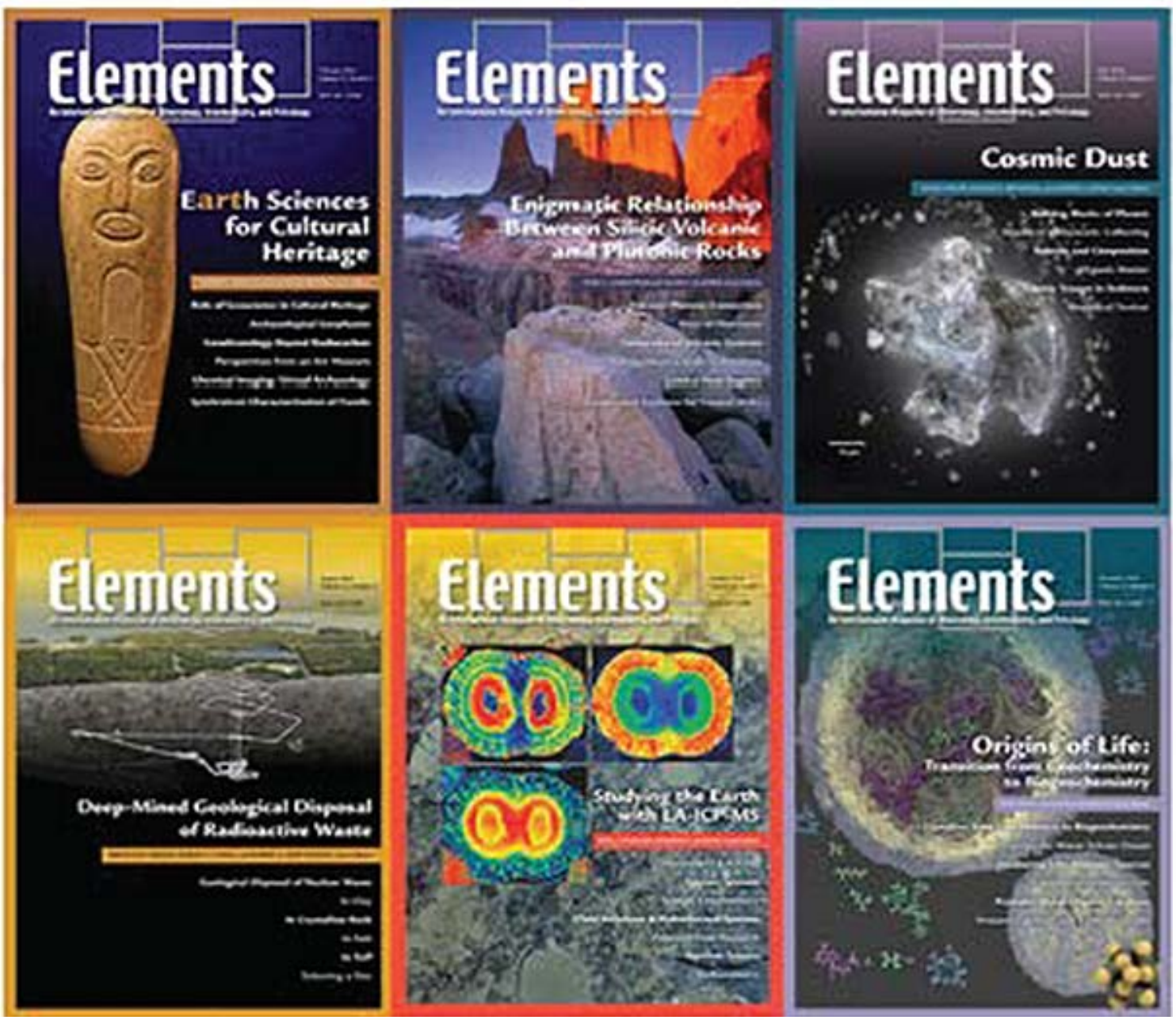
Volume 12
2016



Meteoritical Society

http://meteoriticalsociety.org

PROPOSAL FOR A SPECIAL ISSUE OF *GEOCHIMICA ET COSMOCHIMICA ACTA* DEDICATED TO IAN HUTCHEON

A special issue of *Geochimica et Cosmochimica Acta* is being planned as a tribute to cosmochemist Ian D. Hutcheon (1947–2015) with the theme of "Chondritic Meteorites: Isotopic Records of Protoplanetary Disk and Asteroidal Processes." *GCA* associate editors Alexander Krot (University of Hawai'i, USA), Sara Russell (Natural History Museum, London, UK), Yuri Amelin (Australian National University), and Qing-zhu Yin (University of California, Davis, USA) will organize this issue, which will be dedicated to Dr. Hutcheon in recognition of his outstanding contribution to understanding the origin and early evolution of the Solar System using isotopic records in meteorites. Ian Hutcheon was one of the pioneers in developing ^{26}Al–^{26}Mg systematics for dating chondrules and refractory inclusions using secondary ion mass spectrometry (SIMS), a technique that is the basis for establishing the chronology of the early Solar System. Ian's work on ^{53}Mn–^{53}Cr systematics of carbonates in carbonaceous chondrites of subtypes Mighei (CM) and Renazzo (CR), and of fayalite in carbonaceous chondrites of subtypes Ornans (CO) and Vigarano (CV), as well as ordinary chondrites, as the basis for understanding the chronology of aqueous alteration on the chondrite parent bodies. Using NanoSIMS, Ian Hutcheon and his colleagues demonstrated the coexistence in the protoplanetary disk of ^{16}O-rich and ^{16}O-poor reservoirs, which are responsible for mass-independent fractionation of oxygen isotopes in the Solar System. Potential manuscripts for the proposed special issue should reflect recent developments in the ^{26}Al–^{26}Mg, ^{53}Mn–^{53}Cr, U-corrected ^{207}Pb–^{206}Pb, and O isotope records in meteorites as tracers of disk and asteroidal processes. Professor A. Davis (University of Chicago) and former *GCA* associate editor Prof. T. Ireland (Australian National University) have agreed to serve as guest editors for the issue.

Proposed deadline for initial submissions: February 29, 2016
Deadline for final acceptance of manuscripts and closure of the issue: August 31, 2016

Sasha Krot
Associate Editor of *Geochimica et Cosmochimica Acta*

IN MEMORIAM

IAN DOUGLAS HUTCHEON, 1947–2015

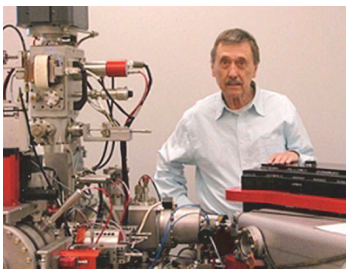
Distinguished cosmochemist Ian Hutcheon passed away 26 March 2015. Ian received his BA in Physics from Occidental College in Los Angeles, California (USA) in 1969 and earned a PhD in Physics from the University of California, Berkeley in 1975. In 1983, he went to the California Institute of Technology as a Senior Research Associate to work with Jerry Wasserburg, applying secondary ion mass spectrometry (SIMS) to the study of meteorites and their inclusions. In 1993, Ian went to Lawrence Livermore National Laboratory (LLNL) in California where he was Deputy Director of the Glenn Seaborg Institute and Group Leader of the Chemical and Isotopic Signatures Group in the Nuclear and Chemical Sciences Division in the Physical and Life Sciences (PLS) Directorate. His work at LLNL was in nuclear forensics but he continued to maintain a vigorous meteorite research program.

Ian made many contributions to isotopic studies of meteorites and dating extraterrestrial materials using SIMS. He was a key developer of nuclear forensics as a field of scientific investigation and a scientific discipline with important applications to national security. He conducted the first NanoSIMS-enabled studies of biological materials. He authored and coauthored more than 200 papers and book chapters, and coauthored the book *Nuclear Forensic Analysis* (2005, CRC Press) with colleagues Patrick Grant and Kenton Moody.

