

The Lattice

1997-1998 MSA LECTURE PROGRAM

Since its inception the Lecture Program of the Mineralogical Society of America has proven to be a great success. Students and faculty at many colleges and universities in the United States and Canada have appreciated the varied and interesting lectures presented by the MSA Lecturers. The Council of the Mineralogical Society is again offering the program for the 1997-98 academic year with the arrangement that the MSA will pay travel expenses of the Lecturers if the host institution will be responsible for local expenses, including accommodation and meals.

For 1997-98 the MSA Lecturers will be: **Dr. David Bish**, Los Alamos National Laboratory, Los Alamos, New Mexico and **Dr. Carol Frost**, University of Wyoming, Laramie, Wyoming

David Bish will be lecturing on:

1. *Mineral Evolution in Low-Temperature Environments*
2. *The Critical Role of Mineralogy in Radioactive Waste Isolation*
3. *Better Living Through Mineralogy: Minerals and Our Environment*

Carol Frost will offer lectures entitled:

1. *The Archean Wyoming Province: Nucleus of North America*
2. *Yellowstone Underground: Granites and Crustal Growth*

Both speakers are prepared to adapt the levels of their lectures to suit the needs of various audiences. However, of the titles above, the first lecture for each speaker will perhaps be more appropriate for an upper-level audience, while the others will be more general.

If your institution is interested in requesting the visit of a MSA Lecturer, please contact:

Prof. Guy L. Hovis **Tel:** 610-250-5192
Department of Geology **Fax:** 610-252-3904
Lafayette College
Easton, PA 18042-1768

E-mail: hovisguy@lafvax.lafayette.edu

The MSA Lecture Program is designed to run from late September, 1997, through April, 1998. Lecturer requests received before May 10, 1997 will be given priority. Late applications will be considered on a space-available basis. In making your request please include (1) airport proximity from, and travel time to, your institution, (2) the name of a contact person at your institution for the summer months, (3) contact phone numbers and e-mail addresses, and (4) flexibility on lecturer preference. I hope to inform institutions about the status of their requests by late spring or early summer.

The Mineralogical Society of America would be pleased to receive suggestions from institutions for future lecturers and topics, or on other aspects of the MSA Lecture Program.

Guy L. Hovis

MSA Lecture Program Administrator

Also in this issue

From the President.....	2
Notes from Washington.....	3
1998 candidates for MSA office.....	3
Members in the News.....	3
Geomicrobiology Short Course.....	4
GSA Symposia / Theme Sessions	5
19th FM-TGMS-MSA Mineralogical Symposium	5
Students Receive MSA's Undergraduate Award.....	6
News from IMA.....	6
MSA Awards Nomination Committees.....	7
Roebbling Medal Nomination	7
Grant for Research in Crystallography.....	8
Grant for Student Research in Mineralogy and Petrology	8
In Memoriam	8
Many thanks to MSA volunteers.....	9
1997 MSA Committees	9
Clay Mineral Society Publications.....	11
Meeting Calendar 1997-1998	12
New Members.....	13
Membership Application	18
Publications Forms	19

From the President

Although the deadlines for nominations are not yet close, it is not too early to remind you that any MSA member can nominate deserving individuals for the various honors bestowed by the society. These include fellowship in the society, the Mineralogical Society of America Award (to recognize early career achievements), the Roebling Medal (the society's highest honor, awarded for a lifetime of high achievement in the mineralogical sciences), and the Public Service Award (for, as the name suggests, public service through or related to the sciences covered by the MSA).

One important change in these honors concerns the MSA Award. Following a suggestion from Bob Hazen, at the first 1997 MSA Council meeting last fall we discussed the eligibility criteria for this award (yes, the first 1997 meeting was actually in 1996!). Previously, the award was based on research performed prior to age 35 and had to be awarded by the age of 37. Bob and others have been concerned that it is becoming more common for individuals to receive the Ph.D. in their thirties and even beyond, and excluding them from consideration for the MSA Award constituted a form of age discrimination. Council agreed unanimously that the intent of the award is to recognize accomplishments early in one's career, rather than at an arbitrary age. As a result, the MSA Award will now be given for science done prior to the awardee's 35th birthday, or within seven years of receiving the Ph.D. These are similar to the eligibility criteria for the Geochemical Society's F. W. Clarke Award. So, from now on do not hesitate to nominate outstanding individuals for the MSA Award no matter what their age--as long as they haven't been out of school too long.

In my last letter in the *Lattice*, I briefly discussed the discovery of electron diffraction and noted that in its early days this phenomenon did not have nearly the same impact as X-ray diffraction had achieved. This is primarily the result of the strong multiple scattering that is typical for electrons.

As we all know, the beams used for X-ray diffraction experiments have no problem making it through crystals hundreds of micrometers thick (although we do, of course, correct for partial absorption). We also know that specimens for electron microscopy and diffraction must be very thin (considerably less than a micrometer thick), because the interaction of electrons with matter is so strong that they can be scattered multiple times and strongly absorbed even in extremely thin specimens. This strong scattering, coupled with the very short wavelengths for high-energy electrons, means that many diffracted beams, in addition to the direct electron beam, are typically excited at the same time. Alas, they trade intensity back and forth in the process known as "dynamical diffraction," with the effect that electron intensities from all but the thinnest of crystals are not useful for accurate structure determination.

Although electron diffraction poses many difficulties for structure determination, electrons do have one enormous advantage over X-rays: they can be focused by electrostatic or magnetic fields and thus be used to construct practical microscopes. Even then, the early electron microscopes, starting with that of Knoll and Ruska in 1932, did not create an instant sensation. In fact, Ernst Ruska was to wait 54 years before receiving the Nobel Prize in physics for their invention of the transmission electron microscope. (Max Knoll was long gone, and Ruska died soon thereafter.) Indeed, it took a good 25 years of further development before the instrumentation and theory were adequate to even begin determining defect structures in crystalline materials, and longer still before TEM began to prove its worth in mineralogy, petrology, and geochemistry. In my next letter, I will again cover some society news and then briefly describe some of the contributions of electron diffraction and microscopy in our field.

David R. Veblen



President



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 1997 are \$60 for professional members who elect to receive *American Mineralogist* and \$30 for those who elect not to receive the journal; those 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, 1997 will be sent all back issues of the journal for volume 82, 1997.

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 1997 volume of *American Mineralogist* for the annual rate of \$295 in the US, \$300 in Canada and Mexico and \$305 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.

1997 President: David R. Veblen

The Johns Hopkins University

Past-President: Gordon E. Brown, Jr.
Stanford University

Vice President: E. Bruce Watson
Rensselaer Polytechnic Institute

Secretary: Barbara L. Dutrow
Louisiana State University

Treasurer: R. Brooks Hanson
Science Magazine

Editor of *The Lattice*: Darrell J. Henry
Louisiana State University

MSA Administrator: J. Alexander Speer

Mineralogical Society of America

1015 Eighteenth Street N.W., Suite 601

Washington, D.C. 20036

Telephone: (202) 775-4344

FAX: (202) 775-0018

Notes from Washington

Renewal notices were sent to members and subscribers in October, 1996. Most renewals were received and processed in December and January, keeping the Business Office very busy. However, if you have not renewed your membership, please do so now. You will have likely missed the regular mailing of the Jan/Feb *American Mineralogist* and the February *Lattice*. However, if you renew now you will save your Society money on the processing and mailing of future issues, and on a second, and perhaps third, renewal notice.

- The *American Mineralogist* Editorial Office is now at the same address as the Business Office: 1015 Eighteenth St. NW Ste 601, Washington, DC 20036-5274, Tel: 202-862-1608, Fax: 202-775-0018. This office was established in November 1996 by Rachel Russell, the new Managing Editor. There are two, new additional staff: Everett Johnson is the Assistant Editor and Anna M. Ewald the Editorial Assistant. The Editorial Office in Ann Arbor, Michigan, was closed on December 31, 1997. That office was started in October, 1989 by the then Managing Editor Vicki Lawrence. That office initially occupied space in the University of Michigan. In September, 1993 it moved to separate offices in Ann Arbor. Thomas Cichonski was Managing Editor there in 1995 and 1996.

- The MSA now has its own domain name (minsocam.org). The Society offices have an ethernet local area network with a T-1 Internet connection. As a result the Business Office has new e-mail addresses. The general e-mail address is business@minsocam.org. Individuals can be reached at j_a_speer@minsocam.org for J. A. Speer, Administrator (for Society-related business); a_pratt@minsocam.org for Andy Pratt, Membership Coordinator (for membership, subscription, and publication order business); and p_baldauf@minsocam.org for Paul Baldauf (subscription and publication order business). The Editorial Office will keep its old e-mail addresses until the *American Mineralogist* server is moved. These are: russell@ammin.gg.utk.edu for Rachel Russell, Managing Editor; johnson@ammin.gg.utk.edu for Everett Johnson, Assistant Editor (for questions regarding galley proofs); and ewald@ammin.gg.utk.edu for Anna M. Ewald, Editorial Assistant (for questions regarding the status of manuscripts).

- MSA has reached an agreement with the Clay Mineral Society (CMS) wherein the members of either Society can purchase the publications of both Societies at member discount prices. The details, and available CMS publications, are described elsewhere in this newsletter.

