

The Lattice

The Newsletter of the
Mineralogical Society
of America

Subscription and membership
information
is on page three.

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Awards Presented at MSA Lunch in Denver

By Andrea Koziol

The eighty-third annual awards luncheon of the Mineralogical Society of America was held on October 29, 2002, during the 2002 Geological Society of America meeting in Denver, Colorado. Medallists were Werner Schreyer (Roebing Medal), John M. Eiler (MSA Award) and David P. Hill (Distinguished Public Service Medal).

Werner Schreyer was awarded the Roebing Medal, the Society's highest honor, in recognition of lifetime scientific achievement. He received his Doctor's degree in 1957 from the University of Munich, Germany, for petrographic work on rocks of the Bavarian Forest. From 1958 to 1961 he worked as Post-doctoral Fellow at the Geophysical Laboratory at Washington, D.C., together with H.S. Yoder, Jr. and J.F. Schairer. During 1962-1965 he was Scientific Assistant and Dozent at the Mineralogy Institute of the University of Kiel, Germany, before being appointed to the Chair for Mineralogy and Petrology at the new Ruhr-University of Bochum, Germany (1966-1996). His research interests are the mineralogy of rock-forming minerals and the petrology of metamorphic rocks studied in nature as well as by experiment, with special emphasis on laboratory studies that are pertinent to interpreting minerals and rocks in the field. This has resulted in the publication of more than 200 scientific articles. He served as President of the German Mineralogical Society (1970-1972), Chairman of the IUGS-Commission on "Experimental Petrology" (1970-1976) and President of the Alfred-Wegener-

Continued
on page 10



(From left to right) Citationist for Roebing Medalist: Peter J. Wyllie; Marianne Schreyer and Roebing Medalist: Werner Schreyer; MSA President: Rod Ewing.

GMR to merge with Journal

by John Brady and Frank Spear

Commencing in January 2003, *Geological Materials Research* (GMR) and *American Mineralogist* will merge through the creation of an "Electronic Article" section of *American Mineralogist*. Abstracts of electronic articles will appear in the paper version of *American Mineralogist*, and the full text version will appear on-line at <http://gmr.minsocam.org>. The joining of these two journals will consolidate and simplify the management of MSA journals, while maintaining a unique electronic publication venue for the mineralogical sciences. With the abstracts of electronic articles appearing in *American Mineralogist*, it should be

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(From left to right) Citationist for MSA Award Recipient: John W. Valley; MSA Award Recipient: John M. Eiler; MSA President: Rod Ewing.

Letter from the President



Financial prudence necessary for active, successful society

by Doug Rumble

Dear MSA members:

This is my first opportunity to write to the membership on the state of the Mineralogical Society of America. The reports given in Council by the Secretary, David Jenkins, the Treasurer, Jim Blencoe, the *American Mineralogist* editors Bob Dymek and Lee Groat, the Reviews editor Paul Ribbe, and the Executive Director Alex Speer reveal an active and successful Society. The MSA endowment funds have clearly suffered at the hands of Wall Street's bear market. It is necessary to exercise prudent fiscal discipline in the coming year, but major

budget cuts are not foreseen.

The recent MSA council meeting in Denver marked the end of the terms of councilors Dave Bish and Jeff Post, both of whom have served the society with distinction. Continuing councilors Peter Heaney, Craig Manning, Kathy Nagy, and Nancy Ross have been joined by newly elected Barb Dutrow and Becky Lange. The Society owes much to the dedication of these volunteers.

Rod Ewing concluded his Presidency in Denver with a riveting address on the metamict state that included a computer animated sequence showing the impact on a crys-

tal structure of alpha-particle radioactive decay and recoil. Rod's enduring legacy to MSA will be a proposed monthly magazine featuring articles of general interest in mineralogy and geochemistry. The new magazine should effectively bridge disciplinary boundaries between mineralogists, geochemists, and petrologists. It is also hoped that it will inform the public and focus the attention of amateurs, collectors and scientists on interests held in common.

Kase Klein has stepped down as Past President. His wise advice will be missed in Council meetings.

Please join me in thanking

these and all the MSA volunteers who make our society possible!

The Society is facing up to the challenge of electronic publishing. The *American Mineralogist* (AM) is available to members at www.minsocam.org (access to full text requires e-mail address, membership number, and a subscription) as is MSA's electronic journal Geological Materials Research. Beginning in January, subscriptions to AM will be available to libraries as downloadable PDF files in addition to traditional paper copies. The AM editorial office, the MSA business office, and the MSA Council

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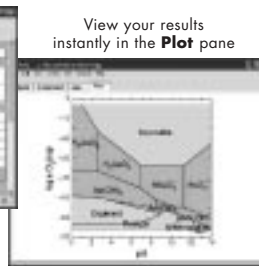
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have all worked towards providing these new services.

The MSA is a founding member of a group that includes the American Association of Petroleum Geologists, American Geological Institute, Geological Society of America, Geological Society of London, Society of Exploration Geophysicists, and the Society for Sedimentary Geology, to establish a publishing aggregate encompassing a wide range of journals in the Earth Sciences. The purpose of the initiative is two-fold: (a) to achieve efficiency and economies of scale in publishing be it electronic or paper media; and (b) to develop a marketing capability that is more competitive with large commercial publishers. The development of a publishing aggregate that suits the needs of MSA will be a top priority for the MSA Council in the coming year. Members will be kept fully informed via the Lattice.

I am grateful for the honor bestowed by the MSA Presidency and also aware of the responsibility that it entails. Please write or call and let me know how you think MSA is doing!

To contact Doug Rumble: Geophysical Lab, 5251 Broad Branch Rd., NW, Washington, DC, 20015-1305; E-mail: rumble@gl.ciw.edu; Phone: 202-478-8990.

Am Min/GMR merger, continued from page 1

easier for readers to find electronic articles, they will be cited in all the bibliographic databases important to MSA members, and there will be a paper record of the publication of the articles. During the first year of this merger, abstracts of articles previously published on-line in GMR will appear in issues of *American Mineralogist*. Readers will find the first abstracts appearing in the January-February 2003 issue.

Geological Materials Research was inaugurated in October 1998 under the sponsorship of the Mineralogical Society of America. The mission of the journal has been to provide a means for authors to utilize the capabilities of electronic publication for the enhancement of scientific communication. GMR has been unique among geological publication venues in its commitment to use state-of-the-art technologies such as those described at http://gmr.minsocam.org/Examples/GMR_Examples.html. *American Mineralogist* electronic articles will continue that commitment through the publication of papers that include design elements that cannot appear in print.

Manuscripts may be submitted now to *American Mineralogist* for publication as an electronic article via the web submission system at <http://minsocam.allentrack.net>; QuickTime videos can be uploaded for peer review. For more unique electronic situations contact the editorial office for submission guidance (editorial@minsocam.org). Articles especially suitable for electronic publication are those in which extensive use of color, animations, or interactive figures is an integral part of the scientific presentation. Authors who are interested in submitting an electronic article can find instructions on the *American Mineralogist* web site or can contact one of the "electronic editors," John Brady John Brady (jbrady@science.smith.edu) or Frank Spear (spearf@rpi.edu), who will be happy to provide assistance with technological details.



The Lattice is published quarterly (February, May, August, November) by the Mineralogical Society of America. It is distributed to MSA members and subscribers as a service. Articles and letters 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 and Geochemistry* series; *The Lattice*; special subscription rates for *Mineralogical Abstracts*, *Physics and Chemistry of Minerals*, *Journal of Petrology*, *Rocks and Minerals*, and *Mineralogical Record*; 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 2003: professional members \$50; student members \$5. *American Mineralogist* subscription: members add \$35 (paper and electronic); \$10 electronic. Membership is on a calendar year basis. Individuals who join after January 1, 2003 will be sent all back issues of volume 88 for 2003.

Additional membership information and an application, and/or a price list of the Society's publications are elsewhere in this newsletter, or contact the Business Office.

Institutions may subscribe to the 2002 volume of *American Mineralogist* for the annual rate of \$580 in the US and \$600 for non-US addresses. The subscription price includes any new volumes of the *Reviews in Mineralogy and Geochemistry* series and issues of the *Lattice* published during the calendar year of the subscription. Payment must be received in full before a subscription will be started.

2003 President: Doug Rumble, Carnegie Institution

Past-President: Rodney C. Ewing, Univ. Michigan

Vice President: Michael A. Carpenter, University of Cambridge

Secretary: David Jenkins, Binghamton Univ.

Treasurer: James G. Blencoe, Oak Ridge Nat. Lab.

Editor of The Lattice: Andrea Koziol, University of Dayton

MSA Executive Director: J. Alexander Speer

Production Manager: Rachel A. Russell

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Notes from Washington

by J. Alexander Speer

- MSA 2003 membership renewals were mailed in early November 2002. If you have not renewed your MSA membership, and not received a paper notice by time you read this, please contact the Business Office.

MSA members for whom we have e-mail addresses were sent two notices about online membership renewal. About 450 members did so before we had to produce paper renewal notices. Those of you who renewed online might have noticed changes from last year. It was on our newer website computer, and had online credit card information submission. There were few problems, mostly involving either expired security certificates on members' computers or servers or use of dashes or spaces when entering the credit card numbers or expiration dates. Otherwise it went smoothly, with the added advantage that MSA is no longer handling actual credit card information.

Members and Fellows who are in the senior, honorary, and life categories were also sent renewal notices. They need not renew. They were sent notices because this seems the best way to prompt an update of membership information, particularly mailing and e-mail addresses.

- In early November the rest of the MSA website was transferred to the new computer. For the most part you may have not noticed many differences immediately. Member access to portions of the site is by e-mail address and member ID number. These were chosen because they are precise and unique identifiers. The same cannot be said about names and cities. MSA does have members with the same names, and people often forget precisely what name and mailing address information they gave us.

- Ask-A-Mineralogist receives about 60-100 questions a month since school started. Those of you signed up for the MSA-Talk list have seen requests for information to answer some of these. There is now a FAQ page with some helpful homework links to sites that could answer the commonest questions as well as a page of the important economic minerals. In Collector's Corner there are now close to 200 articles from older issues of *American Mineralogist*

and a virtual field trip to the Keweenaw peninsula of Michigan. *Rocks and Minerals* had a nice paragraph and graphics promoting the Mineralogy4Kids portion of the MSA site in the editorial section of the November/December issue. MSA's Teaching Mineralogy Special Interest Group has included a list of links to mineralogy courses on the internet. You can reach all of these under the "Education and Outreach" heading of the MSA homepage.

