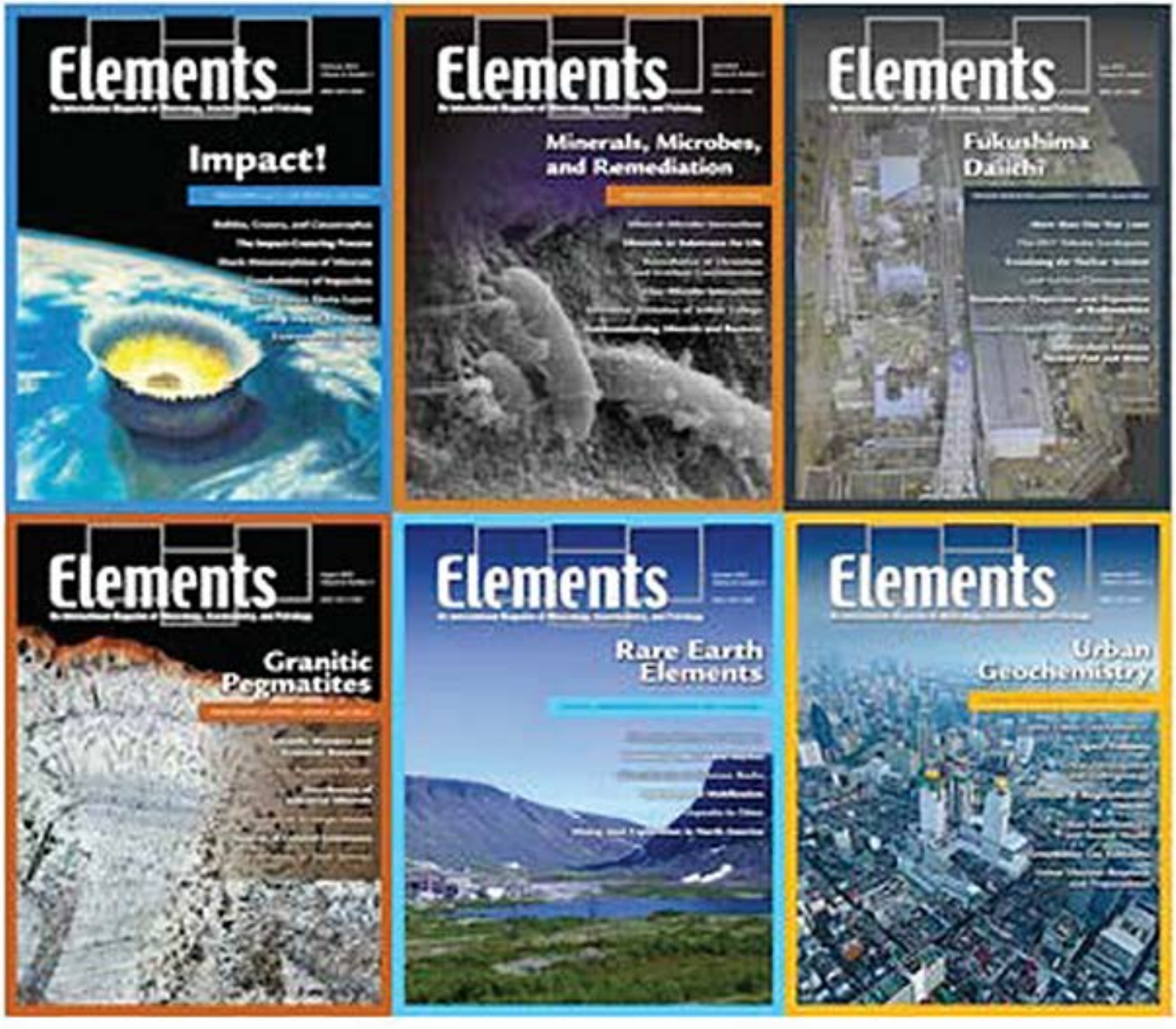
Volume 8
2012



Meteoritical Society

http://meteoriticalsociety.org

ARIZONA STATE UNIVERSITY CENTER FOR METEORITE STUDIES CELEBRATES 50th ANNIVERSARY

To mark its 50th anniversary, the Center for Meteorite Studies (CMS) at Arizona State University held a symposium in October 2011 entitled "Meteoritics and Cosmochemistry: Past, Present, and Future." Director Meenakshi Wadhwa acknowledged the 40 years of accomplishments and important contributions of CMS founding director Carleton B. Moore and announced that the CMS meteorite collection would be named in his honor. One hundred members of the meteoritics and planetary community enjoyed talks by Gerald Wasserburg (Caltech), Donald Burnett (Caltech), Andy Davis (University of Chicago), Caroline Smith (Natural History Museum, London), Phil Christensen (Arizona State University), and Tim McCoy (Smithsonian Institution), who offered their unique insights on the intertwined pursuits of exploration, curation, and analysis in meteoritical science. McCoy also delivered an engaging public lecture following the symposium, in which he commented on early results from NASA's Dawn mission, currently orbiting the asteroid Vesta. The celebration concluded with a field trip to Meteor Crater guided by David Kring (Lunar and Planetary Institute), Drew Barringer (Barringer Crater Company), and CMS Collections Manager Laurence Garvie.

Carleton B. Moore, founding director of the Center for Meteorite Studies. PHOTO CREDIT: CMS/ASU

Michelle Minitti,
Center for Meteorite Studies, Arizona State University

FORMATION OF THE FIRST SOLIDS IN THE SOLAR SYSTEM

On 7–9 November 2011, a three-day interdisciplinary workshop on the island of Kaua'i, Hawai'i, brought together cosmochemists, astronomers, and astrophysicists to consider the formation of the first solids in the Solar System: calcium–aluminum-rich inclusions (CAIs), chondrules, and differentiated asteroids. The meeting was hosted by the University of Hawai'i and sponsored by the Lunar and Planetary Institute, the Meteoritical Society, NASA, the Barringer Crater Company, CAMECA Instruments, and the Center for Star and Planet Formation at the Natural History Museum of Denmark. It was organized by Sasha Krot, with help from Ed Scott, Jonathan Williams, Gary Huss (all at the University of Hawai'i), Martin Bizzarro (Natural History Museum of Denmark), and Yuri Amelin (Australian National University).

The sessions focused on four related issues. How were CAIs and chondrules formed and accreted in the disk around the young Sun? What can we learn from short-lived and long-lived isotopes in meteorites about the chronology of the first few million years of Solar System history and the astrophysical environment? How were stable isotope anomalies preserved in meteorites, and what were the carriers of these anomalies? What do oxygen isotope anomalies tell us about the formation of the first solids, and how are they related to the much smaller isotopic anomalies in, for example, chromium, titanium, and nickel?