Alex Speer (j_a_speer@minsocam.org)

1998 candidates for MSA office

The first MSA Council Meeting of 1997 was held in Denver, CO on Sunday, 27 October 1996. During this meeting, the 1998 candidates for offices were approved. By-laws of the Society require that the members be notified prior to voting. The following MSA members have agreed to be considered for MSA offices.

Candidates for 1998 MSA offices are:

President, **E. Bruce Watson**

Vice President, **John Ferry and Joe Smyth**

Secretary, **Barb Dutrow**

Councilors (2), **Michael Carpenter, Page**

Chamberlain, Mark Ghiorso, Bob Luth.

Ballots will be mailed to the membership in April/May. Please contact any current MSA officer or J. Alex Speer at MSA's business office if you have suggestions and/or questions.

Barb Dutrow
MSA Secretary

Members in the News

Cornelius (Kase) Klein, MSA fellow (Univ. of New Mexico), was the recipient of the 1996 Carnegie Mineralogical Award presented at the Tucson Gem and Mineral Show. The award honors outstanding contributions in mineralogical preservation, conservation and education that match ideals advanced in the museum's Hillman Hall of Minerals and Gems.

Michael Henderson (Manchester University) has been awarded the 1996 Schlumberger Medal by the Mineralogical Society of Great Britain and Ireland.

Advertisements in *The Lattice*

The Lattice accepts paid advertisements. All items advertised must relate to mineralogy, crystallography, or petrology or use of these disciplines in other sciences, industry, technology, or the arts. Rates:

Full page:\$400

Half page:\$200

Quarter page:\$100

Eighth page: \$50

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.

Only camera-ready copy of advertisements can be accepted, and should be sent directly to the editor of *The Lattice*: Darrell J. Henry, Dept. of Geology and Geophysics, Louisiana State University, Baton Rouge, LA 70803. Phone: 504-388-2693; fax: 504-388-2302.

GEOMICROBIOLOGY: INTERACTIONS BETWEEN MICROBES AND MINERALS

Convened by *Jill Banfield* and *Ken Nealson*

October 18, 19, 1997

ALTA PERUVIAN LODGE, Alta, Utah

The mineralogical and geochemical characteristics of the crust, hydrosphere, and atmosphere have evolved in parallel with evolution of microorganisms. Microorganisms cause mineral precipitation and dissolution and control the distribution of elements in diverse environments at and below the surface of the Earth. Conversely, mineralogical and geochemical factors exert important controls on microbial evolution and structure of microbial communities. This short course will teach geologists about the ways in which microbial activity impacts what have traditionally been considered inorganic processes and microbiologists and other life scientists about the mineralogical and geochemical aspects of biogeochemical systems.

Topics to be covered in the short course include the links between evolution of the Earth and microorganisms, new insights into microbial diversity in natural environments and the nature of early life forms, the structure, chemistry, and reactivity of mineral surfaces, the metabolic roles of metals and mechanisms used to modulate metal concentrations, microbial attachment to mineral surfaces and biofilm formation, microbial precipitation and the characteristics of biologically precipitated minerals, microbially-mediated mineral dissolution, and the impacts of microbial processes on geochemical cycles in soils and sediments.

Topic and authors:-

Catherine Skinner : Introduction: where here has the field come from and where is it going?

David DesMarais: Evolution of the Earth and biogeochemical cycles

Sue Barns and **Sandra Nierswicky-Bauer** : Microbial diversity in modern subsurface, ocean, surface environments

Jillian Banfield and **Robert Hamers**: Minerals in the near surface – the structure and reactivity of mineral surfaces

Simon Silver and **Dianne McKnight**: The role of metals in microbial energy cycles.

Brenda Little and **Zbigniew Lewandowski**: Bacterial attachment to mineral surfaces.

Bradley Tebo and **W. Ghiorse**: Biologically-mediated mineral precipitation: molecular genetics.

D. Fortin, **F.G. Ferris** and **T.J. Beveridge**: Surface-mediated mineral development by bacteria.

Elisabeth W. de Vrind-de Jong and **Johannes P.M. de Vrind**: Algal precipitation of Carbonates, silica, and silicates.

Alan Stone with **Ken Nealson**: Reactions of Extracellular Chelating Agents with Dissolved Metal Ions and Mineral Surfaces

D. Kirk Nordstrom and **Gordon Southam**: Biologically mediated dissolution of metal sulfides.

William Barker , **Susan Welch**, **Jillian Banfield**: Biologically mediated dissolution of silicate minerals.

Kenneth Nealson and **David Stahl**: Microbially mediated element cycles in sediments and soils.

The short course will be held in conjunction with an MSA Geomicrobiology Symposium and theme session on Monday, October 20, 1997.

REGISTRATION IS LIMITED TO 100 PARTICIPANTS. Given the wide interest of both geologists and biologists in this topic, we strongly recommend early registration.

For further short course information and registration, contact the MSA Business Office, 1015 Eighteenth Street, N.W., Suite 601, Washington, D.C. 20036-5274. Phone: (202)-775-4344. Fax: (202)-775-0018. E-m j_a_speer@minsocam.org. Web-site: <http://geology.smith.edu/msa/msa.html>.

Geomicrobiology Short Course Registration and Accommodations

Registration and Meal Costs:-

	before 9/17/97	after 9/17/97
MSA Members (Professionals)	270	320
Professional non-Members	340	390
MSA Members (Students)	210	260
Non-member Students	240	290

Registration price covers all meals, including Friday night dinner. A \$50 surcharge will apply for registration (if spaces are still available) to offset higher costs associated with late enrollment.

Limited outside support may be available. Students needing financial assistance to cover registration should contact the MSA business office with their names and email addresses.

Room Charges:

Alpine & Chalet Rooms	\$130.66 for 2 nights (65.33)
Nordic Room	\$86.37 for 2 nights (43.20)
Dorm Rooms	\$33.22 for 2 nights
Snowbird Lodge (overflow)	\$152.80 for 2 nights (76.40)

Numbers in parentheses indicate per person room rates with double occupancy. Prices will be on a first-come first-serve basis and include taxes.

Further information: <http://geology.smith.edu/msa/msa.html>

GSA Symposia / Theme Sessions

MSA will sponsor several symposia and theme sessions at the 1997 GSA meeting in Salt Lake City, Utah. The MSA Symposium and associated Theme Session are on the topic of the MSA Short Course: Geomicrobiology: interactions between microbes and minerals on Monday, October 20, 1997. In addition, there will be symposia and theme sessions on Environmental Mineralogy, jointly sponsored with the Clay Mineral Society, and Volatiles in Planetary Mantles and Basalts as a result of efforts by MSA's Planetary Materials interest group. If you are interested in

contributing a talk on environmental mineralogy, please contact George Guthrie at gguthrie@lanl.gov, MS D462, Geology and Geochemistry, Los Alamos National Laboratory, Los Alamos, NM 87545, Tel: 505-665-6340, Fax: 505-665-3285. If you are interested in planetary volatiles, please contact Chip Shearer, CSHEARER@UNM.EDU, Institute of Meteoritics, University of New Mexico, Albuquerque, NM 87131, Tel: 505 277 9159, Fax: 505 277 3577. Remember to check the appropriate boxes on your submitted abstract forms.

19th FM-TGMS-MSA Mineralogical Symposium

The 19th Mineralogical Symposium sponsored jointly by the Friends of Mineralogy, the Tucson Gem and Mineral Show and the Mineralogical Society of America will be held in conjunction with the 44th Tucson Gem and Mineral Show on Saturday, February 14, 1998. The topic of the Symposium will be **Fluorite, and other Alpine Minerals** – the theme of the show. Papers on descriptive mineralogy, paragenesis, classic and new locations, etc. are invited. If interested in presenting a paper, write or call the Symposium co-Chairs: Robert B. Cook, Dept. of Geology, 210 Petrie Hall, Auburn Univ., Auburn, AL 36849; (334) 844-4282; e-mail: cookrob@mail.auburn.edu or Beau Gordon, Jendon

Minerals, P.O. Box 6214, Rome, GA 30162-6214; (706) 235-9121; e-mail: jendon6214@aol.com. Upon acceptance of the topics, written abstracts will be due by Sept. 15, 1997. Abstracts will be published in the January-February issue of the Mineralogical Record.

THE DEADLINE FOR THE MAY ISSUE OF THE LATTICE IS APRIL 30

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@lsuvax.sncc.lsu.edu.

Members Nominate 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 membership, including the *American Mineralogist*, for 1997.

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. With the 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.