Ian received many honors throughout his career and became a Fellow of the Meteoritical Society in 1986. Ian has the garnet group mineral hutcheonite [$Ca_3Ti_2(SiAl_2)O_{12}$] named after him. Most appropriately, hutcheonite is found in a calcium–aluminum inclusion (CAI) from the Allende meteorite (Mexico). In honor of Ian, the Department of Homeland Security recently established the Dr. Ian Hutcheon Post-Doctoral Fellowship at the LLNL to support research in nuclear forensics as part of the Domestic Nuclear Detection Office's National Nuclear Forensics Expertise Development Program.

Ian leaves behind his wife of 41 years, Nancy Hutcheon, a former Education Coordinator for summer internships in the Physical and Life Sciences Directorate of the LLNL, and his children, Douglas Hutcheon and Dana Gordon.

ERNST ZINNER, 1937–2015



Ernst Zinner, Professor of Physics and Earth and Planetary Sciences at the Laboratory for Space Physics at the Washington University in St Louis (Missouri, USA) (WUSTL), passed away 30 July 2015. Ernst received his Diplom-Ingenieur (equivalent to an MS engineering degree) from the Technische Hochschule in Vienna (Austria) in 1960 and earned a PhD at WUSTL in 1972 in high-energy particle physics. Bob Walker invited Ernst to work at the newly established Laboratory for Space Physics (later a part of the McDonnell Center for the Space Sciences) as a research associate, where, in 1989, he became a full professor, holding that position until assuming emeritus status early in 2015.

Ernst's research covered a variety of topics including solar wind and the lunar space environment, ion microprobe instrumentation and techniques, interplanetary dust and cometary dust particles, NASA's Long Duration Exposure Facility, rare earth element analysis, isotope anomalies in calcium–aluminum-rich inclusions and hibonites, short-lived radionuclides, meteorite isotope studies, and stardust and nucleosynthesis. He was a pioneer in the application of secondary ion mass spectrometry to extraterrestrial materials and a key figure in the discovery of pre-solar material in meteorites.

He received many honors during his career and became a Fellow of the Meteoritical Society in 1988. In 1997, he received the Leonard Medal as well as the J. Lawrence Smith Medal of the U.S. National Academy of Sciences. Ernst was elected a Corresponding Member of the Austrian Academy of Sciences in 2002 and was a Fellow of the American Physical Society (1991), a Fellow of the Geochemical Society and the European Association for Geochemistry (both in 1998) and a Fellow of the American Association for the Advancement of Science (2011). For his work collecting meteorites in Antarctica, he received the Antarctic Service Medal of the National Science Foundation in 1987.

Ernst loved classical music, was an accomplished pianist, played the harpsichord in a baroque music ensemble, and played the cello. He is survived by his wife Brigitte Wopenka and his son Max.

WORKSHOP ON HIGHLY SIDEROPHILE ELEMENT GEOCHEMISTRY

The 4th International Workshop on Highly Siderophile Element Geochemistry will take place in Durham (UK) during the week commencing 11 July 2016. This event is hosted by the Durham Geochemistry Group of the Department of Earth Sciences. This specialist workshop is expected to be of 3.5 to 5 days duration and is open to all interested parties at an international level. A number of travel bursaries will be offered to support attendance of this meeting – details are available from our website: community.dur.ac.uk/hse.ws/.

The workshop will appeal to a cross-disciplinary audience and cover analytical advances, as well as low-temperature and high-temperature geo- and cosmochemistry topics pertaining to highly siderophile elements (HSE) and allied elements. The meeting and related activities will provide opportunities for exchange between scientists of all levels, thereby offering the potential for all to accelerate knowledge/technology sharing and explore new observations that advance understanding of key geo- and cosmochemistry questions. Additionally, we anticipate the workshop will facilitate opportunities for new international collaborations to continue HSE frontier science, support overall advances within the geochemistry community, help create pathways for present and future students, and potentially provide early stage discussions to commercialize scientific applications for industry.

THE BARRINGER FAMILY FUND FOR METEORITE IMPACT RESEARCH

The Barringer Crater Company has established a special fund to support field work by eligible students interested in the study of impact cratering processes. The Barringer Family Fund for Meteorite Impact Research will provide a number of competitive grants ranging between $2,500 and $5,000 to support field research at known or suspected impact sites worldwide. Grant funds may be used to assist with travel and subsistence costs, as well as laboratory and computer analysis of research samples and findings. Masters, doctoral and post-doctoral students enrolled in formal university programs are eligible. Those interested should **apply by 3 April 2016**; notification of grant awards will be by 5 June 2016. Additional details about the fund and the application process can be found at: www.lpi.usra.edu/science/kring/Awards/Barringer_Fund

RENEW YOUR MEMBERSHIP NOW!

Please renew by March 31, 2016; after that date, a $15 late fee will be applied. You can renew online at: http://metsoc.meteoriticalsociety.net

Sociedad Española de Mineralogía

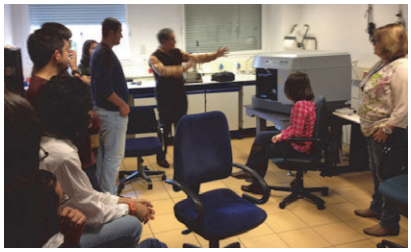
www.ehu.es/sem

SEM SHORT COURSE REPORT

Raman, Infrared and Laser-Induced Breakdown Spectroscopy Applied to Science and Technology of the Earth and the Environment

The Sociedad Española Mineralogia (SEM) short course on three types of spectroscopy – Raman spectroscopy, infrared spectroscopy and laser-induced breakdown spectroscopy (LIBS) – was held 3–4 November 2015 at the University of Jaén (Spain). This short course was supported by the Science and Technology of the Earth PhD program and the Chemistry PhD program at the University of Jaén and included lectures and practical sessions.

Two lectures were given by Dr. Fernando Rull of the University of Valladolid (Spain). Dr Rull is a Senior Researcher at Centro de Astrobiología, a research center that is part of the Spanish National Research Council (CSIC) and that is associated to the NASA Astrobiology Institute. Dr Rull is the principle investigator behind the Raman instrument planned with the Exomars 2018 mission, and coprinciple investigator with the Supercam instrument of the Mars 2020 mission. The first of Rull's lectures introduced the fundamentals of both Raman and LIBS spectroscopies and the instruments used to make the analyses; his second lecture concentrated on the applications of these techniques to planetary exploration, industry, and heritage. Rull showed how Raman instruments provide powerful tools for identifying and characterising minerals and biomarkers because Raman spectra are sensitive to the composition and structure of any mineral or organic compound. This capability provides direct information of potential organic compounds that might be related to present or past signatures of life on Mars, as well as for general mineralogical information and geological processes, especially water-related processes.



Practical session at the Centro de Instrumentación Científica, University of Granada.

Practical sessions took place in two locations: first, at the Centro de Instrumentación Científico Técnica (CICT) at the University of Jaén, which were supervised by Dr Mª José Ayora and Dr Ana Domínguez-Vidal; second, at the Centro de Instrumentación Científica (CIC) at the University of Granada, which was supervised by Dr Nicolás Velilla. At the end, the participants had the opportunity to ask questions about how these spectroscopic techniques could be applied to their own research: some of them even took spectra from their own samples.

The participants were mainly geoscientists and chemistry students and researchers from the Spanish universities of Zaragoza, León, Salamanca, Madrid, Málaga, Granada and Jaén. The short course was coordinated by Dr Juan Jiménez Millán (SEM President) and Dr Isabel Abad (SEM Secretary). The SEM awarded five grants to help students attend.

On behalf of the participants, the SEM would like to thank all the lecturers for sharing their knowledge with our young researchers. These two days were also a great opportunity for students and senior researchers to talk to one another and establish professional contacts. The SEM hopes that the students can now apply their new knowledge to their own individual research problems, and the SEM has every intention of organizing this type of course more regularly for young scientists.

