

Newsletter

of the

International Association of Geochemistry and Cosmochemistry

Number 36, December 2001
Gunter Faure, Newsletter Editor

The International Association of Geochemistry and
Cosmochemistry is a Nonprofit Organization



Please renew your membership in the
IAGC today

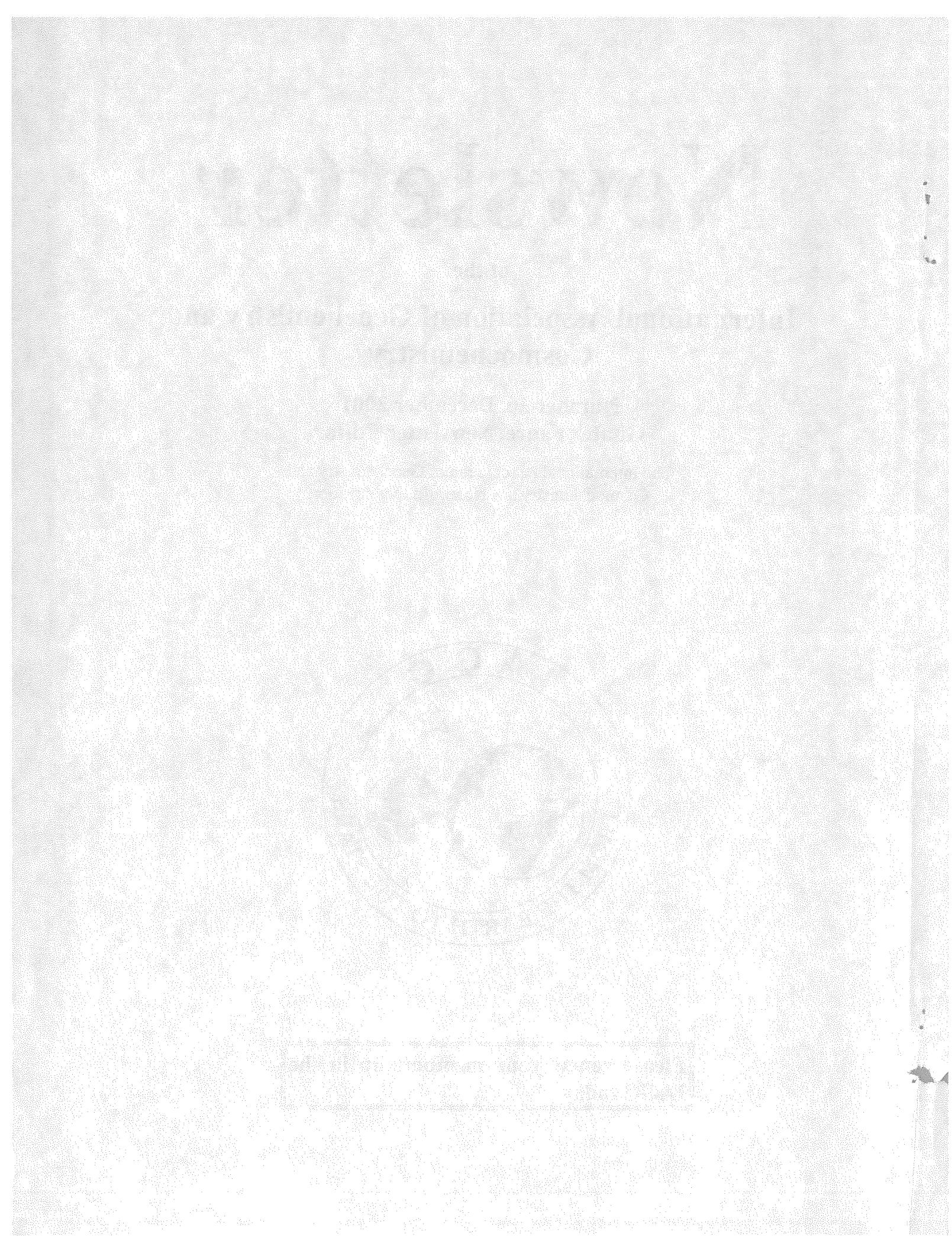
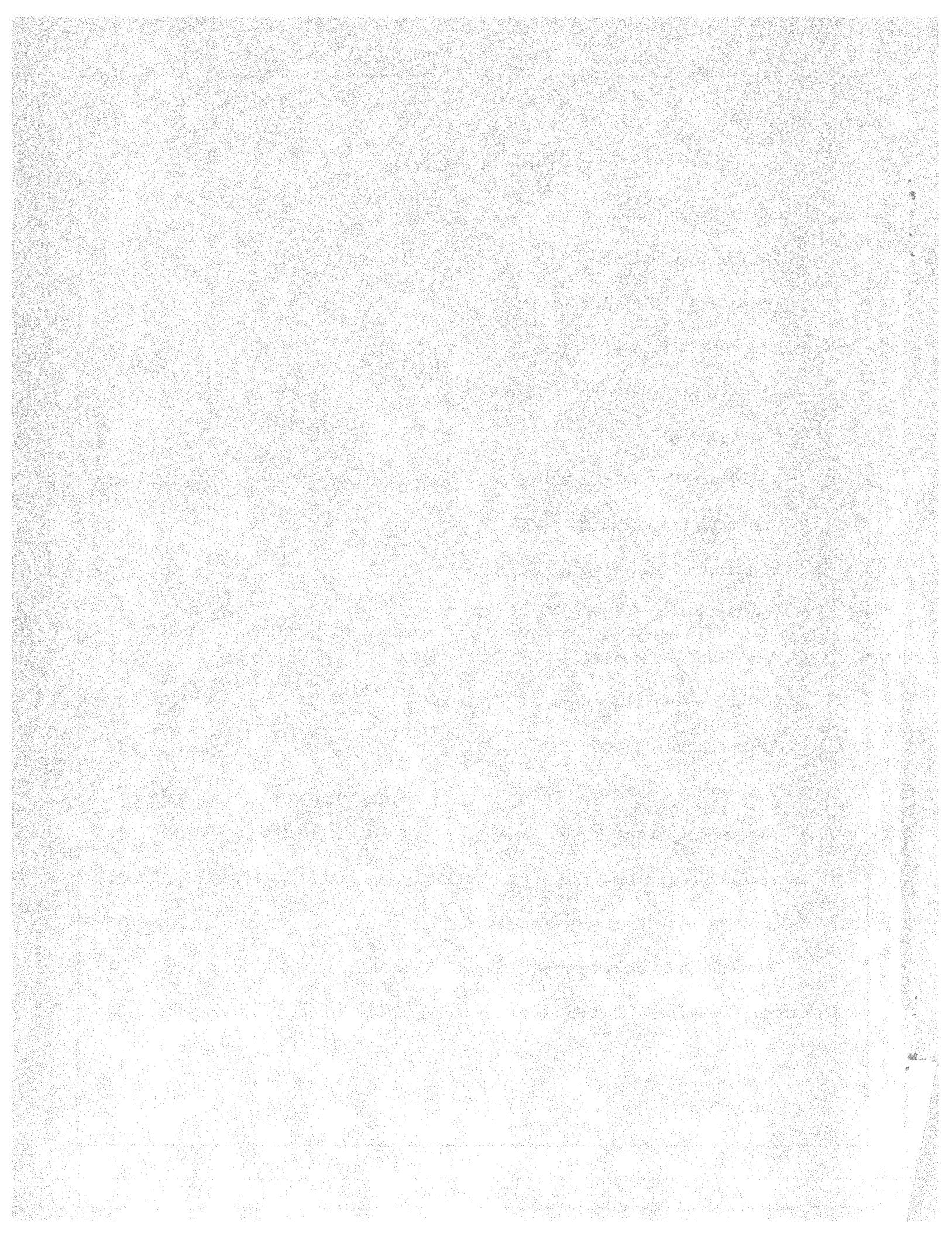


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News from the Association

Message from the Editor

The IAGC is entering a new era because we have assumed responsibility for collecting the annual dues (\$15.00 US) from our members instead of relying on Elsevier Science Ltd. to do it for us. The procedure we have adopted will allow most of our members to pay their dues by means of a personal check in the currency of their own country. The checks are to be made payable to the appropriate regional representative who is identified on the enclosed invoice and are to be mailed to that representative at the address provided on the invoice. The representative of each region will cash your checks, convert the funds to US dollars, and transfer the resulting sum to Gunter Faure in the form of a cashier's check. More information is provided elsewhere in this Newsletter and on the enclosed invoice. Our plan to collect dues by means of credit-card payments had to be abandoned because the bank we had selected for this purpose required that we post a large bond.

