

### December

- 1-3 **The Origin of the Earth and Moon - Geochemical Society Topical Conference**. Monterey, California. *Details:* LPI, 3600 Bay Area Blvd., Houston, TX 77058-1113. Tel.: (281)-486-2158; Fax: (281)-486-2160, E-mail: [simmons@lpi.jsc.nasa.gov](mailto:simmons@lpi.jsc.nasa.gov).
- 2 **Behaviour of Accessory Phases during Metamorphism - Metamorphic Studies Group/Geological Society**. Burlington House, London, England. *Details:* Clark.Friend, Dept. of Geology, Oxford Brookes University, Oxford OX3 0BP, UK, Tel.: +44 (0) 1865 483610; Fax: +44 (0) 1865 483926, E-mail: [crlf@brookes.ac.uk](mailto:crlf@brookes.ac.uk).
- 6-10 **Fall American Geophysical Union Meeting**. San Francisco, California. *Details:* AGU Meetings Dept., 2000 Florida Ave., N. W., Washington D. C. 20009. Tel.: 1-800-966-2431 or (202)-462-6910, ext. 215; Fax: (202)-328-0566; E-mail: [meetinginfo@kosmos.agu.org](mailto:meetinginfo@kosmos.agu.org).

## 1999

### January

- 7-8 **Mineralogy and the Environment**. Aberdeen, UK. *Details:* J. Cotter-Howells, Dept. of Plant and Soil Science, University of Aberdeen, Aberdeen AB24 3UU UK, Tel.44-(0)1224-272702; Fax: 44-

(0)1224-272703; E-mail: [j.cotter-howells@abdn.ac.uk](mailto:j.cotter-howells@abdn.ac.uk). WWW: <http://www.minersoc.org>.

- 24-27 **Conference on Tailings and Mine Waste**. Fort Collins, Colorado *Details:* Linda Hinshaw, Dept. of Civil Engineering, Colorado State University, Fort

Collins, CO 80523-1372, Tel.970-491-6081; Fax:  
970-491-3584; E-mail: [lhinshaw@engr.colo-state.edu](mailto:lhinshaw@engr.colo-state.edu)

Manager, The Clay Minerals Society, P. O. Box 44-5, Boulder, CO 80306. Tel.: 303-444-6405; Fax: 303-444-2260; E-mail: [peberl@clays.org](mailto:peberl@clays.org).

## February

**10-12 Dynamics of Fluids in Fractured Rocks: Concepts and Recent Advances International Symposium.** Berkeley, California. *Details:* Boris Faybishenko, Lawrence Berkeley National Laboratory, Earth Sciences Division, One Cyclotron Road, Mail Stop 90-1116, Berkeley, CA 94720. E-mail: [bfayb@lbl.gov](mailto:bfayb@lbl.gov), WWW: <http://www.esd.lbl.gov/witherspoon>

## April

**7-8 Hydrocarbon-bearing Inclusions in Crustal Rocks - Study Methods, Applications and Case Histories.** Galway, Ireland. *Details:* Martin Feely, Dept. of Geology, National Univ. of Ireland, Galway, Ireland. Tel. 353 091 524411 ext. 2129, E-mail: [martin.feely@ucg.ie](mailto:martin.feely@ucg.ie)

## May

**6-7 GEOVISION 99 (1<sup>st</sup> Symposium on Imaging in Geology).** Liege, Belgium. *Details:* Prof. Eric Pirard, University of Liege, Mica Geomaterials Characterization, Avenues des Tilleuls, 54, 4000 Liege, Belgium. Tel.: 32-4-3669528; Fax: 32-4-3669520; E-mail: [eric.pirard@ulg.ac.be](mailto:eric.pirard@ulg.ac.be); WWW: <http://www.lgih.ulg.ac.be/geovision>.

**26-28 Geological Association of Canada - Mineralogical Association of Canada Joint Annual Meeting.** Sudbury, Ontario. *Details:* GAC-MAC Sudbury 1999, Dept. of Earth Sciences, Laurentian University, Sudbury, Ontario, Canada P3E 2C6, Tel.: 705-673-6572; Fax: 705-673-6508; E-mail: [gacmac99@nickel.laurentian.ca](mailto:gacmac99@nickel.laurentian.ca); WWW: <http://www.laurentian.ca/www/geology/gacmac99.htm>.

## June

**21-24 XV ECROFI (European current research on fluid inclusions).** Potsdam, Germany. *Details:* Mrs. Claudia Rohl, GeoForschungsZentrum Potsdam, Telegrafenberg, D--14473 Potsdam, Germany. Tel.: 49(0) 331 288 1436; E-mail: [ecrofi@gfz-potsdam.de](mailto:ecrofi@gfz-potsdam.de).

