



Council Meeting

Saturday 11 Aug. (AM & PM)
and Sunday 12 Aug. (AM)
Congress Center, 500 Room

At this General Assembly, Council delegates will assemble as they do every two years and review an agenda of more than 270 pages. This year, to help them with their task, the officers have prepared an annotated agenda that lists a time for each item to be reviewed and whether it is for information, discussion, or decision. Over the course of the day-and-a-half meeting, delegates will be briefed on progress made during the two-year period since the last meeting in Beijing in August 2005.

The Council will hear the Statutory Report of the President on the State of the Union as well as a report from the secretary general. One item to be reviewed with anticipation is the report of the Committee on Streamlining IUPAC Operations. As you might recall, at the last two GAs we have debated changes in the operational structure of IUPAC. In both cases changes in structure were not accepted. However, there were significant expressions of support for measures to streamline IUPAC operations and make them more efficient. For this reason, a committee was

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Various delegations at the 2005 GA in Beijing.

President's Address

Saturday 4 August
19:00, in Aula Magna*

An important part of every IUPAC General Assembly is the State of the Union Address in which the president reports on the overall health of the organization. **President Bryan Henry** will make a first address to all IUPAC members on Saturday 4 August at 19:00. Then, one week later, on Saturday 11

August, he will present a more formal statutory report to the Council assembly.

In this year's address, the president will report on what has happened within IUPAC in the last two years. First, he will report on the work of the ad hoc committee for streamlining IUPAC operations. One aspect of the subcommittee's deliberations

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Introducing the Young Observers

This year, Young Observers will again participate in sessions of the General Assembly. Following the same model used in 2003 and 2005, IUPAC and the National Adhering Organizations of Canada, USA, and UK have selected 17 chemists, with varied backgrounds and interests, from 7 countries: Canada, Poland, Romania, Mauritius, Russia, UK, and the USA. Their participation is likely to add vitality and a valuable perspective to the committee work in which they will participate. In the past, several younger chemists have become directly involved in IUPAC. Please welcome them and show them what IUPAC is all about. For a presentation of these Young Observers, see page 10.

Council Round Table Discussions



For the first time, four round table discussions will be held during the 2007 General Assembly. This will allow small groups of Council delegates to discuss subjects of mutual interest in a setting conducive to the easy exchange of ideas.

Each round table will be limited to no more than 40 participants. When

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* Aula Magna/Rektorat is located at Via Verdi 8 on the Piazza Castello, in the center of the old city of Torino. Count about 30 minutes by tram or taxi from Lingotto. Buses will be made available from the Lingotto conference site—check details at the GA registration desk.

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Recognition and Appreciation of Service

There is no formal training that can prepare someone to become a good leader in an organization such as IUPAC. Division presidents and standing committee chairs can attest that their jobs are frequently challenging.

One of Piet Steyn's priorities when he was IUPAC president (2002-2003) was to recognize the achievements of chemists and members of IUPAC. In 2003, he instituted a formal ceremony to honor and recognize the service of IUPAC's retiring officers, division presidents, and standing committee chairmen. The tradition continues at this year's General Assembly. At the conclusion of the President's Address on Saturday 4 August, IUPAC President Bryan Henry will present plaques to the following members:

- **Prof. Leiv K. Sydnes**, retiring as Vice President, President, Past President
- **Dr. Christoph F. Buxtorf**, retiring as Treasurer
- **Dr. H. Luzius Senti**, retiring as Chairman of the Finance Committee

- **Dr. John M. Malin**, retiring as Chairman of CHEMRAWN
- **Prof. Gus Somsen**, retiring as Chairman of the Project Committee
- **Prof. Christopher M.A. Brett**, retiring as President of the Physical and Biophysical Chemistry Division
- **Prof. Anthony R. West**, retiring as President of the Inorganic Chemistry Division
- **Prof. Minoru Iso**, retiring as President of the Organic and Biomolecular Chemistry Division
- **Prof. Ryszard Lobinski**, retiring as President of the Analytical Chemistry Division
- **Dr. Kenneth D. Racke**, retiring as President of the Chemistry and the Environment Division
- **Prof. Paul W. Erhardt**, retiring as President of the Chemistry and Human Health Division

Please join us in recognizing everyone's contributions. The President's Address will be on Saturday 4 August at 19:00 in Aula Magna/Rektorat —see note on page 1. The address will be followed by a reception. All members welcome!

