The Geochemical News

Newsletter of the Geochemical Society

Number 85 Fall 1993

Inquiries and announcements regarding *Geochemical News* should be sent to S.B. Shirey, Carnegie Institution of Washington, 5241 Broad Branch Rd., NW, Washington, DC 20015 USA. Rapid submission of material by facsimile (202-364-8726) or electronic mail (shirey@dtm.ciw.edu) is encouraged.

In this issue:

LETTER FROM GS PRESIDENT, D.H. LINDSLEY

From the President:

Doug MacDougall has served our Society and the Meteoritical Society well and faithfully as Chair of the Joint Publications Committee of the societies. Doug has decided to step down effective October, 1993. An ad hoc search committee, chaired by Derek Sears, is seeking a replacement for Doug.

Doug has served through some very difficult times - his tenure has included the intense discussions over our relationship with Pergamon Press and the renewal of the contract for *Geochimica et Cosmochimica Acta* - but he always managed to retain his poise and his class as arguments swirled around him. He has worked hard for the good

of both Societies. On behalf of the Society, the Board of Directors, and myself I offer a heartfelt "Thank you" to him.

After the new Chair of the Joint Publications Committee is named, we will need to choose some new Committee members as well. If you know of someone who would be appropriate - or especially if you are willing to serve - please let Vice President Tony Lasaga or me know as soon as possible. The Joint Publications Committee is one of our most important committees: it oversees the publication of Geochimica et Cosmochimica Acta as well as our Special Publications Series. Thus it is imperative that it be staffed with knowledgeable, active, and dedicated members.

Don Lindsley
President, 1991-93

UPCOMING MEETINGS OF INTEREST TO GECHEMICAL SOCIETY MEMBERS

Sept 25-Oct 1,1993: *IVACEI 1993: General Assembly of the International Association of Volcanology and Chemistry of the Earth's Interior*, Canberra, Australia. Contact: IAVCEI General Assembly, ACTS, GPO Box 2200, Canberra ACT 2601, Australia. Tel:61-6-2573299, Fax: 61-6-2573256

Oct 17-20, 1993: *American Association of Petroleum Geologists*, annual meeting., The Hague, Netherlands, (AAPG, Box 979, Tulsa, Okla. 74101-0979. Ph: 918 584-2555, Fax: 918 584-0469)

Oct 18-22, 1993: *International Symposium on Sea Ice, Beijing, China.* Beijing, China. Contact: PingShi, Executive Secretary, International Sea-Ice Symposium Office, National Research Center for Marine Environment Forecasts, 8, Dahuisi, Haidan District, 10081, Beijing, China.Tel: 861-8313593, Fax same as telephone.

Oct 25-28, 1993: *Geological Society of America*, and affiliated societies, annual meeting, Boston. MA (Vanessa George, GSA, Box 9140, Boulder, Colo. 80301. Ph: 303 447-2020)

Nov 15-30, 1993: *IGCP Project 294 Thematic Meeting - Low Temperature Metamorphism: Processes, products and economic significance.* Santiago, Chile. Contact: Prof. M. Vergara, Universidad de Chile, Dept. de Geologica y Geofisica, Casilla 13518-Correo 21, Santiago, Chile.Fax: 56-2-6963050.

Dec 5-8, 1993: *6th International Conference on Interactions between Sediments and Water*, Santa Barbara, California.Contact: Wilbert Lick: Department of Mechanical and Environmental Engineering , University of California, Santa Barbara, CA 93106 Tel: 805-983-4295, Fax: 805-893-8651

Dec 6-10, 1993: *American Geophysical Union Fall Meeting.* San Francisco, California. Information: AGU Meetings Dept., 2000 Florida Ave., N.W., Washington, DC 20009, (202)462-6900, fax(202)328-0566, email: dsolomon@kosmos.agu.org.

Jan 5-7, 1993/4: *Winter Conference of the Mineralogical Society of Great Britain (theme: Rates of Geological Processes)* Glasgow University, Scotland. Contact: Dr. T. Dempster, Dept. of Geology and Applied Geology, University of Glasgow, Glasgow, G12 8QQ, Scotland, UK.

Feb 9-12, 1994: *New Developments Regarding the K/T Event and Other Catastrophes in Earth History.* Houston, Texas. Information: K/T Event, Lunar and Planetary Institute, 3600 Bay Area Blvd., Houston, TX 77058-1113, (713)486-2149, fax (713)486-2160, email: (Internet): holley@lpi.jsc.nasa.gov

Feb 16-19, 1994: *Breakthroughs in Karst Geomicrobiology and Redox Geochemistry*, Colorado Springs, CO. David Culver, Department of Biology, The American University, 4400 Massachusetts Ave., Washington, DC. 20016. Ph: 202-885-2194, Fax: 202-885-2182.

March 14-18, 1994: *Lunar and Planetary Science Conference*, Houston, by Lunar and Planetary Institute, and NASA Johnson Space Center. (LeBecca Simmons, LPI Publications and Program Services Department, 3600 Bay Area Blvd., Houston, 77058. (713)486-2158. Fax: (713)486-2160.

April 13-15, 1994: *Fifth International Symposium on Experimental Mineralogy, Petrology and Geochemistry (EMPG-V)* London, England. Contact: R.J. Angel, Dept of Geosciences, University College London, Gower Street London WC1E 6BT, England.Tel:44-71-387-7050Fax: 44-71-388-7614.

May 15-18, 1994: *Geological Association of Canada and Mineralogical Association of Cannada Annual Meeting.* Waterloo, Ontario. Contact: Alan V. Morgan, Dept. of Earth Sciences, University of Waterloo, Ontario N2L 3G1, Canada. Tel: (519)885-1211 ext 3231, Fax: (519)746-7484.

May 19-21, 1994: *PACROFI V - Pan American Current Research in Fluid Inclusions.* Morelo, Mexico. Contact: Georgina Izquierido M., Dept. de Geotermia, Instituto de Investigaciones Electricas, Apdo. Postal 475, Cuernavaca 62000, Morelo, Mexico. Tel: (73)183811 ext 7321, Fax: (73)182526.

May 23-27, 1994: *American Geophysical Union Spring Meeting.* Baltimore, Maryland. Information: AGU Meetings Dept., 2000 Florida Ave., N.W., Washington, DC 20009, (202)462-6900, fax(202)328-0566, email: dsolomon@kosmos.agu.org. (Abstract deadline: March 3, 1994.)

May 30-June 3, 1994: *Annual Meeting of the American Society of Limnology and Oceanography and the Society of Wetland Scientists*, Edmonton, Alberta Canada ASLO/SWS 1994 Conference, Environmental Research and Studies Center, University of Alberta, CW-401L Bio Sciences Bldg., Edmonton, Alberta, Canada TG6 2E9.Fax: 405-492-8610

June 5-11, 1994: *8th International Conference on Geochronology, Cosmochronology and Isotope Geology (ICOG-8)* Berkeley, California.Garniss H. Curtis, Chairman, Institute of Human Origins-Geochronology Center, 2453 Ridge Road, Berkeley CA 94709Tel: 415-845-4003Fax: 415-845-9453. (see more detailed advertisement below)

Aug 7-12, 1994: *Sixth International Kimberlite Conference.* Novosibirsk, Russia. Contact: Dr. N.P. Pokhilenko, Secretary, Sixth International Kimberlite Conference, United Institute of Geology, Geophysics, and Mineralogy, Russian Academy of Sciences, Siberian Branch, 630090 Novosibirsk-90 Russia. Abstract Deadlines Sept 1, 1994 (500 words); March 1, 1995 (3 page, extended) Telex: 133123 KORA SU, Fax: 007-3832 352692, email: chief@diamond.nsk.su

Aug 29-Sept 2, 1994: *4thV.M. Goldschmidt Conference: An International Conference for the Advancement of Geochemistry*, Edinburg, UK.Contact: Peter Symms, Dept. of Geology and Geophysics, The University of Edinburg, Edinburg EH9 3JW, UK. (see more detailed announcement elsewhere in Newsletter).