Among the 180 participants from 16 countries were 30 students and recent postdocs who received travel grants to attend the workshop. Among these recipients, Uta Beyersdorf (Max-Planck-Institut für Chemie, Mainz), Patricia Doyle (Imperial College London), Mia Olsen (University of Copenhagen), Dennis Harries (University of Bayreuth), Juri Katayama (Hokkaido University), and Francesco Pignatale (Swinburne University of Technology, Melbourne) received travel grants from the Meteoritical Society Endowment Fund.

The meeting was dedicated to Klaus Keil (University of Hawai'i) to celebrate his distinguished career in meteoritics and cosmochemistry. Klaus published his first papers on meteorites 50 years ago, pioneered the use of the electron microprobe to determine the chemical composition of minerals in meteorites, and is one of the co-inventors of the energy dispersive X-ray spectrometer, which is used on electron microprobes and microscopes to analyze small samples. Before an ocean-side reception in his honor, Klaus entertained everyone with a personal account of some highlights from his career, including the return of the first Apollo lunar samples and how Hans Suess arranged for him to leave East Germany just a few months before the wall was erected. Klaus celebrated his 77th birthday soon after the workshop and will retire next summer from the University of Hawai'i.

Three of the six students who received Meteoritical Society travel grants—Mia Olsen, Dennis Harries, and Uta Beyersdorf—with Klaus Keil. PHOTO BY ED SCOTT

Abstracts of the 150 oral and poster presentations at the workshop are available at the LPI website. A review of the scientific issues and new data presented at the meeting is available at the Planetary Science Research Discoveries website, www.psrd.hawaii.edu/.

Ed Scott, University of Hawai'i

SECOND ARAB IMPACT CRATERING AND ASTROGEOLOGY CONFERENCE

After the highly successful AICAC I meeting in Jordan in November 2009, AICAC II was convened on 13–20 November 2011 in Morocco. The conference and subsequent excursion were ably organized by Prof. Hasnaa Chennaoui Aoudjehane of Hassan II University, Casablanca, with help from her team of colleagues and students. The first two days featured scientific presentations on fundamental aspects of impact-cratering science and new developments in related fields. The conference's goal was to foster, through this transfer of knowledge, collaborations between scientists/young researchers from Arab countries and established impact-cratering workers. The conference began with a plenary session at Hassan II University, which included keynote and review talks, followed by sessions on the effects of impacts on the atmosphere, landscape, life, and land stability; general astrogeology; discoveries and investigations of new impact structures; geotourism and heritage conservation related to impact structures; desert meteorites; and experimental studies. Some 70 abstracts were submitted by 77 participants

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from 16 countries, including 6 North African and Middle East countries. Twenty-one keynote and invited lectures, another 14 oral presentations, and 19 posters were given.

The 2-day meeting closed with a synopsis by David Baratoux (University of Toulouse), who recounted important aspects of the proceedings, for example, the observation that Earth is not an isolated system but interacts with a diversity of solid bodies in the Solar System and beyond. Impact cratering is one of the main geological processes related to planetary evolution. Current research is focused on the origin of bolides, the present flux of asteroids and dust particles onto the Earth, tracking the fall of meteorites, the search for meteorites, and the effects of impact cratering on the terrrestrial environment. Presentations in comparative planetology dealt with the effects of oblique impact on planetary surfaces, the cratering record on other planets, and impact rates in the Solar System as determined using remote sensing data of planetary surfaces or analysis of shocked meteorites. Another important topic concerned public outreach about planetary processes (presentations on the Ries Crater Museum and the Vredefort World Heritage Site). Much time was devoted to recognition criteria for impact structures. Detailed studies of known impact structures are important for better understanding impact processes at various scales. Impact processes are hard to study in the laboratory, and many aspects related to high-pressure shock in geological media must be studied by comparing natural and experimentally produced effects, in conjunction with state-of-the-art numerical modeling.

Participants recommended that the AICAC series be continued, with the goal of further enhancing the efforts of researchers in Arab countries. As there are already several groups working on impact structures in Algeria, those colleagues were requested to nurture collaborations and to investigate the possibility of an international field trip to some of these structures, as a basis for an AICAC III meeting in the near future. The possibility that an AICAC symposium could be part of the 2014 annual meeting of the Meteoritical Society in Casablanca was also discussed.

After the symposium in Casablanca, 35 participants joined a 5-day excursion along the route Casablanca–Fes–Erfoud/Merzouga–Ouarzazate–Marrakesh–Casablanca. Participants viewed the area's varied and scenic geology and were exposed to the 1200-year cultural-historical heritage of Morocco.

AICAC II was made possible thanks to support from the president of Hassan II University, Casablanca, the dean of the Faculty of Sciences of the university, the CNRST, the Cultural Center of the Atlas Golf Marrakech, and Lafarge Ciments. The Meteoritical Society Endowment Fund and the Barringer Family Fund generously provided travel grants to 15 graduate students and young researchers.

Wolf Uwe Reimold
Museum of Natural History, Berlin

Sociedad Española de Mineralogía

www.ehu.es/sem

SEM SEA 2012 Bilbao 27-30 junio

JOINT SCIENTIFIC MEETING OF THE SPANISH MINERALOGICAL SOCIETY AND THE SPANISH CLAY SOCIETY

SEM-SEA 2012, the joint scientific meeting of the Spanish Mineralogical Society (SEM) and the Spanish Clay Society (SEA), will be held in Bilbao from June 27 to 30, 2012. This event corresponds to the 32nd meeting of the SEM and the 22nd meeting of the SEA. Organization of the joint meeting has been entrusted to the Department of Mineralogy and Petrology of The University of the Basque Country (UPV/EHU).

The SEM-SEA 2012 program includes the following three components:

Seminar A one-day workshop seminar titled "Archaeometry and Cultural Heritage Preservation: The Contribution of Mineralogy and Related Sciences" will take place on June 27. Scientists of international prestige will deliver seven master lectures on the contributions of mineralogy, petrology, and geochemistry to the characterization, dating, and provenance of man-made and natural artifacts constituting part of our cultural heritage. New conceptual and methodological advances will be examined, and the presentations will be aimed at young scientists.

Scientific sessions These sessions will take place on June 28–29 and will feature plenary lectures by invited scientists on topics of general interest. Submissions for oral and poster presentations on all aspects of clays, mineralogy, petrology, and geochemistry will be accepted. Our main objective is to organize high-quality scientific sessions that will provide a platform for debate and exchange of ideas, and lead to new scientific collaborations.

Geological excursions Two field trips, to proceed in parallel, will be held on June 30:

- E1 – Marine volcanic outcrops in the Upper Cretaceous of the Basque Cantabrian Basin (Bizkaia area)
- E2 – The Carranza Valley and its geological heritage. This excursion will include visits to karstic caves with helictites (Pozalagua), the banded dolomites of Ranero, and an old underground Zn–Pb–F–mine (Matienzo).