- In this issue of *The Lattice* there is an announcement of the 2004 Grant for Research in Crystallography from the Edward H. Kraus Crystallographic Research Fund and the 2004 MSA Grant for Student Research in Mineralogy and Petrology Research from an endowment created by contributions from the MSA membership. Council increased the amount of the grants to \$5000 starting in 2002. This was thought to be a more attractive sum than the earlier \$3500, and enough to make an impact on some research. For the 2003 grants there were 56 applicants, up from 38 in 2002. Only three could be funded, though many more were deserving.

- MSA does its membership figures for the year just before renewal notices for the next year are sent. There was another pleasant surprise this year. MSA had more members than last, and the highest number since 1995. If you know someone who ought to be a member of MSA, invite him or her to join.

79% of MSA members have subscribed to the journal in some form in 2002. This is comparable to last year's 77%.

Continued on page 21

History of Membership

Category	1995	1996	1997	1998	1999	2000	2001	2002
Membership								
Members								
regular	1300	1227	1191	1157	1152	1113	1180	1178
life dues	84	78	72	72	71	72	68	62
Fellows								
regular	318	356	334	310	328	313	297	280
life dues	156	152	148	143	144	142	138	133
Senior								
members	22	22	25	23	20	22	49	59
fellows	28	34	45	51	56	57	75	84
Students	287	252	252	237	220	213	320	351
Honorary	4	4	3	3	3	3	3	3
Spouses	5	4	—	—	—	—	—	—
Compl.							7	
TOTAL	2204	2129	2070	1996	1994	1935	2137	2157
Journal Subscriptions								
Members								
members	1792	1743	1658	1549	1545	1537	1451	
students	287	252	252	237	202	213	213	
paper								1446
electronic								266
subtotal	2079	1995	1910	1786	1747	1750	1664	1712
Institutions								
domestic	592	596	600	594	584	601	585	584
foreign	512	458	425	384	328	304	288	276
subtotal	1104	1054	1025	978	912	905	873	860

Secretary's report to the 83rd MSA Business meeting

by David M. Jenkins, MSA Secretary

The 83rd annual business meeting of the Mineralogical Society of America was held on October 29, 2002, at 4:50 PM in the Colorado Convention Center, Denver, Colorado. What follows is a brief overview of the main actions taken by council and the executive committee, society election results, and other actions since the last business meeting.

MEMBERSHIP

As of Sept. 26, 2002, the total membership of the society stands at 2157. This is slightly higher than the total enrollment for the society last year and considerably higher than the enrollment in 2000. Please continue inviting your colleagues but especially students to join MSA. The business office encourages all members to use the online membership renewal process that saves the society the cost of sending paper renewal notices to members. To help entice members to renew early, there is again this year a \$5 discount on the dues for those who renew their membership, either electronically or by paper, before December 31, 2002.

Current MSA membership

Regular members:	1178
Life members:	62
Fellows	280
Life fellows	133
Senior members	59
Senior fellows	84
Students	351
Honorary members	3
Spouses	none
Complimentary	7
Total	2157
Domestic Institutions	584
Foreign institutions	276
Total	860

The total number of institutional subscriptions, 860, continues to decline but at a much slower rate than in the past 5 years. The losses continue to be in the number of foreign institutional subscriptions, which are now almost half of what they were in 1995 (512). Domestic institutional subscriptions have leveled off this year.

NEW FELLOWS

I am pleased to announce the following eleven new Fellows of the Society:

Richard J. Arculus
 J. Michael Brown
 Robert T. Downs
 Masaki Enami
 Ching-Hua Lo
 Alain Manceau
 Catherine Ann McCammon
 Takashi Murakami
 Eiji Ohtani
 David Christopher Smith
 Lars Stixrude

The society extends its congratulations to these individuals! Let me remind you that the Committee for Fellows always welcomes your nominations of society members for this particular honor.

MEDALLISTS/AWARD WINNERS:

I am also pleased to announce the following Medallists and Research Grant Recipients for 2003:

Roebing Medallist is Charles T. Prewitt
 Distinguished Public Service Medallist is George Harlow
 Dana Medal Award recipient is R. James Kirkpatrick (for 2004)
 MSA Award recipient is Guillaume Fiquet

2002/2003 Kraus Crystallographic Research Grant recipient is **Nicholas W. Hayman** for the proposal "Mesophases and minerals: A comparison of electron, X-ray, and modeled diffraction patterns from low crystallinity clay minerals". This study will be conducted at the University of Washington.

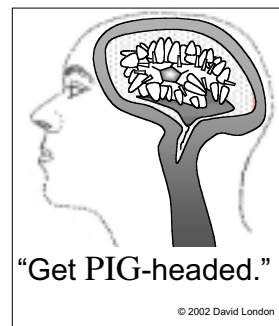
2002/2003 Mineralogy/Petrology Research Grant recipients are:

Andrew S. Madden for the study "Nanoscale observations of redox reactions at mineral surfaces with enzyme-activated atomic force microscopy," which will be conducted at Virginia Polytechnic Institute and State University.

Abigail Spieler for the study "Mineralogic control of trace element mobility in basaltic aquifers," which will be

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Pegmatite Interest Group



Are you interested in the mineralogy and geology of pegmatites? If so, visit the website for the Pegmatite Interest Group (PIG), hosted by the Mineralogical Society of America at

<http://www.minsocam.org/msa/Pegmatites.html>

Keep up on news, events, & information about pegmatites and their minerals. Current postings include a field guide to pegmatites in Madagascar, a report on a new elbaite-bearing pegmatite in the Italian Alps, and weekly updates on gem mining at the Cryo Genie pegmatite, southern California.

Send contributions to the PIG site in electronic formats only to Dr. David London (editor and MSA representative) at

dlondon.ou.edu.

Secretary Report, continued from page 5

conducted at Stanford University.

The *Best Paper Award for 2001* goes to Bret T. Peppard, Ian M. Steele, Andrew M. Davis, Paul J. Wallace, and Alfred T. Anderson for the article "Zoned quartz phenocrysts from the rhyolitic Bishop Tuff," which appeared in the *American Mineralogist*, Volume 86, pages 1034–1052.

Council has decided not confer a Best Paper Award for 2000.

Congratulations to all of the award and research-grant recipients. Council encourages you to nominate individuals for the various awards; detailed information can be found on the MSA website (www.minsocam.org). Please encourage students to apply for the various research grants that provide funding up to \$5000 each.

As a reminder, MSA offers the *Undergraduate Award* to outstanding undergraduates recommended by faculty members. In addition to providing recognition to deserving students, these awards can help make the society a more tangible entity for undergraduates and the population at large. Details on nominating undergraduates can be found on the MSA website.

SHORT COURSES

The society remains very active in sponsoring short courses. In 2002, there was, or will be, the courses:

Phosphates: Geochemical, Geobiological and Materials Importance was just held on October 26 and 27 at Golden, Colorado, prior to the GSA meeting. It was organized by Matthew J. Kohn and John Rakovan. There were approximately 60 in attendance and it was well received.

Applications of Synchrotron Radiation in Low-Temperature Geochemistry and Environmental Science will be held on December 4 and 5 in Monterey, California, prior to the Fall AGU meeting. This short course is sponsored by the Geochemical Society and is being convened by Paul Fenter, Mark Rivers, Neil Sturchio, and Steve Sutton.

Plastic Deformation and Deformation Microstructures of Minerals and Rocks is to be held near UC-Berkeley on December 4 and 5 before the Fall AGU meeting. Conveners are Shun-ichiro Karato and Hans Rudolf Wenk.

In 2003 there will be:

Zircon being organized by John Hanchar and Paul Hoskin to be held at Freiburg, Germany, in conjunction with the joint assembly of the EGS, AGU, and EUG at Nice, France, in April of 2003.

Uranium Series Geochemistry that is sponsored by the Geochemical Society and being organized by Bernard Bourdon, S. P. Turner, Gideon M. Henderson, and Craig C. Lundstrom, which is scheduled for April 14-17 in Nancy, France, which is also to be held in conjunction with the EGS-

AGU-EUG meeting at Nice, France.

Bio mineralization co-sponsored with the Geochemical Society and convened by Patricia Dove, James De Yoreo, and Steve Weiner, which will be held prior to the Fall AGU meeting.

In 2004 the following short courses are being planned:

Epidote Group Minerals is being organized by Axel Liebscher and tentatively planned for the Goldschmidt Conference in Denmark.

Stable Isotopes of Intermediate to Heavy Mass Elements, being organized by Clark Johnson, Francis Albarède, and Brian Beard for the joint AGU-CGU meeting in Montreal, Quebec, in the spring of 2004.

In 2005:

Molecular Geomicrobiology: from genes to geochemical cycles that is being organized by Jill Banfield and Ken Nealson.

It should be mentioned that seven of the recent short courses and/or RiMG volumes have received financial support at a level of approximately \$15,000 each from various sources: five from the US Department of Energy, one from the National Science Foundation, and one from the Italian Academy of Science. MSA is grateful to all of these organizations for their financial support.

RiMG PUBLICATIONS

The following RiMG volumes are either now in print or are planned for publication in 2002:

Volume #46 titled *Micas: Crystal Chemistry and Metamorphic Petrology* edited by A. Mottana, F. P. Sassi, J. B. Thompson, Jr., and Steve Guggenheim is now on sale. This volume is an outgrowth of a short course held in Rome in November 2000.

Volume #47 titled *Noble Gases in Geochemistry and Cosmochemistry* edited by D. Porcelli, C. Ballentine, and R. Wieler is now on sale. This volume appeared in time for the Goldschmidt Conference held in Davos, Switzerland, in August of this year.

Volume #48 titled *Phosphates: Geochemical, Geobiological and Materials Importance* edited by Matt Kohn, John Rakovan, and John Hughes appeared in time for the MSA short course that was convened just prior to this meeting and is also on sale at the MSA Business office.