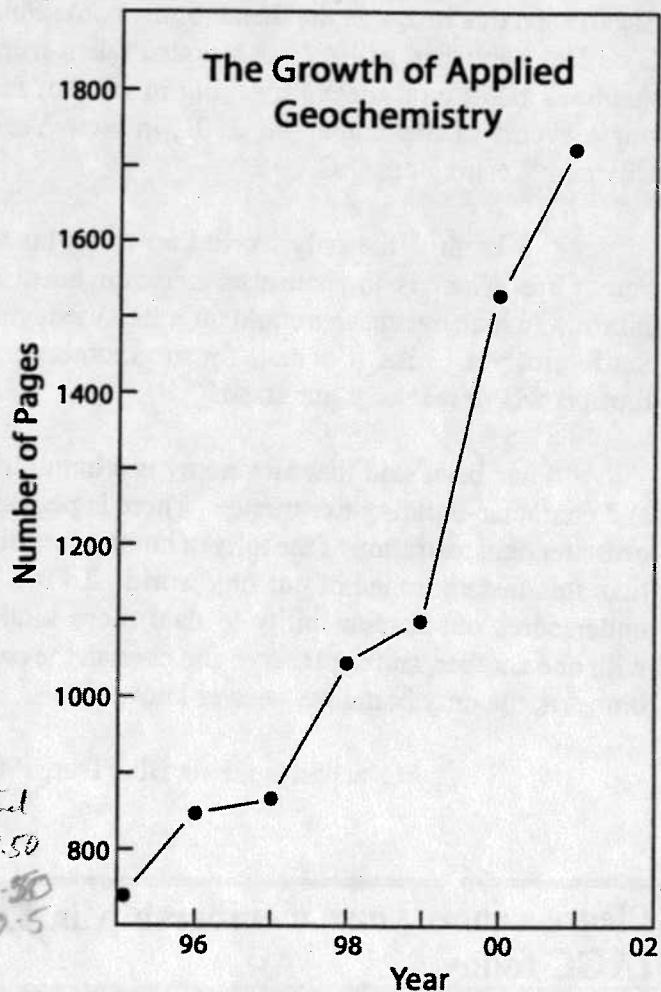
We must rely on our members to pay promptly and on our representatives to act expeditiously because we will transmit to Elsevier in mid-January 2002 a list of members who have paid dues for 2002 and who therefore qualify for the reduced subscription rate to **APPLIED GEOCHEMISTRY**. Therefore, please respond to the enclosed invoice at once to avoid problems with your subscription to our journal.

Another item of significant (good) news is that Russell Harmon, Chair of the Publication Committee, has negotiated a very favorable subscription rate for AG in the next three years:

<u>Agreed by Russ / Frib</u>		<u>75%</u>	<u>Actual</u>
57	2002: \$51.50	38.625	\$38.50
52.50	2003: \$53.00	39.75	\$39.50
54.00	2004: \$54.50	40.875	\$40.50

Our journal has continued to grow as illustrated in the Figure causing the cost to members in 2001 to decrease to 2.6 cents per page.

The present Newsletter contains a draft of the new Statutes of the IAGC. The text is open to comment by members until March 1, 2002. An amended version will be presented to Council at its next meeting which has been tentatively scheduled to coincide with the next Goldschmidt Meeting on August 20 to 28, 2002, in Davos, Switzerland. Please send your comments to Gunter Faure (faure.1@osu.edu).



Finally, I draw your attention to the activities of our Working Groups. The symposia and workshops they organize permit all of us to keep up with the state of the art in a wide range of subject areas in geochemistry and meteoritics.

The next issue of the Newsletter will be mailed in March of 2002.

September 11, 2001, and the Pale Blue Dot

As Voyager I was leaving the solar system on February 14, 1990, it recorded its last image of the Earth whence it had come. This image shows the Earth as a pale blue dot in the vastness of space. Carl Sagan used this image as the theme of his book: *Pale Blue Dot* published in 1994. A passage taken from this book takes on a special meaning in view of the tragic events of September 11, 2001, in New York City and Washington, D.C.

"The Earth is the only world known so far to harbor life. There is nowhere else, at least in the near future, to which our species could migrate. Visit, yes. Settle, not yet. Like it or not, for the moment the Earth is where we make our stand."

"It has been said that astronomy is a humbling and character-building experience. There is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world. To me, it underscores our responsibility to deal more kindly with one another, and to preserve and cherish the pale blue dot, the only home we've ever known."

Carl Sagan, *Pale Blue Dot*, 1994

New Books in Print

McGrayne, S.B., 2001. *Prometheans in the lab: chemistry and the making of the modern world*. McGraw-Hill, ISBN 007 135 007 1, \$24.95.

Winchester, S., 2001. *The map that changed the world: William Smith and the birth of modern geology*, 329 p, \$26.00, Harper Collins.

Worldwatch Institute, 2001. *Vital signs 2001: the trends that are shaping our future*. 192 p, \$13.95, Norton.

Ferris, T., 2001. *Life beyond Earth*. 222 p., \$40.00, Simon and Schuster.

Levy, D.H., 2001. *Shoemaker, the man who made an impact*. Princeton University Press, \$27.95.

Walsh, P.J., 2001. *Echoes among the stars: a short history of the US space program*. M.E. Sharpe, Armonk, NY.

Bakich, M.E., 2001. *Planetary handbook*. Univ. of Cambridge Press.

Jeanloz, R., ed., 2001. *Annual review of Earth and Planetary Sciences*, Vol. 29, Annual Rev., 4139 El Camino Way, P.O. Box 10139, Palo Alto, CA 94303-0139, \$75 US/\$80 International.

Hitchon, B., E.H. Perkins, and W.D. Gunter, 1999. *Introduction to ground water geochemistry*. Geoscience Pub. Ltd., Sherwood Park, Alberta, Canada, 310 p.

Aswathanarayana, U., 2001. *Water resources management and the environment*. A.A. Balkema Publishers, Rotterdam.

Li, Y.-H., 2000. *A compendium of geochemistry; from solar nebula to the human brain*. Princeton University Press, 488 p., \$70.00.

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Alley, R.B., 2000. The two-mile time machine; ice cores, abrupt climate change and our future. Princeton University Press, 240 p., \$24.95.

Philander, S.G., 2000. Is the temperature rising? The uncertain science of global warming. Princeton University Press, 240 p., \$17.95.

Schopf, J.W., 2001. Cradle of life; the discovery of the Earth's earliest fossils. Princeton University Press, 336 p., \$17.95.

Poag, C.W., 1999. Chesapeake invader; discovering America's giant meteorite crater. Princeton University Press, 168 p., \$24.95.

Kluger, J., 1999. Journey beyond Selene. Simon and Schuster, New York, \$26.00.

The Sixth International Symposium on the Geochemistry of the Earth's Surface (GES-6)

GES-6 will be held in Honolulu, Hawaii, USA, from Monday, May 20 to Friday May 24, 2002. The meeting is being organized by Fred Mackenzie (fredm@soest.hawaii.edu).

In addition, GES-6 will feature the International Ingerson Lecture of the IAGC to be presented by Dr. Blair Jones. The topic of this lecture will be announced in Newsletter #37 in March of 2002.

Annual Meeting, Meteoritical Society,
UCLA De Neve Plaza Conference Center, Los Angeles, CA, USA. Contact: Paul H. Warren, Institute of Geophysics, UCLA, Los Angeles, CA 90095-1567. pwarren@ucla.edu, <http://www.lpi.usra.edu/meetings/upcomingmeetings.html/>.