Welcome to Torino!

This is the second edition of the General Assembly newsletter *Gallium*. It is called **gallium** simply because the acronym GA is also the symbol of that element—no mystery there!

What we hope to present in this *Gallium* is plenty of miscellaneous information and reminders about events happening this week.

Although they are integral parts of IUPAC, division and standing committees often are not aware of the issues debated by the Council. Similarly, some of the NAOs are not well aware of the work of committees. Nevertheless, for the Union to function properly, all members should provide feedback to their respective NAOs on what is happening in their groups. The GA is a good time to meet, share ideas and concerns, and resolve problems. Take advantage of it while you are here.

Also, while the GA is happening at this end of the Lingotto, let's not forget that at the other end, in the Conference Center, the 41st IUPAC World Chemistry Congress is also taking place.

In Torino, they say that *Passion Lives Here*, but for this week we can say that *Passion in Chemistry Lives Here!* Wishing you all an enjoyable and fruitful Assembly. See you around!

Fabienne Meyers
<fabienne@iupac.org>



Ethics in Science

Don't Miss the Congress Opening Ceremony!

The Congress will open on Sunday 5 August at 16:00. The opening ceremony will include the awards presentation for the 2006 and 2007 winners of the IUPAC Prizes for Young Chemists followed immediately by the plenary lecture of Roald Hoffmann at 17:00, and the presentation of the play *Should've* (see box on right). Participation in this event requires that you register for the IUPAC Congress, or that you purchase an individual ticket; a reception will follow immediately after, around 18:30.

See the May-June 2007 issue of *Chemistry International* for an interview with Roald Hoffmann about his new play *Should've*.

About the Play

As *Should've* opens, Friedrich Wertheim, a German-born chemist, has taken his own life, blaming himself for putting an easy way to make a neurotoxin into the hands of terrorists. The circumstances and reasons for his death disturb profoundly the lives of three people—his daughter Katie (a scientist herself, a molecular biologist, but with very different ideas about the social

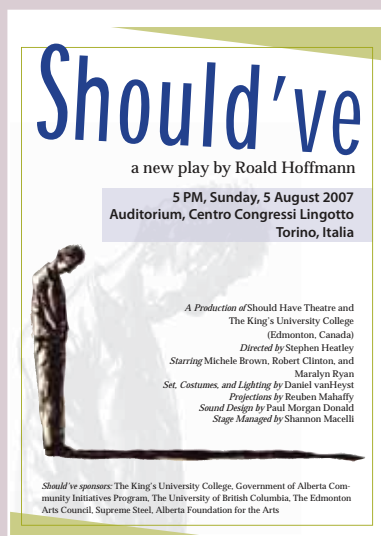
responsibility of scientists), Katie's lover Stefan (a conceptual artist), and Wertheim's estranged second wife, Julia.

In 26 fast-moving scenes, these people's lives are fractured by the suicide. The motive for Wertheim's action isn't as simple as it seems; a story about his parents' survival in Nazi Germany emerges.

A play about the social responsibility of scientists and artists, *Should've* is also about three people trying to resist the transforming power of death. They are unable to do so, sundered as they are by the memories and a past that emerges from that death. And, eventually, the consequences shape a different bond among the three.