Kevin A. Burnette
Georgia State University
Sponsored by Dr. David A. Vanko

Lisa Lynn Call
Brigham Young University
Sponsored by Dr. Dana T. Griffen

Gregory J. Calvert
University of Oklahoma
Sponsored by Dr. David London

James Alexander Crelling
Lafayette College
Sponsored by Dr. Guy L. Hovis

Meghan Eugenia Keohane
Lafayette College
Sponsored by Dr. Guy L. Hovis

Benjamin Kozlowics
Western Michigan University
Sponsored by Dr. John D. Grace

Ron Mart
University of Pittsburgh
Sponsored by Dr. Edward G. Lidiak

Julie A. Mason
Mount Holyoke College
Sponsored by Dr. Steven R. Dunn

Carrie Lynn Odegaard
Boston University
Sponsored by Dr. Arthur H. Brownlow

Jonathan L. Payne
Williams College
Sponsored by Dr. R. A. Wobus

Christine Tabytha Reif
Rice University
Sponsored by Dr. William P. Leeman

Randa Page Rollins
State University of West Georgia
Sponsored by Dr. Curtis Hollabaugh

Andrew G. Stack
Virginia Polytechnic Institute
Sponsored by Dr. Michael F. Hochella

Christopher N. Swank
Miami University
Sponsored by Dr. John M. Hughes

Karen Viskupic
Washington University in St. Louis
Sponsored by Dr. Jill Dill Pasteris

Jonathan Charles White
The University of Calgary
Sponsored by Dr. Peter Bayliss

News from IMA

- The Asociacion Mineralogica Argentina (AMA) joined IMA as a new member. AMA was founded recently as the new national mineralogical society in Argentina. It has 69 members at this time.
- The 2nd Circular for the 17th General Meeting of the IMA in Toronto, Canada (August 10-14, 1998) will be distributed in May, 1997. Anyone needing a copy

of the 1st Circular may obtain one from S. S. Hafner (Secretary of IMA).

- The 18th General Meeting of the IMA will be held in Great Britain in 2002.

Charles Burnham; Representative to IMA

MSA Awards Nominations and Committees

Member participation is essential to the formation and continuation of MSA programs that meet member needs. Involvement can take several forms: nominate a candidate for an award, volunteer to serve on a committee next year, or offer your name or that of a colleague as a possible candidate for office. It is through the involvement of individual members that the Society's programs develop to meet the needs of its members. Please take a minute to read the brief committee descriptions below and consider getting involved. Contact the appropriate Committee Chair with your recommendations.

Award/Office	Deadline	Committee Chair
Roebbling Medal - The highest award given for eminence as represented by outstanding original research in mineralogy.	June 1	Jillian F. Banfield , Graduate School of Science, Mineralogical Institute, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, JAPAN, e-mail: jill@min.s.u-tokyo.ac.jp
Mineralogical Society of America (MSA) Award - Outstanding contribution prior to 35th birthday or within 7 years of the Ph.D.	June 1	John R. Holloway , Dept. of Geology, Arizona State University, Tempe AZ 85287-1404, Tel: 602-965-6907, Fax: 602-965-8102 E-mail: John.Holloway@asu.edu
Distinguished Public Service Medal - Awarded for distinguished contributions to public policy and awareness about mineralogical topics.	June 1	Bernard W. Evans , Dept of Geological Sciences, AJ-20, University of Washington, Seattle, WA 98195, Tel: 206-543-1750, Fax: 206-543-3836, Eml: evans@geology.washington.edu
Fellowship - Society recognition of a member's significant scientific contributions. Nomination undertaken by one member with two members acting as co-sponsors. Form required, contact committee chair or MSA home page.	June 1	Charles A. Geiger , Mineral. Petrograp. Institut, Universitat Kiel, Olshausenstr. 40, D-24098 Kiel, Germany., Fax: 0431-880-4457, E-mail: nmp46@rz.uni-kiel.d400.de
Officers - Any member or fellow of the Society. One-year terms for President and Vice-President; two-year terms for treasurer and secretary; three-year term for Councilors.	June 1	Timothy L. Grove , Dept. Earth, Atmospheric & Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA 02139, Tel: 17-253-2878, Fax: 617-253-7102, E-mail: tlgrove@mit.edu
Committees - Any member or fellow of the Society. Terms usually from one to six years. In addition to above committees, there are committees on Management, Financial Advisory, Publications, Short Course, Tellers, and Committee on Committees, Outreach, and Arts Council. If you are interested in serving, contact the chair.	April 30	E. Bruce Watson , Department of Earth & Environmental Sciences, Rensselaer Polytechnic Institute, Troy, NY 12180-3590, Tel: 518-276-8838, Fax: 518-276-8627, E-mail: watsoe@rpi.edu

Roebbling Medal

The Roebbling Medal is the highest award of the Mineralogical Society of America for scientific eminence as represented primarily by scientific publication of outstanding original research in mineralogy. The science of mineralogy is defined broadly for purposes of the Roebbling Medal, and a candidate need not qualify as a mineralogist; rather his/her published research should be related to the mineralogical sciences and should make

some outstanding contribution to them. Service to mineralogy, teaching, and administrative accomplishment are not to be considered primary merit for the award. The award is not restricted to Americans. Nationality, personality, age of candidate, or place of employment shall not be considered. For more information, see *American Mineralogist* (1973) v. 58, p. 350.

The Mineralogical Society of America

announces the 1998

GRANT FOR RESEARCH IN CRYSTALLOGRAPHY

From the Edward H. Kraus Crystallographic Research Fund with contributions from MSA membership and friends

and the 1998

MSA GRANT FOR STUDENT RESEARCH IN MINERALOGY AND PETROLOGY

from an endowment created by contributions from the MSA membership

Next year marks a milestone for MSA. Two different research grants will be made, one for crystallography and one in mineralogy/petrology. The MSA Mineralogy/Petrology Research Fund has grown sufficiently so as to allow a grant to be made every year. This is because of the continued generosity of members making regular contributions. Additionally, 1998 is an even-numbered year wherein a research grant from the Kraus Fund is made. Because of their history, the requirements for the two grants differ slightly. These are described below.

The Grant for Research in Crystallography is a \$3500 grant for research in crystallography. There are no restrictions on how the grant funds may be spent, as long as they are used in support of research. The only restrictions on eligibility for the grant are that the applicant must have reached his or her 25th birthday but not yet have reached his or her 36th birthday on the date the grant is awarded, and that the person is not a MSA Councilor. The award selection will be based on the qualifications of the applicant, the quality, innovativeness, and scientific significance of the proposed research, and the likelihood of success of the project. The award will be made in January 1998.

MSA Grant for Student Research in Mineralogy and Petrology is a \$3500 grant for student research in mineralogy and petrology. Students, including graduate and undergraduate students, are encouraged to apply. There are no restrictions on how the grant funds may be spent, as long as they are used in support of research. The award selection will be based on the qualifications of the applicant, the quality, innovativeness, and scientific significance of the research, and the likelihood of success of the project. The award will be made in January, 1998.

Application forms for both grants may be obtained from Dr. J. Alex Speer, MSA Business Office, 1015 Eighteenth St., NW, Suite 601, Washington, DC, 20036-5274, USA (202-775-4344, fax 202-775-0018, j_a_speer@minsocam.org) or from the MSA worldwide web home page, <http://geology.smith.edu/msa/msa.html>. Completed applications must be returned to the MSA Business Office by June 1, 1997.

In Memoriam

We regret to announce the passing of the following MSA Member. The Society extends its condolences to the family and friends of this scientist.

Heinz Ebert, Life Member (1949)

Useful Home Pages and List Servers

Lattice Home page: <http://scribe.geol.lsu.edu/henry's/lattice.html>.

MSA list server: msa@smith.smith.edu

MSA Home page: <http://geology.smith.edu/msa/msa.html>
(MSA forms and publication price lists on Home page)

American Mineralogist Home page: <http://ammin.gg.utk.edu>



Petrographic Thin Sections

We Prepare quality double-side-polished thin sections (for TEM, SEM, & EPMA analyses) at relatively low price.

NanoCrystal Center

P. O. Box 25302, Tempe, Arizona 85285-5302

Fax: (602) 829-8044 Message/Phone: (602) 731-3180

Many thanks for time and effort donated to MSA

Each year nearly 120 members, appointed by MSA council, agree to participate in committees as members or chairs, as editors or associate editors, as short course organizers or in other capacities as volunteers for the Society. These people are critical to the affairs of the Society and help the Society to function as well as it does. And, it is to these people that we are grateful. While I would like to send a letter of thanks to each individual, it would be difficult and I offer this.

On behalf of the Mineralogical Society of America, I extend our sincerest thanks to all of you who donate time to the Society; to committee members, committee chairs, various

editors and associate editors, short course organizers, liaisons to other organizations, IMA commission representatives, our Lecturers and program administrator, Abstractors, and our Archivist and Memorialist. Without the generosity of these MSA members who donate their time and energy, we would never be able to accomplish all of the tasks that need to be done during the year.

Thank you!