Council Meeting on November 4, 2001 in Boston, MA, USA

Gunter Faure

An informal meeting of the Council of the IAGC occurred during the Annual GSA Meeting on the date mentioned above. The meeting was attended by Jochen Hoefs, Russell Harmon, David Long, and Gunter Faure. Many topics were discussed, but no votes were taken because the meeting lacked a quorum. In addition, Gunter Faure met separately with Blair Jones, Robert Finkelman, and Friso Veenstra (Publishing Editor, Elsevier).

Collection of Annual Dues

In view of the technical difficulties we have encountered in setting up a payment system based on credit cards, the consensus was that Gunter Faure would collect dues from members in Canada and USA by means of personal checks mailed to him.

In addition, members residing in other countries will pay dues in the currencies of their countries by means of checks mailed to representatives to be identified on the invoice. Gunter Faure agreed to contact these representatives and to specify the amount of foreign currency required to equal \$15.00 US. The representatives will convert the accumulated funds into US dollars in the form of a cashier's check to be mailed to Gunter Faure on or before January 15, 2002.

The list of members who have paid dues will then be passed to Elsevier who will use it to mail invoices for renewal of the subscription to **APPLIED GEOCHEMISTRY**. After two years, in the fall of 2003, the IAGC will take over the renewal of dues and AG subscriptions with financial support from Elsevier.

Technical Session at GSA Meeting in Denver, 2002

David Long and Berry Lyons are planning to

chair a Technical Session on Trace Elements in the Environment: Sources Transport, Fate, and Medical Effects at the next GSA Meeting in Denver, CO.

Council Meeting in 2002

The next Council Meeting will be scheduled to take place in Davos, Switzerland, during the 12th Goldschmidt Meeting in August 18 to 23. In this way, the IAGC continues the pattern of alternating Council Meetings in Europe and North America. We expect that the Editorial Staff of AG will also have a meeting at Davos at this time.

International Geological Congress

The 32nd IGC will take place in Florence, Italy, in 2004. The IAGC should be strongly represented and will provide financial support to its Working Groups which organize symposia or workshops at the IGC.

Deputy Secretary in Europe

In order to facilitate the renewal of dues and subscriptions and to schedule Council Meetings in the future, the IAGC will appoint a Deputy Secretary who resides in Europe. Deputy Secretaries for other regions may also be appointed when the number of members justifies it (e.g. Australia and New Zealand, Japan and Korea, PR China, etc).

Nominations Committee

The IAGC will appoint a Nominations Committee to be chaired by Gunter Faure in order to provide slates of candidates for approval by Council at its next meeting in Davos. Two members of this committee will be members of Council and two will be present or past members of the IAGC.

Acting President

In order to facilitate the administration of the IAGC, Jochen Hoefs will ask the IAGC President, Dr. Erik Galimov, to appoint Gunter Faure to be his representative for the administration of the IAGC.

Web Master

David Long, who has been the Treasurer of the IAGC, has also designed and executed the Web Page of the IAGC. A motion will be submitted to Council to appoint him the Web Master of the IAGC and to purchase a suitable computer to enable him to carry out his mission.

Twelfth Annual V. M. Goldschmidt Conference, August 18 to 23, 2002. Davos, Switzerland. Contact: Gold2002@compublic.co.uk and at <http://www.goldschmidt-conference.com/gold2002>.

Coming Events

Dec. 10-14, 2001. **Fall Meeting of the American Geophysical Union**, San Francisco, California, USA. <http://www.agu.org>

Dec. 16-18, 2001. **ICCE - 2001 International Congress of Chemistry and Environment**, Indore, M.P., India. Contact: Dr. Shankar Lal Gargh, A/80, Scheme No. 54, Vijay Nagar, Indore 452 010 (M.P.) India; Phone: +91 731 552837; chemjyot@sancharnet.in, <http://www.chemenviron.com/>

Jan. 21-25, 2002. **Chapman Conference: Explosive Subaqueous Volcanism**, Dunedin, New Zealand. Abstract and travel deadlines: October 1, 2001. Contact: J.D.L. White, University of Otago, Dunedin, New Zealand (james.white@stonebow.otago.ac.nz) and Bruce F. Houghton, University of Hawaii, Honolulu (bhought@soest.hawaii.edu).

Jan. 27-30, 2002. **Tailings and Mine Waste '02**, Colorado State University, Fort Collins, Colorado, USA. Contact: Linda Hinshaw, Department of Civil Engineering, Colorado State University, Fort Collins, CO 80523-1372, USA; Phone: +1 970 491 6081; Fax: +1 970 491 3584/7727; lhinshaw@engr.colostate.edu.

- Jan. 28-31, 2002. **WG/IGCP433 and 2nd Italian-Latin American Meeting and field trip on the Motagua Suture Zone of Guatemala, Guatemala.** http://www.ig.utexas.edu/CaribPlate/news/guat_announce1.htm and http://www.ig.utexas.edu/CaribPlate/new/guat_circ1.htm
- Feb. 11-15, 2002. **AGU Ocean Sciences Meeting, Honolulu, Hawaii, USA.** <http://www.agu.org>.
- Feb. 25-27, 2002. **2002 SME Annual Meeting and Exhibit: Minerals for the future, Phoenix, Arizona, USA.** http://www.smenet.org/meetings/2002_Call.html
- March 4-7, 2002. **GeoProc2002, Bremen, Germany..** Topic: Geochemical processes with long-term effects in anthropogenically affected seepage and groundwater. Contact: Fachbereich 5 - Geowissenschaften, Universität Bremen, Postfach 330.440, D-28 334 Bremen, Germany; Prof. Dr. Horst D. Schulz; Phone / Fax: +49 421 218 3393 / 432; hdschulz@uni-bremen.de; Dr. Astrid Hadeler; Phone / Fax: +49 421 218 3950 / 4321; ahadeler@uni-bremen.de; <http://www.geochemie.uni-bremen.de/index.html?/projects/spp/geoproc/geoproc.html>
- March 10-13, 2002. **2002 AAPG National meeting, Houston, Texas, with poster session on Geochemical Indicators of Depositional Environments.** <http://www.aapg.org/indexaapg.html>
- March 19-22, 2002. **19th Colloquium of African Geology, El Jadida, Morocco.** Organized by Couaïb Doukkali University, Faculty of Sciences, El Jadida, Morocco and the Geological Society of Africa. Field trips start on March 23. Contact: Secretariat du 19^{Ème} CIGA, Université Chouaïb Doukkali, Faculté des Sciences, Département de Géologie, B.P.20, 24000, El Jadida, Maroc; Phone: +212 23 34 23 25 / 23 34 30 03; Fax: +212 23 34 21 87; cag19@ucd.ac.ma. <http://www.ucd.ac.ma/geologie/cag19.html>.
- March 24-27, 2002. **EMPG IX - Ninth International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Zurich, Switzerland.** Contact: EMPG IX Organizing Committee, Institute for Mineralogy and Petrography, Department of Earth Sciences, ETH Zentrum, Sonneggstrasse 5, CH-8092 Zurich, Switzerland; Phone: +41 1 632 3779 (or 3955); Fax: +41 1 632 1294; empg@erdw.ethz.ch; <http://eurasia.ethz.ch/empg/>
- March 25-27, 2002. **17th Himalaya-Karakoram-Tibet Workshop, Gantok, Sikkim, India.** Contact: Chandra Shekhar Dubey; csdubey@vsnl.com, chandrasdubey@vsnl.net, csdubey@yahoo.com. <http://csdubey.topcities.com/fpexp/index.htm>.
- April 7-11, 2002. **Geochemistry Division, American Chemical Society 223rd National Meeting, Orlando, Florida, USA.** Symposia <http://membership.acs.org/G/GEOC/>. Abstract submission at: <http://oasys.acs.org/>.
- April 24-26, 2002. **15th Argentine Geological Congress, El Calafate, Santa Cruz Province, Southern Patagonia Argentina.** (Contact: President Dr. Miguel Haller, or Secretary Dr. Roberto Page, Asociacion Geologica Argentina, Maipu 645, 1er Piso, Buenos Aires, Argentina; Phone: +54 11 4325 3104; haller@cenpat.edu.ar or formicruz@internet.siscotel.com.)
- April 29 - May 1, 2002. **3rd International Conference on Applications of Stable Isotope Techniques to Ecological Studies, Flagstaff Arizona, USA.** Contact: Dr. Joseph Shannon, Northern Arizona University, Department of Biological Sciences, P.O. Box 5640, Beaver St. Building 21, Flagstaff, AZ 86011, USA; Phone: +1 928 523 1740; Fax: +1 928 523 7500; joseph.shannon@nau.edu; 207.195.94.13/isoecol/.