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IN MEMORIAM: HEINRICH WÄNKE

Heinrich Wänke, former director of the Max-Planck-Institut für Chemie in Mainz, (Germany) passed away 21 November 2015, at the age of 87. Heinrich was well known for his work in cosmo- and geochemistry, which included studies on meteorites, Moon rocks, Martian meteorites, and Earth's mantle rocks. His research had, and continues to have, a strong influence on present work on the formation and evolution of the terrestrial planets. Heinrich Wänke made many contributions to the Meteoritical Society, including organizing the society's annual meeting in Mainz in 1983 and serving as president (1993–1994). He was a fellow of the society since 1976. And, in 1980, he was awarded the Meteoritical Society's Leonard Medal for numerous contributions of fundamental importance to meteoritics and planetary science.

Wänke received his PhD in physics in Vienna (Austria) and took a post-doctoral position with Friedrich Paneth in Durham (England). In 1953, Paneth was appointed director at the Max-Planck-Institut für Chemie and Wänke went with him. After Paneth's death in 1958, and after years of hard work, Wänke became director of the newly formed Department of Cosmochemistry, a position he kept until 1996, when he retired. However, he was still active in research until 2008.

In the 1960s, Wänke began to research the effect of cosmic rays and solar wind on meteorites and to establish an analytical scheme for meteorite analysis and, later, lunar rocks. He used instrumental and radiochemical neutron activation techniques to determine most of the major, and a large number of trace, elements. These analyses were the backbone of many years of innovative research on a variety of problems in meteoritics and planetology. Early on, Heinrich Wänke argued the Martian case for the origin of SNC (shergottite–nakhlite–chassigny class) meteorites and actively participated in Mars missions. He was the first to recognize the significance of tungsten in planetary differentiation and in estimating the size of planetary cores. Today, using the abundance of tungsten and other siderophile elements to derive the conditions of planetary core formation is a major field of research.

Heinrich Wänke received many medals and awards in his career: the Meteoritical Society's Leonard Medal in 1980, the Austrian Mineralogical Society's Friedrich-Becke-Medaille in 1991, the European Geophysical Society's Runcorn Florensky Medal in 1999, and the German Mineralogical Society's highest award, the Abraham-Gottlob-Werner Medaille, in 1999. He was a corresponding member of the Austrian Academy of Science, a foreign member of the Russian Academy of Science and an associate of the Royal Society of London (UK). From 1993 to 1995, he was chair of the Solar System Working Group and a member of the Space Advisory Committee of the European Space Agency (ESA); from 1996 to 1998, he was president of the European Geophysical Society.

Heinrich Wänke was an outstanding scientist. His death is a major loss to the society and to the international planetary science community.

RENEW YOUR MEMBERSHIP NOW!

Please renew your membership by 31 March 2016. After that date, a $25 late fee may be imposed. You can renew online at metsoc.meteoriticalsociety.net.

ANNUAL MEETING SCHEDULE

2016, August 7–12, Berlin (Germany); www.metsoc-berlin.de
2017, July 25–28, Santa Fe, New Mexico (USA)
2018, Dates to be announced, Moscow (Russia)
2019, Dates to be announced, Sapporo (Japan)

CALL FOR NEW MEETING LOCATION PROPOSALS

The society is currently accepting proposals for future annual meeting locations. The next meeting location to be chosen will be for the year 2020. Please submit questions and/or proposals to metsocsec@gmail.com.

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the society's awards. Nominations should be sent to Secretary Mike Weisberg (metsocsec@gmail.com) by 15 January (31 January for the Service Award and for the Paul Pellas–Graham 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's website or e-mail the secretary.

The society gives a number awards each year. The **Leonard Medal** honors outstanding contributions to the science of meteoritics and closely allied fields. The **Barringer Medal and Award** recognizes 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.

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 names of the committee chairs in **bold**. Without the generous help of all these members, the society could not function. We greatly appreciate their help.

2016	Affiliation	Ends
Leonard Medal and Nier Prize Committee (5 members, 3-year term)		
Christine Floss	Washington University in St. Louis	2017
Phil Bland	Curtin University	2018
Sara Russell	Natural History Museum, London	2018
Richard Binzel	Massachusetts Inst. of Technology	2019
Roger Hewins	Rutgers University/MNHN-UPMC, Paris	2020
Barringer Award Committee (4 members, 4-year term)		
Mark Burchell	University of Kent	2016
Alex Deutsch	University of Münster	2017
John Spray	University of New Brunswick	2018
Akiko Nakamura	Kobe University	2018
Pellas–Ryder Award Committee (3 MetSoc members, 3 Geological Society of America members, 3-year term)		
Debra Buczkowski (GSA)	Johns Hopkins Univ. Applied Physics Lab	2016
Susan Schwenzer (MS)	Open University	2016
Danielle Wyrick (GSA)	Curtin University	2016
Randy Korotev (MS)	Washington University in St. Louis	2017
Brad Thomson (GSA)	Boston University	2018
Christoph Burkhardt (MS)	University of Chicago	2018
McKay Award Committee		
Tasha Dunn	Colby College	2016
Kai Wünnemann (vice chair)	Museum für Naturkunde, Berlin	2016
Uwe Reimold (vice chair)	Humboldt University, Berlin	2016
Harry Becker (vice chair)	Free University of Berlin	2016
Nominating Committee		
Hasnaa Chennaoui	Hassan II University, Casablanca	2016
Marina Ivanova	Vernadsky Institute	2016
Yangting Lin	Chinese Academy of Sciences	2016
Takashi Mikouchi	University of Tokyo	2016
Rosa Scorzelli	Centro Brasileiro de Pesquisas Físicas	2016
Ed Scott	University of Hawaii	2016
Nomenclature Committee (12 members, 3 ex officio, 3-year term)		
Tasha Dunn	Colby College	2016
Jerome Gattacceca	CEREGE (CNRS)	2016
Hasnaa Chennaoui	Hassan II University, Casablanca	2017
Emma Bullock	Carnegie Institution of Washington	2017
Vinciane Debaille	Université Libre de Bruxelles	2017
Takashi Mikouchi	University of Tokyo	2017
Knut Metzler	University of Münster	2018
Francis McCubbin	NASA Johnson Space Center	2018
Laurence Garvie	Arizona State University	2018
Audrey Bouvier (editor)	University of Western Ontario	Ex Officio
Jeff Grossman	NASA Headquarters	Ex Officio
Trevor Ireland	The Australian National University	Ex Officio

2016	Affiliation	Ends
Endowment Committee (5 members, 3-year term)		
Allan Treiman	Lunar and Planetary Institute	2016
Drew Barringer	The Barringer Crater Company	2017
Gary Huss	University of Hawaii	2017
Uwe Reimold	Humboldt University Berlin	2017
Paul Warren	University of California, Los Angeles	2017
Candace Kohl	University of California, San Diego	Ex Officio
Audit Committee (3 members, 3-year term)		
Susan Taylor	CRREL, New Hampshire	2016
Beda Hoffman	Natural History Museum, Bern	2017
Harold Connolly	City University New York	2018
Publications Committee (6 members plus treasurer, 3-year term)		
Keiko Nakamura-Messenger	NASA Johnson Space Center	2016
Denton Ebel	American Museum of Natural History	2017
Cecile Engrand	CNSNM, CNRS/IN2P3, Univ. of Paris-Sud	2017
Ian Lyon	University of Manchester	2017
Akira Tsuchiyama	Kyoto University	2017
Alan Rubin	University of California, Los Angeles	2018
Joint Publications Committee (6 members, 3 MetSoc, 3 Geochemical Society, 3-year terms)		
Liz Canuel (GS)	Virginia Institute of Marine Science	2016
Andy Davis (MS)	University of Chicago	2016
Chris Koeberl (MS)	University of Vienna	2016
Jeremy Fein (GS)	Florida State University	2017
George Flynn (MS)	SUNY–Plattsburgh	2017
Laurie Reisberg (GS)	CRPG-CNRS, Nice	2017
Michael Zolensky	NASA Johnson Space Center	Ex Officio
Tim Jull	University of Arizona	Ex Officio
Marc Norman	The Australian National University	Ex Officio
Membership Committee (6 members)		
Katie Dyl	Curtin University	2016
Shoichi Itoh	Kyoto University	2016
Ludovic Ferriere	Natural History Museum, Vienna	2017
Tomas Kohout	University of Helsinki	2017
Rhiannon Mayne	Texas Christian University	2017
Erin Walton	Grant MacEwan University	2018

