

# The Lattice

Vol.5, No.4, November, 1989



## Awards and Fellowship

At its November meeting in St. Louis, MSA Council approved recommendations that **Sturges W. Bailey** (University of Wisconsin, Madison, WI) be awarded the 1990 Roebling Medal, **Russell J. Hemley** (Geophysical Laboratory, Washington, D.C.) be awarded the 1990 Mineralogical Society of America Award, and **Malcolm Ross** (U.S. Geological Survey, Reston, VA) receive the Society's first Public Service Award. It also accepted the recommendation of the Research Grant Committee that **Ross Angel** (University College, London) receive the 1990 Crystallography Research Grant Award for a proposed study on displacive phase transitions at simultaneous high pressure and high temperature.

Council approved Fellowship status for the following Members of the Society: **G.H. Brimhall, R.I. Grauch, W.R. Griffiths, S.J. Guggenheim, R.L. Hervig, R.G. Luedke, H.V. McSween, W.B. Simmons, Georg Amthaer, Hans Annersten, Georges Calas, Heikki Papunen, C.M. Graham, M.A. Lagache, J.D. Scott, Eiichi Takahashi, B.E. Taylor, and Edward Woermann.**



Clockwise from top left:

Attending the Past Presidents' Breakfast from left to right, top row: C. Prewitt, P. Ribbe, P. Wyllie, E. Zen, C. Burnham. Bottom row: H. Yoder, Jr., F.D. Bloss, J. Goldsmith, E. Roedder, J.V. Smith.

At the Annual Awards Luncheon, Past President Charles Burnham awards the Roebling Medal to Helen Megaw. Accepting on Dr. Megaw's behalf is J.V. Smith, right. Citationist Robert Newnham, left, recalls Dr. Megaw's contributions in the field of crystallography.

Michael Carpenter, recipient of the Mineralogical Society of America award, and his citationist, Alexandra Navrotsky, attend the Annual Awards Luncheon.

Members of the Mineralogical Society of America enjoy the Annual Awards Luncheon.



# THE FOREIGN CORNER

## News from International Geological Congress, July '89

Here is news from the IMA Council Meeting held in Washington, D.C., during the 28th IGC, where IMA was strongly represented by about 19 co-sponsored symposia. With support from Councillor I. Sunagawa, IMA expects to co-sponsor Symposia of interest at the 29th IGC in Japan in 1992, for the many mineralogists, petrologists and geochemists who will attend.

Attilio Boriani, acting for President P. Omenetto of the Societa Italiana di Mineralogia e Petrologia, delivered a welcome invitation for IMA to hold the 16th General Meeting in Italy, 1994. This invitation will be delivered to the 15th General Meeting in Beijing, June 28-July 3, 1990.

Following the recent disturbances in China, some colleagues had written or phoned urging that the locale for the 15th General Meeting be changed as a protest. Others argued that we should proceed as planned in order to support Chinese mineralogists who have been working hard for two years to organize the Meeting, and thus to set an example that the spirit of international science transcends other actions. Council affirmed ICSU policy that it was inappropriate for IMA to offer formal political protest. To what extent would the registration of foreign mineralogists decrease because individuals expressed personal protest? Attempts were made to estimate how many potential registrants would stay away. Many responded that it was too early to decide; they wanted to see how things develop in China. Members of the Chinese Organizing Committee assured us that things had calmed down in Beijing, and that plans were proceeding smoothly. After much deliberation, the Council voted 8 to 2 in favor of holding the General Meeting in Beijing as planned.

The Second Circular will be distributed soon, with a deadline for registration and abstracts of February 1, 1990, leaving plenty of time for individuals to consider their personal position. Council members suggest that potential registrants weigh the probable ineffectiveness of personal protest against the effectiveness of their personal support for Chinese mineralogy-petrology-geochemistry (we have joint symposia with IAGC and IAVCEI), and the opportunity to visit new field locations.