Deadlines and Events

- 8 March 2012 – Preliminary abstract submission ends
- 26 April – Closing date for submission of revised and accepted abstracts
- 10 May – Registration at normal rate ends
- 27 June – International seminar on archaeometry and conservation
- 28 June – SEM-SEA 2012 starts; membership assemblies
- 29 June – SEM-SEA 2012 open sessions; conference dinner and awards ceremony
- 30 June – Field trips

www.ehu.es/semsea2012

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TRAVEL GRANTS AVAILABLE FOR ANNUAL MEETING

The 75th Annual Meeting of the Meteoritical Society will be held in Cairns, in the far north of Queensland, Australia, at the Cairns Convention Centre on August 12–17, 2012. Thanks to generous contributions from the Barringer Crater Company, the National Aeronautics and Space Administration Cosmochemistry Program, the Planetary Studies Foundation, and the International Meteorite Collectors Association (which sponsors the Brian Mason Award), travel grants will be available for qualified students and recent PhDs who are members of the Meteoritical Society. In addition, funds from the Meteoritical Society Endowment Fund will be provided to scientists from low-income countries.

The travel grants will be awarded on the basis of the quality of the submitted abstract, other sources of support available to the recipient, and previous travel grants provided to attend annual meetings. The home institution of the awardee is expected to cover part of the costs. Applicants must be the sole or first author of an abstract to be presented at the meeting. They should also complete an application form and submit a current résumé before May 29, 2012.

FRANK PODOSEK TO BE MADE LIFE MEMBER

The Council of the Meteoritical Society has elected Frank Podosek as a Life Member of the Society to honor him for his outstanding service to the community as executive editor of *Geochimica et Cosmochimica Acta*. During his 12-year term, Frank Podosek showed exemplary dedication, bringing *GCA* to the highest standards of scientific publication and helping authors improve the quality of their papers.

In his letter to the associate editors announcing his retirement as executive editor, Podosek wrote, "I have helped to implement changes in the mechanics of how papers are submitted, evaluated and published, but also sought to maintain *GCA*'s scientific preeminence while serving authors, reviewers, Associate Editors and society governance with cordiality and responsiveness. I have been impressed with the energy and conscientiousness that some very talented people have volunteered in service to our societies and our community. I would like particularly to commend and thank *GCA*'s Associate Editors, who have provided both the expertise and the attention that have brought the journal to its current state."

Frank Podosek originally intended to retire as executive editor of *GCA* at the end of 2012, but he agreed with the publisher to step down at the end of last year when the editorial office at the University of Washington was closed. He has retired from teaching and is now living in Texas. *GCA* is jointly sponsored by the Geochemical Society and the Meteoritical Society.

Ed Scott (President) and **Greg Herzog** (Secretary)
The Meteoritical Society

SOCIETY ONLINE DISCUSSION GROUP STARTED

MetSocCom is a new electronic discussion group for Society members. It allows subscribers to send and receive messages via their e-mail inboxes. It can be used for meeting announcements, job opportunities, fellowship announcements, student opportunities, and discussions about research or education topics relevant to the Society's goals. Large data files cannot be posted: only text. Participation in MetSocCom is voluntary, but we encourage members to join as we believe it will be a useful tool. To avoid overwhelming e-mail inboxes, subscribers can choose to have messages combined into a single daily e-mail. You can also unsubscribe at any time.

MetSocCom cannot be used for advertising or for personal e-mail unrelated to Society purposes. Users must obey national and local laws concerning telecommunications. More information, including complete ground rules and links to the subscription page, can be found on the Society website at https://metsoc.meteoriticalsociety.net/lists.html.

To subscribe, visit http://lists.meteoriticalsociety.net/mailman/listinfo/metsoccom, input your name and e-mail address, and choose a password. After you join, you will receive an e-mail explaining how to post messages and manage your subscription. Address questions to MetSocCom's manager, Jon Friedrich (friedrich@fordham.edu). We hope that members will find MetSocCom useful and interesting and look forward to seeing how this new adventure turns out.

Jon Friedrich (Fordham University)
and **Greg Herzog** (Rudgers University)

JAMES R. ARNOLD (1923–2012)

James R. Arnold, a fellow of the Meteoritical Society and recipient of the Leonard Medal for 1976, died on January 6, 2012. He was the founding chairman of the chemistry department at the University of California, San Diego, and the first director of the California Space Institute. His contributions to science ranged from the study of cosmic rays to the future of manned space flight. As a longtime consultant to NASA, Jim helped to set science priorities for missions, including the Apollo flights to the Moon. He first served on a NASA committee in 1959, just three months after the space agency was established. He became the principal investigator for gamma ray spectrometers on Ranger and Apollo. Aware of the importance of water in all aspects of human operations in space, Jim revived and talked widely about earlier ideas for water/ice in the polar regions of the Moon.

Jim was in Houston for the arrival of the first lunar samples and carried some of them back to his laboratory at UC San Diego. Gathered around a television, he and his group watched astronauts on subsequent missions collecting the rocks that they would study next. It was an exciting time. Candace Kohl was then a graduate student, and part of her project required sampling the rock surfaces with a dental drill. She remembers vividly that concern for the precious lunar material was so high that "you would have to collect the Moon dust off your fingers." Over more than two decades, Jim traced the history of bombardment of Moon rocks by cosmic rays and extended our record of the energy output of the Sun by millions of years.

Worried about the threat of nuclear fallout, he was a thoughtful contributor to the *Bulletin of Atomic Scientists* from its foundation. Out of concern for global issues, he took on a student in environmental studies in the early 1970s, a subject that was avant-garde at the time.

In 1970, NASA recognized Jim's work with an Exceptional Scientific Achievement Medal. He also received the Department of Energy's E. O. Lawrence Award in chemistry and metallurgy and was a member of the National Academy of Sciences and the American Academy of Arts and Sciences. In 1980, Eleanor Helin and Eugene Shoemaker named an 8-mile-wide asteroid that they discovered 2143 Jimarnold.

Mark Thiemens, Candace Kohl, and **Bob Reedy**

COMMITTEE MEMBERS THANKED

Many thanks to all those members who are serving on the Society's committees this year. We have listed their names below, with the names of the committee chairs in bold. Without the generous help of these members, the Society could not function. We greatly appreciate their help.