Barb Dutrow,
MSA Secretary

1997 MSA COMMITTEES

ROEBLING MEDAL COMMITTEE

(Award for 1998)

Jill Banfield, *Chair*
Bernie J Wood
Frank C Hawthorne
George D Guthrie
Hanna Nekvasil

MSA AWARD COMMITTEE

(Award for 1998)

John Holloway, *Chair*
Ian Parsons
Alan B Thompson
Rod Ewing
George Rossman

CRYSTALLOGRAPHY RESEARCH GRANT COMMITTEE

*(1998 Award in Crystallography from the
Edward Kraus Trust Fund)*

Frank C Hawthorne, *Chair*
David L Bish
S Merlino
John Hughes

MINERALOGY/PETROLOGY RESEARCH GRANT COMMITTEE

Jonathan Stebbins, *Chair*
David Rubie
John Parise
Donald Rimstidt

PUBLIC SERVICE AWARD COMMITTEE

Bernard J Evans, *Chair* (1997-1999)
H. Catherine Skinner (1995-1997)
Edwin Roedder (1995-1998)
Peter Robinson (1996-1999)
Charles T Prewitt (1997-1999)

MSA LECTURE PROGRAM COMMITTEE

Patricia Dove, *Chair* (1996-1998)
Daniel Appleman (1995-1997)
Kenneth J. DeNault (1996-1998)
W Ranson (1997-1999)
D. Jenkins (1997-1999)
Guy Hovis (Administrator of MSA
Lecture Program)

NOMINATING COMMITTEE FOR FELLOWS

Charles Geiger, *Chair* (1995-1997)
Frank C. Hawthorne (1996-1998)
Bruce Watson (1996-1998)
Alan B Thompson (1997-1999)

MSA DELEGATES TO THE JOINT TECHNICAL PROGRAM COMMITTEE, GSA

Larry Anovitz (1997-1999), *Chair*
Tamsin McCormick (1995-1997)

MSA DELEGATE TO THE AGU PROGRAM COMMITTEE

Craig Manning (1995-1997) Fall AGU
Elise Knittle (1995-1997) Fall AGU
PC Burnley (1997-1999) Spring AGU

NOMINATING COMMITTEE FOR OFFICERS

Timothy L Grove, *Chair*
Darrell Henry
RJ Kirkpatrick
John Ferry
Reid Cooper

TELLERS COMMITTEE

Richard N. Abbott, Jr., *Chair* (1996-97)
Ken Livi (1997-1998)

COMMITTEE ON COMMITTEES

E. Bruce Watson, *Chair* (1996 MSA Vice-
President)
John Ferry (1997 MSA Vice-Presidential
candidate)
Joe Smyth (1997 MSA Vice-Presidential
candidate)
Barb Dutrow (1996-1997 MSA Secretary)
Mark Barton
Frank Spear

COMMITTEE ON MANAGEMENT

Tim Grove, *Chair*
Alan M. Gaines (1995-1997)
Michael Brown (1996-1998)
Brooks Hanson (1997-1998) (MSA
Treasurer)
Barb Dutrow (1995-1997) (MSA
Secretary)
Dave Hewitt (Financial Advisory Chair)
Rich Reeder (Editor, Am. Mineral.)

FINANCIAL ADVISORY COMMITTEE

Dave Hewitt, *Chair*
Douglas Rumble III (1993-1998)
Charles V. Guidotti (1994-1999)
Michael J. Holdaway (1997-2002)
Brooks Hanson (1997-1998) (MSA
Treasurer)
Tim Grove (Management Committee
Chair)

PUBLICATIONS COMMITTEE

Frank S. Spear (1995-1997), *Chair*
Peter J. Heaney (1996-1998)
Sorena Sorensen (1997-1999)
Theodore C. Labotka (Editor, Am.
Mineral.)

Rachael Russell (Managing Editor, Am. Mineral.)
Paul Ribbe (RiM Editor)
Darrell Henry (Lattice Editor)

COMMITTEE ON SHORT COURSES

Mark S. Ghiorso, *Chair* (1996-1998)
Ross J. Angel (1995-1997)
Raymond Jeanloz (1997-1999)
Paul H. Ribbe (Editor, RiM)

BENEFACTORS COMMITTEE

George E. Harlow (1995-1998)
Stephen Guggenheim (1996-1999)
Rodney C. Ewing (1995-1998)
Donald R. Peacor (1996-1999)

MSA ARTS COUNCIL

J Rakovan, *Chair*
Charles A. Weiss, Jr. (1995-1997)
J. Michael Howard (1996-1998)

OUTREACH COMMITTEE

John Brady, *Chair*
Gordon Brown
Peter J Heaney
Jillian F Banfield
George Rossman
Sorena Sorensen
John Rakovan (Chair, Arts Council)

ARCHIVIST

Harvey Belkin (1987-)

MEMORIALIST

Brian H. Mason (1985-)

EDITORS AND BOARD OF ASSOCIATE EDITORS OF AMERICAN MINERALOGIST

Editor: Richard J. Reeder (1994-1998)
Editor: Theodore C. Labotka (1994-1998)
Managing Editor: Rachael Russell (1996-)

Associate Editors:

(1991-1994)

Jonathan Stebbins (extended beyond 1994)

(1994-1997)

Jonathan Berg
Robert W. Luth (extended beyond 1997)
Jean Morrison
Nancy Ross (extended beyond 1997)

(1995-1998)

Adrian J. Brearley

Charles A. Geiger
Hans Keppler
George A. Lager
Kathryn L. Nagy
Ronald C. Peterson

(1995-1998)

Gilberto Artioli
J. William Carey
Lee A. Groat
Anne M. Hofmeister
David M. Jenkins
Rebecca Lange
Dave W. Mogk
Gordon L. Nord, Jr.
Simon A. T. Redfern

(1997-2000)

Gray E. Bebout
Brad L. Jolliff
Craig Manning
Peter I. Nabelek
Lars Sixtrude

REVIEWS IN MINERALOGY

Paul H. Ribbe (1974-)

THE LATTICE

Darrell Henry (1995-)

REPRESENTATIVES TO OTHER SOCIETIES

(year term began in parentheses)

American Crystallographic Association (ACA)

Bernhardt J. Wuensch (1981)

American Geological Institute (AGI)

Charles Shearer (1995)

AGU Mineral Physics Committee

Bob Downs (1997)

Clay Minerals Society (CMS)

David L. Bish (1988)

European Union of Geology (EUG)

George Calas (1996)

Friends of Mineralogy (FM)

Eugene E. Foord (1987)

Gemological Institute of America (GIA)

George Rossman

International Mineralogical Association (IMA)

Charles W. Burnham (1989)

International Centre for Diffraction Data (ICDD)

Jeffrey Post (1995)

Mineral Museum Professionals

George E. Harlow (1994)

Mineralogical Abstracts (American Abstract Organizer)

Karl A. Riggs, Jr. (1986)

REPRESENTATIVES ON IMA COMMISSIONS

Applied Mineralogy

H. Catherine W. Skinner (1992)

Crystal Growth

Rich Reeder (1996)

Gem Materials

Jim Shigley (1996)

History and Teaching

Cornelius Klein (1985)

Mineral Data and Classification

Paul B. Moore (1977)

Museums

Anthony R. Kampf (1992)

New Minerals and Mineral Names

Pete J. Dunn (1985)

Ore Microscopy

James R. Craig (1977)

Physics of Minerals

Subrata Ghose (1989)

MSA SPECIAL INTEREST GROUPS

(No formal structure or terms)

Industrial Mineralogy

Fred Allen, Chair (1995)

Bruce Aitken

John Higgins

Jeffrey Warner

Environmental Mineralogy

George Guthrie (1995)

Mineral Surfaces and Interfaces

Michael F. Hochella, Jr. (1995)

Pegmatites

David London (1992)

Petr Cerny

Planetary Materials

Brad Jolliff, Chair

Roger H. Hewins

Teaching Mineralogy

John Brady

Darby Dyar

Mickey Gunter

Jo Laird

Dave Mogk

Dexter Perkins

Ric Wendlandt

(and all of the participants of the Teaching Mineralogy Workshop)

AD HOC COMMITTEES

Internet

John Brady (1995)

Clay Mineral Society Publications

MSA and the Clay Minerals Society (CMS) have reached an agreement wherein members of either Society can purchase publications of both Societies at member prices. That is, an MSA member gets \$5.00 off the nonmember price for CMS publications. For the time being, each Society is responsible for the sale of its own publications. The CMS publications and ordering information are:

CMS Workshop Lecture Series:

1. *Quantitative Mineral Analysis of Clays*, 1989, D. R. Pevear & F. A. Mumpton, eds., ISBN 1-881208-01-X, 171 pp., \$17.00. A comprehensive presentation of the many techniques used for quantitative analysis of clays.

2. *Electron-Optical Methods in Clay Science*, 1990, I. D. R. Mackinnon & F. A. Mumpton, eds., ISBN 1-881208-02-8, 159 pp., \$21.00. Crammed full of useful analytical and applied techniques, including TEM, analytical electron microscopy, and electron microprobe analysis.

3. *Thermal Analysis in Clay Science*, 1990, J. W. Stucki, D. L. Bish, & F. A. Mumpton, eds., ISBN 1-881208-03-6, 192 pp., \$13.00. An update of many of the most recent methods and techniques including differential scanning calorimetry, differential thermal analysis, and thermogravimetric analysis.

4. *Clay-Water Interface and its Rheological Implications*, 1993, N. Güven & R. M. Pollastro, eds. ISBN 1-881208-04-4, 244 pp., \$18.00. This publication presents papers by several of the leaders in the field of rheology, flow behavior, and stability of clay-water suspensions.

5. *Computer Applications to X-Ray Powder Diffraction Analysis of Clay Minerals*, 1993, R. C. Reynolds, Jr., & J. R. Walker, eds., ISBN 1-881208-06-0, 171 pp., \$18.00. Essential text for the application of the NEWMOD program for X-ray diffraction analysis. Other contributions include Rietveld analysis of clay minerals and studies of illite crystallinity.