Volume #49 titled *Synchrotron Radiation in Low-temperature Geochemistry and Environmental Science* edited by Paul Fenter et al. for the Geochemical Society's short course at the Fall AGU meeting, is in press. Thanks go to Jodi Rosso for overseeing publication of this volume.

Volume #50 titled *Beryllium: Mineralogy, Petrology and Geochemistry* edited by Ed Grew is in press. There is no

short course associated with this volume.

Volume #51 titled *Plastic Deformation and Deformation Microstructure in Earth Materials* edited by Shun-ichiro Karato and H-R. Wenk is being prepared for the accompanying short course at the Fall AGU meeting and should go to press by the end of December.

A special thanks goes to Paul Ribbe as Series Editor for the highly successful and widely cited *Reviews in Mineralogy and Geochemistry* series. Paul has been the series editor since its inception in 1974 starting with Volume 1 on sulfide minerals. Council has received notice from Paul that he wishes to step down as series editor, or at least reduce the number of volumes to two per year until a replacement editor can be identified. I believe I speak for all of us in the society in extending hearty thanks for his 28 years of service and the editing of over 50 RiMG volumes and monographs.

MSA LECTURE PROGRAM

The Lecture Program continues to be one of the more visible and most successful endeavors of the Mineralogical Society of America. This year MSA's lecturers are:

Thomas Armbruster, University of Berne, Switzerland, who is speaking on: *Natural Zeolites: From structure to applications* and *From construction kits and building blocks to complex mineral structures: How mineralogists learn what children knew for centuries*.

Mickey Gunter, University of Idaho, who is speaking on: *Health effects of inhaled dust: Idaho farmers, Libby miners, and New York firefighters* and *The future of polarized light microscopy: dim, bright, or extinct?*

Robert Hazen, Carnegie Inst. of Washington, Geophysical Lab, who is speaking on: *Life's rocky start: Possible roles of minerals in the origin of life* and *Emergence: Minerals and the rise of complexity on the Archaean Earth*.

MSA gratefully thanks these folks for their time and effort in speaking to colleges and universities around North America and Europe, and to Helen Lang for coordinating this program.

We also thank last year's speakers Bob Bodnar, Catherine McCammon, and Roberta Rudnick.

DEATHS

I would like to ask the audience to please rise at this time to honor those fellows and members of the society who have passed away this year. Please remain standing and observe a moment of silence after the names have been read.

W. M. D. Bryant, Life Fellow, 1936
Nelson B. Dodge, Life Member, 1945
Perry L. Ehlig, Member, 1959
Paloa Gallitelli, Life Fellow, 1950
George E. Hesselbacher, Jr., Senior Member, 1975
Ian O. Knizek, Life Member, 1946
William S. MacKenzie, Senior Fellow, 1949
Henry C. Mullner, Life Member, 1947
Sidney W. Poole, Life Member, 1945
John Sinkankas, Fellow, 1956
Deane K. Smith, Jr., Senior Fellow, 1954

Lloyd W. Staples, Life Fellow, 1934

Thank you.

Anyone who wishes to prepare a memorial, please contact Alex Speer, in the Business Office, who is serving in the capacity of editor for memorials in the American Mineralogist.

COMMITTEES

MSA's endeavors depend primarily on the volunteer work of its members serving on the many committees that are in place. Speaking as the one who has the privilege of contacting you to serve on these committees, let me extend a special "thank you" for taking the time to help MSA on these various committees. Without your help, MSA could not undertake its many functions to educate, grant money, and continue to serve our profession. Those who would like to volunteer their time and effort to serve on a committee are welcome to contact Dave Jenkins, Alex Speer, or the in-coming chair of the Committee on Committees, Michael Carpenter.

NEW DEVELOPMENTS

There are several new publication-related ventures that the society is currently working on. First, MSA is currently working with five other societies and one institution to form an electronic publishing aggregate, as a separate corporation, that is tentatively called GeoScienceWorld. The purpose of this aggregate includes, among other things, providing academic institutions and others easy access to the most comprehensive collection of peer-reviewed geoscience journals that are currently published. It is hoped that, by pooling the efforts of many societies, we will be able to advance scientific communications in the geological sciences in ways that may not be possible by the efforts of individual organizations. One of the primary services that will be provided by this aggregate is access to the full-text content of the journals and other various publications (monographs, field guidebooks, conference proceedings, etc.) of the participating organizations. There are many details to be worked out on the organization, initial funding, and revenue collection for this aggregate. The target date for having this aggregate in full service is 2004.

Second, President Ewing has been instrumental in looking for ways to broaden the range of communication between the various mineralogical and geochemical societies, and perhaps eventually, to the general scientific community. To this end, he has initiated dialog between MSA, the Mineralogical Association of Canada, the Clay Minerals Society, the Geochemical Society, and several other societies to consider the concept of a multi-society publication. It is hoped that this publication would have the readership and circulation that such magazines as *Geotimes*, *Materials Research Society Bulletin*, or *Physics Today* has achieved. Discussions really have only begun on this subject, but it is something that council is quite enthusiastic about and hopes that it garners widespread support from the other societies.

Third, MSA acquired the copyright ownership of the

Continued on page 10

For the Year Ending June 30, 2002:

Report of the Financial Advisory Committee

The Committee is charged with oversight of the Society's investments and with reporting to the Council and membership. The Committee Chair reviews the Auditor's Report; the audit did not reveal any significant accounting problems and MSA continues to be in good financial health. This year, a large majority of the Committee felt uncomfortable evaluating the performance of the investments and suggested that a professional advisor be employed. The Council, in May, charged to Committee to suggest how professional advice might be obtained. The Committee Chairman developed five options, including discretionary managers and non-discretionary advisors, for the consideration of the Committee and the Council. The Committee Chairman will now devote his investment activities to the benefit of other institutions.

The total MSA endowment was \$1,865,712 as of June 30, 2002. The constituent Funds had the following balances (in thousands of dollars): (a) Roebing Fund total \$1,243; board restricted \$1122; unrestricted \$121. (b) MSA Endowment Fund total \$206; permanently restricted \$171; temporarily restricted \$35. (c) Mineralogy and Petrology Fund total \$240; permanently restricted \$92; temporarily restricted \$148. (d) Edward H. Kraus Crystallography Fund total \$148; permanently restricted \$108; temporarily restricted \$40. (e) Outreach Fund total \$29; permanently restricted \$26; temporarily restricted \$3.

MSA received 491 contributions totaling \$21,400 in support of public education and student research projects. Contributions to the Funds from July 1, 2001 to June 30, 2002 (the fiscal year for the investment funds) were as follows: Endowment Fund \$9548; Mineralogy and Petrology Research Fund \$5470; Edward H. Kraus Crystallographic Research Fund \$2020; and the Outreach Fund \$4363. The contributions came from North and South America, Europe, and countries of the Pacific Rim. The Society is very grateful and thanks its members for these contributions. One contribution was received from Africa and none from the Near

Disbursements from the Funds in support of Society activities during the investment-year ending June 30, 2002

Min and Pet	\$ 7,194	for two research grants
Kraus	\$ 3,688	for one research grant
Roebing	\$75,525	for the following activities:
Operations (deficit)	\$29,221	
Website	\$19,586	
Lectureship Program	\$11,286	
Life-member Dues	\$10,700	

East, the ex-soviet states, and Asia. M S A should make sure that it is meeting

the needs of its members who live in these areas. At the end of the report there is a description of the use of each of MSA's Funds (see next page).

This past year, 4.6% of the endowment was used to support 8.4% of MSA's activities. Comparable figures were 3.7% and 10.1%, respectively, in 2000, and 3.7% and 10.9% in 1999. The changes this past year can be explained by the decrease in the size of the endowment and the increase in MSA's total operating expenses. If the recent poor market performance continues, MSA may want to consider reducing the amount of support provided by the various Funds or increasing the invested balances.

The Society invests in a diversified portfolio of nine mutual funds and one money market fund. Most of the underlying investments are equities; 12.4% are in bonds, compared with 11% a year ago and 2% two years ago. Equity market performance during the past 12 months has been volatile and corporate bonds have been threatened by credit risk. This year, the market malaise affected all equity sectors. The performance of MSA's funds reflects that of the market: the value of MSA's investments declined \$335,708 (15%) to \$1,865,712.

Summary of Funds 2002

Investment Fund	\$	Investment Style
Artisan International	86	foreign stock
Brandywine	344	mid-cap growth
Brandywine Blue	196	mid-cap growth and value
Fidelity Equity Income	406	large cap value
Fidelity Equity Income II	245	large cap value
Fidelity Magellan	258	large cap value and growth
Strong Corporate Bond	232	Intermediate-term bond
Vanguard Extended Mkt Index	84	mid-cap value and growth
Vanguard Primecap	24	large cap value and growth
First Union money Market	22	money market
Owed the General Operating Fund	-33	
Total endowment	1866	

Alex Speer continues to be extremely helpful in providing summarized financial data. I thank him for his efforts and his effectiveness. MSA is fortunate to have such a talented and conscientious Executive Director.

Respectfully submitted,
 J. STEPHEN HUEBNER, CHAIR, FOR
 JAMES BLENCOE
 RODNEY EWING
 MICHAEL J. HOLDAWAY
 HARRY Y. MCSWEEN
 FRANK S. SPEAR

DESCRIPTION OF THE MSA FUNDS

1. Edward H. Kraus Crystallography Fund

a. Fund Purpose: To provide financial assistance toward future research in the field of crystallography 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 an inflation adjustment is temporarily restricted until March 31, 2016.

2. Mineralogy and Petrology Fund

a. Fund 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.

3. 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 old Endowment Fund, except for the original contributions from Col. Roebing. 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 Roebing 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 Roebing Fund plus the accumulated contributions and the inflation adjustment since that time.

4. Roebing 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 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. Roebing in 1925 and 1926 this fund is named the "Roebing Fund". c. A substantial portion of the Roebing Fund has been "Board Restricted" by the MSA Council and will thereby be treated as permanently restricted by the Society. The "Board Restricted" portion of the Roebing Fund will be calculated annually. If that balance shows an excess over the previous balance plus an inflation adjustment, the excess is to be transferred to the unrestricted portion of the Roebing Fund. d. All remaining money in the Roebing Fund is unrestricted for use by vote of Council with the following specific expenses to be charged to the Roebing Fund annually.