Henry O. A. Meyer  
Purdue University  
Department of Earth and Atmospheric Sciences  
West Lafayette, IN 47907

## IN MEMORIAM

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

Eckel, Edwin B., *Life Fellow, 1932*  
Ehlin, Per-Olov, *Member, 1970*  
Garrels, Robert M., *Life Fellow, 1953*  
Grim, Ralph E., *Life Fellow, 1933*  
Kullerud, Gunnar, *Life Fellow, 1955*

## 1990 Fall Short Course

The 1990 Fall short course, entitled "Mineral-Water Interface Geochemistry", will take place just prior to the MSA/GSA Annual Meeting in Dallas, Texas. Speakers from the US, Canada, Australia, and Switzerland will discuss fundamental aspects of important geochemical reactions that occur at mineral-water interfaces including sorption, ion exchange, dissolution, precipitation, catalysis, and electron transfer (oxidation-reduction). Applications of these topics to more applied subjects, such as the geochemical cycling of the elements, ore deposit formation, and the mobility of pollutants in groundwater, will be explored. The meeting is being convened by Michael F. Hochella, Jr. (Stanford University) and Art F. White (USGS, Menlo Park).

Specific topics and speakers include:  
1) Thermodynamic, kinetic, structural, compositional and computer modeling aspects of mineral surfaces and mineral-water interfaces, G.A. Parks (Stanford), A.C. Lasaga (Yale), and M.F. Hochella, Jr. (Stanford); 2) Sorption and ion exchange reactions, J.A. Davis (USGS), G. Sposito (US-Berkeley), G.E. Brown, Jr. (Stanford); 3) Dissolution and precipitation, W.H. Casey (Sandia), G.R. Holdren, Jr. (Northrop), G. Nancollas (SUNY- Buffalo); 4) Electron transfer and catalytic reactions, G.M. Bancroft (Western Ontario), W. Stumm (Swiss Federal Institute for Water Resources), T.D. Waite (Australian Nuclear Science and Technology Organization), A.F. White (USGS).

The course will be held at the Tanglewood Resort and Conference Center in Pottsboro, Texas, located approximately 60 miles north of Dallas. Bus service will be provided to and from the site. Registration is limited to 120 individuals.

The Lattice is published quarterly (February, May, August, November) by the Mineralogical Society of America. This newsletter 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: The *American Mineralogist*, published bimonthly; 30% 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 of MSA's spring meeting with the American Geophysical Union; participation in a Society that supports the many facets of mineralogy.

Dues for 1990 are \$40 for professional members; \$20 for students. Membership is on a calendar year basis. Individuals who join after January 1, 1990 will be sent all back issues of the journal for volume 75, 1990.

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 American Mineralogist* for the annual rate of \$150. 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.

**1990 President:** Peter Robinson, University of Massachusetts  
**Past-President:** C.W. Burnham, Harvard University  
**Secretary:** Maryellen Cameron, Miami University of Ohio  
**Treasurer:** James A. Whitney, University of Georgia  
**Office Manager/Accountant:** Susan L. Myers

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(202) 775-4344

## FROM THE PRESIDENT

At the end of the MSA Luncheon in St. Louis on November 7, President Charles Burnham relinquished leadership of your Society to me for the first year of the 1990's. His year at the helm was one of steady improvement, sound economics, smoothing and systematizing of procedures, and innovations. One of these was the establishment and initiation of the MSA Lecture Program based on the creative planning of the Lecture Program Committee, Peter Buseck, Chairman. This year's program consists of lecture trips by two outstanding speakers, Maryellen Cameron and Edwin Roedder. Feedback from this program, now half completed, has been very positive, and plans are being made with Program Administrator, Henry Meyer, to increase the program to three lecturers for 1990-91. A second innovation, related to the retirement of Jim Munoz as Editor of the American Mineralogist, was the establishment of two new Editors, Don Peacor, who will operate the main editorial office at the University of Michigan, and Steve Bohlen at the U.S.G.S., Menlo Park, who will take the lead in editing papers in petrology. Working with the Editors will be Managing Editor Vicki Lawrence and Assistant to the Editors, Roland C. Rouse, both at Ann Arbor. We look forward to further improvements and efficiencies along the same directions developed in such an outstanding way by Jim Munoz, including further timely publications under the new Letters category developed by Jim.