Sept 4-9, 1994: *International Mineralogical Association (16th Meeting of the IMA).* Pisa, Italy. Contact: Prof. Stefano Merlino, Organizing Committee IMA' 94, Dipartimento di Scienze della Terra, Universita di Pisa, Via S. Maria, 53, I-56126 Pisa, Italy. Fax: 39 (0)5040976, email: IMA94@MN.CNUCE.CNR.IT

In Memorium
Earl F. Ingerson
1907-1993

Dr. Earl F. Ingerson died June 11, 1993 at the age of 86. Dr. Ingerson received his B.S. in chemistry and his M.A. in geology from Hardin Simmons University where he graduated summa cum laude. He received his PhD in Geology from Yale University in 1934. He did his post-doctoral work in structural petrology with Professor Sander at Innsbruck, Austria.

Dr. Ingerson was on the staff of the Carnegie Institution of Washington's Geophysical Laboratory from 1935-1947. In 1947, he went to the U.S. Geological Survey to become the chief of the Geochemistry and Petrology Branch. During his tenure at U.S.G.S. he published nearly 200 articles in the fields of geology and geochemistry. He left in 1958 to become a professor of geology at The University of Texas at Austin and he remained there until his retirement in 1977.

Among his many achievements are the 1955 Day Medal and the 1959 Distinguished Service Award from the U.S. Department of the Interior. Additionally, he founded two major societies and their journals: The Geochemical Society and *Geochimica et Cosmochimica Acta* and also The International Association of Geochemistry and Cosmochemistry and its journal *Organic Geochemistry*. He served as the first president for both of these societies.

It is not possible to adequately sum up Dr. Ingerson's many achievements in these few paragraphs, but the Geochemical Society is in his debt for his outstanding contributions over the years. Dr. Ingerson is survived by one son, Fred Earl Ingerson.

CALL FOR NOMINATIONS FOR GEOCHEMICAL SOCIETY AWARDS

This is a reminder that nominations are being accepted for the three awards that the Geochemical Society confers: the ***V.M. Goldschmidt Award***, the ***F.W. Clarke Award*** and the ***Alfred Treibs Award***. Nominations are open for the 1994 Goldschmidt and Clarke awards. The Goldschmidt Award, consisting of a gold medal and a certificate, is to be made yearly for major achievements in geochemistry or cosmochemistry (nomination deadline: 12/15/93). The Clarke Award, consisting of a medal and a certificate, is to be made yearly to a young scientist for a single outstanding contribution to geochemistry or cosmochemistry, published as either a paper or a series of papers on a single topic. Nominees are eligible for the award as long as they would receive it at the GS Awards Luncheon (Fall GSA Annual Meeting) no later than six calendar years after their receipt of a doctoral degree (nomination: deadline 11/30/93). The Treibs Award consisting of a gold-filled medal and a certificate, shall be awarded every odd-numbered year for major achievements, over a period of years, in organic geochemistry. The nomination deadline for the 1995 award is 10/15/94. Those interested in making a nomination for any of these awards should consult April, 1993 *Geochimica et Cosmochimica Acta* and contact directly the appropriate award committee chairperson:

V.M. Goldschmidt Award:
Dr. H.T. Haselton
U.S. Geological Survey
959 National Center
Reston, VA 22092 USA
Ph: 703 648 6171 Fax: 703-648-4227

F.W. Clarke Award:
Dr. David Walker
Department of Geological Sciences
Lamont Doherty Earth Observatory
Columbia University
Palisades, NY 10964 USA
Ph: 914-359-2900 Fax: 914-365-2313

Alfred Treibs Award:
Dr. Patrick L. Parker
Department of Marine Sciences
University of Texas at Austin
Austin, TX 78712-1162
Ph: 512-471-5709 Fax: 512-471-6732

IDEAS FOR GEOCHEMICAL SOCIETY SESSIONS AT GSA AND AGU MEETINGS NEEDED

Theme Session and Symposia ideas and organizers are needed for the 1994 Geochemical Society meetings, at the Spring AGU in Baltimore, 23-27 May 1994, and at the GSA Annual Meeting in Seattle,WA, 24-27 October, 1994. Your Society encourages you to take advantage of these opportunities to directly influence the scientific and technical content of these meetings.

1994 Spring Joint Meeting with AGU and MSA: As of this past Spring, the Geochemical Society is a full formal sponsor of the Spring Meeting with AGU and MSA. As a sponsoring society, we have the opportunity to have our own Special Sessions, and to cosponsor sessions with other AGU and MSA sections (e.g., VGP, Ocean Sciences, Tectonophysics).

Special Sessions serve an important function in making the meeting responsive to the desires of members. Special Sessions provide an excellent vehicle for influencing the technical content of the Spring Meeting by providing numerous important focal points for submitted abstracts. As a sponsoring Society, we must take the fullest advantage of this opportunity.

Special Sessions at the Spring Meeting originate as topics proposed by two or more convenors. The procedure is quite simple. Members wishing to convene a Special Session should submit the following to the Geochemical Society's representative to the Program Committee: (1) a title, (2) a brief description of the topic/issue (a couple of sentences to a small paragraph), and (3) contact information for the convenors. The Program Committee will include these Special Sessions under the Geochemical Society banner, and this information is publicized in the weekly AGU publication EOS (see past issues of EOS for examples). Members should keep in mind that there is no set cap on the number of Special Sessions that the Society can sponsor, and therefore there will be no selection process or competition for a small number of available slots.

The success of a Special Session rests on the community's interest in the topic. Convenors can and should influence the success of their Special Session by contacting colleagues and encouraging them to submit abstracts. Convenors may wish to have a core of invited papers, but should be willing to consider adding appropriate contributed abstracts as well. Convenors also have some flexibility in the scheduled lengths of individual talks. Since abstracts are not subject to rejection, convenors can assure invitees of acceptance.

Members are encouraged to formulate Special Session topics they would like to convene for the Spring 1994 meeting in Baltimore, and convey the information outlined above to Geochemical Society's Program Committee by December 15, 1993 (although later submissions can be accommodated and added to the list of Special Sessions after the initial publication in EOS). Your Program Committee is ready and willing to help in any way needed. The first call for session topics will appear in EOS, AGU's weekly newspaper, shortly after their Fall meeting in December. The abstract deadline for the 1994 Spring Meeting is March 3, and the Meeting itself will be May 23-27 in Baltimore.