1. American Mineralogist Undergraduate Awards

2. Life Memberships

3. Roebing 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

5. Outreach Fund

a. Fund 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 to provide financial assistance for the Society's public service activities.

Awards, continued from page 1

Foundation (1982-1983). He is bearer of three medals and member, or foreign member, of six academies of science in Germany and abroad; he holds two Honorary Doctor's degrees and is Honorary Fellow of several geological and mineralogical societies of the U.K., U.S., and Germany. Peter J. Wyllie was Dr. Schreyer's citationist.

John M. Eiler received the Mineralogical Society of America Award for outstanding research early in one's research career. John Eiler attended Beloit College in 1985 and 1986, and received his B.Sc. degree in Geology from the University of Iowa in 1989. He earned his M.Sc. and Ph.D. degrees in Geology in 1991 and 1994, respectively, with John W. Valley as his advisor, at the University of Wisconsin, Madison. He was a postdoctoral fellow at the California Institute of Technology from 1994 to 1997, during which he studied the oxygen isotope geochemistry of the earth's mantle. He continued at Caltech as a Senior Research Fellow in 1997 and 1998 and since



MSA Presidents: Rod Ewing passing the gavel to Doug Rumble

1998 as an Assistant Professor of Geochemistry. His interests and those of his recent group members include applications of stable isotope geochemistry to problems in solid earth evolution, the origin of igneous rocks, meteoritics, planetary atmospheres, and the earth's atmosphere.

The Distinguished Public Service Award was presented to David P. Hill in recognition of his long and distinguished record of service with regard to volcano hazards issues. He graduated with a B.S. in geology from San Jose State University in 1958, a M.S. in geo-

physics from the Colorado School of Mines in 1961, and a Ph.D. in geophysics from the California Institute of Technology in 1971. He has researched the structure and seismotectonics of the western U.S. He served as Chief of the Seismology Branch of the USGS from 1978-1982 and in 1983 assumed his current position as Scientist-in-Charge of the USGS program to monitor and study volcanic unrest in Long Valley Caldera (now formally organized under the Long Valley Observatory). Robert L. Wesson was Dr. Hill's citationist.

Rodney Ewing also recognized the contributions of the MSA Distinguished Lecturers for 2001-2002, Robert J. Bodnar, Catherine Ann McCammon, and Roberta L. Rudnick.

Finally, Rod Ewing passed the gavel of the MSA presidency to Douglas Rumble, who then closed the 2001 MSA Awards luncheon.

Secretary, Continued from page 7

Handbook of Mineralogy as a gift from Richard Bideaux in 2001. The Mineralogical Society of America recognizes the value of this gift and the need to keep it current. Accordingly, council has established an editorial office, headed by Dick Bideaux, for the purpose of updating and maintaining the mineral database of the *Handbook of Mineralogy* and to continue converting the text files to PDF files for on-line access to the *Handbook of Mineralogy* through the MSA website.

2002 ELECTION RESULTS

I am pleased to announce the results of the spring 2002 elections:

New President of the Society is **Douglas Rumble, III**

Our new Vice President is **Michael A. Carpenter.**

David Jenkins remains in office as Secretary.

James Blencoe is Treasurer.

And the new Councilors are **Barbara L. Dutrow** and **Rebecca Lange.**

They will join the continuing councilors: **Craig Manning, Kathryn Nagy, Peter Heaney** and **Nancy Ross.**

We thank the out-going councilors David Bish and Jeffrey Post for 3 years of dedicated service to the society.

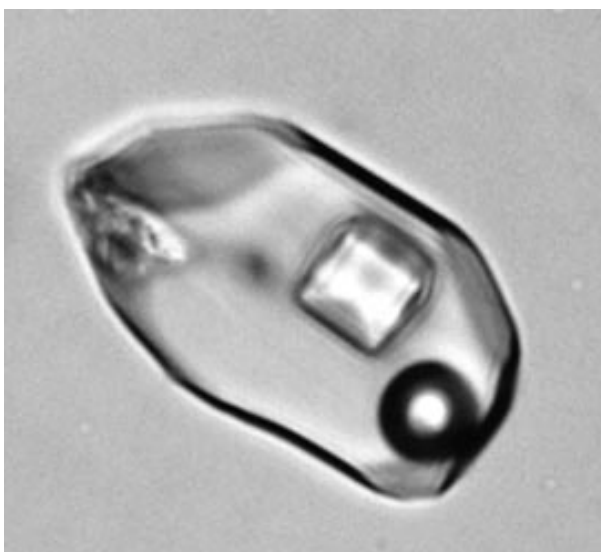
A total of 635 ballots were received by the August 1st deadline, representing 29% of the membership. You are strongly urged to vote as each vote really does make a difference in these closely contested elections. Let me extend a special thanks to those who ran for office.



(From left to right) Citationist for Distinguished Public Service Medalist: Robert L. Wesson; Ann R. Hill and Distinguished Public Service Medalist David P. Hill; MSA President: Rod Ewing

SHORT COURSES 2003

MINERALOGICAL ASSOCIATION OF CANADA



Analysis and Interpretation of Fluid Inclusions

Vancouver GAC-MAC-SEG 2003
May 24 and 25, 2003

Organizers IAIN SAMSON (University of Windsor),
ALAN ANDERSON (St. Francis Xavier University),
DAN MARSHALL (Simon Fraser University)

Objectives

- Introduce participants to both basic and advanced tools for the analysis and interpretation of fluid inclusions.
- Teach the participants about what fluid inclusions are, what types of data can be obtained from fluid inclusions, the approaches and techniques that can be used to analyze fluid inclusions. How such data are processed and interpreted, and where the limitations and pitfalls lie in the various techniques. Examples using the various techniques will also be called upon. There will be demonstrations.

Detailed list of topics can be viewed at
www.mineralogicalassociation.ca

Presenters Alan Anderson (St. Francis Xavier University); Ronald Bakker (University of Leoben, Austria); Robert Bodnar (Virginia Tech); Philip Brown (University of Wisconsin); Robert Burruss (USGS); Larry Diamond (University of Leoben, Austria); Brian Fryer (University of Windsor); Joel Gagnon (University of Windsor); Sarah Gleeson (University of Alberta); Robert Goldstein (University of Kansas); Stefano Salvi (CNRS, France); Iain Samson (University of Windsor); Anthony Williams-Jones (McGill University).

For more information, contact **Iain Samson** at
ims@uwindsor.ca

To register www.vancouver2003.com

Registration fee **CDN\$290** (students **CDN\$165**)

Environmental Aspects of Mine Wastes

MAY 24 and 25, 2003, Vancouver

Conveners J.L. Jambor, D.W. Blowes & A.I. Ritchie

This two-day intensive short course, to be held at Robson Square in the heart of downtown Vancouver, will cover a wide spectrum of environmental issues dealing with mine-waste solids and effluents. Individual presentations will be given on environmental regulations and compliance, mine-waste geology, hydrology, mineralogy, geochemistry, microbiology, drainage prediction, remediation, advances in ARD modelling, and case studies. The course will ensure not only entry-level familiarization with the various topics of primary concern in studies of mining-related wastes, but will also provide exposure to the advances that have been made in these and related fields over the past decade.

Presenters will be C.N. Alpers (USGS, Sacramento), J.W. Bennett (ANSTO, Australia), D.W. Blowes (U. Waterloo), K. Ferguson (Placer Dome) and M. Filion (Teck Cominco), W.D. Gould (NRCan, Ottawa), J.L. Jambor (LRC, Vancouver), B. Kimball (USGS, Utah), K. Lapakko (Minnesota Natural Resources), M. Logsdon (Geochimica, CA), U. Mayer (UBC), D.K. Nordstrom (USGS, Boulder), W. A. Price (B.C. Ministry of Energy and Mines), C.J. Ptacek (U. Waterloo), M. Raudsepp (UBC), A.I.M. Ritchie (ANSTO, Australia), R. Seal (USGS, Reston), L. Smith and R. Beckie (UBC), K. Walton-Day (USGS, Denver), and W. Wilson (UBC).

Registration fee: **CDN\$375** (students **CDN\$250**)
Early registration (prior to April 15, 2003):
CDN\$325 and **CDN\$200.**

Payable to MAC Short Course.

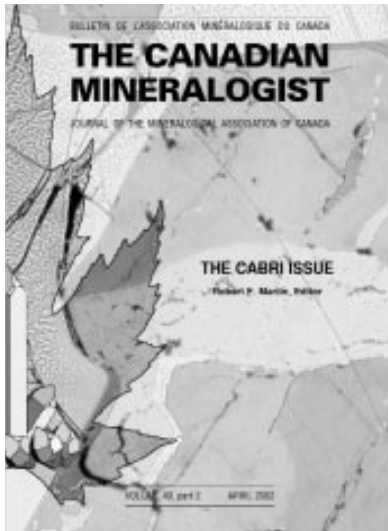
Remittances MAC business office

For more information John Jambor (JL.Jambor@aol.com)
or the MAC website (www.mineralogicalassociation.ca)

To download a registration form or to register online,
www.mineralogicalassociation.ca

NEW PUBLICATIONS 2002

MINERALOGICAL ASSOCIATION OF CANADA



The Cabri Issue

Focusing on PGM and precious metals

This issue of *The Canadian Mineralogist* (vol. 40, part 2, April 2002) honours Louis Cabri on the occasion of his retirement. More than 60 researchers and close collaborators, colleagues and admirers of his work, have contributed papers on the themes that have been recurrent in Louis Cabri's distinguished career of innovative research:

- Ore mineralogy of platinum-group minerals
- Phase-equilibria studies in sulfur-bearing systems
- Distribution of PGE in natural systems
- Crystal structure and crystal chemistry
- Mineralogy of ore assemblages

T140-2, 475 PAGES, 2002
US\$40* / CDN\$40**
MAC member price US\$32*/CDN\$32**

Synchrotron Radiation Earth, Environmental and Material Sciences Applications

Editors Grant S. Henderson and Don R. Baker

Short-course volume 30 presents what synchrotron radiation is, what the latest techniques are, what types of Earth, environmental and materials science problems can be investigated using synchrotron techniques, what the Canadian Light Source can do, how one gains access to the CLS and other sources, and how data are reduced and analyzed for specific techniques. Most of the material is at a level of understanding for most upper undergraduate and graduate students although recent results and ideas presented will appeal to both pure and applied researchers working on Earth, environmental and material sciences.