At the close of the Annual Luncheon, I expressed thanks to our two outgoing Councillors, Mike Holdaway, who chaired our Editorial Search Committee, and Doug Rumble, who will chair the Nominating Committee for Officers in 1990. Thanks were also given the two strongest pillars of our Society, Secretary Maryellen Cameron, and Treasurer, Jim Whitney, both of whom will remain with us at least through 1990. I also welcomed new Vice-President Malcolm Ross and newly elected Councillors Rosemary Vidale Buden and Weecha Crawford, all of whom began work with the Council on Tuesday evening. Ross will chair the important Committee on Committees that reports to Council at the second 1990 Meeting at the Spring AGU Meeting in Baltimore. Volunteers or persons with suggestions for committee posts should communicate with Ross directly early in 1990.

At the 3rd 1989 Council Meeting on Sunday chaired by President Burnham, major decisions were made concerning future short courses and volumes in Reviews in Mineralogy. These actions were the result of an extremely active period for the Committee on Short Courses, very ably

chaired by Jane Selverstone with members D.M. Sherman, K.E. Windom, and Paul Ribbe (Editor, Reviews in Mineralogy). Courses previously approved for 1990 included MINERAL-WATER INTERFACE GEOCHEMISTRY (Mike Hochella and Art White, Organizers) for Fall GSA, and MODERN METHODS IN IGNEOUS PETROLOGY (Nichols and Russell, Organizers) for Fall AGU. Newly approved courses for 1991 include Fe-Ti OXIDE MINERALS: THEIR PETROLOGIC AND GEOPHYSICAL SIGNIFICANCE (B. Ron Frost and D.H. Lindsley, Organizers) for Spring AGU and CONTACT METAMORPHISM (Derrell Kerrick, Organizer) for Fall GSA. The Fall 1991 Short Course at the San Diego Meeting will be preceded by a special GSA Field Trip to the Sierra Nevada organized by Kerrick for Tuesday, Wednesday, and Thursday, followed by the Short Course in San Diego on Friday, Saturday, and Sunday. The Council also examined several proposals for 1992 and beyond, that are being shaped by potential convenors.

Another feature of the Sunday Meeting was an in-person visit by Prof. R.A. Howie, Editor of Mineralogical Abstracts. Prof. Howie gave a clear explanation of the budgetary situation of the Abstracts that are jointly sponsored by MSA and the Mineralogical Society of Great Britain. This was a welcome opportunity to exchange suggestions concerning this important publication and to understand how it might be organized to continue at such time as Prof. Howie decides to retire. Prof. Howie was extremely appreciative of those members of MSA who provide abstracts through North American Abstract Organizer, Prof. Karl Riggs.

One topic for discussion on Sunday was the Society's attitude to the I.M.A. Meeting in Beijing, China in 1990. In Washington this past summer, the IMA Representatives voted 8-2 to go ahead with the meeting as planned despite the political upheaval in China. It was finally decided that MSA would take no official stand, leaving participation up to the various leanings of members. The Society will, however, send one delegate to participate in further decisions by the I.M.A. Committee.

Also at the 3rd 1989 Council Meeting, Councillor Charles Gilbert proposed and Council approved the formation of a one-year Ad Hoc Committee on National Science Policy Issues. Council appointed the following persons to the committee: M.C. Gilbert (Councillor), Charles W. Burnham (Past President), and Douglas Rumble, III (outgoing Councillor). The Committee was formed in response to a widespread concern in the earth science

## MSA Scientific Specialty Working Group on Microcomputers in Mineralogy

MSA Council has approved the formation of a Scientific Specialty Working Group, "Microcomputers in Mineralogy."

The purpose of this Working Group is to:

1. Promote the use of microcomputers (including PC's, microvaxes, and other small computers) in mineralogy, petrology, and crystallography.
2. Compile and distribute a list of programs that can be obtained from the program authors.
3. Organize sessions, symposia, and workshops on microcomputers at MSA and other meetings.
4. Provide information on Working Group activities via *The Lattice* and possibly a Working Group newsletter.

The initial effort will be to compile a list of computer programs that authors are willing to distribute to others. Initially, the maximum fee that an author can charge for a program and its documentation will be \$100. If this works well and there is sufficient additional demand for information about commercial programs, the scope of this activity may be expanded.

Program authors should submit the following information for each program.

Author  
Address  
Program title  
Brief program description  
Computer used, including memory size, math coprocessor (if any), and graphics hardware requirements  
Programming language including vendor and version  
Will source program be supplied?  
Disk required from person requesting program? What kind?  
Is a fee required (\$100 max)?