For further information, please contact the Program Committee's representative to the Spring Meeting: L. Peter Gromet, Department of Geological Sciences, Brown University, Providence, RI 02912-1846, Phone: (401) 863-1920, FAX: (401) 863-2058, E-mail: g@avalon.geo.brown.edu

1994 Fall Meeting with GSA: The Geochemical Society is an affiliated society of the Geological Society of America and as such holds its annual meeting as part of the GSA meeting. The GSA meeting provides two special formats in addition to the volunteered technical sessions. One is the symposium, which consists entirely of invited papers. The presentations can be either oral or poster, but not mixed and are organized by the conveners. Symposia are sponsored by GSA sections and associated societies. The second format is the theme session. The theme session consists entirely of volunteered papers and is designed to arrange abstracts into interdisciplinary sessions. Theme sessions have an advocate, someone who will encourage the submittal of abstracts to the session and will act as liaison to the Joint Technical Program Committee. The theme session will fall under one or more (but no more than three) categories listed on the right-hand side of the abstract form. Any abstract not included in the theme session is then considered in the selected category. The Geochemical Society is soliciting topics for its symposium and for theme sessions. If you have an idea for a topic or would like to be an advocate for a theme session under the geochemistry category, please contact Ted Labotka at the Department of Geological Sciences, University of Tennessee, Knoxville 37996-1410, 615-974-2366, Fax 615-974-2368, E-Mail LABOTKA@TLXRAY.DNET.UTK.EDU. If you are interested in advocating a theme session, he can send you the necessary information and forms. The deadline for submitting symposium and theme session proposals to JTPC is by the end of December, 1993.

GEOCHEMICAL SOCIETY AWARDS FOR 1993

The V.M. Goldschmidt Award for 1993 will be given to **Stuart Ross Taylor** (Dept. of Nuclear Physics, Australian National University, Canberra AC 2601 AUSTRALIA) at the Geochemical Society Awards Luncheon at the Fall GSA Annual Meeting. The Award Committee cited Taylor's highly productive 35 year career marked by his pervasive and seminal contributions to our understanding of crustal evolution on the Earth and Moon, his pioneering analytical and theoretical work in trace element geochemistry, his definitive trace element studies of Lunar samples, meteorites, tektites and upper and lower crustal rocks and his syntheses of Lunar and Planetary Science and Solar System evolution. The award will be presented by Brian H. Mason, Smithsonian Institution. The 1993 Clarke Award will be awarded to **Youxue Zhang** (Department of Geological Sciences, The University of Michigan, Ann Arbor, MI 48109-1063 USA) at the same ceremony. The Award Committee cited Zhang for for the pioneering work in the experimental study of multicomponent diffusion in naturally occurring silicate melts as well as the theoretical treatment of multicomponent diffusion and its application to uphill diffusion and crystal growth/dissolution in natural systems.. Presenting the award will Edward M. Stolper, California Institute of Technology. The Treibs Award

of the Organic Geochemistry Division of the Geochemical Society has been given to **Isaac R. Kaplan** (Blobal Geochemistry Corporation, 6919 Eaton Avenue, Canoga Park, CA 91303). The award committee cited Kaplan as a founder of modern organic geochemistry who was one of the first to emphasize the importance of microbiological processes in the geochemistry of sulfur which led to pioneering applications of stable isotopes to biogeochemistry. With his students, he has carried out innovative research on diagenetic and catagenetic processes leading to petroleum formation and recently has transferred the concepts and methods of organic geochemistry to environmental chemistry. Presenting the award will be J. William Schopf, UCLA. The Organic Geochemistry Division will award the best paper for 1992 to Leigh Price and Jerry Clayton of the USGS for their paper entitled: *"Extraction of whole rock versus ground source rocks: Fundamental petroleum geochemical implications including oil-source rock correlation"* (GCA 56: 1213-1222). The Awards Luncheon is scheduled for 12:30-2:00 pm, Monday, October 25, 1993 in Yarmouth/Vineyard Rooms of the Marriott Copley Place, shortly following the Geochemical Society President Donald H. Lindley's Presidential Address.

EAG MEETING AND 4th GOLDSCHMIDT CONFERENCE TO BE IN EDINBURGH, 1994

The second major EAG Meeting and the 4th V.M. Goldschmidt Conference will be held at Edinburgh on Sunday 28 August - Saturday 3 September 1994, under the auspices of the EAG and the Geochemical Society. The convenor is Dr. B. Harte, Department of Geology and Geophysics, Grant Institute, University of Edinburgh, West Mains Road, Edinburgh, EH9 3JW.

SPECIAL SECTION ON THE 1993 GEOCHEMICAL SOCIETY ANNUAL MEETING AT FALL GSA MEETING, BOSTON, MA

FALL MEETING OF BOARD OF DIRECTORS OF THE GEOCHEMICAL SOCIETY

The 1993 fall meeting of the Board of Directors of the Geochemical Society will be held Sunday, October 24, 1992 from 6:00-10:00 pm in the Hyannis Room, Marriott Copley Place.

OPEN BUSINESS MEETING FOR GEOCHEMICAL SOCIETY MEMBERS

At the spring 1992 Directors Meeting, it was decided to try to improve service of the Geochemical Society to its members by holding an Open Business Meeting. The idea of the meeting is to be a vehicle by which members can directly discuss issues of importance to the Society with a majority of the Board of Directors and Directors in turn can present ideas about future directions for the Society. The meeting is scheduled for 1:30-1:45 pm, Monday October 25, 1993 in the Yarmouth/Vineyard Rooms of the Marriott Copley Place, just after the Society's awards luncheon.

HIGHLIGHTS OF GEOCHEMICAL SOCIETY EVENTS FOR 1993 FALL ANNUAL MEETING (OCTOBER 24-28 WITH GSA, BOSTON, MA)

The Geochemical Society is sponsoring or co-sponsoring several technical and social events at this year's Fall meeting. We are co-sponsoring a short course, joint with the Sedimentary Geology Division of GSA, to be offered on Sunday, Oct 24, by Claudia Mora, Steven Driese, and David Fastovsky on the **Geochemistry and Stable Isotopes of Paleosols**. Two symposia will also be held on Sunday, one on **Sedimentary Diagenesis of Nitrogen and Sulfur in Organic Matter** sponsored by the Organic Geochemistry Division and one on **Fluids and Fluid Flow in the Crust**. On Thursday, Oct 28, the Geochemical Society is sponsoring a symposium on **Fluorine**

and Chlorine as Monitors of Fluid-Rock Interaction: New Developments.(See details on all these symposia below).

The Organic Geochemistry Division Executive Committee Meeting will be in the MIT Room of the Marriott Copley Place, 8:30pm, Saturday, Oct 23rd.

The Organic Geochemistry Division Business Meeting will be held in room 304 of the Hynes Convention Center, 5:00pm, Sunday, October 24th.

The **Fall Meeting of the Board of Directors** of the Geochemical Society will be held on Sunday, Oct 24, 6:00-10:00 PM in the Hyannis Room of the Marriott Copley Place.

Don Lindsley will give his **presidential address** on Monday at 11:00 AM in room 207 of the Hynes Convention Center. The address will be followed by the **Society's awards luncheon**, to be held in the Yarmouth/Vineyard Rooms of the Marriott Copley Place, 12:30-2:00 PM. This year we will combine the open business meeting with the luncheon, just after the presentation of the Society's awards.

On Tuesday, Oct 26, 5:30-7:30, the Society will hold a joint reception with the Mineralogical Society of America in Salon G of the Marriott Copley Place. Beer, wine, and soft drinks will be provided.