SC30, 2002, 178 PAGES
ISBN 0-921294-30-1
US\$40* / CDN\$40**
MAC member price US\$32*/CDN\$32**

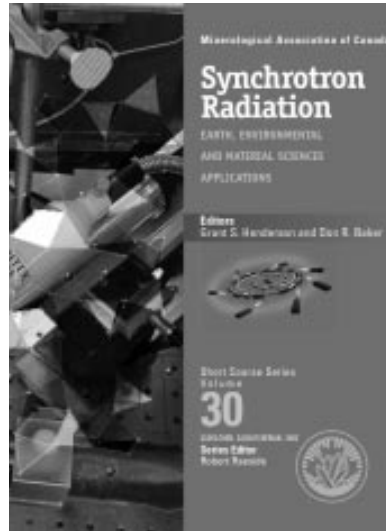


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1. Synchrotron Radiation: An Overview
—T.K. SHAM
2. The Canadian Light Source: Progress, and Opportunities for Earth, Environmental and Materials Science Applications
—G.M. BANCROFT & E.L. HALLIN
3. Powder and Single Crystal Diffraction Using Synchrotron Radiation—J.S. TSE
4. X-Ray Absorption Fine Structure Spectroscopy—DE-TONG JIANG
5. The Hard X-ray Microprobe—D.R. BAKER
6. Interpretation of X-Ray Photoelectron Spectra with Applications to Mineralogy and Geochemistry—H. W. NESBITT
7. The Application of Synchrotron Radiation to Amorphous Materials—G.S. HENDERSON

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Update on the MSA Distinguished Lecturer Program


By Helen M. Lang

I succeeded Guy Hovis as the Administrator of the MSA Distinguished Lecturer Program in 2000 at the same time that the Program was expanded to include a third European lecturer and lecture tours to Europe. Now that I have three years of experience with the Lecture Program, I would like to share with you some of my thoughts on the Program and feedback from lecturers and hosts. First of all, I would like to thank each of the Distinguished Lecturers with whom I've had the pleasure of working. All Lecturers report that, although the schedule is demanding, they have benefited from the experience by learning about the wide variety of educational styles and opportunities worldwide. They report that they initiated research collaborations and recruited graduate students also. Unusually complete feedback from hosts of 2001–2002 Lecturers (solicited by a special reminder) was uniformly positive! Sample quotations: "This program is a great invention and the idea of touring Europe, too, is an even greater one!" "Lectures made clear that research is an interesting, accessible occupation not conducted by 'remote' individuals." "I'm glad you're willing to send folks out into the 'empty place' where I live." And: "The program is a crown jewel for MSA—keep it up."


During the last three years MSA has sent Distinguished Lecturers to 109 institutions, 79 in North America, 30 in Europe, of which 63 were new to the program. Fifty visits were to BS-only or BS/MS institutions in the US. I know it's frustrating for Ph.D.-granting institutions not to get a Lecturer after repeated requests. However, Lecturers find that their experiences are better and they are exposed to more undergraduates at primarily undergraduate institutions and those in remote areas, and Council continues to believe that the Program should favor those institutions. Visits to undergraduate institutions expose their students and faculty to exciting

new research in mineralogy and petrology and encourage students to consider careers in those fields. I encourage those of you at Ph.D. institutions to continue making requests to the Distinguished Lecturer Program and to encourage undergraduate institutions in your region to also submit requests. I have a record of all requests since 1989, and pay attention to persistence. For example, this year I was able to satisfy requests from 9 Ph.D. institutions, which had made 3 or more previous requests and hadn't hosted an MSA Lecturer since 1998. Primarily undergraduate institutions do not exist in Canada and Europe; however, visits to institutions in remote parts of Canada and in eastern Europe serve a similar purpose. A group of Romanian students hitch-hiked about 400 miles to attend Bob Bodnar's lecture in Budapest and slept on the floor of the mineralogy lab during their stay, and a professor from Budapest took a vanload of students to Graz, Austria (a 6-hour drive), to hear Roberta Rudnick's lecture. One host reported: "This kind of opportunity is really important, especially for eastern Europeans; these youngsters here must realize that the world is open and the science is for everyone!"

The MSA Distinguished Lecturer Program is a very successful outreach effort of MSA of which we can all be proud. Bob Bodnar summarized the success and importance of the Program as follows: "The MSA Distinguished Lecturer Program is a valuable outreach activity that helps to shrink the scientific world by providing the opportunity for all involved to become more familiar with the commonalities as well as the differences in the way we do science and approach life in general." If you have comments concerning the Distinguished Lecturer Program, please e-mail them to me at hlang@wvu.edu.



SHORT COURSES



Zircon: Experiments, Isotopes, and Trace Element Investigations. April 3-4, 2003 (preceding joint EUG-AGU-EGS meeting in Nice, France to be held April 6-11, 2003), Freiburg, Germany. Organizers: John M. Hancher and Paul W.O. Hoskin. *Mineralogical Society of America*

U-series Geochemistry, April 3-4, 2003 (preceding joint EUG-AGU-EGS meeting in Nice, France to be held April 6-11, 2003), Paris, France. Organizers: Bernard Bourdon, Simon Turner, Craig Lundstrom, Gideon Henderson. *The Geochemical Society.*

Information and online registrations on the MSA website (http://www.minsocam.org/MSA/Short_Courses.html) and the GS website (<http://www.earth.ox.ac.uk/~gideonh/rimg/>) or the MSA Business Office, 1015 Eighteenth Street NW Ste 601, Washington, DC 20036-5212, USA. ph: 202-775-4344 fax: 202-775-0018 e-mail: business@minsocam.org. and The Geochemical Society, Department of Earth & Planetary Sciences, Washington University, One Brookings Dr, St. Louis, MO 63130-4899, USA. ph: 314-935-413, fax: 314-935-4121, e-mail: gsoffice@gs.wustl.edu.

New Publications

from the Mineralogical Society of America and the Geochemical Society *Reviews in Mineralogy and Geochemistry* (RiMG) series:

- Volume 46: Micas: Crystal Chemistry and Metamorphic Petrology, 2002; Annibale Mottana, Francesco Paolo Sassi, James B. Thompson, Jr., Stephen Guggenheim, editors, Eds. 449 pp. ISBN 0-939950-58-8. US\$32.00
- Volume 47: Noble Gases, 2002; Donald P. Porcelli, Chris J. Ballentine, and Rainer Wieler, Eds. 845 pp. ISBN 0-939950-59-6. US\$40.00
- Volume 48: Phosphates: Geochemical, Geobiological, and Materials Importance, 2002; Matthew J. Kohn, John Rakovan, Eds. 742 pp. ISBN 0-939950-60-X. US\$40.00
- Volume 49: Applications of Synchrotron Radiation in Low-temperature Geochemistry and Environmental Science, 2002; P. A. Fenter, M. L. Rivers, N. C. Sturchio, and S. R. Sutton, Eds. 579 pp. ISBN 0-939950-61-8. US\$32.00

More information about these publications is available on the MSA website at www.minsocam.org or from the MSA Business Office, 1015 Eighteenth Street NW Ste 601, Washington, DC 20036-5212, USA. ph: 202-775-4344 fax: 202-775-0018 e-mail: business@minsocam.org. You may also order these publications online.

The Geochemical Society and the Mineralogical Society of America present:

U-SERIES GEOCHEMISTRY

A two-day short course presenting advances in the application of U-series geochemistry across the Earth Sciences

April 3-4, 2003 Paris, France

(before the EGS-AGU-EUG joint assembly in Nice)

Analytical advances have revolutionized the field of Uranium Series disequilibria, impacting diverse fields from groundwater to mantle melting. For instance, mass spectrometry has greatly improved U-series dating techniques allowing accurate chronology of coral and speleothem paleoclimatic records. More comprehensive U-series database now exist for the field of paleoceanography, allowing examination of the rates of modern oceanic processes and investigation of past ocean productivity and circulation. Understanding melting and melt migration beneath mid-ocean ridges, hotspots and subduction zones has greatly progressed and recent U-series data place important constraints on the timing of magma crystallization. This short course will update knowledge in this active field of research and offers an opportunity for non-specialists to understand the basics of U-series geochemistry illustrated with strong cases studies and demonstrations of how dynamic processes affect the generation of U-series disequilibria.

The short course will be accompanied by publication of a *Reviews in Mineralogy and Geochemistry* volume on U-series Geochemistry which will be free to attendants.

Convened by: Bernard Bourdon (bourdon@ipgp.jussieu.fr)
Simon Turner (simon.turner@bristol.ac.uk)
Craig Lundstrom (lundstro@uiuc.edu)
Gideon Henderson (Gideon.Henderson@earth.ox.ac.uk)

Speakers include: Jon Blundy, Bristol
Bernard Bourdon, IPGP, Paris
Francois Chabaux, Strasbourg
Hai Cheng, Minnesota
Kirk Cochran, SUNY
Gideon Henderson, Oxford
Steve Goldstein, Los Alamos National Laboratory
Craig Lundstrom, University of Illinois
Alistair Pike, Oxford
Don Porcelli, Oxford
Dave Richards, Bristol
Peter Swarzenski, USGS
Simon Turner, Bristol University

Student Scholarships: A limited number of student scholarships including support for travel and registrations fees will be available. Please contact one of the conveners for more information.

Sponsored by: CEA, ANDRA, MAT-Finnigan, U.S. DOE

Details of the short course including registration information can be found at: <http://www.earth.ox.ac.uk/~gideonh/rimg>.