Meteoritical Society

http://meteoriticalsociety.org

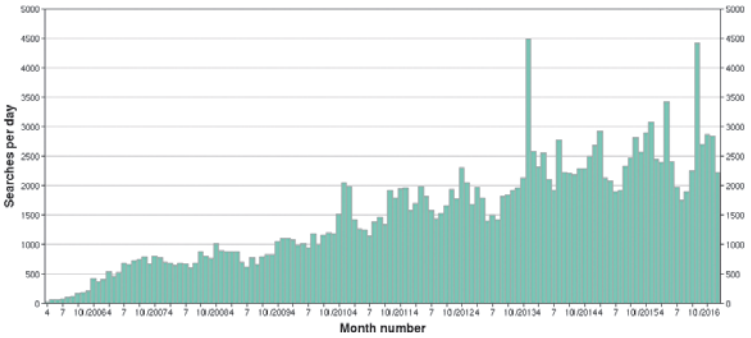
METEORITE NOMENCLATURE COMMITTEE REPORT

Report of the Chair Laurence Garvie

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. The committee also keeps the community apprised of new meteorites via the *Meteoritical Bulletin* and the *Meteoritical Bulletin Database* (www.lpi.usra.edu/meteor/metbull.php). While the yearly publication of the *Meteoritical Bulletin* (e.g. MB103 = 2014, MB104 = 2015) lags behind the database entries, new meteorites are automatically added to the next issue of the bulletin by the database editor. The contents of the bulletin are accessible using the "Publication" dropdown window in the database. MB104 contains 2,282 meteorites (1,285 non-Antarctic), and MB105, so far, has 204 meteorites.

I would like to thank Carl Agee for his service on the NomCom since 2013 and as Chair. I also welcome Francis McCubbin as a new NomCom member. Special thanks to Alex Ruzicka for his term on the NomCom and especially to Chris Herd who has served on the committee since 2009 as the Chair

The *Meteoritical Bulletin Database* (www.lpi.usra.edu/meteor/), which is updated almost daily by our database editor Jeff Grossman, currently (as of 11 March 2016) lists 53,199 valid meteorite names. Many submitters understand the importance of the database as a worldwide source for meteoritical information, and the depth of their submissions reflect this understanding. I encourage submitters to see these submissions as mini-refereed publications—they are reviewed by the NomCom consisting of 12 of your fellow scientists. Often, this submission will be the only time the meteorite is studied, and, as such, sufficient petrographic and geochemical information should be included so as to be useful for future scientists.



Meteoritical Bulletin Database usage statistics. Number of searches per day for the years 2006–2016.

An indication of the importance and popularity of the database as a source of meteoritical information is seen through the usage statistics, with searches per day of only a few hundred in 2006 to currently several thousand a day (**see figure**). The database also reflects changes in discovery and recognition of meteorites. For example, the NomCom has approved an astonishing 37 lunar meteorites in the last year alone, for a total mass near 50 kg! The database also shows some interesting numbers. Of the 41,327 approved meteorites from Antarctica, only 35 are lunars, with the largest being 1,226 g. However, of the 21,506 classified non-Antarctic meteorites, 209 are lunars, of which 23 have a mass greater than one kg, with several above 10 kg.

Essential information on meteorite nomenclature, instructions and the template for reporting new meteorites, and NomCom membership can be found at meteoriticalsociety.org/?page_id=106. The template that should be filled out for new submission can be found at meteoriticalsociety.org/?page_id=63. This template is in Microsoft Excel® format with instructions both on page one of this file and header for each column (just let your mouse hover over the column header name). Here is where I would like to make a special plea—please take the time to follow these instructions, especially for special characters such as micron, degrees etc. Having been the NomCom editor from 2011 to 2013, I found myself spending many hours editing submissions before sending them out for vote. In my opinion, the editor position, currently held by Audrey Bouvier and Jérôme Gattacceca, is the most time-consuming on the committee – a big thank you to Audrey and Jérôme for taking on this mammoth task!

Finally, please do not hesitate to contact us with questions or concerns about the NomCom, especially with suggestions for improvement. You can find a list of current and past NomCom members at www.lpi.usra.edu/meteor/docs/TermExpirations2016.html.

Laurence Garvie
Chair of the Nomenclature Committee

Cari Corrigan

Christine Floss

Pierre Rochette

Mario Trieloff

Maria Euginia Varela

NEW COUNCIL MEMBERS

The Meteoritical Society has elected five new members to its council. Cari Corrigan (Smithsonian Institution, Washington DC, USA), Christine Floss (Washington University of St Louis, Missouri, USA), Pierre Rochette (Aix-Marseille Université CNRS, Aix-en-Provence, France), Mario Trieloff (Universität Heidelberg, Heidelberg, Germany), and Maria Eugenia Varela (ICATE-CONICET, San Juan, Argentina) will begin their terms as councilors in January 2017.

ANNUAL MEETING SCHEDULE

- 2016 August 7–12, Berlin, Germany
- 2017 July 24–28, Santa Fe, New Mexico, USA
- 2018 July 29 – August 3, Moscow, Russia
- 2019 Dates to be announced, Sapporo, Japan

Meteoritical Society

http://meteoriticalsociety.org

2016 METEORITICAL SOCIETY TREASURER'S REPORT

Candace Kohl

The society's finances continue to be on a sound footing, and both the operating fund and our investment fund are currently very healthy. A large portion of the operating budget goes towards publishing *Meteoritics and Planetary Science* (*MAPS*), our international monthly journal of planetary science, which covers topics including the origin and history of the Solar System, planets and natural satellites, interplanetary dust and the interstellar medium, lunar samples, meteors, meteorites, asteroids, comets, craters, and tektites. The *MAPS* journal 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 (USA), which is managed by Editor Tim Jull.

Society memberships include subscriptions to *MAPS* and *Elements*. Membership with subscription to only the electronic version of *MAPS* has become a popular option, although more than half of our membership still purchases the printed version. Collection of membership dues for 2017 will begin in October 2016. I would like to encourage members to pay their dues in a timely manner because this really helps with our financial planning. Healthy finances depend on a stable membership.

Our investment fund, which includes four separate endowed funds, continues to do as well as we can expect with the current market situation. Many society members contribute generously to support 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. The 2016 recipient is Dr. Gregory Bennecka (University of Munster, Germany). The Gordon A. McKay Fund supports an award to the student who gives the best oral presentation at the annual meeting of the society: the award for 2015 was given to Carolyn Crow (University of California, Los Angeles, USA). The Travel for International Members (TIM) Fund to support travel to Meteoritical Society meetings for professional members of the society from low-income countries continues to grow, and, in 2016, the money will be used to fund travel to our 2016 meeting in Berlin (Germany).

The General Endowment Fund supports a variety of outreach projects. During 2015/16, this fund has been used to provide travel support for students to attend the Highly Siderophile Elements Workshop in the UK and the Paneth Colloquium in Germany. Support was also given to attend the Seminar for the Classification of Meteorites, which was held in Chile. Endowment funds were also used to support travel for students to attend the Meteoritical Society meeting in Berkeley (California, USA). This year, endowment funds will be used to help students and postdoctoral scholars attend the Meteoritical Society's meeting in Berlin. Some of the money used has been contributed directly as part of the annual membership renewal. We always welcome suggestions and ideas for ways in which the General Endowment Fund can be used to promote the goals of the society and enrich its activities.

A total of over $15,000 was donated to the various funds from our generous members. Your contributions provide direct support that helps to strengthen our international community.