The program committee has scheduled a variety of technical sessions throughout the meeting time. The schedule of these is given in detail below. In addition to the Society's technical sessions, several theme sessions with geochemical flavors are to be held. These are:

Geochemistry of Large Rivers
Hydrogeochemistry Related to Health and Disease
Health Implications of Metals in Soils
Constraints on the Evolution of the Early Earth
Fate and Transport of Contaminants in Boston Harbor and Massachusetts Bay
High-Resolution Paleozoic Isochrons
Paleoenvironments in Oxygen-Deficient Basins: The Carbon-Sulfur-Iron System and Related Geochemical and Ecological Constraints
First Transition Series Metals and Health: Fact and Fiction
Isotope Paleobiology
Geochemistry and Chronology of Appalachian Mylonites and Shear Zones
Metamorphism, Fluid Flow, and Ore Deposits
Geologic Disposal of Nuclear Waste and the Risk to Public Health and Safety
Advances in Dating Young Groundwater
Thermobarometric Studies and P-T Path Determinations in Mountain Belts

Information on the day, time and composition of these theme sessions is in the GSA *Program with Abstracts*.

Calendar and Synopsis of Geochemical Society Events

Saturday, Oct 23
OGD Executuve Committee Meeting, 8:30pm, Marriott Copley Place

Sunday, Oct 24
OGD Symposium: Sedimentary Diagenesis of Nitrogen and Sulfur in Organic Matter
GS Symposium: Fluids and Fluid Flow in the Crust
GS Short Course: Geochemistry and Stable Isotopes of Paleosols
OGD Business Meeting, 5:00pm, Room 304 Hynes Convention Center
GS Board of Directors 6:00-10:00 PM, Hyannis Room, Marriott Copley Place

Monday, Oct 25
Presidential Address: Late Liquids of Anorthosite Complexes: Does Liquid Immiscibility Play a Role? by D. H. Lindsley, 11:00 AM, Room 207, Convention Center
Awards Luncheon and Business Meeting: 12:30-2:00 PM Yarmouth/ Vineyard Rooms, Marriott Copley Place

Tuesday, Oct 26
GS-MSA Reception: 5:30-7:30, Salon G, Marriott Copley Place

Thursday, Oct 28
GS Symposium: Fluorine and Chlorine as Monitors of Fluid-Rock Interaction: New Developments

SYMPOSIA AND TECHNICAL SESSIONS SPONSORED BY THE GEOCHEMICAL SOCIETY

Sedimentary Diagenesis of Nitrogen and Sulfur in Organic Matter (Part I)

Sunday, Oct 24

Time	Title	Authors
8:00	Geochemical incorporation of sulfur into organic matter: importance of hydrogen sulfide oxidation products	— Appathurai, Vairavamurthy
8:30	Early diagenetic transformations of organically-bound sulfur in Peru margin sediments	— Eglinton, T.L., Sinninghe Damste, J.S., Schouten, S., DeLeeuw, J.W., Vairavamurthy, A., Manowitz, B., and Irvine, J.
9:00	Organic sulfur compounds formed during early diagenesis in Black Sea sediments	— Wakeham, S.G., Kohnen, M.E.L., Sinninghe Damste, J.S., DeLeeuw, J.W.,
9:30	Formation and destruction of sedimentary organically-bound sulphur: implications for paleoenvironment reconstruction	— Koopmans, Martin P., Lewan, M.D., Sinninghe Damste, J.S., DeLeeuw, J.W.
10:30	Implication of sulphur incorporation and diagenesis in organic-rich marine sediments	— Pratt, Lisa M., and Davis, Cara L.
11:00	Alterations of plant nitrogen during decomposition	— Fogel. Marilyn L.
11:30	The early diagenesis of nitrogen in sediments	— Burdige, D.L.

Sedimentary Diagenesis of Nitrogen and Sulfur in Organic Matter (Part II)

Sunday, Oct 24

Time	Title	Authors
1:00	An integrated chemical and microbiological study of the diagenesis of organic matter in sediments from offshore Peru (0-100 m depth)	— Lewis, C.A.
1:30	Aspects of porphyrin diagenesis	— Baker, Earl, W., and Louda, J.W.
2:00	Possible origins of organic nitrogen in crude oils	— Bakel, Allen J.
2:45	The petroleum geochememistry of nitrogen	— Larter, Steve and Li, Maowen
3:15	Nitrogen isotopic variations in organic matter and minerals influenced by fluid migration during duagenesis	— Williams, Lynda B., Ferrell, R.E.Jr., Hutcheon, Ian, Krouse, H.R., Bakel, Allen

Fluids and Fluid Flow in the Crust

Sunday, Oct 24

Time	Title	Authors
1:00	Introduction	—
1:05	How are mineral weathering rates affected by porewater flow and chemistry?	— Brantley, Susan L.
1:25	Submicroscopic controls on water transport to reaction sites in weathering amphiboles	— Banfield, Jillian F. and Barker, William W.
1:45	Saline formation waters: New constraints on origin and migration from comparisons at Basin scale	— Walter, L. M., Martini, A. M., Stueber, A. M., and Moldovanyi, E. P.
2:05	Regional scale fluid flow in the Deep Michigan Basin	— Bahr, Jean M. and Moline, Gerilynn R.
2:25	Post-impact fluid flow and alteration: Manson impact structure, Manson, 1A	— Crossey, Laura J., Campana, Michael E., Gates, Thomas Gregory, and McCarville, Peter
2:45	The role of porosity and chemical buoyancy on fluid flow regimes int the crust	— Dutrow, Barb, Rosenberg, N., and Spera, F. J.
3:05	Interaction between fluid migration, metamorphic reactions, and deformation in mid-to deep-crustal shear zones	— Selverstone, Jane
3:25	Meteoric water-rock interaction in lower-plate rocks of the whipple mtns. metamorphic core complex, SE CA	— Morrison, Jean

3:45	Alteration of ancient arc crust: The tales of two (Meta) Tuffs	—	Sorensen, S. S., Hanson, R. B., and Barton, M. D.
4:05	The influence of kinetics on the smectite to illite transition in the Barbados accretionary prism	—	Bekins, Barbara, McCaffrey, Anne M., and Dreiss, Shirley J.
4:25	Fluids and fluid-mobile elements in modern subduction zones	—	Morris, Julie and Leeman, W. P.
4:45	U. th and ree transport in crustal and mantle fluids	—	Ragnarsdottir, K. Vala and Bailey, Elizabeth H.

Geochronology

Monday, Oct 25

Time	Title		Authors
8:00	Nd, Sr and Ar isotopic dating of diagenesis and low-grade metamorphism of argillaceous sediments	—	Schaltegger, Urs, Stille, Peter and Clauer, Norbert,
8:15	Anorogenic granite provenance for clastic metasediments of the Early Proterozoic Broken Hill Group, Australia	—	Slack, John F., Stevens, Brian P. J.
8:30	Isotopic evidence in the Carolina slate and Charlotte belts (North Carolina) for reactivated Grenvillian and older sources	—	Kozuch, M., Mueller, P., Heatherington, A., Wooden, J., Koeppen, R., and Klein, T.
8:45	U-Pb dating of staurolite	—	Lanzirotti, Antonio, and Hanson, Gilbert N.
9:00	Zircon geochronology of Avalonian magmatic suite southwest of Boston, Massachusetts	—	Kelly, K. L., Thompson, M. D., Besancon, J. R., Bowring, S. A., and Isachsen, C. E.
9:15	Geochronological constraints on the petrogenesis of granitic pegmatites, Topsham, Maine	—	Tomascak, Paul B., Krogstad, Eirik J., and Walker, Richard J.
9:30	The geochemical evolution of Neogene volcanism in west-central Sonora	—	Mora-Alvarez, Gabriela, and McDowell, Fred W.
9:45	Geochemistry of early Tertiary monzogranites and andesites in northeastern Washington: Implications for tectonic environment	—	Russell, Christine L., and Ikramuddin, Mohammed
10:00	Sr and Nd isotope systematics of the Cassiar serpentinite	—	O'Hanley, David S., and Kyser, T. K.
10:15	High U-Pb closure temperatures of large apatites	—	Krogstad, Eirik J.
10:30	Trace element zoning patterns of mantle garnets	—	Shimizu, N., Boyd, F. R., and Pokhilenko, N. P.
10:45	On the thorium-lead paradox in zircon geochronology	—	Silver, Leon T.