Committees	Members for 2012		Term ends
Leonard Medal and Nier Prize	McCoy, Tim	Smithsonian Institution	2012
	Alexander, Conel	Carnegie Institution of Washington	2013
	Palme, Herbert	Senckenberg Museum Frankfurt	2014
	Robert, François	Muséum d'Histoire Naturelle, Paris	2015
	Kita, Noriko	University of Wisconsin–Madison	2016
Barringer Award	**Morgan, Joanna**	Imperial College London	2012
	Plescia, Jeff	Johns Hopkins University	2013
	Cohen, Barbara	NASA Marshall Space Flight Center	2014
	Crosta, Alvaro	University of Campinas–UNICAMP	2015
Pellas-Ryder Award	Lauretta, Dante	University of Arizona	2012
	Williams, Dave (GS)	Arizona State University	2012
	Anderson, Bob (GS)	Columbia University	2013
	Kattenhorn, Simon (GS)	University of Idaho	2013
	Trieloff, Mario	University of Heidelberg	2013
	Downes, Hilary	Birkbeck College	2014
McKay Award	**Ciesla, Fred**	The University of Chicago	2012
	Norman, Marc	Australian National University	2012
Nominating	Yamaguchi Akira	Antarctic Meteorite Research Center	2012
	Osinski, Gordon	University of Western Ontario	2012
	Goldstein, Joe	University of Massachusetts	2012
	Kohl, Candace	University of California–San Diego	2012
	Wieler, Rainer	ETH Zurich	2012
	Zanda, Brigitte	Muséum d'Histoire Naturelle, Paris	2012
Nomenclature	Murty, S. V. S.	Physical Research Laboratory	2012
	Herd, Chris	University of Alberta	2013
	Rochette, Pierre	CEREGE, CNRS Aix-Marseille	2013
	Smith, Caroline	Natural History Museum, London	2013
	Haack, Henning	University of Copenhagen	2014
	Mostefaoui, Smail	Muséum d'Histoire Naturelle, Paris	2014
	Welten, Kees	University of California, Berkeley	2014
	Greenwood, Richard	The Open University	2015
	Ruzicka, Alex	Portland State University	2015
	Welzenbach, Linda	Smithsonian Institution	2015
	Mikouchi, Takashi	University of Tokyo	2016
Endowment	Goldstein, Joseph	University of Massachusetts	2012
	Reimold, Uwe	Humboldt-Universitaet Berlin	2012
	Caffee, Marc	Purdue University	2013
	Barringer, Drew	The Barringer Crater Company	2014
	Warren, Paul	University of California, Los Angeles	2014
Audit	**Davis, Andrew**	The University of Chicago	2012
	Taylor, Susan	CRREL, Hanover, New Hampshire	2013
	Wadhwa, Mini	Arizona State University	2013
Publications	Dauphas, Nicholas	The University of Chicago	2012
	Goodrich, Cyrena	Planetary Science Institute	2012
	Nittler, Larry	Carnegie Institution of Washington	2013
	Pack, Andreas	Georg-August-Universitaet	2013
	Flynn, George	SUNY–Plattsburgh	2014
	Mikouchi, Takashi	University of Tokyo	2014
Joint Publications	Bar-Matthews, Mira (GS)	Geological Survey of Israel	2013
	Grossman, Jeff (MS)	NASA	2013
	Humayun, Munir (MS)	Florida State University	2014
	Salters, Vince (GS)	Florida State University	2013
	Wesolowski, Dave (GS)	Oak Ridge National Laboratory	2013
	Zanda, Brigitte (MS)	Muséum d'Histoire Naturelle, Paris	2013
	Bland, Phil	Curtin University	2012
	Kunihiro, Takuya	Okayama University	2013
	Lebofsky, Larry	University of Arizona	2014
	Ruzicka, Alex	Portland State University	2014
	Strait, Melissa	Alma College	2014
	Zipfel, Jutta	Forschungsinstitut und Natur- Frankfurt am Main	2013

Congratulations to Hap McSween
on winning the J. Lawrence Smith Medal of the National Academy of Sciences (page 86)

Société Française de Minéralogie et de Cristallographie

www.sfmc-fr.org

MEETING ANNOUNCEMENTS

10th Annual Conference of the GFA • 14–16 May 2012

The French Clay Group (GFA) will hold its 10th annual conference in Limoges (France), on 14–16 May 2012. The meeting will cover fundamental and applied fields in clay science, including natural and synthetic, finely divided materials. The first circular, with instructions for abstract submission, is available online (http://generateur.unilim.fr/gfalimoges2012).

GFA
Groupe Français des Argiles

Contact: Emmanuel Joussein (emmanuel.joussein@unilim.fr)

Serpentine Days • 2–6 September 2012

A new international edition of "Serpentine Days" will be held on 2–6 September 2012. The conference will take place in Porquerolles, a very welcoming island in the south of France in the Mediterranean Sea. The island can easily be reached by daily boat connections. The nearest airports and train stations on the mainland are at Toulon-Hyères. The official conference language for talks and posters will be English. The following session themes, centred on serpentine, will be addressed during the meeting: mineralogy, crystal chemistry, rheology, deformation, geodynamics, thermodynamics, origins of life, primitive planets, and societal implications. The meeting will be sponsored by SFMC and the Deep Carbon Observatory. All efforts will be made to keep costs affordable. Fees will include registration and full board during the conference. **Note that the deadline for abstract submission has been brought forward to April 15, 2012.** Registration will start on May 15, 2012. Early registration (lower fees) will be possible until June 8, 2012. You'll also find information on the SFMC website: http://sfmc-fr.org/spip.php?article131.

Contact: Gaelle at serpentines2012@sfmc-fr.org

Organizing Committee: M. Andreani (LGL-Lyon), A.-L. Auzende (IMPMC-Paris), I. Daniel (LGL-Lyon), A. Delacour (GET-Toulouse)

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2012 METEORITICAL SOCIETY FELLOWS

Philip Bland (UK/Australia) – For original and diverse studies of important meteorite problems, helping establish the Western Australia camera network, and contributions to the society

Christine Floss (USA) – For superior ion microprobe studies of isotopes and trace elements in diverse meteorites and in presolar grains, as well as for contributions to the society

Makoto Kimura (Japan) – For outstanding studies of the mineralogy and petrology of primitive chondrites and of high-pressure minerals in shocked meteorites, and for his contributions to the society

Thorsten Kleine (Germany) – For his fundamental studies of the Hf–W system and the chronology of the early Solar System

Yangting Lin (China) – For contributions to the understanding of the origins of chondritic components, most notably presolar grains and CAIs, and the petrology of Martian meteorites, for his role in the Chinese Antarctic meteorite collection program, and for his contributions to the society

Katharina Lodders (USA) – For the application of thermodynamics to our understanding of Solar System processes and the compilation of huge amounts of Solar System data so that it is readily accessible to scientists

Bernard Marty (France) – For outstanding studies on the noble gases and nitrogen in meteorites and Genesis samples, and for contributions to the society

Akira Yamaguchi (Japan) – For major contributions to our understanding of the petrogenesis of achondrites, leadership in the collection/curation of Antarctic meteorites at NIPR, and contributions to the society

Edward Young (USA) – For significant studies of C, O, and Mg isotopes in meteorites and protoplanetary disks, for studies of the hydrology of asteroids, and for contributions to the understanding of isotopic fractionation during evaporation of silicates

Hisayoshi Yurimoto (Japan) – For innovative isotopic studies of chondritic components, particularly CAIs and fluid inclusions, and the mentoring of many students

Jutta Zipfel (Germany) – For significant research on a range of differentiated meteorites and on planetary missions to understand igneous processes on asteroids and Mars, for work on meteorite curation and classification, and for contributions to the society

The Meteoritical Society wishes Marc Norman great success as executive editor of *Geochimica et Cosmochimica Acta*. Read about his appointment on page 186.