6. *Layer Charge Characteristics of 2:1 Silicate Clay Minerals*, 1994, A. R. Mermut, ed., ISBN 1-881208-07-9, 144 pp., \$15.00. For workers in this field, this publication provides an excellent update of current theories and practice.

7. *Scanning Probe Microscopy of Clays*, 1994, K. R. Nagy & A. E. Blum, eds., ISBN 1-881208-08-7, 239 pp., \$21.00. A series of contributed articles covering the theory of scanning probe microscopy, atomic and molecular scale imaging, and applications to studies of morphology and mineral-water interactions.

8. *Organic Pollutants in the Environment*, 1996, B. L. Sawhney, ed., ISBN 1-881208-10-9, 197 pp., \$18.00. This publication presents several chapters on the fundamentals of the sorption and desorption of organics on clays, zeolites, and other minerals. Chapters on bioremediation, organic contaminant transport, and spectroscopic characterization are also included.

Other Publications

Kaolin Genesis and Utilization, 1993, H. H. Murray, W. M. Bundy, & C. C. Harvey, eds., ISBN 1-881208-05-2, 341 pp. \$25.00

Proceedings of the International Clay Conference, 1985, L. G. Schultz, H. van Olphen, and F. A. Mumpton, eds., ISBN 1-881208-00-1, Clothbound \$20.00 (Formerly \$66.00)

Mica Polytype Slide Set. Prepared by A. C. Rule for the CMS. \$18.00

Crystallography Slide Set, Symmetry Drawings of the Seventeen Plane Groups. Prepared by A. C. Rule for the CMS. \$35.00

Abstracts from CMS annual meetings are available from 1980 through the present, excluding 1992 (specify year). \$13.00

Special Zeolite Issue, Clays and Clay Minerals, Vol. 29, No. 5, 1981, F. A. Mumpton, eds., \$21.00

CMS News Back Issues. \$5.00/issue, The lively newsletter of The Clay Minerals Society, containing interviews, commentary, letters, humor, and retrospectives, as well as information about Society activities and related meetings.

Historical VHS Videotapes

W. D. Keller, W. D. Johns, and C. E. Marshall's daughter. \$23.00

J. Gieseeking, H. Glass, and T. Kurtz, discussing R. E. Grim, R. Bray, & W. F. Bradley. \$23.00

M. M. Mortland and T. J. Pinnavaia \$23.00

Symposium on the Triple Point: Historical Interconnections of Soil Science, Clay Mineralogy, and X-ray Diffraction. \$33.00

Linus Pauling presenting the 1993 Pioneer in Clay Science Lecture. \$35.00

To order, indicate the desired publications and send with the required funds in U. S. dollars, drawn on a U.S. bank, to: The Clay Minerals Society, Patricia Jo Eberl, Manager, P. O. Box 4416, Boulder, CO 80306, USA, Phone: 303-444-6405, FAX: 303-444-2260, E-mail: peberl@clays.org. All prices include surface or book-rate postage. Add \$10.00 per item for overseas air shipment and \$5.00 per item for domestic first class shipment. If Visa or Mastercard is used, please give your name as it appears on the card, card number, expiration date, and telephone, fax, or e-mail number. Do not send credit card numbers via email. Send by phone, FAX, or regular mail. Prices and availability subject to change without notice. Order forms and recent information are given on the CMS Home Page: <http://shadow.agry.purdue.edu/clay/claymin/claymins.html>

Meeting Calendar 1997-1998

1997

March

17-20 28th Annual Lunar and Planetary Science Conference.

Houston, Texas. *Details:* L. Simmons, LPI Publications and Program Services Department, 3600 Bay Area Blvd., Houston, TX 77058. Tel.: 713-486-2158; E-mail: simmons@lpi.jsc.nasa.gov.

23-27 9th Biennial Meeting of the European Union of

Geosciences (EUG 9). Strasbourg, France. *Details:* A. W. Hofmann, Max-Planck-Institut für Chemie, 55020 Mainz, Germany. Tel.: 49-6131-305-280; Fax: 49-6131-371-051; E-mail: hofmann@geobar.mpch-mainz.mpg.de.

March-April

31-4 Materials Research Society 1997 Spring Meeting. San Francisco, California. *Details:* Linda G. Griffith-Cima, Room 66-556, 77 Massachusetts Ave., Cambridge, MA 02139. Tel.: (617)-253-0013; Fax: (617)-258-8224; E-mail: griff@mit.edu.

April

8-10 Principal Genetic Problems Related to Mineral Deposits of Magmatic Affiliation. Moscow, Russia. *Details:* Nick S. Bortnikov, IGEM RAS, Staromonetny per., 35, Moscow 109017, Russia. Tel.: (007) 095-230-8259 or 230-8244; Fax: (007) 095-230-2179; e-mail: symposium@igem.msk.ru. (*Abstract deadline: Feb. 1, 1997.*)

14-18 Plumes, Plates and Mineralization. Pretoria, South Africa. *Details:* S. de Waal, Tel.: (012)-4202454; Fax: (012)-433430; E-mail: ppm97@scientia.up.ac.za.

May

19-21 Geological Association of Canada/Mineralogical Association of Canada. Ottawa, Canada. *Details:* GAC, Room 757, 601 Booth St., Ottawa, Ontario K1A 0E8. Tel.: (613) 947-7649; Fax: (613) 947-7650; WWW: <http://www.NRCan.gc.ca/~ottawa97>.

27-30 AGU Spring Meeting. Baltimore, Maryland. *Details:* AGU Meetings Dept., 2000 Florida Ave., Washington, D.C. 20009. Tel.: 202-462-6900.

June

2-6 7th Annual V. M. Goldschmidt Conference. Tucson, Arizona. *Details:* Michael Drake, Dept. of Planetary Sci., Lunar and Planetary Inst., Univ. of Arizona, Tucson, AZ 85721. Tel.: (520) 621-6962; Fax: (520) 621-4933; E-mail: goldconf@lpl.arizona.edu; WWW: cass.jsc.nasa.gov/meetings/gold/gold.intro.html. (*abst deadline: Feb. 21*).

15-21 The 11th International Clay Conference and The 34th Annual Meeting of the Clay Minerals Society. Ottawa, Ontario, Canada. *Details:* Jeanne B. Percival, Secretary-General, 11th ICC, Geological Society of Canada, 601 Booth

St., Ottawa, Ontario K1A 0E8, Ontario, Canada. Fax: (613) 943-1286; E-mail: icc97@gsc.emr.ca.

20-25 "Tourmaline 1997" - International Symposium on Tourmaline. Moravia, Czech Republic. Technical Session (June 20-22) and Field Trip (June 23-25). *Details:* M. Novák, Dept. of Mineralogy and Petrography, Moravian Museum, Zelný trh 6, 659 37 Brno, Czech Republic. Fax: (05) 4221 2792; E-mail: mzm@mzm.anet.cz and F. C. Hawthorne, Dept. of Geological Sci., Univ. of Manitoba, Winnipeg, R3T 2N2, Manitoba, Canada. Fax: (204) 261-7581; E-mail: fchawthorn@bldgwall.lan1.umanitoba.ca

July

15-21 5th International Symposium on Hydrothermal Reactions (ISHR '97). Gatlinburg, Tennessee. *Details:* ISHR '97, ORNL, P.O. Box 2008, Building 4500S, MS 6110, Oak Ridge, TN 37831-6110. Tel.: (423)-576-5109; Fax: (423)-574-4961; E-mail ddp@ornl.gov; WWW: <http://flory.engr.utk.edu/ishr97>.

August

10-15 Gordon Research Conference on Inorganic Geochemistry: Ore Deposits. New Hampton School, New Hampton, New Hampshire. *Details:* Mark Reed, Dept. of Geological Sciences, Univ. of Oregon, Eugene, OR 97401-1272. Tel.: (541) 346-5587; Fax: (541) 346-4692; e-mail: mhreed@oregon.uoregon.edu; or Kevin Shelton, Dept. of Geological Sciences, Univ. of Missouri, Columbia, MO 65211. Tel.: (573) 882-6568, Fax: (573) 882-5458; e-mail: geosckls@showme.missouri.edu; or Robert Schafer, BHP Minerals International Exploration, Inc., 5330 South 900 East, Suite 200, Salt Lake City, Utah 84117, Tel.: (801) 261-1103.

19-20 IMA Working Group in Mineral Equilibria and Data Bases. Helsinki, Finland. *Details:* Pentti Holttä, Geol. Surv. Finland, SF-02150 Espoo, Finland. Tel.: 358-0-469323-12; Fax: 358-0-462205; e-mail: pentti.holttä@gsf.fi or Leonid L. Perchuk, Geological Faculty, Moscow State Univ., Vorobievsky Gory 119899, Russia. Tel.: 7-095-913-2112; Fax: 7-095-939-1395; e-mail: llp@geol.msu.ru or llp@p1854.home.chg.ru.

22-23 International Pressure Calibration Workshop. Misasa, Japan. *Details:* Dean C. Presnall, Dept. of Geosciences, Univ. of Texas at Dallas, P.O. Box 830688, Richardson, TX 75083-0688. Tel.: (972) 883-2444; Fax: (972) 883-2829; E-mail: presnall@utdallas.edu.