Country	Developing Country	Regular Member	Retired Member	Student Member	Life Member	Total
Algeria	2					2
Argentina		1				1
Australia		21	4			25
Austria		3	6			9
Azerbaijan		1				1
Belgium		9	1			10
Brazil		4		1		5
Canada		20	8	5	1	34
Chile		1		1		2
China	1	6				7
Czech Republic		2	1			3
Denmark		4	1		1	6
Egypt		1				1
Estonia		1				1
Finland		2	1	1		4
France		25	6	3	2	36
Germany		69	16	12	4	101
Ghana				1		1
Greece		1				1
Holy See (Vatican)		2				2
Hungary		2				2
India		2	1	1		4
Ireland		2				2
Italy		9				9
Japan		79	10	4		93
Jordan	2					2
Korea, Republic of		3	1			4
Latvia				1		1
Luxembourg			1			1
Malaysia		1				1
Mexico		2				2
Morocco	2					2
Netherlands		3	2	1		6
New Zealand		1			1	2
Norway		3				3
Oman	1					1
Poland		5	1	1		7
Romania	1					1
Russian Federation		6	1	3		10
Slovak Republic		1				1
South Africa		1		1		2
Spain		4	1	1		6
Sweden		5	1			6
Switzerland		18	7	4	1	30
United Kingdom		40	4	16		60
United States		302	77	33	17	429
Uruguay		1				1
Membership #'s	**9**	**663**	**151**	**90**	**27**	**940**

2016 MEMBERSHIP REPORT

As of May 2016, the Meteoritical Society is made up of 663 regular members, 90 students, 151 retired members, 27 life members and 9 members from developing countries. This brings us to a grand total of 940 members. Many thanks to Erin Walton for providing these statistics. This year we have added Azerbaijan and Ghana to the growing list of countries in which we have membership. We can be proud that we have members in 47 countries, but the statistic show that we still have a lot to do to gain members in many more countries. The society does have a mechanism to subsidize annual dues for members in low-income countries. Prior approval is required from the Membership Committee for this rate. Please refer to 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.

THE PAUL PELLAS–GRAHAM RYDER AWARD WINNERS

The Paul Pellas–Graham 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.

Romy D. Hanna

Tanya Harrison

For 2015, the committee for the Paul Pellas–Graham Ryder Award found that two of the nominated papers were of equal excellence. Thus, the Award for the Best Student Paper in Planetary Sciences for 2015 has been given to two students: **Romy D. Hanna** (a graduate student in the Jackson School of Geosciences at the University of Texas, Austin, USA) and **Tanya Harrison** (a student at the Centre for Planetary Science and Exploration, Department of Earth Sciences, University of Western Ontario, Canada). The award to Romy Hanna is in recognition of the paper "Impact-induced brittle deformation, porosity loss, and aqueous alteration in the Murchison CM chondrite," which was published in *Geochimica et Cosmochimica Acta*, volume 171, pages 256–282. The award to Tanya Harrison is for her paper, "Global documentation of gullies with the Mars Reconnaissance Orbiter Context Camera and implications for their Formation", which was published in *Icarus,* volume 252, pages 236–324.

MEETING INFO

- **2016, August 7–12, Berlin (Germany)**
- **2017, July 24–28, Santa Fe, New Mexico (USA)**
- **2018, Dates TBD, Moscow (Russia)**
- **2019, Dates TBD, Sapporo (Japan)**

IN MEMORIAM: ROY S. CLARKE, JR. (1925–2016)

Roy S. Clarke, Jr., Emeritus Curator in the Department of Mineral Sciences at the Smithsonian Institution (Washington, D.C., USA), passed away on 1 April 2016, at the age of 91. Born 23 January 1925, Roy had a distinguished service in the US army during WWII, after which he studied at Cornell University (New York, USA), earning his BA in 1949. Early in his career, he was employed by the US Geological Survey as an analytical chemist, during which time he also earned an MSc at George Washington University (Washington, D.C.) in 1957. He transferred to the Smithsonian in October 1957 where he would spend the rest of his career up until December 1993 and also after he retired as an emeritus curator. Roy began his career as an analytical chemist within weeks of the launch of Russia's Sputnik satellite and, before long, began analyzing the chemical composition of meteorites. Roy's research interests centered on understanding the origin of iron meteorites, particularly coarse-structured irons rich in phosphorus. Upon the retirement of Edward P. Henderson from the Smithsonian in 1965, Roy assumed the role of Curator-in-Charge of the US National Meteorite Collection. He became an active member of the Meteoritical Society, serving as Secretary of the Society from 1967 to 1970. He played a pivotal role in the acquisition of the Allende meteorite in 1969, traveling to Mexico to acquire thousands of individual stones. He returned to complete his PhD later in life by studying at George Washington University, where he graduated in 1976. At almost the same time as earning his PhD, Roy would be involved in the contentious legal acquisition of the Old Woman meteorite, which would become the largest single meteorite in the Smithsonian's collection and, coincidentally, was a coarse-structured iron meteorite rich in phosphorus. Roy played a pivotal role in the formation and management of the US Antarctic Meteorite Program, a cooperation between the Smithsonian, NASA and the USA's National Science Foundation. Upon retirement, Roy's interests turned to the history of meteoritics and the history of the Meteoritical Society. This led to a series of papers about meteoritics at the Smithsonian, among other topics. Roy did an outstanding job of growing the National Collection of meteorites and provided countless outside investigators with material for their study. In 2014, he was awarded the Meteoritical Society's Service Award. Roy was preceded in death by his wife Grace and is survived by three daughters and numerous grandchildren.

Meteoritical Society

http://meteoriticalsociety.org

2017 ANNUAL MEETING INVITATION

You are cordially invited to attend the 80th Annual Meeting of the Meteoritical Society, which will take place 24–28 July 2017 in Santa Fe (New Mexico, USA). The annual meeting is organized by the Institute of Meteoritics of the University of New Mexico in Albuquerque. It will be held at the Santa Fe Convention Center, which stays true to Santa Fe's historic adobe architecture. Oral sessions, plenary sessions, and the public Barringer Invitational Lecture will take place in state-of-the-art auditoria of various sizes. Poster sessions will take place on-site throughout the week in dedicated rooms that open up to the beautiful courtyard of the convention center.

The conference registration and the welcome party will be held Sunday, 23 July 2017, in the historic La Fonda hotel, situated on the famous Santa Fe Plaza, only minutes away from the convention center. On the afternoon of the Wednesday conference day, several excursions will be offered by which to explore the city of Santa Fe and the surrounding areas (including the Santa Fe impact structure). The conference banquet on Wednesday evening will again be held in the beautiful La Fonda hotel.

The conference program will contain workshops that will precede the conference. A number of postconference excursions are also being prepared, including a 3-day trip to the Petrified Forest, Walnut Canyon, Sunset Volcanic Crater, Wupatki Pueblo, Grand Canyon, and the Barringer Meteorite Crater itself (led by David Kring of the Lunar and Planetary Institute in Houston, Texas, USA).

We have reserved blocks of rooms in multiple hotels, offering a range of price categories and distance from the convention center. Most are within walking distance of the center; others offer regular shuttles. One offers apartments of different sizes, making it ideal for families and students.

The Carrizozo Malpais lava flow in New Mexico (USA) will be visited during a 2-day post-conference field-trip.

The city of Santa Fe is the state capital of New Mexico. It was founded by Spanish colonists in 1610 and is the oldest state capital city in the USA. It is located at 2,194 m (7,199 feet) above sea level, making it also the highest state capital in the USA. Santa Fe (meaning "holy faith" in Spanish) has a population of 70,000. It experiences a dry steppe climate, with an average temperature in July/August of 25 °C (77 °F), and monthly rainfall of 6.5 cm (2.5") due to the arrival of the North American monsoon at this time. The city is well-known as a center for arts that reflect the multicultural character of the city: it has been designated as a UNESCO Creative City in Design, Crafts and Folk Art.

The Barringer Meteorite Crater in Arizona (USA) will be visited during a 3-day post-conference field-trip.

Santa Fe and the surrounding areas have a high concentration of artists who have come over the decades to capture the natural beauty of the landscape, flora and fauna. Canyon Road has the highest concentration of art galleries in the city, and is a major destination for international collectors, tourists, and locals.