Mineralogical Society of America Publications Price List and Order Form

Reviews in Mineralogy and Reviews in Mineralogy and Geochemistry
(25% member discount)

___ v. 08: Kinetics of Geochemical Processes (1981)	\$20
___ v. 9A: Amphiboles: Mineralogy (1981)	\$20
___ v. 9B: Amphiboles: Petrology, Phase Relations (1982)	\$20
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___ v. 30: Volatiles in Magmas (1994)	\$32
___ v. 31: Chemical Weathering Silicate Minerals (1995)	\$32
___ v. 32: Silicate Melts (1995)	\$32
___ v. 33: Boron (2002 reprint)	\$36
___ v. 34: Reactive Transport in Porous Media (1996)	\$32
___ v. 35: Geomicrobiology (1997)	\$32
___ v. 36: Planetary Materials (2002 reprint)	\$40
___ v. 37: Ultra-High Pressure Mineralogy (1998)	\$32
___ v. 38: U Minerals & Chemistry (1999)	\$32
___ v. 39: Mineral Transformation Processes (2000)	\$32
___ v. 40: Sulfate Minerals (2000)	\$32
___ v. 41: High T & P Crystal Chemistry (2001)	\$36
___ v. 42: Molecular Modeling (2001)	\$32
___ v. 43: Stable Isotopes (2001)	\$32
___ v. 44: Nanoparticles (2001)	\$28
___ v. 45: Zeolites (2001)	\$32
___ v. 46: Micas (2002)	\$32
___ v. 47: Noble Gases (2002)	\$40
___ v. 48: Phosphates (2002)	\$40
___ v. 49: Synchrotron (2002)	\$36
___ v. 50: Beryllium (2002)	\$36

To Order: Indicate quantity, shipping, and cost information. MSA, CMS, and Geochemical Society members may take the 25% member discount where noted. Prepay orders under \$300. Send entire form to: Mineralogical Society of America, 1015 18th Street NW Ste 601, Washington, DC 20036-5212 USA. Phone: (202) 775-4344; Fax: (202) 775-0018 E-mail: business@minsocam.org. Publications may not be returned for refund or credit.

Shipping: Please add the following amounts for postage to book orders for which shipping is not indicated. Shipping is by surface mail that may take up to 4 months to some destinations. Contact the MSA Business Office for shipping rates by air mail, United Parcel Service, Federal Express, or other express service.

Shipping cost

No. of books	US	Canada	other
1	\$2.50	\$6.50	\$8.00
2	\$3.50	\$14.00	\$18.00
3 to 4, per book	\$1.25	\$5.50	\$7.00
5 to 7, per book	\$1.25	\$4.00	\$5.00
8 +, per book	\$1.25	\$3.00	\$4.00

Monographs (25% member discount)

___ Crystallography & Crystal Chemistry, F. D. Bloss	\$32
___ v. 1: Metamorphic Phase Equilibria, Spear	\$60
___ v. 2: Crystal Structures v. 1, O'Keeffe & Hyde	\$36
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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>) and the MSA Business Office, 1015 Eighteenth St NW Ste 601, Washington, DC 20036-5212, USA.

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Short Course Announcement

The Mineralogical Society of America presents:

Zircon: Experiments, Isotopes, and Trace Element Investigations

Dates: Thursday and Friday, April 3 and 4, 2003 (preceding joint EUG-AGU-EGS meeting in Nice, France to be held April 6 to 11, 2003). The short course will start at 8:30 a.m. on Thursday, April 3, and end in the evening of Friday, April 4. Saturday, April 5, will be a travel day for short course attendees to travel to Nice if they plan to attend the EGS-AGU-EUG meeting in Nice.

Location: All events will be held at the Institut für Mineralogie, Petrologie und Geochemie, Albert-Ludwigs-Universität Freiburg, Albertstrasse 23b, D-79104 Freiburg, Germany.

Conveners: *John M. Hanchar*, Department of Earth and Environmental Sciences, The George Washington University, Washington, DC 20006 USA. Tel: 202-994-4336, Fax: 202-994-0450, E-mail: jhanch@gwu.edu

Paul W.O. Hoskin, Institut für Mineralogie, Petrologie und Geochemie, Albert-Ludwigs-Universität, Freiburg, Germany. Tel: 49-761-2036416 Fax: 49-761-2036407, E-mail: paul.hoskin@minpet.uni-freiburg.de

Registration: Registration forms are available from the MSA Business Office, 1015 Eighteenth St., NW, Suite 601, Washington, DC 200036-5212 USA. Tel: 202-775-4344, Fax: 202-775-0018; via E-Mail: business@minsocam.org; or the MSA Home Page (<http://www.minsocam.org>). Registration forms with payment must be returned to the MSA Business office. Registration fees will be fully refunded if cancellation is received in writing on or before March 4th, 2003. You can also register online with a credit card. All participants and speakers must register. Registration is limited to 100 participants.

Logistics: Registration fee includes MSA short course sessions, refreshments at breaks (twice daily) on April 3 and 4, a banquet to be held the evening Thursday April 3, and a copy of *Reviews in Mineralogy and Geochemistry* volume. The registration fee does not include lodging, other meals, or transportation costs to and from Freiburg, Germany. Short course participants (and speakers) should arrange their own travel arrangements and local accommodations at one of the hotels in Freiburg listed on the following web page: <http://www.minpet.uni-freiburg.de/MSA.html> Freiburg, Germany is accessible by several modes of transportation, including major rail service, and can be easily reached from Frankfurt International Airport by train. Further travel information is also provided on the short course web page listed above. Preferred lodging is at the Hotel Atlanta, Rheinstrasse 29, D-79104 Freiburg, Germany Tel: 49 – 761-296970, Fax: 49-761-289090, <http://www.atlantahotel.de/> where a block of 75 rooms has been reserved for short course attendees and speakers. Use the code “Zircon” to get the prearranged room rate. Other options for accommodations are listed on the web page above. The Hotel Atlanta is a two-minute walk to the short course location in Freiburg.

Short Course Description: In past two decades much has been learned about the internal textures, trace element and isotope geochemistry (both radiogenic and stable), and chemical and physical properties and stability of zircon. This includes analyzing extremely small fragments of zircon with high degrees of age precision, and using *in situ* techniques for measuring both radiogenetic and stable isotopic composition. Related to this, there have been several experimental studies on diffusive transport of elements and isotopes of interest to both the radiogenic and stable isotope community. Many recent papers have presented results of studies using laser ablation ICP-MS (including multicollector), SIMS and the electron microprobe for *in situ* trace element analyses of zircon crystals from a wide range of rock types. Several studies have integrated imaging techniques such as cathodoluminescence and back-scattered electron imaging to guide the analysis location of *in situ* analyses. This short course is designed to fill the need for a comprehensive review of these different aspects of zircon by bringing together a group of internationally known researchers working in these different fields.

Speakers: Samuel A. Bowring (Massachusetts Institute of Technology)
Daniele J. Cherniak (Rensselaer Polytechnic Institute)
Fernando Corfu (University of Oslo)
Don Davis (Royal Ontario Museum)
Chris Fedo (The George Washington University)
Rodney C. Ewing (The University of Michigan)
John M. Hanchar (The George Washington University)
Paul W. O. Hoskin (Albert-Ludwigs-Universität, Freiburg)
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Lutz Nasdala (Johannes Gutenberg-Universität, Mainz)
Randy Parrish (NIGL-University of Leicester)
John W. Valley (The University of Wisconsin)
E. Bruce Watson (Rensselaer Polytechnic Institute)

This short course will be held in conjunction with an EGS-AGU-EUG symposium, Solid Earth Programme, VGP3.03 Zircon: Experiments, Isotopes, and Trace Element Investigations (also convened by J.M. Hanchar and P.W.O. Hoskin). If you would like to present your research at this symposium please go to: http://www.copernicus.org/EGS/egsga/nice03/abstract_submission_txt_new.htm The abstract deadline is Jan 15, 2003. If you intend to submit an abstract to the EGS-AGU-EUG symposium, please inform the conveners of your abstract submission.

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Mineralogical Society of America Short Course Registration
Zircon: Experiments, Isotopes, and Trace Element Investigations

Freiburg, Germany April 3 and 4, 2003

Complete and return this registration form to the MSA Business Office, 1015 Eighteenth St NW Ste 601, Washington, D.C. 20036-5212, USA. Telephone: (202) 775-4344. FAX: (202) 775-0018. Please type or print. Use one form per registrant. Payment must accompany this form. 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 on or before March 4, 2003.

Name _____

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Notes from Washington, continued from page 4

but a drop from previous years where the number was 90% or above. The abrupt decrease in subscriptions from 2000 to 2001 was a result of a new membership renewal format that made it obvious that MSA members need not subscribe to the journal. The drop was expected. Also, MSA has many more senior members now, and they usually do not subscribe. Another drop in electronic version-only subscriptions is expected when members have the option of electronically accessing the journal through their institutional libraries in 2003.

The decrease in the number of institutional subscribers has slowed. The loss was only 13 compared to previous year-to-year losses of 32, 7, 64, 47, 29, and 50. The losses were predominately to non-US addresses.

There are three Mineralogical Society of America and Geochemical Society short courses in 2003:

- Biomineralization, Fall 2003, Napa Valley, CA, before the American Geophysical Union Meeting. Short Course organizers: Patricia Dove, James J. DeYoreo and Steve Weiner.
- Zircon, April 3-4, 2003, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany, prior to the combined EUG XII-EGS-AGU meeting in Nice, France (April 6-11, 2003). Short Course organizers: John M. Hanchar and Paul W. O. Hoskin.
- Uranium Series Geochemistry April 3-4, 2003, Laboratoire de Géochimie et Cosmochimie, IPGP-CNRS Paris, France, prior to the combined EUG XII-EGS-AGU meeting in Nice, France (April 6-11, 2003). Short Course


organizers: Bernard Bourdon, S. P. Turner, Gideon M. Henderson, and Craig C. Lundstrom.

More information about these short courses are elsewhere in this Lattice issue, will be in the February and May 2003 *Lattices* and on the MSA (www.minsocam.org) and GS (<http://gs.wustl.edu>) websites.

- The Spring 2003 Council Meeting and Dana Medal presentation will be at a joint meeting with The Clay Minerals Society, June 7–11, 2003 in Athens, Georgia.

- There are two new MSA-GS publications—Reviews in Mineralogy and Geochemistry; volume 47, *Noble Gases*, Donald P. Porcelli, Chris J. Ballentine, Rainer Wieler, editors, and volume 48, *Phosphates: Geochemical, Geobiological, and Materials Importance*, Matthew L. Kohn, John Rakovan & John M. Hughes, editors.