Please send the above information to MSA Working Group on Microcomputers, Geophysical Laboratory, 2801 Upton Street, N.W., Washington, D.C. 20008. Organizers of the Working Group are C.T. Prewitt (Geophysical Laboratory), G.V. Gibbs (VPISU), and D.K. Smith (Penn State). Individuals may become members of the Working Group even if they do not now have programs to submit. If you would like to be a member of the Working Group and/or be put on the mailing list, please let us know.

Charles T. Prewitt

Continued on page 7

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## MEMBERS IN THE NEWS...

Anne Hofmeister received a fellowship in science and engineering from the David and Lucile Packard Foundation. The fellowship of \$100,000 per year for five years is to support Anne's work in infrared spectroscopy as a function of pressure. The work will be conducted in the Department of Geology at the University of California - Davis.

Dr. Gerald M. Friedman, a Fellow of the Society, was named Distinguished Professor of Geology of Brooklyn College and the Graduate School and University Center of the City University of New York. A sedimentary mineralogist, geochemist and stratigrapher he has served as President of the International Association of Sedimentologists and the Society for Sedimentary Geology (SEPM) (formerly Society of Economic Mineralogists and Paleontologists); as Vice-President of the American Association of Petroleum Geologists, and as Editor of the *Journal of Sedimentary Petrology*. He is currently Editor of *Earth Sciences History*, the journal of the History of Earth Sciences Society.

## SPNHC 5TH Annual Meeting

The Society for the Preservation of Natural History Collections will hold its fifth annual meeting from May 7-11, 1990, in Chicago, hosted by the Field Museum of Natural History. The tentative program includes sessions on pest control, museum hazards and safety, problem solving, and a symposium on conservation of exhibit specimens. The meeting is open to anyone with a professional interest in the management and preservation of natural history collections. For further information, please contact David Willard, Bird Division, Field Museum of Natural History, Roosevelt Rd. at Lake Shore Dr., Chicago, IL 60605, phone (312)922-9410, ext. 269.

## MEETING CALENDAR

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1989

### December

- 18-20 Mineralogical Society of Great Britain's 1989 Winter Meeting on Stability of Minerals. Details: G.D. Price, Dept. of Geological Sciences, Univ. College London, Gower Street, London, England WC1E 6BT.

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1990

### May

- 2-4 V.M. Goldschmidt Conference at the Hunt Valley Inn, Baltimore, Maryland. Organized by the Geochemical Society. Details: Donna Ricketts, 409 Keller Conference Center, The Pennsylvania State University, University Park, PA 16802. Telephone: (814)863-1743. Fax: (814)865-3003.
- 7-10 MAC/Commission on Ore Mineralogy Short Course on "Advanced Microscopic Studies of Ore Minerals" in Ottawa, Canada. Details: D.C. Harris, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario, Canada, K1A 0E8. Telephone: (613)992-4495. Fax: (613)996-9990. See article in this newsletter.
- 14-15 MAC Short Course on "Fluids in Tectonically Active Regimes of the Continental Crust" in Vancouver, British Columbia. Details: B.E. Nesbitt, Department of Geology, University of Alberta, Edmonton, Alberta, Canada T6G 2E3. Telephone: (403)492-5071. Fax: (403)492-2030. See article in this newsletter.
- 13-25 International School on Crystal Growth and Crystallographic Assessment of Industrial Materials in Sitges, Spain. It will cover four general areas: Crystal Growth Fundamentals; Techniques of Crystal Growth; Characterization of Materials; and Industrial Materials. Details: Dr. R. Rodriguez-Clemente, Institute of Materials Science, C.S.I.C. - c/Marti i Franques, s/n. 08028 Barcelona, SPAIN Telephone: 34-3-3302716. Fax: 34-3-4110012.
- 16-18 GAC/MAC Annual Meeting in Vancouver, British Columbia, Canada. Details: GAC/MAC, Secretariat, 801-750 Jervis Street, Vancouver, BC V6E 2A9 Telephone: (604)681-5226. Fax: (604)681-2503.

### June/July

- 28-3 15th General Meeting of the IMA in Beijing, China.

### October

- 6-11 Clay Minerals Society 27th Annual Meeting in Columbia, Missouri. Details: Professor W.D. Johns, Department of Geology, University of Missouri, Columbia, MO 65211. Telephone: (314)882-3785 See article in this newsletter.
- 26-28 MSA 1990 Short Course on Mineral-Water Interface Geochemistry in Pottsboro, TX. See article in this newsletter.