Further information about Santa Fe and environs can be obtained at www.santafe.org. Santa Fe can be reached by air directly from Dallas (Texas, USA) and Denver (Colorado, USA); through the nearby (106 km, 66 miles) Albuquerque airport, which offers 30 shuttles daily to Santa Fe; and via numerous car rental companies.

For specific information please contact the Organizing Committee at kziegler@unm.edu.

2016 ANNUAL MEETING STUDENT TRAVEL AWARDS

On behalf of the Meteoritical Society, we would like to thank the organizations whose generous sponsorships provided student travel grants, postdoc travel grants and travel grants for scientists from countries with limited financial resources. The sponsoring organizations, and the recipients of the travel awards, are listed below.

This year, 63 travel grants were given to students and researchers who attended the annual meeting of the society in Berlin (Germany). 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, the Meteoritical Society Endowment Fund, the International Mineral Collectors Association (Brian Mason Award), and Elsevier publishers.

Meteoritical Society Endowment Fund

Moritz Barth (Friedrich-Schiller-University Jena, Germany)
Hasnaa Chennaoui Aoudjehane (Hassan II University Casablanca, Morocco)
Edivaldo Dos Santos (Universidade Federal dos Vales do Jequitinhonha e Mucuri, Brazil)
Atmane Lamali (Centre de Recherche en Astronomie Astrophysique et Géophysique, Algeria)
Jane MacArthur (University of Leicester, UK)
Jayanta Pati (University of Allahabad, India)
Dwijesh Ray (Physical Research Laboratory, Allahabad, India)
Ratiba Sahoui (The University of Science and Technology – Houari Boumediene, Algeria)

Jinia Sikdar (Physical Research Laboratory, Allahabad, India)
Sheryl Singerling (University of New Mexico, USA)
Natasha Stephen (Plymouth University, UK)
Atsushi Takenouchi (The University of Tokyo, Japan)
Marcos Vasconcelos (University of Bahia, Brazil)
Yuchen Xu (Chinese Academy of Sciences, China)

Barringer Crater Company Fund

Natasha Almeida (Natural History Museum, London, UK)
Jitse Alsemgeest (University of Potsdam & German Aerospace Center Berlin, Germany)
Thomas Barrett (The Open University, UK)
Candice Bedford (The Open University, UK)
Enrica Bonato (Natural History Museum, London, UK)
Grace Goncalves de Oliveira (Campinas State University, Brazil)
Houda El Kerni (Hassan II University, Faculty of Science, Morocco)
Kohei Fukuda (The University of Tokyo, Japan)
Soogyoung Goh (Seoul National University, South Korea)
Hikari Hasegawa (The University of Tokyo, Japan)
Patrick Hill (University of Western Ontario, Canada)
Aurore Hutzler (Natural History Museum, Vienna, Austria)
Hwayoung Kim (Seoul National University, South Korea)
Mizuho Koike (The University of Tokyo, Japan)
Prajkta Mane (Arizona State University, USA)
Mariana Maziviero (University of Campinas, Brazil)
Nassima Meftah (Université d'El-Oued, Algeria)
Josefine Nanne (Durham University, UK)
Wladimir Neumann [German Aerospace Center (DLR) Berlin, Germany]
Seda Ozdemir (Vienna University, Austria)
Hamed Pourkhorsandi (Aix - Marseille University, France)
Jan Render (University of Münster, Germany)
Åke Rosén (University of Bern, Switzerland)
Quinn Shollenberger (University of Münster, Germany)
Martin Suttle (Imperial College London, UK)
François Tissot (Massachussetts Institute of Technology, USA)
Epifanio Vaccaro (Natural History Museum, London, UK)
Patrizia Will (Eidgenössische Technische Hochschule Zürich, Switzerland)
Tianqi Xie (University of Western Ontario, Canada)
Masahiro Yasutake (Sokendai, Japan)
Mehmet Yesiltas (Stony Brook University, New York, USA)

NASA Award

Patrick Boehnke (University of California, Los Angeles, USA)
Emilie Dunham (Arizona State University, USA)
Daniel Dunlap (Arizona State University, USA)
Roger Fu (Columbia University, USA)
Crystylynda Fudge (Arizona State University, USA)
Brendan Haas (Washington University, USA)
Pierre Haenecour (Washington University in St. Louis, USA)
Levke Kööp (University of Chicago, USA)
Josiah Lewis (Washington University in St. Louis, USA)
Nan Liu (Carnegie Institution for Science, Washington DC, USA)
Kelly Miller (University of Arizona, USA)
Alice Stephant (Arizona State University, USA)
Myriam Telus (Carnegie Institution for Science, Washington DC, USA)

Planetary Studies Foundation

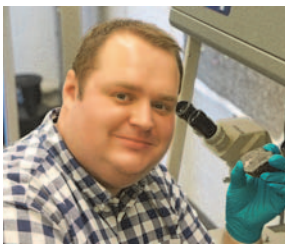
Sky Beard (Lunar and Planetary Laboratory, University of Arizona, USA)
Emilie Dunham (Arizona State University, USA)

Elsevier

Evan Groopman (U.S. Naval Research Laboratory, Washington DC, USA)

International Collectors Association: the 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 and spent the majority of his career as a Curator at the Smithsonian Institution (Washington DC, USA). The award is given to a student attending the annual meeting of the society who submits an abstract that presents exciting results of particular interest to readers of *Meteorite* magazine. The recipient is required to write a popular account of their 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 Annual Meeting of the Meteoritical Society, held in Berlin (Germany), selected Luke Daly and Pierre Haenecour to win the Brian Mason Award. **Luke Daly** is a graduate student at Curtin University in Perth (Australia). His abstract was entitled "Atom probe tomography and its application to refractory metal nuggets" and authors were L. Daly, P. Bland, L. Forman, S. Reddy, W. Rickard, D. Saxey, A. La Fontaine, L. Yang, P. Trimby, J. Cairney, S. Ringer and B. Schaefer. **Pierre Hanecour** is a graduate student at Washington University in St. Louis (Missouri, USA). His abstract was entitled "Auger spectroscopy analysis of submicron-sized silicate grains in chondrites: Insight into their aqueous and thermal alteration history" and authors were P. Haenecour, C. Floss, T. Zega and R. Ogliore.

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the society's awards. Nominations should be sent to Secretary Mike Weisberg (metsocsec@gmail.com) by 15 January 2017 (31 January 2017 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's website or email the secretary.

The society gives a number 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 by young scientists in meteoritics and closely allied fields. 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.

IN MEMORIAM – GERALD WASSERBURG

Gerald J. (Jerry) Wasserburg passed away 13 June 2016 at the age of 89. Jerry Wasserburg was a giant in geochemistry and planetary science communities, a relentless figure in the Apollo Program and hugely influential in the field of isotope geochemistry. At the time of his death, he was the John D. MacArthur Professor of Geology and Geophysics, Emeritus, at the California Institute of Technology.

Jerry Wasserburg was born in New Brunswick, New Jersey (USA) in 1927. He served in the army during World War II (enlisted by lying about his age). After his service in the military, he earned his high school degree and enrolled in college at Rutgers University (New Jersey, USA). With Henri Bader as his advisor and mentor at Rutgers, he transferred to the University of Chicago (Illinois, USA), where he earned a BSc degree in physics in 1951 and a MSc in geology in 1952. While still at Chicago, he got a job running a mass spectrometer in Harold Urey's lab and, under the guidance of Professors Urey and Mark Inghram, in 1954 earned a PhD with a thesis on the new technique of potassium–argon dating. After a year as a postdoctoral research fellow at the University of Chicago, he joined the faculty at the California Institute of Technology (USA) as an Assistant Professor in Geology and Geophysics. He was promoted to full Professor in 1962, and appointed the John D. MacArthur Professor of Geology and Geophysics in 1982. He retired in 2001, but remained active until the end.