September

1-5 "Challenges to Chemical Geology" - 10th Meeting of the European Geological Societies. Carlsbad, Czech Republic. *Details:* M. Novák, Czech Geol. Survey, Geologická 6, 15200 Prague 5, Czech Republic. Tel.: 42-2-581-71-20; Fax: 42-2-581-87-48; E-mail: novak@cgu.cz.

1-7 Fifth International Eclogite Conference. "Centro Stefano Franscini", Monte Verita, Ascona, Switzerland. *Details:* Dr. Rolf Schmid, Mineralogy, IEC 97, ETH-centre, NO E43, 8092 Zurich, Switzerland. Tel. direct: XX41 1 6323791, Tel. secr.: XX41 1 6323779; Fax: XX41 1 6321088; E mail: rolf@erdw.ethz.ch; WWW: http://www.erdw.ethz.ch/~rolf/pre_reg.html. *Preliminary registration:* Oct. 31, 1996, *Registration due:* May 31, 1997; (*Abstr due:* May 31)

4-5 Metamorphic Studies Group and Applied Mineralogy Group Workshop on "Applying Hydrogeology and Fluid Flow Modelling to Metamorphic and Ore Systems" Leeds, UK. *Details:* Bruce Yardley, Dept. of Earth Sciences,

University of Leeds, Leeds LS2 9JT, UK. Fax: +44 (0)113 2335259, email: bruce@earth.leeds.ac.uk

8-10 COM/IMA short course: "Modern Approaches to Ore and Environmental Mineralogy". S. Mamede de Infesta, Portugal. *Details:* Dr. Orlando C. Gaspar, Laboratório do IGM, Apartado 89,4465 S. Mamede de Infesta, Portugal. Tel.+ 351 2 951 19 15, Fax + 351 951 40 40

October

20-23 Geological Society of America Annual Meeting. Salt Lake City, Utah. *Details:* GSA, P.O. Box 9140, Boulder, CO 80301. Tel.: (303) 447-2020.

1998

April

13-17 7th International Kimberlite Conference. Rondebosch, South Africa. Field trips April 6-12 and April 19-24. *Details:* J. Gurney, 71KC, Dept. of Geol. Sci., University of Cape Town, Private Bag, Rondebosch, 7700, South Africa. Tel.: 27-21-531-3162 or 27-82-550-2004; Fax: 27-21-650-3783; E-mail: 71kc@geology.uct.ac.za; WWW: <http://www.uct.ac.za/depts/geolsci/71kc/>.

May

18-20 Geological Association of Canada/Mineralogical Association of Canada. Quebec, Canada. *Details:* A. Morin, Dept. Geologie et de genie geologique, Universite Laval, Pavillon Adreïn-Pouliot Sainte-Fay, Quebec, G1K 7P4 Canada. Tel.: (418) 656-2193; Fax: (418) 656-7339; E-Mail: quebec1998@ggl.ulaval.ca; WWW: <http://www.ggl.ulaval.ca/quebec1998.html>.

June-July

29-15 8th International Platinum Symposium (IAGOD/CODMUR). Johannesburg, South Africa.

Details: Dr. C. A. Lee, P.O. Box 68108, Bryanston, South Africa. Tel.: 27-1127-373-2580; Fax: 27-1127-836-0371; E-mail: clee@amplats.co.za.

August

10-14 17th General Meeting of the International Mineralogical Association. Toronto, Canada. *Details:* E. Schandl, Dept. of Geology, University of Toronto, Toronto, Canada M5S 3B1 Tel.: (416) 978-7084; Fax: (416) 978-3938; E-mail: ima98@quartz.geology.utoronto.ca; WWW: <http://www.geology.utoronto.ca/IMA98>.

10-16 International Ophiolite Symposium and Field Excursion: "Generation and Emplacement of Ophiolites through Time". Oulo, Finland. *Details:* J. Vuollo, Dept. of Geology, University of Oulu, FIN-90570 Oulu, Finland. Fax: 358-81-5531484; E-mail: vuollo@sveka.oulu.fi or E. Hanski, Geol. Survey of Finland, P.O. Box 77, FIN-96101 Rovaniemi, Finland. Fax: 358-60-3297289; E-mail: eero.hanski@gsf.fi.

Welcome New Members!

We welcome the following as members of 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), and Others as indicated.

If you know of someone who would like to join MSA, or should join MSA, use the membership application appearing elsewhere in this issue of *The Lattice* or obtain one from either MSA's home page (<http://geology.smith.edu/msa/msa.html>) or the MSA Business Office, 1015 Eighteenth Street, N.W., Suite 601, Washington, DC 20036-5203.

Aigner-Torres, Mario, Institute of Mineralogy & Petrography, ETH-Zentrum, Sonneggstrasse 5, CH-8092 Zurich, SWITZERLAND. Ph: 41-1-6327816. Fax: 41-1-6321088. E-mail: mario@erdw.ethz.ch. (S-97) IP MI CC PP MP SP GE PE EG IM EM GM. Sponsor: MSA.

Ans, Joseph A., 69 Westford Road, Ashford, CT 06278, USA. Ph: 860-487-1083. (S-97) Mineral Physics. Sponsor: MSA.

Banerjee, Neil R., School of Earth and Ocean Sciences, University of Victoria, P.O. Box 3055, V8W 3P6 Victoria, BC, CANADA. Ph:

250-472-4024. Fax: 250-472-4030. E-mail: banergee@uvic.ca. (S-97) MP GE. Sponsor: MSA.

Black, Nancy Rodriguez, Department of Geology, University of North Carolina-Chapel Hill, Mitchell Hall, CB#3315, Chapel Hill, NC 27599-3315, USA. Ph: 919-966-4516. Fax: 919-966-4519. E-mail: nrblack@email.unc.edu. (S-97) GE SP CM TC. Sponsors: Robert R.

Boyer, Thomas, 120 Washington Ave., Mantua, NJ 08051-1139, USA. Ph: 609-468-8277. Fax: 609-464-1003. E-mail: rockman@voicenet.com. (M-97) MI CC. Sponsor: MSA.

The following individuals became Society members as a result of their attendance at the MSA Short Course on Reactive Transport in Porous Media held at Golden, CO, October 25-27, 1996. Because of this we do not have all of the usual new member information for them, but they are all interested in reactive transport.

Appold, Martin S., Department of Earth & Planetary Sciences, Johns Hopkins University, Baltimore, MD 21218, USA. Ph: 410-516-7034. Fax: 410-516-7933. Email: appol_ms@jhuvms.hcf.jhu.edu. (S-97).

Ayora, Carlos, Institut de Ciències de la Terra, CSIC, Lluís solé I sabaris, S/N. 08028 Barcelona, SPAIN. Ph: +34 3 3302716. Fax: +34 3 4110012. Email: ayora@ija.csic.es. (M-97).

Barboza, Scott, 310 N. 72nd Street, Apartment B, Seattle WA 98103, USA. Ph: 206-784-8247. Email: barboza@u.washington.edu. (S-97).

Beekman, ir. W., Kiwa N.V. Research & Consultancy, P.O. Box 1072, 3430 BB Nieuwegein, THE NETHERLANDS. Ph: +31 606 95 93. Fax: +31 606 11 65. Email: beekman@kiwaoa.nl. (M-97).

Bennett, Philip C., Department of Geological Sciences, University of Texas, Austin, TX 78712, USA. Ph: 512-471-3587. Fax: 512-471-9425. Email: pbennett@mail.utexas.edu. (M-97).

Bentley, Lawrence R., Department of Geology & Geophysics, University of Calgary, 2500 University Drive, NW, Calgary, Alberta, CANADA T2N 1N4. Ph: 403-220-4512. Fax: 403-284-0074. Email: bentley@geo.ucalgary.ca. (M-97).

Cheng, Songlin, Department of Geological Sciences, Wright State University, Dayton, OH 45435, USA. Ph: 513-873-3450. Fax: 513-873-3462. Email: scheng@desire.wright.edu. (M-97).

Christiansen, Jesper Skovdal, Dept. Hydrodynamics & Water Resources, 2800 Lyngby, DENMARK. Ph: +45 45 25 1464. Fax: +45 45 93 2860. Email: skovdal@email.isva.dtu.dk. (S-97).

Cook, Stephen J., Argonne National Laboratory, Environmental Research Division, 9700 South Cass Avenue ER/203, Argonne, IL 60439-4843, USA. Ph: 630-252-9513. Fax: 630-252-5747. Email: sjcook@anl.gov. (M-97).

Cooke, David R., c/o CODES Key Centre, University of Tasmania, GPO Box 252C, 7001 Hobart, Tasmania, AUSTRALIA. Ph: +61 02 20 7605. Fax: +61 02 20 7662. Email: d.cooke@geol.utas.edu.au. (M-97).

Ebert, Markus, Universitaet Bremen, FB 5 Geowissenschaften, Klagenfurter Str., Postfach 330 44, 28359-Bremen, GERMANY. Ph: +421 218 7125. Fax: +421 218 4321. Email: mebert@geochemie.uni-bremen.de. (S-97).

Furukawa, Yoko, Seafloor Sciences Branch, Naval Research Laboratory, Stennis Space Center, MS 39529, USA. Ph: 601-688-5474. Fax: 601-688-5752. Email: yokof@zephyr.nrlssc.navy.mil. (M-97).