May 8, 2002. **100th Anniversary of the eruption of Mt. Pelee, International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI) workshop, Martinique.** <http://www.iavcei.org>.

May 28 - June 1, 2002. **AGU Spring Meeting, Washington, DC, USA.** www.agu.org.

July 14-17, 2002. **Fifth International Conference on arsenic exposure and health effects, San Diego, California, USA.** Society for Environmental Geochemistry and Health. <http://www.cudenver.edu/as2000/>

July 21-25, 2002. **9th International Platinum Symposium, Holiday Inn - Grand Montana, Billings, MT, USA.** By the IGCP 427/SEG/SGA. Contact: Roger Cooper, Dept. of Geology, Lamar University, P.O. Box 10031, Beaumont, TX 77710, USA; Phone: +1 409 880 8239; cooper@hal.lamar.edu. <http://www.platinumsymposium.org/>.

July 22-26, 2002. **The Earth System and Metallogenesis - 11th Quadrennial IAGOD Symposium and GEOCONGRESS 2002, Windhoek, Namibia.** Theme: Sedimentary and magmatic responses to compressional and extensional tectonics and the associated ore-forming processes. Hosted by: The Geological Society of Namibia, the Geological Society of South Africa, The Geological Society. Contact: IAGOD/Geocongress 2002 Conference Secretariat, P.O. Box 9870, Windhoek, Namibia; Phone: + 264 61 251014; Fax: + 264 61 272032; (Alice Kaukuetu-Hue): geoconference2002@conferencelink.com.na. www.geoconference2002.com.

39th Annual Meeting of the Clay Mineral Society, June 8-13, 2002. University of Boulder, Boulder, CO. Contact: Kathryn Nagy, 303-492-6137, kathryn.nagy@colorado.edu. The meeting includes a workshop: Teaching Clay Science on June 8 and a Field Trip: Clays and the Front Range on June 13.

July 22-26, 2002. **65th Annual Meeting of the Meteoritical Society, UCLA DeNeve Plaza Conference Center, Los Angeles, CA, USA,** the Meteoritical Society, Lunar and Planetary Institute. Contact: Paul H. Warren, Institute of Geophysics, UCLA, Los Angeles, CA 90095-1567, USA; Phone: +1 3108253202; pwarren@ucla.edu; <http://www.lpi.usra.edu/meetings/upcomingmeetings.html/>

Aug. 18-23 2002. **Twelfth Annual V.M. Goldschmidt Conference, incorporating ICOG X, Davos, Switzerland.** Contact: Cambridge Publications, P.O. Box 27, Cambridge CB1 8TR, U.K.; Gold2002@campublic.co.uk. <http://www.goldschmidt-conference.com/gold2002/>.

Sept. 1-6, 2002. **Mineralogy for the new millennium (IMA 2002), 18th General Meeting of the International Mineralogical Association, Edinburgh, United Kingdom.** Contact: Mr. K. Murphy, Executive Secretary, Mineralogical Society of Great Britain and Ireland, 41 Queen's Gate, London SW7 5HR, United Kingdom; Phone: +44 171 584 7516; IMA@minersoc.demon.co.uk; <http://www.minersoc.org/IMA2002>

Sept. 2-7 2002. **Holocene environmental catastrophes and recovery, Brunel University, West London, UK.** Co-sponsored by Brunel University, INQUA and PAGES. Contact: Prof. Suzanne A.G. Leroy, Department of Geography and Earth Sciences, Brunel University, Uxbridge, Middlesex UB8 3PH, (West London), UK; Phone: +44 1895 20 31 78; Fax: +44 1895 20 32 17; Phone secr: +44 1895-20 3215; suzanne.leroy@brunel.ac.uk. <http://www.brunel.ac.uk/depts/geo/Catastrophes/>

Sept. 16-20, 2002. **Uranium Mining and Hydrogeology III - International Mine Water Association Symposium - Mine Water and The Environment**, Freiberg, Germany. Contact: Prof. Dr. B. Merkel, Dr. Christian Wolkersdorfer, Lehrstuhl für Hydrogeologie; Gustav-Zeuner-Str. 12; D-09596 Freiberg/Sachsen, Germany; Phone: +49 3731 39 3309; Fax: +49 3731 39 2720; UMH@IMWA.de. <http://www.IMWA.de>.

Oct. 27-30, 2002. **Geological Society of America Annual Meeting, Denver, Colorado, USA.** Contact: GSA Meetings, Box 9140, Boulder, CO 80301-9140, USA. Tel: +1 303 447 2020, ext. 164; Fax: +1303 447 1133. <http://www.geosociety.org/meetings/index.htm>

Dec. 6-10, 2002. **AGU Fall Meeting**, San Francisco, California, USA. www.agu.org.

May 20-23, 2003. **GERM 4**, Lyon, France. Contact: Janne Blichert-Toft, Laboratoire de Sciences de la Terre (CNRS UMR 5570), Ecole Normale Supérieure de Lyon, 46, Allée d'Italie, 69364 Lyon Cedex 7, France; Phone: +33 (0)472 72 84 88; Fax: +33(0)472 72 86 77; jblicher@enslyon.fr.

Sept. 7-11, 2003. **6th International Symposium on Environmental Geochemistry (ISEG)**, Edinburgh, UK. Dr. John G. Farmer, Department of Chemistry, University of Edinburgh, West Mains Road, Edinburgh EH9 3JJ, UK; J.G.Farmer@ed.ac.uk.

Nov. 2-5, 2003. **Annual Meeting GSA**, Seattle, Washington. <http://www.geosociety.org/meetings/index.htm>.

Dec. 8-12, 2003. **AGU Fall Meeting**, San Francisco, California, USA. www.agu.org.

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Report of the Treasurer for 2000

David T. Long

Beginning balance, January 1, 2000:	\$43,202.89
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Income

Royalty from APPLIED GEOCHEMISTRY:	15,450.46
Interest earned by funds on deposit	1,327.66
Miscellaneous	<u>60.00</u>
	Total Income
	\$16,838.12

Expenses

Newsletter 34 and 35	4,875.00
International Geological Congress	2,000.00
Honorarium, International Ingerson Lecture, Dr. Umberto Cordani	500.00
Keynote speaker, GSA Technical Session, Dr. J. Nriagu	1,095.22
Catastrophic Events and Mass Extinctions, WG on Meteoritics, Vienna, July 9-12, 2000	2,000.00
Challenges of Water Resources Management in the Developing Countries, WG on Geochemical Training, Andhra University, May 6-10, 2001	2,000.00
Working Group on Global Geochemical Baselines, Athens. Travel by Arthur Darnley and Prodip Govil, Nov. 13-19, 2000	1,500.00
Travel by Council Members	4,500.00
Fee to IUPAC	50.00
Bank fees	<u>45.00</u>
	Total Expenses
	\$18,565.22

Summary

Cash on hand:	43,202.89
Income	+16,838.12
	<u>\$60,041.01</u>
Expenses	-18,565.22
	<u>Net balance</u>
	+\$41,475.79
	on January 1, 2001

Christopher Columbus Visits NASA

by Nancy E. Small

Warner van Brown, a NASA administrator, couldn't believe what he was seeing. He knew he was really tired, having stayed late at the office in an attempt to establish his department's budget for the coming fiscal year. Determining how much money to set aside for various projects was always a difficult task. Warner was beginning to wonder if his job was worth the effort. Opening and closing his eyes twice, he stared ahead. The vision of a white-haired man in full fifteenth-century regalia was still there. Seeing a ghost should have frightened Warner, but tonight he was just too exhausted to react. Instead, he simply asked the apparition, "Who are you?"