Wasserburg's research spanned a wide range of topics both terrestrial and extraterrestrial, including Earth's interior, Apollo lunar samples, the earliest Solar System, and stellar nucleosynthesis. The focus invariably was on isotopic properties, especially those related to chronology. His PhD thesis basically invented the ^{40}K–^{40}Ar age dating method. Along with many students and research associates (among the latter most notably being Dimitri Papanastassiou, Fouad Tera, and Jack Chen) Jerry made major contributions to age-dating other systems, including U–Pb, ^{87}Rb–^{87}Sr, ^{234}U–^{230}Th, ^{40}K–^{39}Ar, ^{187}Re–^{187}Os and ^{147}Sm–^{143}Nd. His work with Typhoon Lee and Dimitri Papanastassiou led to the discovery that the short-lived radionuclide ^{26}Al was present in the earliest Solar System, and (with William Kelly) the discovery that another short-lived isotope (^{107}Pd) was also present at that time. Jerry made major contributions to the study of refractory inclusions in the Allende CV3 chondrite, including the discovery of FUN inclusions, named for their unusual mass-dependent Fractionation and Unidentified Nuclear (now known to be nucleosynthetic) isotopic effects.

Jerry—along with Jim Arnold, Bob Walker and Paul Gast ("The Four Horsemen") —was instrumental in convincing NASA to include a major science component as part of the Apollo program, namely the collecting of Lunar samples for return to Earth and the building of a special laboratory to receive, describe, and eventually distribute them to the world science community.

The awards and honors Jerry received during his career were numerous: he was a member of the US National Academy of Sciences, the American Philosophical Society, the American Academy of Arts and Sciences, and the Norwegian Academy of Science and Letters. He received the Arthur L. Day Medal in 1970, the J. F. Kemp Medal (with Paul Gast) in 1973, the Meteoritical Society's Leonard Medal in 1975, the V. M. Goldschmidt Medal of the Geochemical Society in 1978, the Arthur L. Day Prize & Lectureship of the National Academy of Sciences in 1981, the Wollaston Medal in 1985, the Harry H. Hess Medal of the American Geophysical Union in 1985, the J. Lawrence Smith Medal of the National Academy of Sciences in 1985, the Holmes Medal of the European Union of Geosciences in 1986, the Gold Medal of the Royal Astronomical Society in 1991, and the Bowie Medal in 2008. The work on Sr–Nd isotope correlations on terrestrial basalts culminated in the award of the Crafoord Prize in Geosciences, which was awarded by the Royal Swedish Academy of Sciences in 1986 (corecipient with C. J. Allègre).

Jerry Wasserburg was a larger-than-life figure whose impact on the world geoscience community has rarely been equaled. He truly was one of those giants on whose shoulders so many others now stand. He will be greatly missed. (Full obituary available on the Meteoritical Society website).

IN MEMORIAM – ANDREI VALERIEVICH IVANOV

On 7 July 2016, Andrei Valerievich Ivanov passed away after a struggle with cancer. Andrei was a distinguished scientist, Doctor of Geological and Mineralogical Sciences, member of the Meteoritical Society, and a leading researcher at the Laboratory of Meteoritics division of the Vernadsky Institute of Geochemistry and Analytical Chemistry in Moscow (Russia).

Andrei Valerievich graduated from the Department of Geochemistry of the Geology Faculty of Moscow State University (MGU) (Russia) in 1960. He joined the Laboratory of Isotope Geochemistry at the Vernadsky Institute of Geochemistry (GEOKHI) in 1962 and worked there for eight years. From 1969 to 1975, Dr. Ivanov worked at the USSR Institute for Space Research (IKI), then returned to the Vernadsky Institute in 1975 and remained there for the rest of his career.

Andrei's scientific career focused on investigations of extraterrestrial materials. His work on the fine-grained (>10 μm) spherical deposits of probable extraterrestrial origin found in the peat and salt deposits from the region of the Tunguska explosion became widely known. Beginning in the late 1960s, Andrei was a major participant in the receiving and study of the first lunar samples returned to Earth by the Soviet robotic moon landers. He told wonderful stories of opening the sample-return capsules in the vacuum glove chamber and seeing the lunar soil emerge before his eyes.

Andrei's lunar research focused on the effects of space environmental factors on the formation conditions of the lunar regolith. In 1980, this became the foundation of his major scientific report, "Anti-oxidative properties of ultradispersed, simple materials on the surfaces of extraterrestrial bodies" (Vinogradov AP, Barsukov VP, Urusov VS, Ivanov AV, Number of discovery #219, April 15, 1980.).

Andrei Valerievich committed nearly 30 years to the study of the unique Kaidun meteorite. Through his investigations, he identified new types of meteorite material and discovered a series of new mineral phases, including the new mineral florenskyite, an unusual phosphide (FeTiP) found in Kaidun. Andrei's colleagues later identified an even rarer isomorph (FeCrP) and named it andreyivanovite in his honor. Andrei's studies were the first to find traces of fluid metasomatic changes in the components of Kaidun. Andrei defended his Doctoral dissertation in 2003 based on his work with the Kaidun meteorite.

Dr. Ivanov was the author of over 200 scientific publications, and in 1977 was awarded the USSR's Medal "For Labor Valor". The asteroid 5761 Andreivanov was named in Andrei's honor.

In recent years, Andrei Valerievich worked on systematizing and cataloging the Vernadsky Institute's collection of lunar samples. He saw this as his personal duty to future generations of lunar investigators. Andrei's passing is an irreplaceable loss for the Laboratory of Meteoritics and the whole Vernadsky Institute. His personality naturally combined professionalism, broad interests, highest ethics, and openness to people. All of us could always count on his kind words, advice, and help! His wisdom in life and broad knowledge were always available. (Full obituary available on the Meteoritical Society website).

Meteoritical Society

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2016 ANNUAL MEETING REPORT

The 79th Annual Meeting of the Meteoritical Society was held Sunday 7th– Friday 12th August 2016 in Berlin (Germany). The meeting took place in the Henry-Ford-Bau of the Freie Universität Berlin. With 539 registered participants, this annual meeting was amongst the largest ever. And it was the tops in terms of student participation: 136 students. In total, 544 abstracts were accepted for 289 oral and 255 poster presentations. Oral presentations were scheduled in three parallel sessions from Monday to Friday, and all posters were on display for the duration of the conference week.

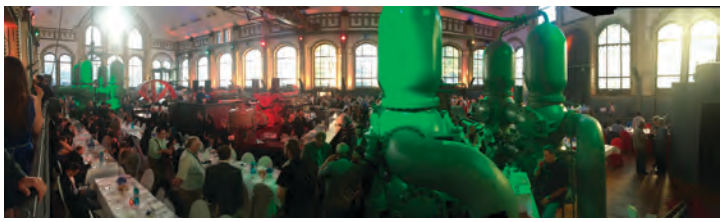
Of the 539 registered participants, 244 were members, 117 non-members, 87 student members, 49 non-member students, 37 accompanying persons, and 5 guests. A total of 60 travel awards were allocated to student members, early career scientists, and scientists from low-income countries through generous sponsorship to the combined amount of $76,000, which had been donated by the Barringer Crater Company, the NASA Cosmochemistry Program, the International Meteorite Collectors Association (IMCA), the Planetary Studies Foundation (PSF), Elsevier, and the Meteoritical Society Endowment Fund. A grant from the Deutsche Forschungsgemeinschaft (DFG) allowed several student assistants to be employed, who then could also participate in the scientific sessions.

The conference kicked off with registration in the Thaersaal of the Humboldt University of Berlin, followed by the Welcome Function, which was sponsored by the Museum für Naturkunde and that was held amidst the museum's exhibitions. The welcome party also provided an opportunity for a preview of the museum's special exhibition: "Comets – The Rosetta Mission, A Journey to the Origins of the Solar System."

The scientific program covered 21 topics. These included the processes and evolution of Solar System materials (interplanetary dust particles, chondrites, achondrites, asteroids, and Mars); the chronology, mineralogy, and chemical compositions of extraterrestrial materials; aspects of impact cratering; planetary sciences, including evolution and dynamics of the planets, the Moon, and small planetary bodies. There were five special sessions: "Presolar Grains - A Session in Honor of Ernst Zinner"; "From Meteorites to Planets – A Session in Honor of Heinrich Wänke"; "Small Meteorite Impacts – From Atmospheric Entry to Environmental Effects"; "Surface and Interior Dynamics of Meteorite Parent Bodies"; and, "Planetary Evolution: Advances in Meteoritical and Lunar Isotopic Analysis." Within the "Presolar Grains" session there was a special invited lecture, sponsored by the Meteoritical Society's Endowment Fund, that was given by Maria Lugaro (Budapest, Hungary) with the title, "Stellar Grains in the Laboratory: Messengers from the Sky!".