Gable, Carl, MSS F665, EES-5, Los Alamos National Lab, Los Alamos, NM 87505, USA. Ph: 505-665-3533. Fax: 505-665-3687. Email: gable@lanl.gov. (M-97).

Gammons, Christopher H., 2273 Belgrave Ave., Montreal, Quebec, CANADA H4A 2L9. Ph: 514-487-6286. Fax: 514-398-6767. Email: chrisga@geosci.lan.mcgill.ca. (M-97).

Getahun, Aberra, 3636 N. Central Avenue, Suite 300, Phoenix, AZ 85012, USA. Ph: 602-222-4444. Fax: 602-222-4466. Email: agetahun@brwnclad.com. (M-97).

Griffith, Laura, Washington University, Campus Box 1169, 1 Brookings Dr., St. Louis, MO 63130, USA. Ph: 314-935-5021. Fax: 312 935-7361. Email: griffith@zonvark.wustl.edu. (S-97).

Hanor, Jeffrey S., Department of Geology & Geophysics, Louisiana State University, Baton Rouge, LA 70803, USA. Ph: 504-388-3418. Fax: 504-388-2302. (M-97).

Hencke, Joerg, Universitaet Bremen, FB 5 Geowissenschaften, Klagenfurter Str., P.O. Box 330 440, 28359 Bremen, GERMANY. Ph: +421 218 3927. Fax: +421 218 4321. Email: jhencke@geochemie.uni-bremen.de. (M-97).

Herbert, Bruce, Department of Geology and Geophysics, Te. A&M University, College Station, TX 77843, USA. Ph: 409-845-2405. Fax: 409-845-6162. Email: herbert@geopsum.tamu.edu. (M-97).

Holm, Jesper, Institute of Hydrodynamics and Water Resources, ISVA, Building 115, DTU, 2800 Lyngby, DENMARK. Ph: +45 4525 1464. Fax: +45 4593 2880. Email: Jeh@email.isva.dtu.dk. (S-97).

Hunter, Kimberly Sue, School of Earth & Atmospheric Sciences, Georgia Institute of Technology, 221 Bobby Dodd Way, Atlanta, GA 30332-0340, USA. Ph: 404-872-2235. Fax: 404-894-5638. Email: kimh@aqchem.eas.gatech.edu. (S-97).

Jackson, Kenneth J., Lawrence Livermore National Lab, 700 East Avenue, L-207, Livermore, CA 94550, USA. Ph: 510-422-6053. Fax: 510-422-3118. Email: jackson8@llnl.gov. (M-97).

Jessen, Chris Alan, 714 Short Place, Laramie, WY 82070, USA. Ph: 307-721-5908. Fax: 307-766-6679. Email: jessen@plains.uwyo.edu. (S-97).

Jolley, Darren M., Intera, Inc., 1261 Town Center Drive, Las Vegas, NV 89134, USA. Ph: 702-295-4695. Fax: 702-295-4730. Email: darrenjolley@notes.ymmp.gov. (M-97).

Jones, B. Geoffrey, USPCI/Laidlaw, 5665 Flatiron Parkway, Boulder, CO 80301, USA. Ph: 303-938-4915. Fax: 303-938-5520. Email: bgjones@lescorp.com. (M-97).

Keating, Elizabeth, EES-3 MS C335, Los Alamos National Lab, Los Alamos, NM 87545, USA. Ph: 505-667-0896. Fax: 505-667-1310. Email: ekeating@lanl.gov. (M-97).

Kersting, Annie B., Isotope Sciences Division L-231, Lawrence Livermore National Lab, P.O. Box 808, Livermore, CA 94550, USA. Ph: 510-423-3338. Fax: 510-422-3160. Email: kersting@llnl.gov. (M-97).

Landenberger, Holger, Universität Bremen, FB 5 Geowissenschaften, Klagenfurter Str., Postfach 330 440, 28359 Bremen, GERMANY. Ph: +4212 187121. Fax: +4212 184321. Email: hland@geochemie.uni-bremen.de. (M-97).

Lewis, Robert, Shepherd Miller, Inc., 2460 West 26th Avenue, #430C, Denver, CO 80211, USA. Ph: 303-477-5338. Fax: 303-477-5318. Email: rlewis@shepmill.com. (M-97).

Lundstrom, Craig, Department of Earth Sciences, University of California, Santa Cruz, CA 95064, USA. Ph: 408-459-4089. Fax: 408-459-3074. Email: cclund@earthsci.ucsc.edu. (M-97).

Matt, Veit J., Department of Geology & Geophysics, Texas A&M University, College Station, TX 77843, USA. Ph: 409-845-9683. Fax: 409-845-6162. Email: vjm6937@geopsun.tamu.edu. (S-97).

McGrath, Christian J., USAE Waterways Experiment Station, 3909 Halls Ferry Road, Vicksburg, MS 39180, USA. Ph: 601-3788. Fax: 601-634-3129. Email: @glantalamh.wes.army.mil. (M-97).

Morse, Lee, Geology Department -Box 8072, Idaho State University, 785 S 8th Street, Pocatello, ID 83209, USA. Ph: 208-236-3235. Fax: 208-236-4414. (S-97).

Nelson, Stephen, Woodward-Clyde Federal Services, 101 Convention Center Drive, MS 423, Las Vegas, NV 89109, USA. Ph: 702-794-7877. Fax: 702-794-5378. Email: stephen_nelson@notes.ypm.gov. (M-97).

Orr, Shlomo, BMP Copper, Inc., 7400 N. Oracle Road, Suite 162 RDTG, Tucson, AZ 85704, USA. Ph: 520-575-4785. Fax: 520-575-4781. Email: 103726.3042@compuserve.com. (M-97).

Parker, Ron, Department of Geology & Geophysics, Texas A&M University, College Station, TX 77843, USA. Ph: 409-845-2451. Fax: 409-845-6162. Email: rlp4045@geopsum.tamu.edu. (S-97).

Paschke, Suzanne, Department of Geology & Geological Engineering, Colorado School of Mines, Golden, CO 80401, USA. Ph: 303-420-5099. Email: spaschke@slate.mines.edu. (S-97).

Pearson, F.J., Paul Scherrer Institute, OFLA/207, CH-5232 Villigen PSI, SWITZERLAND. Ph: +41 56 310 29 01. Fax: +41 56 310 28 21. Email: fj.pearson@psi.ch. (M-97).

Peters, Mark T., Woodward-Clyde Federal Services, 101 Convention Center Drive, MS 423, Las Vegas, NV 89109, USA.

Ph: 702-794-7234. Fax: 702-794-5378. Email: mark_peters@notes.ypm.gov. (M-97).

Petersen, Michael Juul, Institute of Hydrodynamics and Water Resources, ISVA, Technical University of Denmark, Building 115, 2800 Lyngby, DENMARK. Ph: +45 4525 1453. Fax: +45 4593 2880. Email: michael@isv16.isva.dtu.dk. (S-97).

Petrovich, Radomir, 239 GB, Phillips Petroleum Company, Bartlesville, OK 74004, USA. Ph: 918-661-3160. Fax: 918-662-2047. Email: rpetrov@ppco.com. (M-97).

Preece, Richard K., BHP Copper, Inc., 7400 N. Oracle Rd., Suite 200, Tucson, AZ 85704, USA. Ph: 520-575-4794. Fax: 520-575-4781. Email: preece.richard.rk@bhp.com.au. (M-97).

Ransom, Barbara, Scripps Institute of Oceanography, UCSO - GRO 0220, La Jolla, CA 92083-0220, USA. Ph: 619-534-1826. Fax: 619-534-0784. Email: ransom@ucsd.edu. (M-97).

Rosenberg, Nina D., LANL Earth Sciences Dept., UCSC, Santa Cruz, CA 95064, USA. Ph: 408-459-5858. Fax: 408-459-3074. E-mail: rosenberg@lanl.gov. (M-97).

Sahai, Nita, Department Earth & Planetary Sciences, Olin Hall, Johns Hopkins University, 3400 N. Charles Street, Baltimore, MD 21218, USA. Ph: 410-516-8362. Fax: 410-516-7933. Email: sahai@jhuvms.hcf.jhu.edu. (S-97).

Sassani, David C., Intera, Inc., 1261 Town Center Drive, Las Vegas, NY 89134, USA. Ph: 702-295-4635. Fax: 702-295-4730. Email: sassani@notes.ypm.gov. (M-97).

Schramke, Janet A., Shepherd Miller, Inc., 3801 Automation Way, Suite 100, Fort Collins, CO 80525, USA. Ph: 404-223-9600. Fax: 404-223-7171. Email: jschramke@shepmill.com. (M-97).

Sedivy, Robert, Environmental Research Division, Argonne National Laboratory, 9700 S. Cass Avenue, Bldg. 203, Rm. B161, Argonne, IL 60439-4843, USA. Ph: 708-252-1897. Fax: 709-252-5747. Email: rasedivy@anl.gov. (M-97).

Shiller, Alan, Institute of Marine Sciences, University of Mississippi, Stennis Space Center, MS 39529, USA. Ph: 601-688-1178. Fax: 601-688-1121. Email: ashiller@whale.st.usm.edu. (M-97).