NOMENCLATURE COMMITTEE REPORT

The purpose of the Nomenclature Committee (NomCom) is to approve new meteorite names, and to establish guidelines and make decisions regarding the naming of meteorites. We are also charged with keeping the community apprised of new meteorites through the *Meteoritical Bulletin* and the Meteoritical Bulletin Database (www.lpi.usra.edu/meteor/metbull.php). Since the last report, *Meteoritical Bulletin* (*MB*) 99 has been completed; it contains 1075 meteorites, 468 of which are non-Antarctic. *MB*99 will be published shortly in the new online format. A further 1509 meteorites have been approved thus far for *MB*100.

The type specimen (TS) repository review process is underway, with curators of TS repositories now required to update their contact information in an online database. Any new meteorite submission will not be considered if the information about the TS repository listed in the submission is incomplete.

Our guidelines for meteorite nomenclature continue to be revised to keep up with the times. A recent addition is a section entitled "Meteorites Found on Celestial Bodies Other than Earth"! The complete, up-to-date guidelines can be found at www.meteoriticalsociety.org/bulletin/nc-guidelines.htm.

Please do not hesitate to contact me (herd@ualberta.ca) with questions or concerns about NomCom and especially with suggestions for improvement. As always, essential information on meteorite nomenclature, instructions, and the template for reporting new meteorites can be found on our homepage: http://meteoriticalsociety.org/simple_template.cfm?code=pub_bulletin. A list of current NomCom members can be found at www.meteoriticalsociety.org/bulletin/TermExpirations2011.htm.

Chris Herd
Chair of the Nomenclature Committee

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REPORT FROM THE TREASURER

Rhian Jones

I am happy to report that the Society's finances continue to be sound and that both our Operating Fund and our Endowments are very healthy. A large portion of the operating budget relates to publication of *Meteoritics and Planetary Science* (*MAPS*), our international monthly journal of planetary science. *MAPS* has been published by Wiley since 2010, and our income from Wiley closely matches the expenses of the editorial office at the University of Arizona, which is managed by Editor Tim Jull.

Society membership benefits include subscriptions to *MAPS* and *Elements*. Membership with subscription to only the electronic version of *MAPS* has become a popular option, although about 60% of our members still purchases the printed version. Collection of membership dues for 2013 will begin in October 2012. I encourage members to pay their dues in a timely manner, as this helps greatly with financial planning. We are now able to accept American Express for membership dues payments.

Our Investment Fund, which includes three separate endowed funds, continues to grow steadily. Many Society members contribute generously to all of these funds, and your donations are always greatly appreciated. The Nier Fund supports the annual Nier Prize, which recognizes outstanding research by young scientists in meteoritics and closely allied fields. This year's recipient (2012) is Dr. Frederic Moynier of Washington University, St. Louis. The Gordon A. McKay Fund supports an award to the student who gives the best oral presentation at the annual meeting of the Society. Last year's award (2011) was given to Dennis Harries of Universität Bayreuth. The General Endowment Fund supports a variety of outreach projects. Over the last year, the General Endowment Fund was used to support students traveling to the Second Arab Impact Cratering and Astrogeology Conference (AICAC II), held in Morocco in November 2011, and the Workshop on Formation of the First Solids in the Solar System, held in Kauai in November 2011. General Endowment money was also used to help members from low-income countries to participate in the Meteoritical Society meeting in Greenwich in August 2011. This year we will again support scientists from low-income countries to travel to the Meteoritical Society meeting in Cairns, Australia. However, this money will come from a combination of two sources: the General Endowment Fund and our new initiative to raise money for this purpose directly from members by means of the annual membership renewal form. Thirty members responded to this request this year. Your direct contributions help to strengthen our international community. We always welcome suggestions and ideas for ways in which the General Endowment Fund can be utilized to promote the goals of the Society and enrich its activities.

Dr. Rhian H. Jones, Meteoritical Society Treasurer

2012 MEMBERSHIP REPORT

As of May 2012, the Meteoritical Society is made up of 699 regular members, 160 student members, 127 retired members, and 13 life members, for a total of 1013 members. Many thanks to our secretary, Greg Herzog, for coming up with the interesting statistics about Society membership. We can be proud that we have members in 46 countries, but the statistics also show that we still have a lot of work to do to gain members in India, China, and many other countries. The Society does have a scheme to subsidize the annual dues for members in low-income countries. Prior approval is required from the Membership Committee for this rate—please see our website for more information.

For those wishing to avoid the hassle of paying dues every year, consider becoming a life member! For more information and details on how to become a member of the Meteoritical Society, please see our Society web page at www.meteoriticalsociety.org.

Membership Distribution

	Member	Student	Retired	Life	Total All
United States	334	95	47	13	489
Japan	79	11	14		104
Germany	80	12	8	3	103
United Kingdom	37	5	18		60
France	34	5	7	1	47
Canada	24	8	6	1	39
Australia	16	4	8		28
Switzerland	17	5	3		25
Italy	10	3	1		14
Austria	5	2	3		10
Denmark	3	1	3	1	8
Belgium	6	1			7
Brazil	3	2	2		7
Sweden	5		2		7
China	4		2		6
Russian Federation	5	1			6
India	4	1			5
Netherlands	3		1		4
Poland	4		1		5
Czech Republic	3	1			4
Finland	1	1	1		3
Korea, Republic Of	3				3
Argentina	2				2
Morocco	2				2
Spain	2				2
Taiwan	2				2
Grand Total	688	158	127	19	992

The following countries have one member at this time: Botswana, Chile, Estonia, Holy See (Vatican City State), Ireland, Malaysia, Mexico, New Zealand, Norway, Oman, Peru, Philippines, Portugal, Romania, Slovakia, South Africa, Thailand, Ukraine, United Arab Emirates, and Uruguay.

2012 PELLAS-RYDER AWARD WINNER

D. Alex Patthoff

The Pellas-Ryder Award for the best student paper in planetary sciences is jointly sponsored by the Meteoritical Society and the Planetary Geology Division of the Geological Society of America. It is awarded to an undergraduate or graduate student who is first author of the best planetary science paper published in a peer-reviewed scientific journal during the year prior to the award. The award has been given since 2001 and honors the memories of meteoriticist Paul Pellas and lunar scientist Graham Ryder.