Oceans,pore fluids,weathering, and the atmosphere: Surface to the sky

Monday, Oct 25

Time	Title		Authors
2:00	Quantifying rates of sulfide mineral oxidation and iron hydroxide precipitation in a controlled field setting, East Mancos River, Colorado	—	Parnell, Roderic A., Jr., Meyer, Wendy A., and Bennett, Jeffrey B.
2:15	Unraveling multi-solute sorption by mineral mixtures through surface-complexation studies of simple systems: Sorption of Ni and Li by a natural sand	—	Ward, David B., Bryan, Charles R., and Siegel, Malcolm D.
2:30	Impact of agriculture on the quality of shallow ground water: spatial and temporal changes in NO and Cl beneath a cornfield	—	Wanty, R. B., Landon, M. K., Tuttle, M. L., and Delin, G. N.
2:45	Nitrogen isotopic ceormface a site of intense cycling in a forested, midwestern ecosystem	—	Ostrom N. E., Hedin, L. O., and G. P. Robertson
3:00	Factors contributing to spatial and temporal variations in water chemistry of a riparian wetland system	—	Donahoe, Rona J.; Liu, Chongxuan; and Dobson, Keith
3:15	Intensification of silicate weathering by vascular plants: Mount St. Helens field studies and related experiments	—	Cochran, M. Ford, and Berner, Robert A.

3:30	Application of radiogenic isotopes to the evolution of a soil-vegetation-atmosphere system on a decade time scale	—	Stewart, Brian W., Chadwick, Oliver A., and Graham, Robert C.
3:45	Pre-vascular biomass and soil CO2 respiration on early Paleozoic continents: implications from an Upper Ordovician weathering profile	—	Yapp, Crayton J. and Poths, Harald
4:00	The banded iron formations: products of the oxygen-rich atmosphere?	—	Ohmoto, Hiroshi
4:15	Late Archean atmospheric CO2	—	Kuo, Philip H., Holland, Heinrich D., and Danielson, Antje
4:30	The implication of the oxygen isotopic composition of nodular chert from the Lower Devonian carbonate sequences in Oklahoma and Texas	—	Gao, Guoqiu and Land, L. S.
4:45	Location of uranium and thorium in granites - radiogenic influence on cosmogenic isotope abundance	—	Turner, Jill L.

Biogeochemistry

Tuesday, Oct 26

Time	Title		Authors
1:30	C-S-Fe systematics in Peru margin muds	—	Suits, Neil S., and Arthur, Michael A.
1:45	Evidence for syngenetic mineralization in the Utica shale of central New York State and Quebec using carbon-iron-sulfur systematics	—	Hannigan, R., and Mitchell, C. E.
2:00	Diagenetic and replacement reactions forming pyrite	—	Furukawa, Yoko, and Barnes, H. L.
2:15	Formation processes of framboidal pyrite	—	Wilkin, Richard T. and Barnes, H. L.
2:30	Anglo-Paris Basin albian phosphates: observations and implications	—	Knight, Robin I.
2:45	Phosphorus geochemistry of equatorial Pacific deep sea sediments	—	Filippelli, Gabriel M., and Delaney, Margaret L.
3:00	Contribution of algal (?) REE signatures to sedimentary phosphates via fecal material	—	Kidder, David L., Eddy Dilek, Carol
3:15	Kinetic isotope fractionation of amino acids during simulated humification	—	Qian, Y., Engel, M. H., and Macko, S. A.
3:30	Fermentable carbon loading as a key to acetoclastic methanogenesis	—	Risatti, J. B., Hatcher, P. G.
3:45	Spatial and temporal variations in CO2, CH4, and O2 in the unsaturated zone of a freshwater playa: implications for geochemical processes	—	Romanak, Katherine D., Bennett, Philip C., and Hovorka, Susan
4:00	Methane distribution and isotopic composition in the upper framework of Checker Reef, Oahu, Hawaii	—	Sansone, Francis J., Popp, Brian N., Rust, Terri M., and Haberstroh, Paul R.
4:15	Stable carbon isotope values of bulk organic matter from surface sediments of Florida Bay	—	Lutz, Michael J., Bateman, Alison, and Swart, Peter K.
4:30	Extreme depletion in the C-isotopic composition of seawater on Bahamian and Floridian platforms: Mechanisms and significance for ancient epieric seas	—	Patterson, Willlam P., and Walter, Lynn M.
4:45	Microbial diagenesis of silicates and calcite in an organic-rich aquifer	—	Hiebert, Franz, K. and Bennett, Philip C.
5:00	The roles of pCO2, organic acids, and organic acid anions on clastic diagenesis in the Wilcox Group of the Texas Gulf coast	—	Tempel, Regina N. and Harrison, Wendy J.
5:15	Authigenic K-NH4-feldspar in sandstones: A fingerprint for organic-inorganic reactions under anoxic conditions	—	Ramseyer, Karl, Diamond, Larryn W., and Boles, James R.

Fluid-rock interaction and stable isotopes

Tuesday, Oct 26

Time	Title	Authors
1:30	Tectonic controls on post-burial rock-water interactions in the Delaware Basin. West Texas and Southeast New Mexico	— Zaengle, J. F., and Lohmann, K. C.
1:45	Long and short period oscillatory zonation in vein calcite: evidence for marine, hydrothermal, and meteoric fluid sources	— Wogelius, Roy A., Wall, Gavin R. T., and Fraser, Donald G.
2:00	Fluid mixing, boiling and water-rock interaction in the east rift zone of Kilauea volcano, Hawaii	— Conrad, Mark E., and Thomas, Donald M.
2:15	Sodic-calcic alteration in an arc environment: a case study at the Buffalo Mountain pluton, north-central Nevada	— Battles, Denise A.
2:30	Geochemistry of host-rock alteration at a one-mile long sheeted quartz lode within the Avalonian terrane of southern New England	— Altamura, Robert J. and Gold, David P.
2:45	Isotopic pattern of ancient meteoric water - a study of altered diabase dykes in the Canadian shield	— Li, Hong, Schwarcz, Henry P. and Shaw, Denis M.
3:00	Remarkably uniform bulk silicate d180 values of terrigenous sedimentary rocks from the central Appalachian and Ouachita geosynclines	— Burt, Emelia A. and Taylor, Hugh P. Jr.
3:15	Isotopic evidence for fluid driven mid crustal anatexis and late stage meteoric-hydrothermal activity near the Monashee decollement: Thor-Odin metamorphic core complex, S. E. British Columbia	— Holk, Gregory J., and Taylor, Hugh P. Jr.
3:30	Use of oxygen isotopes to trace a zone of meteoric-hydrothermal fluid flow along a Hercynian fault system: Vosges, N. E. France	— Gazis, Carey and Taylor, Hugh P. Jr.
3:45	The stable isotope geochemistry of carbon in the Kapuskasing structural zone and the electrical resistivity of the lower crust	— Puris, Eriks M., Wickham, Stephen M.
4:00	Quartz-calcite oxygen isotope thermometry: an empirical calibration	— Sharp, Z. D and Kirschner D. L.
4:15	Oxygen isotope geochemistry of zircon	— Valley, J. W., Chiarenzelli, J. R., McLelland, J. M.
4:30	Oxygen isotope systematics of sphene in plutonic igneous rocks	— Wickham, Stephen M., Alberts, Amy D., Bindeman, Ilya N., Litvinovsky, Boris A., and Zanvilevich, Ada N.
4:45	The sulfur isotope scale: high precision analyses using SF6 and Miles laser microprobe	— Beaudoin, Georges, and Taylor, Bruce E.
5:00	Oxygen isotope ratio analysis of phosphate in biogenic and non-biogenic apatite by laser heating in F2 gas: a spectroscopic study of the fluorination process	— Young, Edward D.
5:15	Laser microprobe analysis of Ar and Kr isotopes in an	— Irwin, James J.