Siegel, Malcolm D., MS-1320, Sandia National Laboratories, Albuquerque, NM 87185-1320, USA. Ph: 505-848-0631. Fax: 505-848-0622. Email: msiegel@nwer.sandia.gov. (M-97).

Stober, Ingrid, Geologisches Landesamt, Albertstraße 5, D-79104 Freiburg, GERMANY. Ph: +49 761-204-4396. Fax: +49 761-204-4438. Email: stober@glar2.gla.uni-freiburg.de. (M-97).

Troignon, Laurent, DESD/SESD/SGE, Bât.307 -CEA - Cadarache, BP No. 1, 13108 St. Paul lez Duranion Cdx, FRANCE. Ph: +33 42 25 2678. Fax: +33 42 25 6272. Email: laurent@lima.cad.cea.fr. (M-97).

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 20036-5203

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), ☐ Others (Please indicate) _____

Education Information:

Highest Degree earned: ☐ Doctorate ☐ Masters ☐ Bachelors ☐ No College Degree

Institution at which Highest Degree was earned _____ Year _____

Employer _____ Job Title _____

Job Function(s): _____

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 a US bank and payable to the Mineralogical Society of America)

Please charge my: ☐ Mastercard ☐ Visa

\$ _____ ☐ Diners Club ☐ American Express

Card # _____

Exp. Date: _____

Cardholder: _____

Signature: _____

1997 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	\$36.00
<i>Physics and Chemistry of Minerals</i> , published eight times a year by Springer-Verlag	\$42.30
<i>Journal of Petrology</i> , published twelve times a year by Oxford University Press	\$300.00
TOTAL	

Mineralogical Society of America

Publications Price List and Order Form

- Views in Mineralogy* (25% member discount)
- ☐ v. 08: Kinetics of Geochemical Processes **\$15**
 - ☐ v. 9A: Amphiboles and Other Hydrous Pyriboles - Mineralogy **\$18**
 - ☐ v. 9B: Amphiboles: Petrology and Experimental - Phase Relations **\$18**
 - ☐ v. 10: Characterization of Metamorphism through Mineral Equilibria **\$18**
 - ☐ v. 11: Carbonates: Mineralogy & Chemistry **\$18**
 - ☐ v. 12: Fluid Inclusions **\$24**
 - ☐ v. 13: Micas **\$22**
 - ☐ v. 14: Microscopic to Macroscopic: Atomic Environments to Mineral Thermodynamics **\$20**
 - ☐ v. 15: Mathematical Crystallography (rev.) **\$20**
 - ☐ v. 16: Stable Isotopes in High Temperature Geological Processes **\$24**
 - ☐ v. 17: Thermodynamic Modeling of Geological Materials: Minerals, Fluids, Melts **\$25**
 - ☐ v. 18: Spectroscopic Methods in Mineralogy and Geology **\$25**
 - ☐ v. 19: Hydrous Phyllosilicates (Exclusive of Micas) **\$25**
 - ☐ v. 20: Modern Powder Diffraction **\$24**
 - ☐ v. 21: Geochemistry and Mineralogy of Rare Earth Elements **\$24**
 - ☐ v. 22: The Al_2SiO_5 Polymorphs **\$24**
 - ☐ v. 23: Mineral-Water Interface Geochemistry **\$25**
 - ☐ v. 24: Modern Methods of Igneous Petrology: Understanding Magmatic Processes **\$24**
 - ☐ v. 25: Oxide Minerals: Petrologic and Magnetic Significance **\$25**
 - ☐ v. 26: Contact Metamorphism **\$30**
 - ☐ v. 27: Minerals and Reactions at the Atomic Scale: Transmission Electron Microscopy **\$28**
 - ☐ v. 28: Health Effects of Mineral Dusts **\$28**
 - ☐ v. 29: Silica: Physical Behavior, Geochemistry and Materials Applications **\$28**
 - ☐ v. 30: Volatiles in Magmas **\$28**
 - ☐ v. 31: Chemical Weathering Silicate Minerals **\$28**
 - ☐ v. 32: Structure, Dynamics, and Properties of Silicate Melts **\$28**

- ☐ v. 33: Boron: Mineralogy, Petrology and Geochemistry .. **\$32**
 - ☐ v. 34: Reactive Transport in Porous Media **\$28**
- 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) **\$30**
 - ☐ Crystal Structures, Volume I, Patterns and Symmetry, by M. O'Keeffe & B.G. Hyde **\$36**
- Mineralogical Society Series* (25% member discount)
- ☐ v. 1: Deformation Processes in Minerals... **\$133.95**
 - ☐ v. 2: High-Temp. Metamorphism... **\$115.50**
 - ☐ v. 3: Stability of Minerals **\$182.95**
 - ☐ v. 4: Clay-Pore Fluid Interactions **\$165.95**
 - ☐ v. 5: Mineral Surfaces **\$46.95**
 - ☐ v. 6: Microanalytical Techniques in the Geosciences .. **\$52.50**
 - ☐ v. 7: Rare Earth Minerals **\$55.00**

CD-ROM

☐ **MinSource.** I have been an MSA member for 3 years. Please request Chapman & Hall to send me ☐ demonstration ☐ subscription materials and information. I ☐ do ☐ do not now subscribe to *Mineralogical Abstracts*.

Other Publications (no member discount)

☐ Fifth International Kimberlite Conference Proceedings (two volume set) **\$45 + postage:**
U.S.-**\$3.75/set**, Canada and Mexico-**\$6/set**, Other-**\$6.75/set**.

American Mineralogist - back issues

Vol.	Member	Nonmember
1-64	Contact Periodicals Service Company, 11 Main St., Germantown, NY 12526 (518)537-4700	
66-74	\$3/issue, \$18 vol.	\$3/issue, \$18/vol.
75-80	\$5/issue, \$30 vol.	\$250 volume

_____ copies of v._____, issue_____/_____, at \$_____
use back of form to list more issues if necessary

Miscellaneous (no member discount)

- ☐ MSA Garnet Crystal Design Tie **\$12**
choose ☐ yellow on burgundy ☐ coral on blue
- ☐ MSA 75th Anniversary T-Shirt (large only) **\$15**
member price **\$12**

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 20036-5203. Phone: (202) 775-4344; Fax: (202) 775-0018

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Country: _____ Postal Code: _____

Payment: check in U.S. funds drawn on a U.S. bank, money order, or credit card:

☐ Visa ☐ MasterCard ☐ Diners Club ☐ American Express

Card #: _____ Exp Date: _____

Signature: _____

Print name as it appears on card: _____

A. Total for member discount books	
B. less 25% member discount (A x 0.25)	
C. Total non-discounted items	
D. Shipping (no charge for surface mail/library rate except as noted) For airmail, UPS, or invoiced orders, contact MSA	
Total (A-B+C+D)	

Vasconcelos, Flavio, 15 Mines Park, Golden, CO 80401, USA.
Ph: 303-215-0212. Fax: 303-273-3413. Email:
fvasconc@mines.edu. (S-97)

Viollier, Eric, School of Earth & Atmospheric Sciences, Georgia
Institute of Technology, 221 Bobby Dodd Way, Atlanta, GA
30332-0340, USA. Ph: 404-894-3917. Fax: 404-894-5638.
Email: ericv@aqchem.eas.gatech.edu. (M-97).

Walder, Ingar, 8400 Menaul Blvd., NE S196, Albuquerque,
NM 87112, USA. Ph: 505-293-5945. Fax: 505-275-2550.
Email: sarb4you@aol.com. (M-97).

Wassenaar, Leonard I., National Hydrology Research Institute,
Saskatoon, Saskatchewan, S7N 3H5 CANADA. Ph: 306-975-
5747. Fax: 306-978-5143. Email:
wassenaarl@nhri.sk.doe.ca. (M-97).

West, Brian P., School of Oceanography, University of
Washington, Box 357940. Seattle, WA 98195-7940, USA. Ph:
206-543-5156. Fax: 206-543-0275. Email:
bpw@ocean.washington.edu. (S-97).

Wetzel, Laura, Dept. of Earth & Planetary Sciences,
Washington University, St. Louis, MO 63130, USA. Ph: 314-
935-4080. Fax: 314-935-7361. Email:
laura@zonvark.wustl.edu. (S-97).

Wijsman, Jeroen, Netherlands Institute of Ecology, Centre for
Estuarine and Coastal Ecology, Vierstraat 28, 4401 EA Yerseke,
THE NETHERLANDS. Ph: +31 113 571920. Fax: +31 113
573616. Email: wijsman@cemo.nioo.knaw.nl. (S-97).

Zhang, Yong, Department of Geology, University of South
Florida, Tampa, FL 33620, USA. Ph: 813-972-2549. Fax:
813-974-9674. Email: yzhang@chuma.cas.usf.edu. (S-97).

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 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 or fax us for specific quotes.

Excalibur-Cureton Company

A subsidiary of Excalibur Mineral Co.

1000 N. Division Street - Peekskill, NY 10566

Tel: (914)739-1134 Fax: (914)739-1257



1015 Eighteenth Street, N. W.
Suite 601
Washington, D. C. 20036

NON-PROFIT ORG.
U.S. POSTAGE
PAID
PERMIT NO. 4450
DAMASCUS, MD