## LAST CALL FOR PAPERS FOR THE SPECIAL J.B. THOMPSON ISSUE OF AMERICAN MINERALOGIST

A special issue of *American Mineralogist* is to be devoted to papers in honor of Professor J.B. Thompson. This is a final notice for papers, as the deadline for receipt of manuscripts is January 31, 1990.

Inquiries regarding manuscripts should be directed to John Brady (Dept. of Geology, Smith College, Northampton, MA 01063) or to Charles W. Burnham (Hoffman Lab, Harvard University, 20 Oxford St., Cambridge, MA 02138), who are serving as Associate Editors for the special papers.

All manuscripts should be sent directly to Donald R. Peacor and Steven Bohlen, Editors, *American Mineralogist*, Department of Geological Sciences, The University of Michigan, Ann Arbor, MI 48109.

## WELCOME!

The following new members and students have joined MSA effective January 1, 1989. Welcome! Applications for membership may be obtained from the Business Office, 1625 I Street, N.W., Suite 414, Washington, D.C. 20006; (202)775-4344.

**Armstrong, Thomas R.**, Department of Geology, VPI & SU, Blacksburg, VA 24061. O:(703)231-8817. H:(703)745-4873. (ST-89)MP Sponsors: Robert J. Tracy and D. A. Hewitt.

**El-Makhrouf, Ali A.**, CB #3315 Mitchell Hall, Geology Department UNC, Chapel Hill, NC 27514. O:(919)966-4516. H:(919)933-6612. (ST-89)IP Sponsor: James R. Butler.

**Lu, Changsheng**, Department of Geological Sciences, University of Tennessee, Knoxville, TN 37996. O:(615)974-2366. H:(615)577-3089. (ST-89)GE Sponsors: Theodore C. Labotka and Lawrence A. Taylor.

**Macaoay, Suzanne**, Geology Department, Princeton University, Princeton, NJ 08544. O:(609)258-3287. H:(609)924-7458. (ST-89)CC Sponsor: MSA.

**Munn, Barbara J.**, Department of Geological Sciences, Virginia Tech Institute, Blacksburg, VA 24061. O:(703)231-8821. H:(703)552-7753. (ST-89)MP Sponsors: P.H. Ribbe and R.J. Tracy.

**Nijland, T.G.**, Institute of Earth Sciences, Department Petr., P.O. Box 80021, Utrecht, 3520 TA Netherlands. H:(030)899078. (ST-89)MP Sponsors: M.A. Th. M. Broekmans and Robert O. Felius.

**Russell, James K.**, Department of Geological Sciences, University of British Columbia, Vancouver, BC, Canada V6T 2B4. O:(604)228-2703. (M-89)IP Sponsors: Rob Berman and Thomas H. Brown.

The following new members and students have joined MSA effective January 1, 1990.

**Back, Judy**, U.S. Geological Survey, 954 National Center, Reston, VA 22092. O:(703)742-0754. (M-90)MI Sponsors: Jean A. Minkin and Edward C.T. Chao.

**Brittain, Richard A.**, 602 E. Weber Drive, Unit 11, Tempe, AZ 85281. (ST-90) Sponsor: MSA.

**Chasens, Naomi**, P.O. Box 490133, Key Biscayne, FL 33149. O:(305)751-1184. H:(305)361-3846. (M-90)CM Sponsor: MSA.

**Craig, Walter**, AMA Analytical Service, 4475 Forbes Blvd., Lanham, MD 20706. O:(301)459-2640. H:(703)620-3786. (M-90)MI Sponsors: Dr. Ann Wylie and Emily Landis.

**Forsythe, Lance M.**, P.O. Box 6549, Alpine, TX 79832. O:(915)837-8132. H:(915)837-5767. (ST-90)GE Sponsor: MSA.

**Kubic, Thomas A.**, 8 Pine Hill Court, Northport, NY 11768. O:(516)261-2117. H:(516)261-2117. (M-90) Sponsor: MSA.

**Tanaka, Hisao**, Department of Earth Science, Yamagata University, Yamagata, Japan 990. (M-90)IP Sponsor: MSA.

**Tu, Kan**, University of Illinois, Department of Geological Sciences, Box 4348, Chicago, IL 60680. O:(312)996-3158. H:(312)955-3472. (ST-90) Sponsors: Stephen Guggenheim and Paul Tyrna.