Geochemistry of surface and basin fluids

Wednesday, Oct 27

Time	Title	Authors
8:00	Origin of aqueous sulfate in pore fluids from Oligocene rocks, South Texas	— Dworkin, S. I., and Land L. S.
8:15	Sulfur speciation and thiosulfate formation in Doughty Springs, Hotchkiss, Colorado	— Schoonen, M A. A., Nordstrom, D. K., Ball, J. W., and Cunningham, K. M.
8:30	Mg and Ca during burial of sea water—Relation to salt dissolution and other water-rock interaction	— Macpherson, G. L.
8:45	Fluid inclusion evidence for multiple generations of halite crystallization in the Paradox Formation, Colorado and Utah	— Williams-Stroud, Sherilyn C.
9:00	Variations of Mg, Sr, and K in sulfate minerals from the Paradox Formation, Utah - Clues to the composition of depositional and diagenetic brines	— Rice, C.A., Breit, G. N., and Hills, F. A.

9:15	Strontium isotope ratios in Paradox Basin evaporite evidence for a nonmarine component	—	Hills, F. Allan, Rice, C. A., and Breit, G. N.
9:30	Geochemical modeling of mixing of subsurface fluids in the	—	Long, David T. and Sibley Duncan F.
9:45	Rare earth element concentrations and speciation in acidic and alkaline natural waters	—	Johannesson, Kevin H., and Lyons, W. Berry
10:00	A model for sulfur accumulation in Adirondack lakes	—	Matisoff, Gerald, and Holdren, George, Jr.
10:15	Recent brines from the Salina Ometepec, Baja California: Chemical evolution of marine brines in a siliciclastic/evaporite environment	—	Martini, A. M., Walter, L. M.
10:30	Modern ikaite formation at Mono Lake, CA	—	Council, Todd C., Bennett, Philip C.
10:45	Major dissolved ion and stable isotope hydrochemistry of the Badwater salt pan, Death Valley, California, U.S.A.	—	Roberts, Sheila, Spencer, Ronald J., Yang, Wenbo, Krouse, H. Roy, Lowenstein, Tim K., Li, Jianren
11:00	Comparison of data obtained from fluid inclusions in halite with measurements during halite formation	—	Spencer, Ronald J., Yang, Wenbo, Krouse, H. Roy, and Lowenstein, Tim K.
11:15	Burial-diagenetic (?) K/Ar ages from the <0.05 μm fraction of illite/ smectite mixed-layer clays, Reindeer D-27 well, Beaufort-Mackenzie basin, Arctic Canada	—	Sears, K., Hesse, R., Vali, H., Aronson, J. L., and W. C. Elliot
11:30	The stable isotopic composition of ancient kaolinites of North America	—	Lawrence, James R., and Rashkes, Janet R.
11:45	Chemical weathering of silicate minerals in a mountainous, tropical, rain forest, Puerto Rico	—	Blum, Alex E., White, Art F., Bullen, Thomas, Schulz, Marjorie S., and Larson, Matthew

Geochemistry Posters

Wednesday, Oct 27

Time	Title		Authors
1:30	Eolian flux to an alpine catchment, Snowy Range, Wyoming	—	Finley, Jim B., Drever, James I., and Frost, Carol D.
1:30	Geochemical and isotopic study of the Filicudi Island, Aeolian Arc, southern Tyrrhenian Sea, Italy	—	Santo, Alba P., and Jacobsen, Stein B.
1:30	Late Proterozoic diamonds: evidence from zircon in diamond	—	Kinny, Peter D., and Meyer, Henry O. A.
1:30	Oxygen isotope evidence for the Permo-Triassic onset of extensional tectonism in the Lake Baikal region	—	Alberts, Amy D., Wickham, Stephen M., Litvinovsky, Boris A., and Zanvilevich, Ada N.
1:30	Oxygen isotopic environmental information showing possible seasonal variation in large rodent incisors	—	Stuart-Williams, Hilary Le Q., Schwarcz, Henry P.
1:30	Geochemistry of diagenetic carbonates and implications for hydrothermal circulation within the sediments at ODP site 858, Juan De Fuca Ridge	—	Baker, Paul A., Cross, Scott L., Burns, Stephen J., Rigsby, Catherine A.
1:30	Rare earth element geochemistry of smectite from the Cretaceous/Tertiary (K/T) boundary in Denmark	—	Elliott, W. Crawford
1:30	Carbon isotope composition of amino acids using GC/C/IRMS: Some analytical considerations and interpretations of modern and fossil ostrich eggshell	—	Johnson, Beverly J., Fogel, Marilyn I., Miller, Gifford H.
1:30	Carbon-13 organic matter and pollen composition as evidence of environmental changes in Cobweb Swamp, Belize	—	Alcala-Herrera, Javier A., Garcia-Romero, Bernardo, Jacob, John S., Gioargaez, F. Raul, and Machain-Castillo, Maria L.
1:30	Two Precambrian sources for the Ordovician St. Peter Sandstone of the Great Lakes region: Pb isotope evidence	—	Winter, Bryce L. and Johnson, Clark M
1:30	Shrimp study of extreme bacteriogenic sulfur isotope enrichments in the moat sediments of the Creede caldera	—	Kibben. M. A., Eldrldge. C. S., Bethke. P.M.
1:30	Element distribution in the Cleveland Shale, a weathered, Devonian black shale, northeastern Ohio	—	Wilson, Timothy P., and Choate, Robert E.
1:30	Geochemistry of Llanvirn-Llandeilo black shales: Tectonic evolution of the eastern margin of the Iapetus Ocean	—	Lev, Steven, Algeo, Thomas J., Niemitz, Jeff, and Harrison, Trent