The winner of the 2012 Pellas-Ryder Award is **D. Alex Patthoff** of the University of Idaho. Mr. Patthoff's paper, "A fracture history on Enceladus provides evidence for a global ocean," published last year in *Geophysical Research Letters*, presents paradigm-shifting results in the study of Saturn's moon Enceladus. Alex and coauthor Simon A. Kattenhorn suggest that this small moon could possess a liquid-water ocean underneath its icy crust, joining Europa, Ganymede, and Titan in this club of special moons. One reviewer described this paper as follows: "It was a fantastic study and a well-written paper. I could really relate to the study and tell what an excellent job he had done. I thought the figures were just right and totally sufficient toward expressing the point of the paper."

Meteoritical Society

http://meteoriticalsociety.org

2013 ANNUAL MEETING INVITATION

The 76th annual meeting of the Meteoritical Society will take place in Edmonton, the capital city of Alberta, Canada. The meeting will be held on July 29–August 2 at the Crowne Plaza Chateau Lacombe in Edmonton's downtown core, within walking distance of the Arts District, shopping, nightlife, restaurants, and coffee shops. Edmonton is the most northerly major city in Canada. Long daylight hours and warm weather are therefore expected during the summer months. Situated on the North Saskatchewan River, Edmonton is close to UNESCO World Heritage Sites such as Jasper and Banff national parks in the Canadian Rocky Mountains, Head-Smashed-In Buffalo Jump, and Dinosaur Provincial Park. Less than an hour from Edmonton is Elk Island National Park. In addition to being an opportunity to observe bison, moose, and deer in a natural setting, this dark-sky preserve is also a prime viewing area for the aurora borealis, a light show we may be treated to as the next northern lights activity maximum is approached. The conference banquet will be held on Wednesday, July 31, on the picturesque campus of the University of Alberta.

We expect to have a wide variety of interesting scientific sessions at our meeting. Several field trips are planned, including an excursion to the Whitecourt Meteorite Impact Crater, one of a few Holocene craters worldwide; a K/T boundary locality; and the world-famous Royal Tyrell Museum of paleontology. Full details can be found in the first announcement, available on the LPI website, www.lpi.usra.edu. Additional details can be found on the local meeting website, www.metsoc2013edmonton.org. For more information, please contact Organizing Committee Chair Chris Herd at herd@ualberta.ca.

We look forward to welcoming you to Edmonton next summer!

SECOND CONFERENCE ON THE LUNAR HIGHLANDS CRUST – MEETING REPORT

The lunar highlands are the accessible exposures of the Moon's premare crust, and so are a principal source of data on the Moon's origin and early history. Lunar meteorites are essential contributors to understanding the lunar highlands; they provide "ground truths" from outside the Apollo and Luna sampling sites for remote sensing data (optical, radar, and gravity). The last conference devoted solely to the lunar highlands was in 1979, the year of the first find of a lunar meteorite. So, it seemed timely to hold another such conference, augmented by field study of a terrestrial analog for lunar crust formation. The Meteoritical Society was a cosponsor, and supported attendance by two students, Corey Wall and Anaïs Fourny of the University of British Columbia.

Anaïs Fourny, one of the two students sponsored by the Meteoritical Society to attend the workshop. Photo credit: Allan Treiman

The workshop, held on July 12–16, 2012, was convened by Dr. Allan Treiman of the Lunar and Planetary Institute (and Fellow of the Society) in Bozeman, Montana. The workshop featured invited contributions by Dr. David Kring, who talked about the Moon's impact history (including the nature of the putative cataclysm) and the sources of the impactors; Dr. Maria Zuber, on the new gravity maps from the GRAIL mission; Dr. Carlé Pieters, on optical remote sensing and the mineral constitution of the lunar surface; and Dr. Randy Korotev, on the nature of the lunar highlands revealed by meteorites and the returned samples. Contributed talks and posters spanned a huge range of topics, such as terrestrial analogs, details of optical properties and models, and petrologic studies of samples new and old. Free discussion was an important part of the meeting, and the conversations were active and cordial.

To complement the technical sessions, Dr. Stewart McCallum (University of Washington) led two field trips to view rocks of the nearby Stillwater Complex, a layered basic intrusion that has provided much of the conceptual basis for understanding lunar highlands rocks. Before the workshop, participants examined rocks of the lower section of the Stillwater, including peridotites, pyroxenites, chromite-rich rocks, and some anorthosites. After the workshop, Dr. McCallum and a dozen young hardies climbed up Picket Pin Mountain to see part of the upper section, including massive anorthosites, norites with sedimentary structures, and a sulfide-rich zone. After summiting, the group retreated from a massive thunderstorm, soaked, but alive and happy.

To view the complete program and abstracts for this workshop, see www.lpi.usra.edu/meetings/highlands2012/.

FUTURE ANNUAL MEETINGS

2013 July 29–August 2 Edmonton, Alberta, Canada
Contact Chris Herd (herd@ualberta.ca)

2014 September 7–14 Casablanca, Morocco
Contact Hassna Chennaoui (chennaoui_h@yahoo.fr)

2015 July 27–31 Berkeley, California

2016 Dates to be announced Berlin, Germany

STUDENT TRAVEL AWARDS

Over 45 students attending the annual meeting of the Society in Cairns, Australia, in August 2012, received travel grants. Student travel grants and travel grants for scientists from countries with limited financial resources are generously sponsored by the Barringer Crater Company, the Planetary Studies Foundation, NASA (Cosmochemistry Program), the Meteoritical Society Endowment Fund, the International Meteorite Collectors Association (Brian Mason Award), and the Australian National University (Research School of Earth Sciences and ICOG-7 awards).