## NSF Awards Grant to Help AGI Support Minority Geoscience Education

The National Science Foundation has awarded \$250,000 to the American Geological Institute to provide scholarships to ethnic minority undergraduate students who are currently underrepresented in the geosciences: Blacks, Hispanics, and Native Americans.

"Ethnic minorities constitute only 4.6% of the geoscience work force, which comprises some 85,000 professionals," said Marvin E. Kauffman, AGI's executive director. "In 1988, ethnic minorities were 6.5% of the total enrollment in academic programs in geoscience. The need to encourage and support minority participation in the geosciences continues to grow."

Although the current grant is for one year, NSF has approved the grant to be renewed for each year of a three-year period. Continuation will be based on scientific or technical merit and availability of funds.

## INTERNATIONAL CONFERENCE ON ELECTRONIC MATERIALS

SCHEDULED FOR  
SEPTEMBER 17 - 19, 1990  
NEWARK, NEW JERSEY

The Materials Research Society, Japan Society of Applied Physics and the European Materials Research Society will jointly sponsor the second International Conference on Electronic Materials (ICEM-90) September 17-19, 1990 in Newark, New Jersey. This biennial conference provides an opportunity for investigators in the field of advanced electronic materials to discuss recent progress and future trends. Conference topics will include: SUPERCONDUCTING DEVICE MATERIALS, MATERIALS FOR OPTOELECTRONICS, ADVANCED THIN FILM TECHNOLOGY, and DIAMOND FOR ELECTRONIC AND OPTICAL APPLICATIONS.

The first International Conference on Electronic Materials was held in Tokyo, Japan in 1988. The proceedings from that conference have just been published by the Materials Research Society.

R.P.H. Chang, Takeo Sugano and Van Tran Nguyen are co-chairs of ICEM-90. Chang is a professor of materials science and engineering at Northwestern University and president of the Materials Research Society. Sugano is a professor in the Department of Electronic Engineering at the University of Tokyo, and Nguyen is with CNET CNS in Meylan, France.

Abstracts of contributed papers must be 5 inches wide by 6 inches long and must be received at Materials Research Society Headquarters no later than May 1, 1990. Templates may be obtained from MRS Headquarters, 9800 McKnight Road, Pittsburgh, PA 15237 U.S.A. (Attention: ICEM-90); telephone (412) 367-3003; fax (412) 367-4373. A Call for Papers with detailed information about individual topical areas is currently available from the Materials Research Society.

## News from the Editors' Office

The baton has been passed. At the GSA meeting, the editorship officially passed from Jim Munoz to Steve Bohlen and Don Peacor. As this is the first time that we've operated with two editors, it is appropriate that we describe the modus operandi of the editorial office.

First of all, the American Mineralogist office will be in Ann Arbor in the Department of Geological Sciences of The University of Michigan, and for that reason you should be sending all manuscripts to Ann Arbor. Manuscripts can then be logged in and tracked through the review/revision/publication process. Once a manuscript has been logged in, however, it will be assigned to Steve Bohlen or Don Peacor, each of whom will have full responsibility for all manuscripts assigned to them. The more crystallographically oriented papers will generally be handled by Don; those that are more petrologically oriented will usually go to Steve. From then on, the review process will be pretty much as it has always been. Do remember to send all manuscripts to Ann Arbor, though.

We also have a new Managing Editor whose name is Vicki Lawrence. She will be managing the editorial office, working out of an office next to Don Peacor's office. By the time you read this, that office should be set up and running at full steam, so you can direct those questions to Vicki that used to go to Mary Eberle. Vicki will have the help of an editorial assistant to the Managing Editor, but that person is yet to be hired.

We're also very pleased that a brand new position, Assistant to the Editors, has been created. Roland Rouse, Research Associate in the Department of Geological Sciences, The University of Michigan, has agreed to take on this position. Roland will be helping Don and Steve, primarily with the editing duties.