"I'm Christopher Columbus. I'm here to set your mind straight about a few things. Your job is important. Let's compare your work with mine." Columbus continued, "I knew what I wanted to accomplish on my voyages of exploration. The main aim of my expeditions was, of course, to find a safer, easier trade route to the Indies. In the process, I hoped to become wealthy by acquiring spices, jewels, and gold. I dreamed of claiming new territory for Spain, territory that I would govern. More than anything, I was curious about crossing the Atlantic Ocean. I wondered what marvels of nature might be waiting to be discovered. What about you? Do you and NASA have any reasons for exploring space?" "Well, certainly," muttered Warner. "NASA's goals include understanding the nature and history of the solar system, identifying locales and resources for future human habitation, and making the solar system a part of the human experience in the same way that the Earth is."

Columbus seemed pleased with Warner's reply. "Now," he proceeded, "let's consider the evidence and clues that I assembled to support my proposed expeditions. I gathered information from sailors who had ventured farther west on the Ocean than most had dared. While in Iceland and England, I listened to

legends about possible lands located beyond the western horizon. Unusual pieces of driftwood, huge reeds, and strange plants cast onto the shores of Madeira and Porto Santo also attracted my attention. I read many books, including Marco Polo's *Description of the World* and Ptolemy's *Geography*, which contained a section with maps and rules for scientific map making. I also made calculations about the size of the world. In hindsight, I must confess that my figures were wrong. I thought the world was much smaller than it really is. Anyway, at the time, my calculations convinced me that my dreams were worth pursuing. Have you marshaled any facts to justify your aim of exploring the solar system and eventually establishing colonies on other planets?"

Warner was indignant. "Of course, don't you know that NASA missions, such as Mars Pathfinder and Lunar Prospector, already have collected reams of data, including high quality images, spectra, and altimetry on numerous planetary objects within the solar system?" "Well, excuse me," retorted Columbus. "You know that I'm from the fifteenth century. You can't expect me to be completely up to date."

"Let's talk about funding next," continued Columbus. "I know you've been having trouble with your budget. I had a terrible time getting a government to support my expeditions. I repeatedly tried to get Portugal, England, or Spain to help me with financing. Finally, fear that Portugal was becoming too powerful on the high seas convinced Queen Isabella of Spain to come through with money for crews and supplies required for my first voyage. A fine for smuggling levied against the city of Palos provided me with two small ships, the *Nina* and the *Pinta*. I had to invest my own money (about 250,000 maravedis raised from a consortium of four Genoese and Florentine merchants in Seville) to charter a third ship, the *Santa Maria*. Have you contributed monetarily to any of NASA's expeditions?"

At this question, Warner smiled wryly. "Yes, I guess you could say my taxes have helped indirectly

to fund NASA projects. You see Congress, the law-making part of our government, allots a certain part of the federal budget to NASA. Congress' decision is based partly on what NASA officials such as myself think will be needed to fund various projects. Since there are many government agencies vying for federal funds, NASA never seems to receive enough money to accomplish all of the missions the space agency would like to undertake."

Nodding his head in agreement, Columbus said, "I can relate to that. Just remember, perseverance pays off. I survived a threatened mutiny aboard my ship and also experienced real difficulties trying to govern the colonies of La Isabela and Santo Domingo. Once, I was even arrested and sent back to Spain in chains. In the end, I did manage to outfit and lead a total of four expeditions to the New World. Not a bad track record if I do say so myself."

Feeling that this apparition was becoming a bit too cocky, Warner spoke without thinking. "You know there are some people today who believe you were a greedy, self-serving man. They claim that your main interest in exploration was to find gold. They accuse you of exploiting the natives and sending some of them to Europe as slaves." Columbus looked somewhat taken aback, but he was quick to respond. "Not everyone supports NASA missions either. There are some who think the monies being appropriated for space exploration could be better spent on Earth to improve the economy, reduce pollution, or support education."

Warner sighed and commented that everyone was entitled to his/her opinion. "On the other hand," Warner pointed out, "you realize there are still plenty of people who recognize the value of exploring space. After all, the space industry helps the nation's economy by providing jobs and creating products that are useful on Earth as well as in space." Warner enthused, "I think what is most important about NASA is that the agency is laying the ground work for human expansion into the solar system in the coming century." "Well, it certainly sounds like you believe

what you are doing is worthwhile," Columbus concluded. "Just don't give us the ship, if you'll excuse the pun." Warner laughed. Suddenly the vision disappeared. Warner felt refreshed, almost as if he had taken a nap. He was ready once again to tackle those budget figures.

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"Background Material: NASA FY 2002 Budget Briefing," released April 9, 2001, retrieved April 14, 2001. <ftp://ftp.hq.nasa.gov/pub/pao/budget_summary.pdf>

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Annual Meeting, Meteoritical Society,
UCLA De Neve Plaza Conference Center, Los Angeles, CA, USA. Contact: Paul H. Warren, Institute of Geophysics, UCLA, Los Angeles, CA 90095-1567. pwarren@ucla.edu, <http://www.lpi.usra.edu/meetings/upcomingmeetings.html/>.

PRELIMINARY DRAFT

November 2001

STATUTES OF THE INTERNATIONAL ASSOCIATION OF GEOCHEMISTRY AND COSMOCHEMISTRY

The Statutes of the IAGC must be updated by a vote of Council after discussion and modification of this preliminary draft.

The reasons necessitating the changes in the Statutes include:

1. The IAGC has entered into a contract with Elsevier for the publication of the journal APPLIED GEOCHEMISTRY which is owned by Elsevier but sponsored by the Association.
2. The Executive Editor of AG is a member of the council of the IAGC.
3. The IAGC has appointed a Publications Committee to assist in the interactions with Elsevier and with the Executive Editor of AG.
4. The International Ingerson Lecture needs to be integrated into the fabric of the Association.
5. The Assembly of National Members has dissolved itself and National Memberships were thereby abolished.
6. The Council has appointed a Newsletter Editor who is charged with preparing and mailing two issues of the Newsletter each year.

All Members of the IAGC are hereby urged to examine this preliminary draft and to forward all comments to **Gunter Faure** who will circulate them to the Council for consideration.

The "open season" on this document will end on March 1, 2002. Any comments received after that date may not be considered in the final document which will be submitted for approval by Council in the fall of 2002.

I. Name, Objectives, Membership and Associated Societies

A. Name

The organization shall be known as the International Association of Geochemistry and Cosmochemistry (IAGC). The word 'geochemistry', where used hereinafter, shall be understood always to include 'cosmochemistry'.

B. Objectives

The principal objective of the Association shall be to foster cooperation in, and advancement of, geochemistry and cosmochemistry in their broadest sense:

1. by working with any interested group in planning symposia and other types of meetings related to geochemistry;
2. by sponsoring publication in the geochemistry of a type not normally covered by existing organizations;
3. by appointment of Working Groups to study problems that require, or would profit from, international cooperation.

C. Membership

Membership of the Association shall be of three classes:

1. Individual Members

Individuals who are interested in any aspect of pure or applied geochemistry.

2. Sustaining Members

Individuals or organizations particularly interested in the Association and its work and who make annual contributions, substantially greater than the regular dues, as specified below under Finances.

3. Honorary Fellows

Individuals distinguished for their contributions to geochemistry or cosmochemistry may be nominated as Honorary Fellows from time to time by a **Nominating Committee appointed by Council**, their election being ratified by a vote of the Council. Such Honorary Fellows shall be elected for life and shall pay no dues to the Association.