The main conference program was preceded by a two-day workshop entitled Shock Metamorphism and High Pressure Phases in Meteorites and Terrestrial Impactites that was convened by O. Tschauner, T. Sharp, and D. Stöffler and that included the special session "Microstructure and Geochronology of Shocked Accessory Minerals" (convened by A. Cavosie and N. Timms). The workshop was attended by 58 participants. The Annual Barringer Invitational Lecture was presented by Professor Mark McCaughrean of the European Space Agency (Nordwijk, The Netherlands) on Monday evening in the Henry-Ford-Bau auditorium. His fabulously illustrated lecture, "Rosetta: To Catch a Comet!", was very well received by an audience of some 400. Mark's presence on Tuesday morning (9th August) also enhanced the public opening of the Rosetta exhibition.

The Meteoritical Society's Award Ceremony, plus talks by recent medalists Hiroko Nagahara (Leonard Medal) and Keith Holsapple (Barringer Award) took place on Wednesday morning (10th August). This event also included a special appreciation of the late Gerald (Jerry) Wasserburg (1921–2016), which was given by Gary Huss.



Following the award ceremony, most conference attendees embarked on the two bus tours: the City of Contrasts tour, and the Excursion to Potsdam tour. Later that evening, the annual conference banquet was held at the former Berlin sewage works, the *Wasserwerk* venue, which provided a novel ambience. Following the four-course dinner, late-night revelers enjoyed dancing until 1:00 am. To conclude on the topic of festivities, both poster sessions on Tuesday and Thursday evenings were well catered for, and the conference concluded on Friday afternoon with an impromptu farewell function.

Four excursions took place around the conference. Preconference trips went to the old mining-town of Freiberg and to the Ore Mountains in Saxonia (to the southeast of Berlin), and there was a 5-day tour that

explored the Nördlinger Ries and Steinheim Basin impact craters and that sampled the cultural and culinary delights of southern Germany. Following the conference, a small group of participants investigated the Morasko impact-crater field near the Polish city of Poznan, while others travelled to Norway to partake in an expedition to the Rietland impact structure in the mountains west of Oslo. The excellent excursion guides deserve our compliments.

The conference program and abstract volume can be accessed on the website of the Lunar and Planetary Institute (http://www.hou.usra.edu/meetings/metsoc2016/) and on the dedicated conference website (http://www.metsoc-berlin.de/). A sizable and impressive image gallery put together by Hans Knöfler is accessible at https://metsoc.naturkundemuseum.berlin/.

The meeting was generously supported by the Barringer Crater Company, the Museum für Naturkunde Berlin - Leibniz Institute for Evolution and Biodiversity Science, the Humboldt-Universität zu Berlin, the Freie Universität Berlin, NASA's Cosmochemistry Program, the Lunar and Planetary Institute, the Geo.X Alliance for Geoscience in Berlin-Potsdam, the International Meteorite Collectors Association, the Deutsche Forschungsgemeinschaft (DFG), the Planetary Studies Foundation, *Meteorite Times Magazine*, Elsevier, AMETEK, Bruker Nano, JEOL, Thermo Fisher Scientific, DFG (the Collaborative Research Centre TRR170 Late Accretion onto Terrestrial Planets), and the Meteoritical Society.

This report would not be complete without us thanking the numerous colleagues and students whose tireless efforts made it all possible. We want to emphasize the dedicated support from the members of the Local Organizing Committee, the Scientific Program Committee, and the Travel Award Committee, and from all those who made themselves available as judges of student presentations, guides on conference tours, student assistants, and as general helpers. Staff of CPO Hanser provided expert event management support.

The MetSoc 2016 co-chairs:
Wolf Uwe Reimold, **Harry Becker**, and **Kai Wünnemann**

SOCIETY AWARD WINNERS

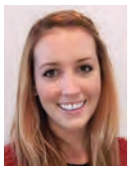
The Meteoritical Society gives four major awards each year. For more information on individual awards see the Call for Nominations and the society's webpage.

LEONARD MEDAL This is the society's highest and oldest award and 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 2016 winner is **Hiroko Nagahara** (University of Tokyo, Japan), for her fundamental contributions to understanding the origin and evolution of primitive planetary materials, including chondrule formation and the kinetics of gas–solid reactions. The citation was given by Shogo Tachibana.

BARRINGER MEDAL AND AWARD This is sponsored by the Barringer Crater Company and was 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 goes to **Keith Holsapple** (University of Washington, USA) for his significant contributions to crater scaling laws. His work was important in establishing scaling relationships relating the size of impactors to that of the resulting craters. The citation was given by Guy Consolmagno.

NIER PRIZE The 2016 Nier Prize for young scientists in the field of meteoritics goes to **Gregory Brennecka** of the University of Münster (Germany). Gregory receives this award for his significant contributions to our understanding of isotopic variations and the chronology of the early Solar System. The citation was given by Meenakshi Wadhwa.

SERVICE AWARD The 2016 Meteoritical Society Service Award goes to **Gisela Pösges** who works at the Ries Crater Museum (Germany). Gisela receives this award for her effort in establishing the Ries Crater Museum and in keeping it up to date, inspiring young students in the field, and communicating information about the Ries Crater to schools and their students. The citation was given by Alex Deutsch.



GORDON MCKAY AWARD This award is given for the best oral presentation by a student at the annual meeting. In 2016, the award goes to **Danielle Simkus** (University of Alberta, Canada) for her talk "Compound-specific Carbon Isotope Compositions of Aldehydes and Ketones in the Tagish Lake Meteorite", which she gave in Berlin (Germany) at the 79th Annual Meeting of the Meteoritical Society. The award comes with a prize of US $1,000 and a certificate.

WILEY-BLACKWELL AWARDS Wiley-Blackwell, publishers of *Meteoritics and Planetary Science*, sponsored four awards of US$500 each for outstanding presentations by students at the 79th Annual Meeting of the Society in Berlin. The winners were **Timo Hopp** (University of Münster, Germany) for "Ruthenium Isotope Fractionation During Crystallization of Planetesimal Cores"; **Gavin Kenny** (Trinity College, Dublin, Ireland) for "Impact Crater Environments as Potential Sources of Hadean Detrital Zircons"; **Kelly Miller** (University of Arizona, USA) for "Copper Sulfides in the R Chondrites: Evidence of Hydrothermal Alteration in Low Petrologic Types"; and **Sheryl Singerling** (University of New Mexico, USA) for "Synchrotron X-ray Fluorescence Analysis of Trace Elements in Focused Ion Beam Prepared Sections of Carbonaceous Chondrite Iron Sulfides (CM and CR) and Associated Metal (CR)".

Timo Hopp

Gavin Kenny

Kelly Miller

Sheryl Singerling

CALL FOR AWARD NOMINATIONS

Please consider nominating a colleague for one of the society's awards. Nominations should be sent to Secretary Michael Weisberg (metsocsec@gmail.com) by 15 January 2017 (31 January 2017 for the Pellas–Ryder Award and the Service Award). For more information and details on how to submit a nomination for any of these awards, please see the latest *Newsletter* at the Meteoritical Society's website, or email the secretary.

ANNUAL MEETING SCHEDULE

2017 – 24–28 July, Santa Fe (New Mexico, USA)
2018 – Dates to be decided (tbd), Moscow (Russia)
2019 – Dates tbd, Sapporo (Japan)
2020 – Dates tbd, Glasgow (Scotland)

RENEW YOUR MEMBERSHIP NOW!

Please renew by 31 March 2017; after that date, a $15 late fee will be assessed. You can renew online at: http://metsoc.meteoriticalsociety.net