Once again, manuscripts are to be sent to:

Donald R. Peacor and Steven Bohlen  
Editors, American Mineralogist  
Department of Geological Sciences  
The University of Michigan  
Ann Arbor, MI 48109

## 1990 MAC Short Course on "Fluids in Tectonically Active Regimes of the Continental Crust"

The objective of the short course is to bring together experts in a variety of different aspects of crustal fluid flow and fluid chemistry in order to provide a comprehensive overview of the state of knowledge on fluid flow, fluid chemical evolution and the interactions between fluids and rock units. Covered in the short course will be fluid dynamics in deep crustal settings, geophysical indications of the presence of fluids, effects of fluids on geophysical properties, chemistry of fluid-rock interactions, and the implications of flow and chemical evolution of fluids to metamorphism, deformation and the genesis of hydrothermal ore deposits. The course is targeted towards individuals with a general background in geology, who desire to be brought up to date on current concepts and discoveries concerning fluids in tectonically active regimes of the continental crust.

Speakers and Topics:

*C. Forster and J.L. Smith: Fluid Flow in Tectonic Regimes*

*T. Lewis: Fluids and Heat Flow*

*D.I. Gough: Geophysical Evidence of Fluids in the Crust*

*R.H. Sibson: Fluids in Relation to Deformation*

*T.K. Kyser and R. Kerrich: Chemical Aspects of Fluid-Rock Interaction*

*E.D. Ghent and T. Gordon: Fluids in Intermediate and Low Grade Metamorphism*

*B.E. Nesbitt: Fluids and Mineralization*

*W.S. Fyfe: Plate Tectonics, Fluid Transport and the Hydrosphere*

The short course will be held on May 14 and 15, 1990 in the Hotel Vancouver, Vancouver, B.C. It will precede the 1990 Annual GAC/MAC Convention in Vancouver, B.C. Tentative fees for the short course are \$250 (Professional) and \$150 (Student). For further information contact Dr. B.E. Nesbitt, Department of Geology, University of Alberta, Edmonton, Alberta, Canada T6G 2E3. Telephone: (403) 492-5071. FAX: (403) 492-2030.

## J. D. HANAWALT POWDER DIFFRACTION AWARD

The JCPDS-International Centre for Diffraction Data is seeking candidates for the J. D. Hanawalt Powder Diffraction Award. The award is presented every three years for an important, recent contribution to the field of powder diffraction. The award consists of a certificate and \$1,000. The awardee is expected to submit an abstract and present a paper on the work being recognized at a forthcoming Powder Diffraction/Crystallographic Meeting. Recipient's travel expenses to the meeting will be provided. Work eligible for consideration must have been published between August 1984 and August 1989. The selection committee welcomes suggestions, nominations, and documentation of accomplishments for possible recipients through 10 January 1990. Contact: Benjamin Post, 108 Church Street, W. Roxbury, MA 02132.

## Advanced Microscopic Studies of Ore Minerals Short Course

A short course on Advanced Microscopic Studies of Ore Minerals sponsored by the Mineralogical Association of Canada and the Commission on Ore Mineralogy will be held in Ottawa, Canada, May 7-10, 1990. Topics for the short course include the reflected light microscope, preparation of material for study, optical properties of minerals and their chemistry, reflectance measurements and quantitative colour measurements, identification scheme for ore minerals, textural and paragenetic studies, image analysis, electron microprobe analysis, advanced methods of trace element analysis and advanced microspectroscopy. Sessions to include laboratory studies. Rooms and meals available at Carleton University. Registration fees will be students \$150 (est.) and non-student \$250 (est.). For information contact D.C. Harris, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario, Canada K1A 0E8. Telephone: (613)992-4495. Fax: (613)996-9990.

community that 1) the federal system is not providing adequately for basic research in the earth sciences, nor 2) adequately incorporating modern understanding of earth processes into environmental decisions. The charge to this committee is to examine how the Society and its members can interact with and impact positively on decisions within federal agencies and within Congress. It is hoped that this Committee will develop a more permanent and effective way for concerns of "mineralogists" to be heard in these areas. Members are urged to send their suggestions to one or all of these committee members.