D. Associated Societies

1. Any international, regional, or national scientific society with a particular interest in the objectives of the Association that wishes to join with the Association in seeking to achieve those objectives may become an Associated Society. This association can be established by mutual agreement between the IAGC Council and that of the Society. No

hierarchical relationship between IAGC and the Associated Society is implied by joining in this way. Associated Societies will receive all general mailings of IAGC and will be notified in advance of all regular Council meetings. Associated Societies are expected to maintain effective contact with the Association and provide up-to-date mailing addresses to the Secretary of the Association.

II. Administration

A. Council

1. The Council shall consist of the President, Vice-President, Secretary, Treasurer, Past President, Executive Editor, and ten ordinary members, all of whom shall be elected by the Council. No two of the ordinary members of Council shall be from the same country. The President and Vice-President shall not be eligible for reelection in the same position. Ordinary members shall be eligible for reelection for **one** additional term. The Secretary, Treasurer, Past President and Executive Editor are members of the Council as long as they occupy their positions.
2. The Council shall be responsible for supervising the activities, conducting the business, and achieving the objectives of the Association. A quorum for a meeting of Council shall be five members of the Council.
3. Councillors should reside in different countries such that not more than two councillors represent the same country.
4. The President, Vice President, Secretary, Treasurer, and Executive Editor are not subject to the restriction expressed in paragraph A3 above.

B. President

1. The President of the Association presides at Council Meetings and provides the necessary leadership to achieve the goals of the Association.
2. The President serves one four-year term and becomes the Past President when that term expires.

C. Vice President

1. The Vice President is elected by Council from candidates provided for its consideration by the Nominations Committee.
2. The Vice President serves a four-year term and becomes the President of the Association at the end of that period.

3. The terms of office of the President, Vice President, and Past President are synchronous.
4. The Vice President or Past President may be appointed to be the Acting President in case the President is disabled or is otherwise prevented from discharging his/her responsibilities.

D. Working Groups

The Council may appoint Working Groups as required to carry out functions of the Association. Further, the Council will formally appoint the chairman and members of all Working Groups. Existing appointments will remain effective until these new appointments are made. The Council may also establish new Working Groups, as well as discontinue or change the membership of existing Working Groups. In the case of well-organized groups operating under their own statutes, the Council will recognize the need of these groups for autonomy, and in normal circumstances, the appointments will be consistent with the recommendations of the Working Group.

E. Treasurer

1. The Council shall appoint a Treasurer and instruct the Treasurer as to the kinds of expenses for which funds may be used.
2. The Treasurer shall serve a six-year term and may be reappointed by Council for one additional six-year term.
3. The Treasurer shall deposit the funds of the Association in interest-bearing bank accounts and shall disburse funds as directed by Council.
4. The Treasurer shall provide the Council with an annual summary of all income and expenditures.
5. The funds of the Association shall be lodged in a bank in the country of the Treasurer and be at his or her disposal, subject to the instructions from the Council. In the event that the office of the Treasurer should be vacant, the President may transfer the funds to the custody of an Acting Treasurer until another Treasurer is duly elected.

F. Secretary

1. The Council shall appoint a Secretary who shall make all necessary preparations for Council Meetings, distribute agendas and minutes to the members of Council, and maintain the records of the Association. In addition, the Secretary shall interact with Members of the Association and

facilitate the recruitment of new Members.

2. The Secretary shall serve a six-year term and may be reappointed by Council for one additional six-year term.
3. The terms of office of the Secretary and Treasurer are to be adjusted by Council as needed to prevent both to leave office in the same year.

G. Executive Editor of APPLIED GEOCHEMISTRY

1. The Council shall appoint the Executive Editor of APPLIED GEOCHEMISTRY in accordance with the terms of a contract between the Association and Elsevier Science Ltd.
2. The Executive Editor shall be solely responsible for the editorial policy and the content of the journal.
3. In addition, the Executive Editor shall be a voting member of Council.
4. The Executive Editor shall serve a six-year term and may be reappointed without limit by Council following consultations with Elsevier and after an objective review of the Editor's job performance by the Publications Committee.
5. The Executive Editor shall make an annual report to Council concerning the publication of the journal.

H. Newsletter Editor

1. The Council shall appoint a Newsletter Editor who shall prepare and mail to the Members of the Association two issues of the Newsletter each year. The Newsletter Editor shall be an ordinary member of Council or a former officer of the Association.
2. The Newsletter shall inform the Members concerning actions contemplated or taken by Council and shall also contain information concerning activities of the Working Groups of the Association.
3. The Newsletter Editor is solely responsible for the accuracy and appropriateness of all items included in this publication.
4. The Newsletter Editor may accept paid advertisements provided they are compatible with the objective of the IAGC and its members.

III. Standing Committees of the Association

A. Executive Committee

1. There shall be an Executive Committee, consisting of the President, Vice-President, Secretary, Treasurer, Past President, Executive Editor, Newsletter Editor, and chairs of all permanent committees.
2. The Executive Committee is empowered to take emergency action on behalf of the Council when there is not time to poll the entire Council, and to act on minor matters on which polling the entire Council is not justified.
3. Interim actions of the Executive Committee must be ratified by the Council at its next meeting.

B. Publications Committee

1. Council shall appoint an ordinary member of Council to chair the Publications Committee.
2. The Chair of the Publications Committee shall select four persons with experience in the publication of scientific journals and present their credentials to Council for approval.
3. The members of the Publications Committee serve at the pleasure of its Chair and can be replaced by him/her after appropriate consultation with the Council.
4. The duties of the Publications Committee include:
 - a. To evaluate the credentials of prospective Associate Editors of the journal nominated by the Executive Editor.
 - b. To assist the Executive Editor to maintain a harmonious working relationship with Elsevier Science, Ltd.
 - c. To negotiate with Elsevier the price of the annual subscription to APPLIED GEOCHEMISTRY for Members of IAGC in accordance with the provisions of the contract.
 - d. To nominate candidates for the office of Executive Editor, in case the previous Editor has resigned. The new Executive Editor will be appointed by vote of the Council after consultation with Elsevier.
 - e. The Chair of the Publications Committee shall make an annual report to Council concerning the status of the journal. This report should be sensitive to the perceptions of the authors and readers of the journal.

- f. In case the Chair of the Publications Committee resigns or retires, a successor shall be appointed by the Executive Committee of the IAGC which shall include the Executive Editor.

C. Nominations Committee

1. The Council shall appoint an ordinary Member of Council to be Chair of a Nominating Committee. The Chair selects four additional members, not more than two of whom may be Council members. The membership of this committee shall be made known to all Individual Members.
2. The committee shall submit for approval of Council a list of nominations for officers and ordinary members of the Council for the ensuing period. The approved list shall be made known to all Individual Members at least 90 days prior to a regular meeting of the Council, together with notice of said meeting.
3. Additional nominations for one or more officers and ordinary members of the Council may be made in writing to the Secretary by 15 or more individual members of the Association not less than 60 days prior to the meeting of the Council.
4. Election of officers and councilors shall be by majority vote of the Council.
5. The Nomination Committee shall remain active until the term of its Chair expires.

D. Auditing Committee

1. The Council shall appoint the Chair of a committee to verify the accuracy of the financial report of the Treasurer in advance of its presentation to Council.
2. The Auditing Committee will remain active until either its Chair resigns or Council decides to appoint a new Chair.

IV. International Ingerson Lecture

1. The International Ingerson Lecture of the IAGC is based on a bequest by Dr. Earl Ingerson, first President of the IAGC. The funds are invested separately by the Treasurer and only the accrued interest is used to support the Lecture, supplemented by general funds as required.
2. The Ingerson Lecture is scheduled every two years at a suitable Scientific Meeting organized by a Working Group of the IAGC or by another scientific society.