- Everett Johnson of the Business Office became a father on August 31, 2002, with the arrival of Kierston Lee Johnson.



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24th FM-TGMS-MSA Mineralogical Symposium

GEMS AND MINERALS OF THE ANDES MOUNTAINS

in conjunction with the Tucson Gem and
Mineral Show

Saturday February 15, 2003



The twenty-fourth annual Mineralogical Symposium will be held on February 15, 2003 at the Tucson Gem and Mineral Show (February 13-16, 2002). The Friends of Mineralogy (FM), the Tucson Gem and Mineral Society (TGMS), and the Mineralogical Society of America (MSA) cosponsor it. The topic of the symposium is Gems and Minerals of the Andes Mountains, the Tucson Show's theme for 2003. Papers on descriptive mineralogy, paragenesis, classic and new locations, and related subjects about the minerals of the designated region are welcome. An audience of amateur and professional mineralogists and geologists is expected.

Anyone wanting to present a paper should submit a 200 to 300 word abstract to: Dr. Robert B. Cook, Auburn University, Department of Geology and Geography, Auburn University, AL 36849-5305; phone (334) 844-4891; fax: (334) 844-4486, e-mail: cookrob@auburn.edu.

Presentations will twenty minutes, followed by a period for questions. Abstracts must be submitted by September 10, 2002.

Meetings Calendar 2002

2003 February

7–9 Impact Cratering: Bridging the Gap between Modeling and Observations. Lunar and Planetary Institute (LPI), Houston, Texas. Details: Kimberly Taylor, phone: 281-486-2151. E-mail: taylor@lpi.usra.edu. Web page: <http://www.lpi.usra.edu/meetings/impact2003/>

2003 March

2–6 The Minerals, Metals & Materials Society Annual Meeting. San Diego, CA. Details: TMS, Meeting Services, 184 Thorn Hill Road, Warrendale, PA 15086 USA. Tel: (724) 776-9000 x243; Fax: (724) 776-3700. Email: mtgserv@tms.org. Web page: <http://www.tms.org/Meetings/Annual-03/AnnMtg03Home.html>.

17–21 2003 34rd Lunar and Planetary Science Conference. Houston TX 77058-1113. Phone: 281-486-2188; Fax: 281-486-2125. E-mail: walley@lpi.usra.edu. Web page: <http://cass.jsc.nasa.gov/meetings/lpsc2003/>

April

7–11 2003 EGS-AGU-EUG Joint Assembly. Nice, FRANCE. Details: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USA. Phone: +1-202-462-6900; Fax: +1-202-328-0566. Email: meetingsinfo@agu.org. Web page: <http://www.agu.org/meetings/>

www.agu.org/meetings/
15–16 The Mineralogical Society Spring meeting. Glasgow University, Scotland. Details: Martin Lee or Tim Dempster. Email: leemarti@earthsci.gla.ac.uk or tjd@earthsci.gla.ac.uk. Web page: <http://www.minersoc.org/pages/meetings/Socspring.htm>.

21–25 Materials Research Society Spring Meeting. San Francisco, CA, USA. Details: Materials Research Society, 506 Keystone Drive, PA 15086-7573, USA. Tel: 724-779-3003. Fax: 724-779-8313. E-mail info@mrs.org. Web page: http://www.mrs.org/meetings/future_meetings.html

May

11–14 AAPG Annual Convention and Exhibition. Salt Lake City, UT. Email: convene@aapg.org. Web page: <http://www.aapg.org/meetings/slc03/index.html>

12–16 Geofluids IV: Fourth international conference on fluid evolution, migration and interaction in sedimentary basins and orogenic belts. Utrecht, The Netherlands. Details: Mrs. Marielle Hoogendoorn, FBU Congress Bureau, Utrecht University, P.O. 80125, 3508 TC Utrecht, The Netherlands. Fax +31 30 253 58 51. E-mail: m.hoogendoorn@fbu.uu.nl. Web Page: <http://www.nitg.tno.nl/eng/geofluids/index.shtml>

25–28 Vancouver 2003: joint annual meeting of the Geological Association of Canada, the Mineralogical Association of Canada and

the Society of Economic Geologists, Vancouver, Canada. Details: VANCOUVER 2003, C/O Venue West Conference Services Ltd., 645-375 Water Street, Vancouver, B.C. Canada V6B 5C6. Tel.: 604-681-5226; Fax: 604-681-2503. Email: Vancouver2003@nrcan.gc.ca. Web page: <http://www.vancouver2003.com>.

May 29–June 1 Geology Without Frontiers: Magmatic and Metamorphic Evolution of the Central European Variscides. Blansko, Czech Republic. Details: Dr. Jaromir Leichmann, No Frontiers, Dept. of Geology and Palaeontology, Masaryk University, Kotlarska 2, 611 37 Brno, Czech Republic. Phone: +420 (5) 41 12 92 61; Fax: +420 (5) 41 21 12 14. e-mail: cgs@mail.natur.cuni.cz. Web page: <http://www.natur.cuni.cz/~cgs/nofrontiers>.

June

4–6 17th Biennial European Current Research on Fluid Inclusions (ECROFI XXVII). Budapest, Hungary. E-mail: ecrofi17@geology.elte.hu. Web site: <http://ecrofi17.geology.elte.hu/>.

4–15 High Pressure Crystallography. Erice, Italy. Details: Andrzej Katrusiak, Dept of Crystal Chemistry, Adam Mickiewicz University, ul. Grunwaldzka 6, 60780 Poznan, Poland. Phone : +48 61 86 99 181 Fax : +48 61 86 58 008. E-mail: katran@amu.edu.pl. Web page: <http://www.geomin.unibo.it/orgv/erice/highpres.htm>.

7–11 40th meeting of the

Clay Minerals Society. Athens, Georgia USA. Details: Paul A. Schroeder, University of Georgia, Department of Geology, Athens, GA 30602-2501, USA. Phone: (706) 542-2384. Email: schroe@gly.uga.edu. Web page: <http://www.gly.uga.edu/CMS2003/>.

16–18 5th International Conference on the Analysis of Geological and Environmental Materials. Rovaniemi, Finland. Details: Lars-Martin Westerberg, Geological Survey of Finland P.O. Box 1237 FIN-70211 KUOPIO, Finland. Email: Lars.Westerberg@gsf.fi or geoanalysis@gsf.fi. Web page: <http://www.gsf.fi/geoanalysis2003>

22–26 Euroclay 2003. Modena, Italy Details: Maria Franca Brigatti, Dipartimento di Scienza della Terra, Universita di Modena e Reggio Emilia, Largo S. Eufemia 19, 41100 Modena-ITALY. Fax: +39-059-2055887. E-mail: ec2003@unimo.it. Web page: <http://www.unimo.it/euroclay2003/>.

22–27 8th International Kimberlite Conference. Victoria, British Columbia, Canada. Details: Dr. Roger H. Mitchell, Geology Department, Lakehead University, Thunder Bay, Ontario, Canada P7B 5E1. Phone. 807-343-8287, Fax 807-623-7526. E-mail: Roger.Mitchell@lakeheadu.ca. Web page: <http://www.venuewest.com/8IKC>

July

26–31 American Crystallographic Association An-

nual Meeting, Cincinnati, OH. Details: Jeanette Krause Bauer, Dept. of Chemistry, Univ. of Cincinnati, P.O. Box 210172, Cincinnati OH 45221-0172. Tel. (516) 556-9226 Fax (513) 556-9239. Email: jeanette.krause@uc.edu. Web page: <http://www.hwi.buffalo.edu/ACA/>

July 28-August 1 66th Meteoritical Society Meeting. Münster, Germany. Details: Kimberly Taylor, 3600 Bay Area Blvd., Houston, TX 77058-1113. phone: 281-486-2151. Fax 281-486-2160. E-mail: taylor@lpi.usra.edu. Web page: <http://cass.jsc.nasa.gov/meetings/metsoc2003/>

August

24-30 XXI European Crystallographic Meeting. Durban, South Africa. Web site: <http://www.ecm21-africa.co.za>.

September

2-6 5th Hutton Symposium on the Origin of Granites. Toyohashi City, Japan. Details: Hutton V, Geological Survey of Japan, AIST Tsukuba Central-7, Higashi 1-1-1, Tsukuba, 305-8567 JAPAN. E-mail: Hutton-V@m.aist.go.jp.

Web site: <http://www.gsj.jp/Info/event/hutton>

7-12 13th V.M. Goldschmidt Conference, Kurashiki, Japan. Details: Organizing Committee of Goldschmidt 2003, c/o International Communications Specialists, Inc. Sabo Kaikanbekkan, 2-7-4 Hirakawa-cho, Chiyoda-ku, Tokyo 102-8646, Japan. Email: gold2003@ics-inc.co.jp. Web page: <http://www.ics-inc.co.jp/gold2003/>

November

2-5 Geological Society of America Annual Meeting. Seattle WA USA. Details: GSA Meetings, Box 9140, Boulder, Colo. 80301-9140. Phone: +1-303-447-2020, ext. 164. Fax: +1-303-447-1133. E-mail: meetings@geosociety.org. Web page: <http://www.geosociety.org/meetings/index.htm>

December

8-12 2003 AGU Fall Meeting, San Francisco, CA, USA. Details: AGU Meetings Department, 2000 Florida Avenue NW, Washington, DC 20009 USA. Phone: +1-202-462-6900; Fax: +1-202-328-0566. Email: meetinginfo@agu.org. Web page: <http://www.agu.org/meetings>.

Attention Meeting Planners!

Send meeting information to Andrea Koziol e-mail: Andrea.Koziol@notes.udayton.edu -- please include the meeting date, name, location, and all the contact information you would like.