At the same time as the MSA Reception early Tuesday evening, a meeting was held for the proposed purpose of establishing a Petrology and Geochemistry Division of GSA. This was attended by Treasurer Jim Whitney and me, as well as several other members, and also by Larry Haskin and Peter Gromet, President and Program Chairman, respectively, of the Geochemical Society. The proposers of the GSA Division saw advantages of visibility within GSA and on GSA Membership Forms. Those less enthusiastic pointed to duplication of effort and further tangling of the current workable review system for the Annual Meeting. I introduced myself as MSA President as well as a Member of GSA and of its Structural Geology Division. I then asked if there is an unexpressed need within the petrology-geochemistry community that is not being adequately served, and pointed out that MSA has a mechanism in place for the development of special interest groups. Haskin spoke eloquently concerning the excellent cooperation and rapport that has developed between the Geochemical Society, MSA, and GSA so far as the Annual Meeting is concerned, and felt that amalgamation rather than fragmentation seemed to be the best way for the future. The proposers went ahead with circulation of petitions to be forwarded to GSA Council. Suggestions and comments from MSA Members on this proposal would be most helpful in shaping our course should this matter come up formally before the Council of GSA.

At the first 1990 Council Meeting on Tuesday, E-an Zen reported on his role and activities as MSA representative to the AGI's educational program as well as the new GSA educational program. As a result of this report the Council established a one-year Ad Hoc Committee on Pre-College Earth Science Education consisting of E-an Zen, Weecha Crawford

(Councillor) and Bob Hazen (Councillor). This group will investigate ways in which MSA and its members can contribute to and enhance this important effort currently under way by AGI and GSA. Members active in this area or with pertinent suggestions are urged to contact committee members. An interest in minerals and rocks is a frequent common denominator for the growth of an earth science interest at the secondary level. This interest should be creatively exploited in building new K through 12 curricula.

In the coming year I am looking forward to contact with members of the Society at all levels and with all kinds of interests. I firmly believe that mineralogical science advances best on a very broad front with very active communication between different specializations.

*Peter Robinson  
1990 President*

## Clay Minerals Society 27th Annual Meeting

The Clay Minerals Society 27th Annual Meeting will be held October 6-11, 1990 at the Holiday Inn Executive Center in Columbia, Missouri. It will be sponsored by the University of Missouri-Columbia, Department of Geology, Department of Agronomy and UMC Research Reactor. The meeting will be preceded on Saturday, October 6 by a workshop on "Neutron Scattering and Diffraction." Three scientific sessions are planned: General Session; Clays-in-Sandstones Symposium; and Keller 90-Kaolin Symposium. The latter is to honor Prof. Emeritus W.D. Keller in his 90th year.

On Wednesday, October 10, an all-day field trip is planned to visit deposits of central Missouri refractory clays and related soils. Co-Chairmen are J.F. Burst and W.D. Johns.

Further information may be obtained from:

Prof. W.D. Johns  
Department of Geology  
University of Missouri  
Columbia, MO 65211 U.S.A.  
Telephone: (314) 882-3785



**Charles Burnham, immediate past president, left, congratulates Peter Robinson, newly elected president, right.**

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## Earth Scientists and Teachers Meet, Develop Guidelines for K-12 Curriculum

Twenty six scientists and educators met August 6-19, 1989, at the Yellowstone-Bighorn Research Association Field Camp, near Red Lodge, Montana, to develop guidelines for a complete precollege curriculum for earth-science education. The conference, sponsored by the American Geological Institute and supported by a grant from the National Science Foundation, was designed to identify earth-science content appropriate for study in elementary through secondary school.

Other national programs such as the American Association for the Advancement of Science's Project 2061 and the National

Science Teachers Association's Scope, Sequence, and Coordination Project have stressed the need for science education to permeate the curriculum from the elementary level through high school. The AGI conference focused on this issue for the earth sciences in particular.

Teams of scientists, teachers and other science educators were selected through a national search process to take part in the conference. Each team wrote questions appropriate to designated levels: K-3, 3-6, 6-9, 9-12. These questions and associated key ideas that students and teachers can explore define content regarding Earth that all students should know.

The resulting new curriculum will be based on how the solid Earth interacts with its water, ice, air, life, and its place in space. The concept of using those spheres emerged during discussions at AGI regional conferences held in 1988 and 1989.

Conference participants believe the new curriculum to be unique in these respects: It is totally sequenced from kindergarten through grade 12; an appreciation of earth-science concepts and stewardship of the earth is fully integrated; the maximum focus is on children's natural interests; and it was developed by teams of teachers and scientists.



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