3. The Lecturer is selected by the Executive Committee based on nominations by any one of its members.
4. The Lecturer must be an outstanding senior geochemist or cosmochemist who resides in the region in which the lecture is to be given.
5. The topic of the Lecture is to be chosen by the Lecturer and may consist of a synthesis of known facts, or of new data, or a combination of both.
6. The International Ingerson Lecture is to be introduced by the President of the IAGC or another member of the Executive Committee of the IAGC.
7. The International Ingerson Lecturer receives an Honorarium of \$500.00 and a framed certificate to be presented during the introduction of the Lecturer.
8. The Secretary of the IAGC shall maintain the list of names of the past Lecturers who shall be identified in program notes to be distributed to the audience.

V. Dues and Contributions

A. Authority

Annual dues of all classes of members shall be established by the Council upon recommendation of the Executive Committee.

B. Associated Societies

No dues are required of Associated Societies, but they are requested to contribute sufficient funds to support the cost of preparing and mailing the IAGC Newsletter to their Secretary or other designated recipient of the material.

C. Sustaining Members

Sustaining Members shall make annual contributions to the Association substantially larger than the annual dues they would pay as individual Members.

VI. General

A. Affiliations

The Association may affiliate with appropriate international unions and other international organizations with geochemical interests in order to further the

objectives of the Association. Any affiliation must be approved by Council.

B. Council Meetings

The Council shall hold regular meetings at least once each year, but may also hold interim meetings as deemed necessary by the Executive Committee, either separately or in conjunction with meetings of other appropriate organizations. The Council may take ballots via e-mail on important or emergency matters in lieu of interim meetings. Representatives of all Working Groups and Associated Societies are invited to attend all regular Council Meetings as non-voting guests. They shall be informed of the time and place of these meetings at least 60 days in advance by newsletter or special mailing.

C. Amendments to the Existing Statutes

The Council shall have the power to modify its statutes by majority vote of the Council.

D. Executive Committee Meetings

The Executive Committee may meet or consult by e-mail when such meetings or consultations appear to be essential. However, their interim decisions must be ratified by the Council.

E. Official Languages

The official language of the Association shall be English, French, German, and Russian. The English text shall be considered the authoritative one in the interpretation of these statutes.

F. Petitions to Council

Requests for changes of the existing Statutes may be submitted either by the Executive Committee or by a group of at least 20 Members of the Association. Such recommendations must be in the hands of the Secretary at least six months prior to the date of the next meeting of the Council.

**The Sixth International Symposium
on the Geochemistry of the Earth's
Surface (GES-6)**

GES-6 will be held in Honolulu, Hawaii, USA, from Monday, May 20 to Friday May 24, 2002. The meeting is being organized by Fred Mackenzie (fredm@soest.hawaii.edu).

In addition, GES-6 will feature the International Ingerson Lecture of the IAGC to be presented by Dr. Blair Jones. The topic of this lecture will be announced in Newsletter #37 in March of 2002.

39th Annual Meeting of the Clay Mineral Society,
June 8-13, 2002. University of Boulder, Boulder, CO.
Contact: Kathryn Nagy, 303-492-6137, kathryn.nagy@colorado.edu. The meeting includes a workshop:
Teaching Clay Science on June 8 and a Field Trip:
Clays and the Front Range on June 13.

**Please renew your membership in the
IAGC today**

Activities of the Working Groups in 2001

10th International Symposium on Water Rock Interaction (WRI-10)

Yousif Kharaka

The 10th International Symposium on Water Rock Interaction was held at the Mediterranean resort "Tanka Village" Congress Center in Villasimius (Sardinia, Italy), located about 50 km east of Cagliari, June 10-15, 2001. The Organizing Committee of WRI-10 was lead by its Secretary General, Prof. Luca Fanfani (U. of Cagliari) and included several other faculty members from the universities of Cagliari, Parma, Genova, Pisa, Palermo and Naples.

This conference attracted 479 participants, including 400 leading geochemists, hydrologists and geologists from 45 countries, and 79 accompanying members. At registration, we received two hard-cover proceeding volumes, edited by Prof. Rosa Cidu (U. of Cagliari) and published by A. A. Balkema Publishers, that include a record 380 papers and a total of 1607 pages. The Symposium was preceded and followed by three field trips to the famous geological, volcanic, and mining sites in and around Sicily, North Sardinia, and Naples. Those participating in the post-session field trip were treated to spectacular eruptions of Mount Etna and the dazzling night-time fireworks of Stromboli. Also, several one-day mid-session field trips to the geological and mining sites in southern Sardinia were organized for all WRI-10 attendees.

The oral and poster presentations at this symposium covered the latest research results of water-rock interactions in a wide spectrum of geochemical environments ranging from low temperature groundwater and mining operations to geothermal and magmatic systems. At WRI-10 there was special emphasis on the application of a multi-tracer (isotopic and chemical) approach to understanding water-rock interactions, and on natural

and anthropogenic processes affecting the quality of the water resources. One of the highlights of this Symposium were the eight keynote lectures covering the various themes of WRI-10 from inverse modeling of water-rock interaction (G. Ottonello) to thermophilic bacteria (E. L. Shock) and kinetics of groundwater-mineral interactions (S. L. Brantley and coauthors); these lectures were presented to all the attendees by distinguished scientists from around the World.

The poster sessions included a large number of outstanding presentations. Three posters received official WRI-10 awards, with the Best Symposium poster going to L. C. Cavé, M. V. Fey and D. K. Nordstrom for "Dissolution rate of apophyllite. The effects of pH and implications for underground water storage"; Best Student poster was awarded to D. Fabian, Z. Zheng, B. Wehrli and G. Friedl for "Establishing a mass balance for fluxes of arsenic and antimony in Baldeggsee, a eutrophic lake in central Switzerland"; and Best Mature Scientist Poster was received by S. Gurrieri, C. Federico A. Aiuppa and M. Valenza for "Thermodynamic constraints on WRI processes at Mt. Vesuvius, Southern Italy".

The Organizing Committee of WRI-10 planned an excellent social program for all participants that included a welcome cocktail reception, a cultural trip to Cagliari with visits to U. of Cagliari (Mike Edmunds, WRI Chairman was awarded a medal), museums, the Cathedral and the ancient town (Castello), several wine and cheese get-togethers, and a sumptuous symposium banquet with Sardinian folk music and dance. The accompanying members were treated to several cultural trips, including visits to

museums, Nuragic archeological sites, traditional Sardinian cuisine, and a Mediterranean cruise.

During the General Assembly of WRI-10, Mike Edmunds (BGS, Wallingford, UK) retired as Chairman and Yousif Kharaka (USGS, Menlo Park, USA) was voted the new Chairman of WRI Working Group. The Assembly also voted to hold WRI-11 in Florida in the Summer of 2004, with Prof. Susan Brantley (Pennsylvania State University, USA) as the Secretary General.

Summary of Activities - IUGS/IAGC Working Group on Global Geochemical Baselines

David B. Smith

The IUGS/IAGC Working Group on Global Geochemical Baselines is currently quite active throughout the world. Most of the current effort is still centered on Europe where approximately 27 countries are actively participating in sampling and chemical analyses to establish the global geochemical reference network for that portion of the world. This activity has been formally recognized by the Directors of the Forum of European Geological Surveys (FOREGS), and an official FOREGS Geochemical Baseline Working Group has been established under the leadership of Prof. Reijo Salminen of the Geological Survey of Finland. The databases and maps generated by the FOREGS working group will be Europe's contribution to the IUGS/IAGC working group. The specific goals include: 1) Collect, analyze, and store several sampling media (stream sediments, flood plain sediments, overbank sediments, soil, water, and humus) from the global reference network cells throughout Europe; 2) Normalize national geochemical data sets across national boundaries using results from the global reference network; and 3) Publish a geochemical atlas of Europe. At the last business meeting of the IUGS/IAGC Working Group held in Athens in November 2000, it was recognized that the sampling and chemical analyses being done in

Europe was running somewhat behind the original ambitious schedule. A new timetable was formalized in which the sampling and chemical analyses will be completed by the end of 2001. In 2002, we will convene the 3rd Symposium on Geochemical Baseline Mapping of Europe to be held in Orleans, France. Preliminary maps generated from the new geochemical data should be ready for presentation at these meetings. An outline has been developed for the Geochemical Atlas of Europe and writing assignments have been made. Publication of this atlas is currently projected for 2004.