1:30	Electron microprobe study of young Paleocene glauconitic micas, Savanna h River site (SRS), South Carolina	— Harris, W. Burleigh, Tovo, Laura L., and McDaniel, Shirley, F.
1:30	Geochemistry of the Chiwaukum Schist, Washington: evidence for a back arc basin and island arc complex, the accretion of a juvenile oceanic terrane, and geochemical stability during metamorphism	— MagLoughlin, Jerry F., and Edwards, R. Lawrence
1:30	Laser-fluorination investigation of sulfur isotopes in pyrite from the moat deposits of the Creede caldera, Colorado	— Ilchik, Robert P. and Rumble, Douglas
1:30	Miarolitic elbaite subtype of complex rare-element pegmatite Peninsular Ranges batholith, Southern California	— Taylor, Matthew C., Williams, Alan E., McKibben, Michael A., Kimbrough, David L., and Novak, Milan
1:30	An ion microprobe study of trace element microdistributions in Martian (?) igneous rocks (SNC meteorites)	— Wadhwa, Meenakshi, and Crozaz, Ghislaine
1:30	A convection-oxidation model for the genesis of the upper Mississippi Valley Zn-Pb deposits	— Corbella, Mercè and Barnes, H. L.
1:30	Oxygen isotopic compositions of diagenetic quartz overgrowths determined by secondary ion mass spectrometry	— Hervig, R.L., Williams, Lynda B., Kirkland, I., and Longstaffe, F. J.
1:30	Interaction belween meteoric water and mylonites undergoing semibrittle deformation below the brittle/ductile transition	— Fricke, Henry C., and O'Neil, Jarnes R.
1:30	Evidence of multiple alteration events affecting Precambrian basement, Saint Francois Mountains, Missouri	— Sutton, S. J., and Maynard, J. B.
1:30	U-Pb dating of single shocked zircons: A method for locating the target site and determining the time of impact	— Kamo, Sandra L., Krogh, Thomas E., and Bohor, Bruce H.
1:30	Boron isotopic study of the tertiary bedded borate deposits of Furnace Creek, California	— Swihart, George H., McBay, Eddy H., Smith, David H., and Carpenter, Steven B.
1:30	Terrane accretion in southeastern North America: Constraints of geochronologic data from Paleozoic and Proterozoic granitoids	— Heatherington, A. L., Mueller, P. A., Spencer, J., and Isachsen, C. E.
1:30	The role of thermochemical sulfate reduction in the evolution of secondary porosIty, Whitney Canyon-Carter Creek field, Wyoming	— Nicholson, Andrew D., and Goldhaber, Martin B.
1:30	Geochemical characterization of shell matrix proteins, an approach for evaluating diagenetic alteration	— Ostrom, P. H., and Robbins, L. L.
1:30	Reaction of NaCl brines with siliciclastic sediments: An experimental study	— Esch, L., and Hanor, J. S.
1:30	A thermodynamic model of endogenic siderite precipitation in Plio-Pleistocene Black Sea	— Rajan, S., Mackenzie, Fred T., and Glenn, Craig R.
1:30	Geochemical characterization of acidic waters from uranium mines in the Black Hills of South Dakota	— Webb, Cathleen, J., Davis, Arden D., and Hodge, Vernon F.
1:30	The optimum conditions for the distillation of nitrate and ammonium for natural abundance stable isotope determinations	— Knoke, Keith, Ostrom, Nathaniel E., and Bell, Emily
1:30	Bromide-chloride-sulfate trilinear/rectilinear diagram for salinity source identification	— Whittemore, Donald O.
1:30	Chemical and isotopic composmon of thermal waters in Egypt	— Sturchio, Neil C. and Arehart, Greg. B., Sultan, Mohamed, Abo Kamar, Yousry, and Ibrahim, Sayed M.
1:30	Assessing the magnitude of petroleum contamination of estuarine sediments: evidence from compound-specific carbon isotope signatures	— Abrajano, T. A. Jr. and O'Malley, V. O.
1:30	Geochemistry of authigenic minerals in the Ivishak Formation, North Slope, Alaska	— Mozley, Peter S., Carothers, William W., Bird, Kenneth J.
1:30	Examination of the sorption behavior of cesium by minerals using XPS and NMR spectroscopies	— Kim, Yeongkyoo, Cygan, Randall, and Kirkpatrick, R. James
1:30	Petrology and chemistry of Limalok and Wodejebato guyots (ODP sites 871 and 874), Republic of the Marshall Islands	— Wyatt, Jennifer, Quinn, T. M., and Davies, G. R.
1:30	Aqueous geochemistry of the Snake River Plain aquifer, at the Idaho National Engineering Laboratory	— McLing, Travis L, and Smith, Robert W.

1:30	Early siliciclastic diagenesis in an evaporative setting: implications for C-S-Fe systematics and water/rock interactions	—	Hansen, John, R., Hover, Victoria C., Walter, Lynn M., Lyons, Timothy W., Martini, Anna M., Robinson, Dawn M.
1:30	Microanalysis of organic-rich fluid inclusions by synchronously scanned luminescence spectroscopy	—	Musgrave, John A., Tait, C. Drew, Janecky, David R., Carey, Russell, G, Hulen, Jeff, B., Peter, Jan
1:30	The effect of malonate anion on the dissolution kinetics of albite, quartz and microcline as a function of pH at 70 °C	—	Knauss, Kevin G. and Copenhaver, Sally A
1:30	Major ion, O-18, and Sr variations in K-rich lakes of the alkali lakes region, Western Sandhills, Nebraska	—	Gosselin, David C., Nabelek, P., and Peterman, Z.
1:30	Orientation and dynamics of organic compounds in clay interlayers	—	Gill, Wendy A., and Kirkpatrick, R.J.
1:30	High resolution profiles of methane and DIC stable isotopic compositions in sediments of Tomales Bay, California	—	Popp, Brian N., and Sansone, Francis J.
1:30	The first study of aqueous species in inclusion fluids using X-ray absorption spectroscopy	—	Anderson, A. J., Mayanovic, R. A., Bodnar. R. J., Mavrogenes, J. A., Bajt, S., Rivers, M. L., and Sutton S. R.
1:30	A new method for oxygen isotope analysis of soil water	—	Hsieh, Jean, Savin, Samuel M., Kelly, Eugene F., Chadwick, Oliver A.
1:30	Geochemical and microbiological reactions during bioremediation in shallow clay-silt sediments	—	Capuano, Regina M., Jan, Rezie, Siringan, Maria Auxilia, and Jurtshuk, Peter Jr.
1:30	Effects of concentration, salinity, and pH on gold immobilization in bacllllus subtilis	—	Conboy, M. J., F. G. Ferris, G. S. Henderson, and J. J. Fawcett
1:30	Kinetics of low temperature oxygen isotope exchange between carbon dioxide and chloride salt solutions		Fortier, Steven M.
1:30	The effects of organic acid species on plagioclase and K-feldspar dissolution at 80°C and circum-neutral pH	—	Blake, R.E., and Walter, Lynn M.