## June-July

**26-1 36<sup>nd</sup> Clay Minerals Society Annual Meeting.** West Lafayette, Indiana. *Details:* Patricia Eberl,

## July

**7-18 Inside Silicic Calderas - CEV Field Workshop.** Birmingham, UK. *Details:* Michael Brantly, Geology Dept., Leicester University, University Road, Leicester LE1 7RH, UK. Tel.: +44 116 252 3647 Fax: +44 116 252 3647, E-mail: [mjb26@ie.ac.uk](mailto:mjb26@ie.ac.uk).

**11-16 62<sup>nd</sup> Annual Meteoritical Society Meeting.** Johannesburg, South Africa. *Details:* W. U. Reimold, Dept. of Geology, University of Witwatersrand, Private Bag 3, P.O. Wits 2050, Johannesburg, South Africa, Tel.: 27 11 716 2946, Fax: 27 11 339 1697, E-mail: [065wur@cosmos.wits.ac.za](mailto:065wur@cosmos.wits.ac.za)

**19-30 22<sup>nd</sup> General Assembly of the International Union of Geodesy and Geophysics.** Birmingham, UK. *Details:* IUGG99, School of Earth Sciences, The University of Birmingham, Edgbaston, Birmingham B15 2TT, UK. Fax: 44121414 4942, E-mail: [IUGG99@bham.ac.uk](mailto:IUGG99@bham.ac.uk). WWW: <http://www.bham.ac.uk/IUGG99/>. (Abstract deadline January 15, 1999.)

**22-25 SGA-IAGOD 1999.** London, UK. Detail: C. J. Stanley, Dept. of Mineralogy, Natural History Museum, Cromwell Road, London SW7 5BD. E-Mail: [cjs@nhm.ac.uk](mailto:cjs@nhm.ac.uk)

## August-September

**31-2 Exhumation of Metamorphic Terranes (Metamorphic Studies Group).** Rennes, France. *Details:* Michel Balleve ([michel.balleve@univ-rennes1.fr](mailto:michel.balleve@univ-rennes1.fr)), Simon Cuthbert ([cuthce0@wpmail.paisley.ac.uk](mailto:cuthce0@wpmail.paisley.ac.uk)), Giles Droop ([Giles.droop@man.ac.uk](mailto:Giles.droop@man.ac.uk))

## September

**4-10 Euroclay 1999.** Banska Stiavnica, Slovakia. *Details:* WWW: <http://www.ing-pan.krakow.pl>.

**12-15 Third International Workshop on Orogenic Lherzolites and Mantle Processes.** Pavia, Italy. WWW: <http://www.crystal.unipv.it>.

## October

**25-28 Geological Society of America.** Denver, Colorado. *Details:* Becky Martin, GSA Meetings Dept. Boulder, CO 80301-9140. Tel.: (303)-447-2020, Fax: (303)-447-1133.

July

16-22 6<sup>th</sup> International Council for Applied Mineralogy (ICAM 2000). Gottingen and Hannover, Ger-

many. *Details:* ICAM 2000 Office, P. O. Box 510153, D-30631 Hannover, Germany. WWW: <http://www.bgr.de/ICAM2000>.

### Welcome New Members!

The following new members and students have joined MSA. We welcome them to the Society. The areas of interest on the application form have been increased in an attempt to cover the increasingly broader interests of our membership. They are: Mineralogy (MI), Crystallography/Crystal Chemistry (CC), Material Properties (PP), Igneous Petrology (IP), Metamorphic Petrology (MP), Sedimentary Petrology (SP), Geochemistry (GE), Phase Equilibria (PE), Economic Geology (EG), Clay Mineralogy (CM), Industrial Mineralogy (IM), Environmental Mineralogy (EM), Gems (GM),

Planetary Materials (PM), Teaching (TC), Topologic Mineralogy (TP), Biological-Mineral Interactions (BM), and Others as indicated.

If you know of someone who would like or should join MSA, give them the membership application that appears in this issue of *The Lattice*, or is available from either MSA's web site (<http://www.minsocam.org/MSAmember/MBRfrm96.html>) and the MSA Business Office, 1015 18th St NW Ste 601, Washington DC 20036-5274, USA.

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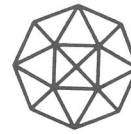
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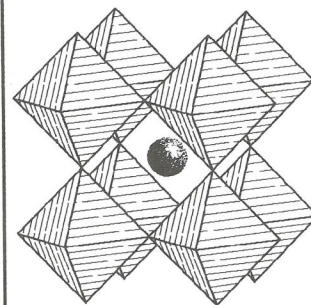
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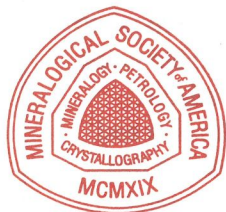
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