The Barringer Crater Company

- Feargus Abernethy, *Open University*
- Marlene Giscard, *Imperial College*
- Michael Goodyear, *Open University*
- Maartje Hamers, *Utrecht University*
- Leon Hicks, *University of Leicester*
- Yoshihiro Hidaka, *Tokyo Metropolitan University*
- Jesper Holst, *University of Copenhagen*
- Yutaro Kuriyama, *University of Tokyo*
- Yi-Jen Lai, *University of Bristol*
- Nan Liu, *University of Chicago*
- Anna Losiak, *University of Vienna*
- Tu-Han Luu, *CPRG-CNRS Nancy, France*
- Mia Olsen, *University of Copenhagen*
- Claudiu Tănăselia, *Babes-Bolyai University*
- Nicole Spring, *University of Manchester*
- Hiroko Suzuki, *University of Tokyo*
- Mona Weyrauch, *Westfälische Wilhelms Universität, Münster*
- Felicity Williams, *Open University*
- Niel Williams, *University of Manchester*
- Yuchen Xu, *Chinese Academy of Science, Guiyang*
- Shogo Yakame, *University of Tokyo*

NASA–Cosmochemistry

- Robert Beauford, *University of Arkansas*
- Timothy Bowling, *Purdue University*
- Patrick Gasda, *University of Hawaii*
- Evan Groopman, *Washington University in St. Louis*
- Pierre Haenecour, *Washington University in St. Louis*
- Junko Isa, *University of California, Los Angeles*
- Christine Jilly, *University of Hawaii*
- Jordan Kendall, *Purdue University*
- Takafumi Niihara, *Lunar and Planetary Institute*
- Caitlin Schnitzer, *University of Arizona*
- Lev Spivak-Birndorf, *Arizona State University*
- Reto Tappitsch, *University of Chicago*
- Myriam Telus, *University of Hawaii*
- Curtis Williams, *Arizona State University*
- Kelsey Young, *Arizona State University*

Planetary Studies Foundation

- Marc Biren, *University of New Brunswick*
- Matthew Huber, *University of Vienna*

Australian National University Research School of Earth Sciences

- Vicki Darlington, *James Cook University*
- Francesco Pignatale, *Swinburne University*

Australian National University ICOG-7 Conference Fund

- Joelene Buntain, *Monash University*
- Barbara Frasl, *Australian National University*

Meteoritical Society Endowment Fund

- Rogelio Acevedo, *Centro Austral de Investigaciones Cientificas, Argentina*
- Hasnaa Chennaoui Aoudjehane, *Hassan II University, Morocco*
- Assia Laroussi, *Hassan II University, Morocco*
- Kuljeet Marhas, *Physical Research Lab, India*
- S.V.S. Murty, *Physical Research Lab, India*

International Meteorite Collectors Association (Brian Mason Award)

- Natasha Stephen, *Imperial College*

Natasha Stephen, winner of the Brian Mason Award. Photo credit: Diamond Light Source

Brian Mason Award

In 1997, Joel Schiff, the first editor of the popular *Meteorite* magazine, created a travel award in honor of Brian Mason, who was born in New Zealand. The award is given to a student attending the annual meeting of the Society who submits an abstract that presents clearly explained, exciting results of particular interest to readers of *Meteorite* magazine. The recipient is required to write a popular account of his/her work for the magazine. Since 2008, the award has been generously funded by the International Meteorite Collectors Association.

This year the Program Committee for the Cairns, Australia, meeting selected Natasha R. Stephen as the winner of the Brian Mason Award. Natasha is a student at Imperial College in London, UK, and she submitted an abstract entitled "The Tissint Meteorite: A pristine and unique sample of the Martian sub-surface," authored by N. R. Stephen, M. Genge, and S. Russell. This paper discusses the newest Martian meteorite, Tissint, which was recovered quickly after it fell and represents a rare opportunity to study unweathered Martian material (see the August 2012 "CosmoElements" feature in this magazine for a discussion of Tissint).

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the Society's awards. Nominations should be sent to Secretary Greg Herzog (herzog@rutchem.rutgers.edu) by January 15 (January 31 for the Service Award and the Pellas–Ryder Award). For more information and details on how to submit a nomination for any of these awards, please see the latest Newsletter at the Society website (http://meteoriticalsociety.org/Newsletter/nlett11.pdf - see page 9) or e-mail the secretary (metsocsec@gmail.com).

The Society gives a number of awards each year. The ***Leonard Medal*** honors outstanding contributions to the science of meteoritics and closely allied fields. The ***Barringer Medal and Award*** recognize outstanding work in the field of impact cratering and/or work that has led to a better understanding of impact phenomena. The ***Nier Prize*** recognizes outstanding research in meteoritics and closely allied fields by young scientists (under 35). The ***Service Award*** honors members who have advanced the goals of the Meteoritical Society to promote research and education in meteoritics and planetary science in ways other than by conducting scientific research. The ***Paul Pellas–Graham Ryder Award*** is given for the best student paper in planetary science and is awarded jointly by the Meteoritical Society and the Planetary Geology Division of the Geological Society of America.

Meteoritical Society

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2012 ANNUAL MEETING REPORT

Sunrise over the Cairns harbor
PHOTO: CARI CORRIGAN

Conference organizer, Trevor Ireland
PHOTO: MINI WADHWA

The 75th annual meeting of the Meteoritical Society was held in Cairns, Australia, on 7–12 August 2012 at the Cairns Convention Centre. Over 400 abstracts were submitted, creating an exciting program that included new reports on the Sutter's Mill and Tissint meteorites. Oral presentations were accommodated in two parallel sessions through to Friday afternoon, with poster sessions on Tuesday and Thursday evenings.

There were 370 attendees, including 240 member and nonmember participants, 70 students, and a further 60 guests. Forty-four students and five professionals from low-income countries were awarded travel funds totaling ~$40,000, primarily through the support of the Barringer Crater Company, NASA Cosmochemistry, and the Meteoritical Society Endowment Fund.

The scientific program covered a wide range of topics, including the formation of the Solar System; samples from Mars and Vesta; impacts and shock processes; chondrules and refractory inclusions; carbonaceous, ordinary, and enstatite chondrites; differentiated meteorites; isotopes; IDPs and micrometeorites; secondary processes; and organic matter. Special sessions were dedicated to Jim Arnold, Brian Mason, John de Laeter, and David Wark.

The Barringer Invitational Lecture, on the origin of planetary systems, was delivered by Prof. Ross Taylor to an enthusiastic audience. Ross is a stalwart of the Meteoritical Society and his presence in Cairns was a highlight.

On Wednesday afternoon, participants were transported to the Skyrail station for a trip over the rainforest canopy, ending at the Rainforestation Nature Park. Guests attended an Aboriginal concert, traveled through the forest and lagoon on Army Ducks, and visited a native zoo with everything from a 6-meter crocodile to cuddly koalas, before enjoying a barbecue dinner.

Many attendees also participated in cruises to the Great Barrier Reef to view the Earth's largest living organism. Following the meeting were two field trips to craters in central Australia; the trip out of Alice Springs was organized by Craig O'Neill, and the one out of Perth in Western Australia was organized by Alex Bevan.

The abstract volume and program are available online at www.lpi.usra.edu/meetings/metsoc2012/pdf/program.pdf.