Thermodynamics and kinetics of water-rock interaction

Thursday, Oct 28

Time	Title		Authors
1:00	Assessing the role of aqueous metal complexes of monovalent organic ligands in geochemical processes	—	Koretsky, Carla M. and Shock, Everett L.
1:15	Predictions of high-temperature stability constants for aqueous complexes of the rare earth elements	—	Haas, Johnson R., Shock, Everett L., and Sassani, David C.
1:30	Hydrothermal transformation of muscovite to end-member illite at 250 °C	—	Yates, Douglas M., and Rosenberg, Philip E.
1:45	Kinetics of muscovite dissolution and kaolinite precipitation onto muscovite at 80°C and pH 3	—	Nagy, Kathryn L. and Pevear, David R.
2:00	Experimental investigation of the dissolution rates of K-feldspar and anorthite as functions of chemical affinity and Al/Si ratio in solution	—	Oelkers, Eric. H, Schott, Jacques, and Gautier, Jean-Marie
2:15	Liquid-vapor partitioning of oxygen and hydrogen isotopes of water to 350°C	—	Horita, Juske and Wesolowski, David J.
2:30	Predicted effects of temperature, oxygen fugacity, pH, and solution composition on the speciation of aqueous uranium and the solubility of uraninite	—	Sassani, D. C., Betz, H., and Shock, E. L.
2:45	Dissolution kinetics and adsorption of cations to the acid-reacted wollastonite surface at 25 °C	—	Xie, Zhixin, Walther, John V.
3:00	The interfacial tension between water and calcite and water and dolomite at 20°C	—	Wu, W., Giese R. F., and Van Oss, C. J.
3:15	Differential partitioning of sulfate in synthetic calcite single crystals: Evidence of sulfate substitution for carbonate	—	Staudt, W. J., Reeder, R. J., and Schoonen, M. A. A.
3:30	Inter- and intra-zonal carbon and oxygen isotope variations in a sector-zoned calcite revealed by microsampling techniques	—	Klein, Robert T., and Lohmann, Kyger C.

3:45	Precipitation at the mineral-water interface: linking microscopic to macroscopic processes	—	Junta, Jodi L., Hochella, Michael F., Jr., and Rimstidt, J Donald
4:00	The effects of kinetics on the distribution coefficient between calcite and diagenetic solutions during the conversion of aragonite to calcite	—	Howell, Roy P.
4:15	Marcasite epitaxy on pyrite, deep tunnel project, Chicago, Illinois	—	Rakovan, John, Schoonen, Martin, and Reeder, Richard J.
4:30	Reexamination of the temperature dependence on activation energies of mineral dissolution	—	Ganor, Jiwchar and Lasaga, Antonio C.
4:45	Laboratory and numerical experiments on 1HNMR relaxation in fluid-filled sandstones	—	Moses, Carl O. and Egers, Kristin M.

Chlorine and Fluorine as Monitors of Fluid-Rock Interaction: New Developments

Thursday, Oct 28

Time	Title		Authors
8:00	Single-crystal x-ray study of halogen-rich 1M biotites with implications for octahedral fe-mg ordering	—	Swope, R. Jeffrey, Munoz, James L., and Smyth, Joseph R.
8:15	A tem study of high-Cl amphiboles and biotites: Possible petrological interpretations	—	Zhu, Chen, Xu, Huifang, Ilton, E., Vehlen, D., and Henry D.
8:30	Order/disorder in the apatite anion columns: Crystal chemical constraints on F. Cl., OH	—	Hughes, John M. and Cameron, M.
8:45	Problems and perspectives in thermodynamic modeling of apatite compositions	—	Tacker, Chris
9:00	Determination of Fluorine in minerals by proton-induced gamma-ray emmission analysis	—	Robertson, J. D., Dyar, M. Darby, Cross, L. R., Grant, C. A., and Guidolli, C. V.
9:15	An experimental study of the partitioning of fluorine between biotite and silicic melts	—	Icenhower, Jonathan P. and London, David
9:30	The role of fluorine in crystallization of a-type sheet granites, Wichita Mountains Oklahoma	—	Hogan, John P. and Gilbert, M. Charles
10:00	Exsolution of F-and Cl - rich melts from felsic silicate melts: Constraints from experiments and glass inclusions	—	Webster, J. D.
10:15	Halogens in layered intrusions	—	Boudreau, A. E., Meure, W. P., Cawthorn, R. G., and Mathison, C. I.
10:30	Halogen chemistry associated with contrasting styles of mineralisation of Hercynian granitoids	—	Yardley, B. W. D., Banks, D. A., Cathelineau, M. A., and Boiron, M. C.
10:45	Comparative regional patterns in biotite halogen compositions in the Sierra Nevada. Caucasus and Mongolia	—	Brimhall, G., Lewis, C., Gurbanov, A., Bogaukov, O., and Kovalenko, S.
11:00	Sources of halogens and sulfate in deep granitic ground waters based on geochemical modeling and fluid inclusion leach experiments ofr the stripa granite	—	Waber, H. Niklaus and Nordstrom, D. Kirk
11:15	A recalibration of cosmogenic Chlorine-36 production rates using lava-flow samples from the Western Snake River plain volcanic field	—	Phillips, Fred M., Zreda, Marck G., and Elmore, David
11:30	The relationship of Cl, br and 37/35Cl isotopic ratios in fluids and associated crystalline rocks of the Canadian and Fennoscandian shields	—	Frape, Sahun K., Bryant, Gary, and Blomqvist, R.

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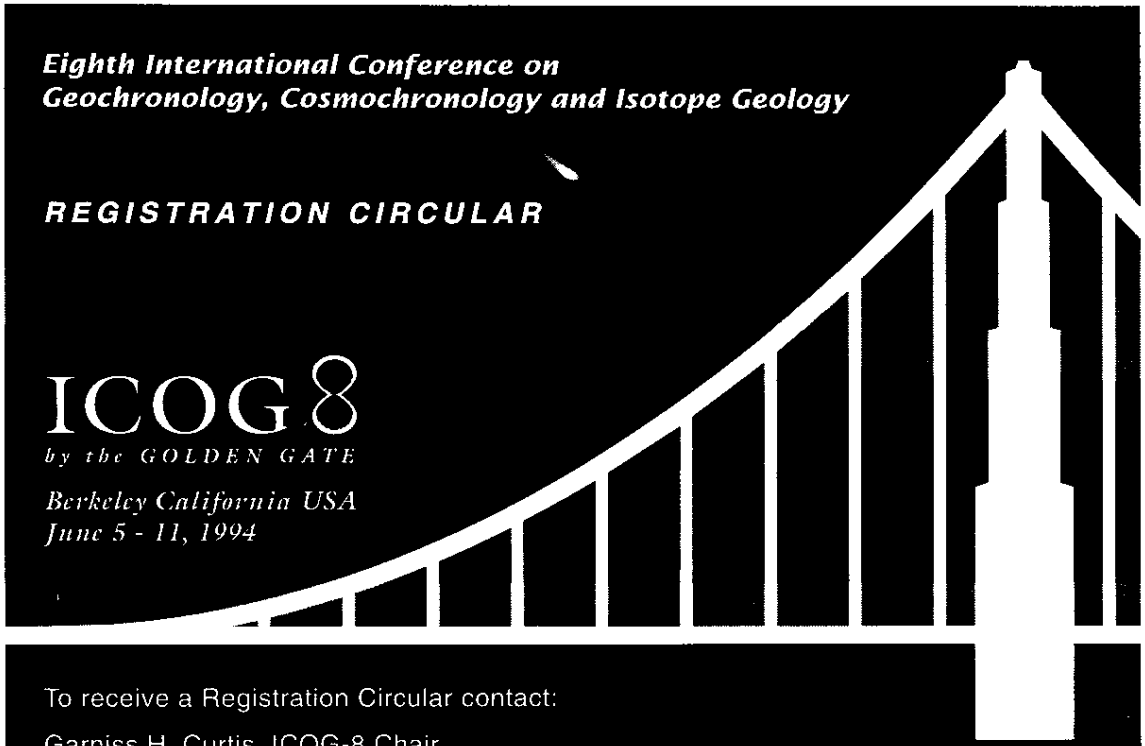

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