Elsewhere a meeting of the CCOP countries was held in Beijing in May, 2001, to discuss the development of a geochemical baseline project to establish the global geochemical reference network for east and southeast Asia. The participating countries are currently inventorying available data. Shaun Reeder, Scientific Secretary of the IUGS/IAGC Working Group, attended this meeting and made a presentation on the history, goals, and current activities of the Working Group. Another recent development was the publication of a geochemical atlas of the State of Paraná in Brazil as a result of a geochemical survey designed according to IUGS/IAGC Working Group recommendations.

Dr. David Smith co-leader of the IUGS/IAGC Working Group, presented a keynote lecture at the VII Brazilian Geochemical Congress and ISymposium of the MERCOSUL Countries held in Curitiba, Brazil, in October 2000. A large part of the lecture focused on the goals and activities of the WG.

The IUGS/IAGC Working Group maintains a website at:
<http://www.bgs.ac.uk/iugs/home.html>.

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Working Group on the Geochemistry and Disease

by Robert Finkelman

The Working Group on Geochemistry and Disease helped sponsor workshops on the Health Impacts of Trace Elements at the June Geomedicine Workshop in Lusaka, Zambia. The IAGC provided financial support for two students to attend the conference and workshop. A shortened version of the workshop was also presented in South Africa. Interest in Medical Geology is so keen that we received eight requests to offer the workshop in other countries. In July the workshop was presented in Caracas, Venezuela, and we were invited to give it again next year.

We understand that the International Committee on Scientific Unions has given the International Union of Geological Societies a \$45,000 grant for Medical Geology, which includes funding workshops in developing countries. In addition, a book on Medical Geology is scheduled for publication in early 2003. Several members of our Working Group are involved in this activity.

The Geological Society of America Symposium on Medical Geology took place on November 5 in Boston. Another symposium on Geology and Human Health will occur at a regional GSA meeting in April, 2002, and the November issue of *Geotimes* will feature an article on Medical Geology.

Finally, the George Washington University is considering developing a Certificate Program in Medical Geology. The program will be jointly sponsored by the Public and Occupational Health Department, the Geology Department, and the Environmental Sciences Department with co-operation from the USGS and the Environmental Protection Agency.

Our Working Group agreed to sponsor at least one symposium at The Sixth International Symposium

on Environmental Geochemistry to be held in Edinburgh, Scotland, 7-11 September, 2003. We will also participate in the 7th International Symposium on Metal Ions in Biology and Medicine which will be held in St. Petersburg, Russia, from 5-9 May, 2002.

Report of the Working Group on the Geochemistry of the Earth's Surface

Blair Jones

Planning has proceeded apace for the Sixth International Symposium on the Geochemistry of the Earth's Surface (GES-6) to be held at the East-West Center, Honolulu, Hawaii, USA, May 20-24, 2002. The meeting is sponsored by the School of Ocean and Earth Sciences and Technology, University of Hawaii, and the IAGC, and is being organized under the chairmanship of Fred Mackenzie of SOEST. Additional sponsors are being sought. A web site with travel information has been established at <http://imina.soest.hawaii.edu/oceanography/ges-6/>. The site presents important dates, including field trips, a meeting calendar, housing and registration, and information on scientific contributions. Symposium themes include:

- Interdisciplinary Environment Geochemistry of the Earth's Surface
- Role of Calcification and Carbonates in Climate Change
- Weathering in the Global Context
- Interactions between Weathering and Ecosystem Function
- Stable Isotopes in Environmental Interpretation

- Coupled C, N, and P Cycles at the Global Scale
- Benthic Biogeochemistry
- Geomicrobiology

Report of the Working Group on Thermodynamics of Natural Processes

German Kolonin

The WG on TNP has not had a lot of activity this year. In particular, few members attended the WRI-10 Symposium (Nik Akinfiev and me) using the financial assistance of OC. Unfortunately, the arrangement of the special joint TNP-WRI session failed because the OC of WRI-10 did not receive \$2000 in spite of the positive decision of the Executive Committee of the IAGC.

Last but not least, I would like to suggest an Interdisciplinary Symposium for the next International Geological Congress in 2004 in Florence, Italy, on the topic: "Thermodynamic evaluation of the efficiency of geochemical barriers within a multiple-barrier concept to underground nuclear waste disposal". I believe that a lot of people from North America, Europe, and Russia could be involved in such a symposium.

Fourth Applied Isotope Geochemistry (AIG-4) Conference

The Working Group on environmental Isotope Geochemistry held its fourth International Conference from June 25 to 29, 2001, at the Asilomar Conference Center, Pacific Grove, California. The conference was organized by Thomas Bullen (tdbull@usgs.gov). Information concerning AIG-4 and about the time and place of the next meeting can be obtained from Tom Bullen and from Arne Raheim (ara@ife.no) who is the Chair of this Working Group.

Working Group Geochemical Training in the Developing Countries

by U. Aswathanarayana

To commemorate the Birth Centenary of the late Prof. C. Mahadevan an international conference on "Challenges of the Water Resources Management in the Developing Countries in the twenty-first century" was held in Hotel Grand Bay Sheraton, Visakhapatnam, India, May 06 - 10, 2001. It was inaugurated by Dr. G.O.P. Obasi, Secretary General, World Meteorological Organization, Geneva. Apart from the Indian national organizations, the Conference was supported by IAGC, WMO, TWAS, IAHS, etc. The proceedings volume, "Water Resources Management and the Environment" by Prof. Aswathanarayana (450 pp., A.A. Balkema, Rotterdam, hardcover: USD 97.50, Student edition: USD 47.40 with a Foreword by Dr. Obasi) was released by Prof. Jochen Bundschuh.

The most important outcome of the Conference was the establishment on May 6, 2001, of the Mahadevan International Centre for Water Resources Management (Prof. U. Aswathanarayana as Honorary Director), with the "blessings" of Dr. G.O.P. Obasi, Secretary General, WMO. The objective of the Centre is to serve as a clearinghouse for water sciences and technologies in the developing countries. The Centre is presently engaged in developing two international cooperation programmes: (1) It is seeking the assistance of WMO for a series of training programmes for water scientists and technologists in the developing countries, during the next five years and (2) it has proposed a Vision Programme for the UNESCO Centre for Trace Element Research, Lyon, France, to be undertaken by the Satellite Centres in different countries. Prof. Aswathanarayana was to finalize both programmes during his visits to WMO, Geneva, on Sept. 13 & 14, 2001, and Quebec (Canada) during Sept., 15-19, 2001. The terrorist attack on New York led to the cancellation of the trip. The visits will now take place in April, 2002.

Working Group on Meteoritics and Cosmochemistry

by Herbert Palme

Our Working Group together with Brigitte Zand, Conel Alexander, and Ed Young will be organizing a fairly large session on Stars, Disks and Planetary Growth during the next Goldschmidt Meeting in Davos, Switzerland. We have asked Rudy Marcus to talk about mechanisms of mass independent fractionation of oxygen isotopes. He is a Nobel laureate (1997, chemistry) and we hope to learn from him the origin of oxygen isotopic fractionation in the early solar system. If Dr. Marcus is not able to attend, we plan to invite two other keynote speakers in his place. Oxygen isotopes are one of the most important geochemical constraints on the origin of the Earth and the inner planets.

Join the IAGC

If you are not yet a Member or if your Membership has lapsed, contact our Secretary Mel Gascoyne at <[gascoyne @granite.mb.ca](mailto:gascoyne@granite.mb.ca)>. Annual dues are only \$15.00 US. For that you get two Newsletters per year and a low-cost subscription to APPLIED GEO-CHEMISTRY at \$51.50 for 2002.

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In addition, GES-6 will feature the International Ingerson Lecture of the IAGC to be presented by Dr. Blair Jones. The topic of this lecture will be announced in Newsletter #37 in March of 2002.

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**PLEASE Renew your Membership
TODAY**

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