Field Trips to the Impact Craters of Australia

After the Cairns meeting, 26 meteoriticists enjoyed a five-day field trip to see the geology, impact craters, and scenery of central Australia. The trip, which was led by Craig O'Neill (Macquarie University), included spectacular visits to the western Macdonnell Ranges, the Finke River, the majestic Palm Valley and Cycad Gorge, Gosses Bluff, Kings Canyon, Kata Tjuta (The Olgas), Henbury Crater, Amelia Creek Crater, and Kelly West Crater. A 10-day field trip, led by Alex Bevan (Western Australia Museum), took participants to impact craters including the Yallalie, Dalgaranga, Yarrabubba, Shoemaker, Glikson, and Hickman structures in Western Australia.

2012 SOCIETY AWARD WINNERS

The Society gives four major awards each year. For more information on individual awards, see the Society web page.

The LEONARD MEDAL, which is the Society's highest and oldest award, is given to individuals who have made outstanding original contributions to the science of meteoritics or closely allied fields. It is named for Frederick C. Leonard, who was a founder and the first president of the Society. The 2012 winner is **Donald S. Burnett**, of Caltech, for his outstanding contributions to our understanding of the composition of the Solar System through study of meteorites, noble gases, the lunar surface neutron flux, and CAIs, and through his leadership in the Genesis mission, which led to a marked increase in the understanding of the isotopic and elemental composition of the Sun and the terrestrial planets. The citation was given by Kevin McKeegan.

The BARRINGER MEDAL AND AWARD, sponsored by the Barringer Crater Company, were created in memory of D. Moreau Barringer Sr. and his son D. Moreau Barringer Jr. The award is given for outstanding work in the field of impact cratering. This year, the Barringer Award is given to **Jan Smit** (Vrije Universiteit, Amsterdam) for his fundamental contributions to impact crater studies, including playing a major role in the confirmation that the K–T boundary layer has an impact origin, and for characterization of the many deposits that resulted from this impact. The citation was given by Phillipe Claeys.

The NIER PRIZE recognizes young scientists in the field of meteoritics. This year's winner is **Frédéric Moynier** of the University of Chicago. Frédéric receives this award for his excellent work in pioneering the use of the isotopic composition of the transition metals (Fe, Ni, Cu, and Zn) in geochemistry and cosmochemistry to search for new constraints on the accretion and differentiation processes of planets (and planetesimals). The citation was given by Marc Chaussidon.

The METEORITICAL SOCIETY SERVICE AWARD is given this year to **Ursula Marvin**. Ursula receives this award for her excellent service toward documenting the history of the Meteoritical Society. Ursula was also instrumental in establishing personal histories of some of the most influential people in meteoritics and planetary science. The citation was given by Derek Sears.

The GORDON MCKAY AWARD, for the best oral presentation by a student at the annual meeting of the Meteoritical Society, is given to **Maartje Hamers** of Utrecht University, the Netherlands, for her talk in Cairns entitled "Shocked quartz in the SEM: Distinction between amorphous and healed PDFs." The award comes with a prize of US$1000 and a certificate.

WILEY-BLACKWELL AWARDS, worth US$500 each and provided by Wiley-Blackwell, publishers of *Meteoritics and Planetary Science*, were given for outstanding presentations by students at the 75th annual meeting of the Society in Cairns. The four winners (left to right, below) were **Evan Groopman** (Washington University, St. Louis) for his talk entitled "Ti-XANES and EELS of presolar TiC subgrains within low-density supernova graphite," **Matthew Huber** (University of Vienna) for his talk entitled "Distribution of meteoritic material in Sudbury ejecta," **Reto Trappitsch** (University of Chicago) for his talk entitled "Solar cosmic-ray irradiation of the solar nebula," and **Kelsey Young** (Arizona State University) for her talk entitled "The age of Haughton Impact Structure as determined by zircon (UTh)/He thermochronology."

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ANNUAL MEETING SCHEDULE

- 2013: Edmonton, Alberta, Canada, July 29–August 2
- 2014: Casablanca, Morocco, September 7–14
- 2015: Berkeley, California, USA, July 27–31
- 2016: Berlin, Germany, dates to be announced

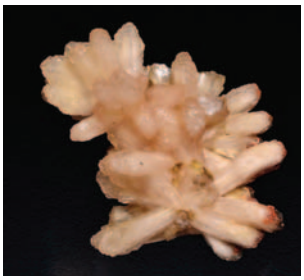
RENEW YOUR MEMBERSHIP NOW!

Please renew by March 31, 2013; after that date, a $15 late fee will be assessed. You can renew online at http://metsoc.meteoriticalsociety.net.

International Mineralogical Association

www.ima-mineralogy.org

MINSA
Mineralogical Association of South Africa
A division of the GSSA



The South African mineral poldervaartite, a hydroxyl nesosilicate, associated with red andradite garnet, from the Wessels mine, Kalahari manganese field, South Africa. Specimen width 2.6 cm. Bruce Cairncross collection and photograph

MINERALOGICAL ACTIVITIES IN SOUTH AFRICA

In 2014, the quadrennial International Mineralogical Association conference will be held in South Africa and hosted by the Mineralogical Association of South Africa (see call for session proposals on page 479). MINSA, as the Association is more commonly called, was formed in 1979 as a specialist division of the Geological Society of South Africa (GSSA) with the primary aim of promoting interaction amongst mineralogists, particularly in the fields of mineralogy, petrology and geochemistry. Applied mineralogy is a current strong focus. MINSA organises various ad hoc lectures by local and overseas experts, symposia, short courses, workshops, conferences, laboratory visits and ever-popular field excursions. Regular visits to laboratories based mainly in the Gauteng region of South Africa enable local mineralogists to keep abreast of the latest instrumentation and techniques available in the country. One-day and weekend excursions to mines and other areas of geological, palaeontological or archaeological interest are popular. Such trips have included visits to the caves of the Cradle of Humankind, site of many important palaeoanthropological fossil finds; the Mapungubwe historical site; and chrome, diamond, gold and platinum mining operations. Longer excursions have been undertaken to regions further afield in southern Africa, such as the Richtersveld, Namibia and Lesotho. Field excursions to other countries, such as Tanzania, where the mining operations around tanzanite were a highlight, and the French volcanic island of Réunion in the Indian Ocean, have also been a success.

Ongoing education for mineralogists is provided in the form of courses and workshops on such subjects as coal petrology, metallurgy for geologists, mineralogy for metallurgists, X-ray diffraction and Rietveld refinement, fluid inclusions, sulfide mineralogy, clay mineralogy, optical mineralogy, acid mine drainage and applied mineralogy.

The planning and organisation of all events are undertaken by a committee made up of a chair, vice-chair, secretary and three elected members, together with usually 20–25 co-opted committee members drawn from industry and academia throughout South Africa, all of whom give of their time on a voluntary basis. The Association currently consists of more than 100 members, and includes students as well as mineralogists outside South Africa's borders. Anyone interested in joining MINSA can do so by downloading a membership form from the website www.minsoc.org.za.

Dr Jill Richards, MINSA Secretary
(jill.richards@exxaro.com)