IN MEMORIAM

C. A. Botner (Life Member-1954)
Richard T. Liddicoat (Life Fellow-1953)
Clifford Frondel (Life Fellow-1934)

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Vibrational spectroscopy of layered clays and hydroxides

Field trips: June 12th
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3. Piedmont soils

General Chair: Paul A. Schroeder (schroe@uga.edu)

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Paul M. Bertsch (bertsch@uic.edu)
R. James Kirkpatrick (kirkpat@uic.edu)
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Goldschmidt 2003 in Kurashiki September 7-12, 2003 (www.ics-inc.co.jp/gold2003/)

The Goldschmidt Conference is now the premier annual meeting for geochemistry. The conference covers a wide range of topics in geochemistry and cosmochemistry, including cosmic substances and the solar system, early earth, substances and processes in the earth's interior, material circulation on the earth's surface, climate change, earth's environment, biogeochemical processes, and technological advancement. The past Goldschmidt Conferences have been organized through the collaboration of the Geochemical Society and European Association of Geochemistry. In 2003, the Geochemical Society of Japan will join this collaboration, and the 13th Goldschmidt Conference will be held in Kurashiki, Japan, from September 7 to 12. For the first time, the meeting will be held in the western Pacific region.



Kurashiki, where you will meet old Japan

The city of Kurashiki is located approximately 200 km west of Osaka, easily accessible by the bullet train (*Shinkansen*) from Tokyo, Osaka, or Fukuoka. Kurashiki was a local trading center in western Japan in the 17th to 19th centuries, preserving the medieval Japan atmosphere in its old town area. Many attractive tourist cities such as Kyoto, Nara, Himeji, Okayama, and Hiroshima can be reached by *Shinkansen*.

Visit an active volcanic arc

Japan is a good place to see not only historical monuments but also geology of island arcs. A post-conference field trip to Kyushu is being organized, where you will see active volcanoes, thermal springs, and mineralization. Mid-session optional tours include a visit to Japanese gardens and old castles in the Okayama and Himeji areas. A cruise in Seto Inland Sea is also planned.

First priority for all geochemists

Goldschmidt 2003 will provide you with an opportunity to take part in the frontiers in geochemistry and cosmochemistry. It will also help you extend collaborations with geochemists worldwide.

Indication of Interest

Further announcements will be made on our web-site, and important updates and reminders will be announced by e-mail. To be included in the mailing list, please send e-mail with Registration of interest in the subject line to gold2003@ics-inc.co.jp or register your interest on the web-site (<http://www.ics-inc.co.jp/gold2003/>).

Important Dates:

October 31, 2002	Deadline for special session proposals
January 2003	2nd Circular (website), Call for papers, pre-registration
May 2003	Deadline for electronic submission of abstracts
September 7-12, 2003	Goldschmidt 2003 in Kurashiki, Japan

Members in the News

Prof. Dr. Gregor Markl, Universität Tuebingen, received the "Alfried-Krupp-Foerderpreis für junge Hochschullehrer" (Alfried Krupp award for young university professors). It is an award of 500,000 Euros (about US \$500,000) for 5 years of scientific research. It is granted once a year to typically one to three young German researchers in natural sciences below the age of 38, that have an associate, but not yet a full professorship. It is given by the Krupp Foundation, one of the large German foundations that are related to the Krupp company. The award has been given the last 16 years and, up to now, 23 candidates got this award. Dr. Markl is the first Earth scientist to receive it.

AM MIN STATS AT A GLANCE (FOR OCTOBER)

No. of Pending "Web" Manuscripts (on 1-OCT-2002): 115
 No. of New "Web" Manuscripts Submitted: 34
 No. of Accepted "Web" Manuscripts: 8
 No. of Declined "Web" Manuscripts: 3
 No. of Withdrawn "Web" Manuscripts: 3
 No. of Pending "Web" Manuscripts (on 31-OCT-2002): 143
 No. of Total Manuscripts, old and new systems: 173

FACTS AT A GLANCE FOR 2002

- Total published pages 1776.
- 191 papers were published.
- Current rejection rate about 20%.
- The average total submission-to-publication time is 12.3 months.
- 12 "web" papers have been accepted.
- Average submission-to-publication (projected) for those "web" papers is 7.5 months.
- The average time in peer review is 3.4 months.
- The average time in revision is 3.4 months.
- The average time with the editors is 37 days.
- The average time in production (from acceptance to print) is 4 months.
- 58% of the papers have a non-USA first author affiliation.
- As of early Nov. 2002 we've had about 217 submissions.

UPCOMING FOR 2003

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**Coming in the *American Mineralogist*:
LETTER**

- 1727 Crystal morphology of MV-1 magnetite**
Simon J. Clemett, Kathie L. Thomas-Keptra, Joel Shimmin,
Mary Morphew, J. Richard McIntosh, Dennis A. Bazylinski,
Joseph L. Kirschvink, Susan J. Wentworth, David S. McKay,
Hojatollah Vali, Everett K. Gibson Jr., and Christopher S.
Romanek

REYNOLDS' COMMEMORATIVE PAPERS

- 1517 Preface Remarks to the Reynolds' Commemorative Volume**
James Aronson and David Bish
- 1519 The chemical character of fluids forming diagenetic illite in the Southern Appalachian Basin**
W. Crawford Elliott, and John T. Haynes
- 1528 Interpretation of K-Ar dates of illitic clays from sedimentary rocks aided by modeling**
Jan Środoń, Norbert Clauer, and Dennis D.D. Eberl
- 1536 Illite polytype quantification for accurate K-Ar age determination**
Robert F. Ylagan, Charlie S. Kim, David R. Pevear, and Peter J. Vrolijk
- 1546 Characterization and modeling of illite crystal particles and growth mechanisms in a zoned hydrothermal deposit, Lake City, Colorado**
D.J. Bove, D.D. Eberl, D.K. McCarty, and G.P. Meeker
- 1557 Characterization of the Waukesha Illite: A mixed-polytype illite in the Clay Mineral Society repository**
Georg H. Grathoff and Duane M. Moore
- 1564 Exploring intra-crystalline B-isotope variations in mixed-layer illite-smectite**
Lynda B. Williams and Richard L. Hervig
- 1571 Characteristics of mixed-layer smectite/illite density separates during burial diagenesis**
Matthew W. Totten, Mark A. Hanan, Denise Knight, and Joniell Borges
- 1580 I-S precipitation in pore space as the cause of geopressuring in Mesozoic mudstones, Egersund Basin, Norwegian continental shelf**
Paul H. Nadeau, Donald R. Peacor, Jessie Yan, and Steve Hillier
- 1590 Structural and chemical heterogeneity of illite-smectites from Upper Jurassic mudstones of East Greenland related to volcanic and weathered parent rocks**
Victor A. Drits, Boris A. Sakharov, Lidia G. Dainyak, Alfred L. Salyn, and Holger Lindgreen
- 1607 Berthierine/chamosite, corrensinite, and discrete chlorite from evolved verdine and evaporite-associated facies in the Jurassic Sundance Formation, Wyoming**
P.C. Ryan and S. Hillier
- 1616 Weathering of ilmenite from granite and chlorite schist in the Georgia Piedmont**
Paul A. Schroeder, John J. Le Golvan, and Michael F. Roden
- 1626 The effects of grinding on the structure of a low-defect kaolinite**
R. C. Reynolds, Jr. and D. L. Bish
- 1631 Structure of heavy-metal sorbed birnessite: Part 1. Results from X-ray diffraction**
Bruno Lanson, Victor A. Drits, Anne-Claire Gaillot, Ewen Silvester, Alain Plançon, and Alain Manceau
- 1646 Structure of heavy-metal sorbed birnessite: Part 2. Results from electron diffraction**
Victor A. Drits, Bruno Lanson, Catherine Bougerol-Chaillout, Anatoli I. Gorshkov, and Alain Manceau
- 1662 Structure of synthetic Na-birnessite: Evidence for a triclinic one-layer unit cell**
Bruno Lanson, Victor A. Drits, Qi Feng, and Alain Manceau
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announces the 2004

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MSA Grants for Student Research in Mineralogy and Petrology comprise two US\$5000 grants. 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.



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. Grants will be made in January 2003. There are no restrictions on how the grant funds may be spent, as long as they are used in support of research. Application instructions and forms for the grants may be obtained from the MSA home page, <http://www.minsocam.org> or Dr. J. Alex Speer, MSA Business Office, 1015 Eighteenth St NW Ste 601, Washington, DC 20036-5212, USA (ph: 202-775-4344, fax: 202-775-0018, e-mail: j_a_speer@minsocam.org). Completed applications must be received by June 1, 2003.

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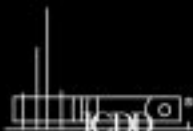
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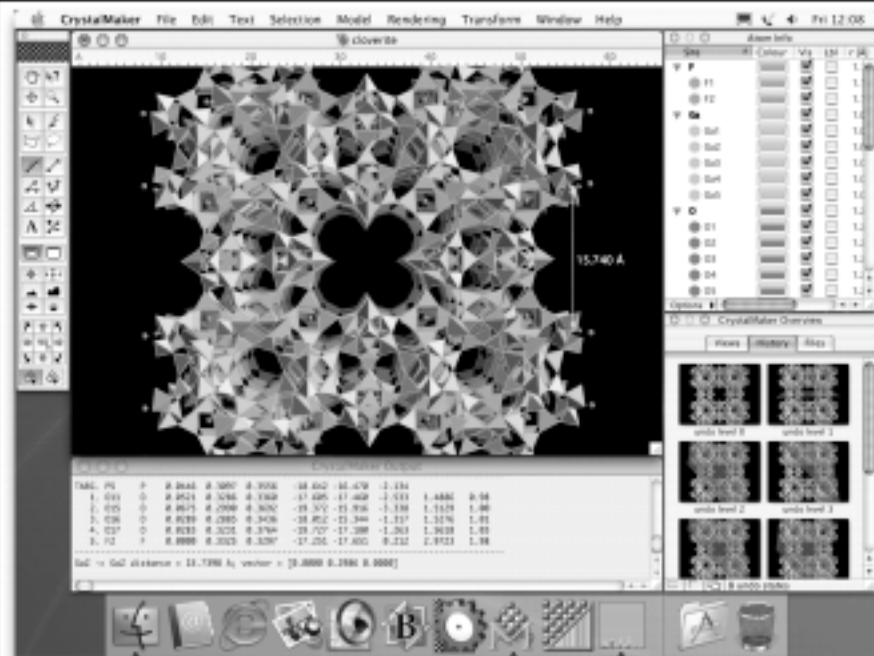


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