Produced by The King's University College, *Should've* is directed by Stephen Heatley of the University of British Columbia and designed by Daniel vanHeyst of The King's University College. Professional actors Robert Clinton, Maralyn Ryan, and Michele Brown are based in Edmonton. The performance will take place on Sunday 5 August 2007 at 17:00 as part of the opening ceremony of the IUPAC Congress in Torino, Italy.

www.shouldve.kcvs.ca



Beyond *Should've*: Ethics in Science and Education

Congress Session 10
Wednesday 8 August, 10:30–13:00

Following the initiative of CCE Chair Peter Mahaffy, a symposium entitled *Beyond Should've: Ethics in Science and Education* is being organized as part of the Congress. The symposium continues the conversation and makes it concrete by asking key questions such as:

- What are key ethical issues that professional chemists should engage?
- What lessons can we learn from history?
- How can post-secondary and graduate chemistry education ensure that ethical issues are addressed in a constructive and compelling manner in the formation of chemistry professionals?

Check Congress program for details.

SYMPOSIUM SCHEDULE

- | | |
|-------|--|
| 10:30 | Ute Deichmann , "Research Ethics and Context: The Example of Biochemistry in Nazi Germany" |
| 10:50 | Richard Cassidy , "Restructuring Science Education for a Global Community: Promoting Critical Thinking About Science-Societal Issues" |
| 11:10 | Elio Santacesaria , "The Proposal of a Charter of the Ethical Principles of Chemical Sciences by the Italian Chemical Society" |
| 11:30 | Alastair Hay , "What Choice for Chemists?" |
| 11:50 | Natalia P. Tarasova , "Formation of a Professional Ethics—New Task For University Education in Russia" |
| 12:10 | Panel discussion led by Roald Hoffmann , including preceding lecturers, and moderated by Peter Mahaffy |

Safety Training Program

Workshop



Thursday 9 August
Congress Session 10
10:30–13:00

The Safety Training program allows safety experts from developing countries to learn more about safety and environmental protective measures by visiting and working in plants of IUPAC Company Associates in the industrialized world. The program was established to disseminate state-of-the-art knowledge on safety and environmental protection in chemical production and is coordinated by the IUPAC Committee on Chemistry and Industry.

The beneficiaries are expected to use the training in their home countries to improve health, safety, and the environment. In recent years, the program supported Fellows from China, India, Nigeria, Kenya, and Uruguay, and coordinated their visits to host companies in the USA, South Africa, Japan, Sweden, and Belgium.

On Thursday 9 August at 10:30, a half-day workshop of the Congress will be held to discuss recent activities by Fellows in their home countries; to evaluate the effectiveness of the Safety Training Program in terms of these home country activities; to learn from invited speakers who are experts in health, safety, and environmental matters; and to solicit ideas for improvements in the program and for possible expansion to incorporate new host companies and new regional trainees.

SAFETY TRAINING PROGRAM WORKSHOP SCHEDULE

10:30	Poster Viewing
	<p>“Environmental Safety and Management Training: Its Impact on Rubber Research” Institute of Nigeria Isiaka O. Bakare, Rubber Research Institute of Nigeria, Benin City</p> <p>“Improving Safety Culture in a Developing Economy: A Build-Up from IUPAC-UNESCO-UNIDO Fellowship Experience” Tersoo C. Gwaza, Shell Petroleum Development Company, Port Harcourt, Nigeria</p>
	<p>“The Regional Conference on Occupational Health and Safety Management in East Africa” Kelvin Khisa, Kenya National Cleaner Production Centre, Nairobi</p> <p>“Building Capacity in Environment, Health and Safety in Kenyan Businesses” Jane B. Nyakang’o, Kenya National Cleaner Production Centre, Nairobi</p>
	<p>“Improvements in Occupational Health and Safety Management in Turkey” Esma Toprak, Department of Chemical Engineering, Bogazici University, Istanbul, Turkey</p> <p>“Improving Safety Management with Scientific Safety Management Philosophy” Zhang Guo-Hong, Unilever China, Beijing</p>
	Oral Presentations
11:20	<p>“The IUPAC-UNESCO-UNIDO Safety Training Program—Overview” Mark C. Cesa, INEOS USA LLC, Naperville, Illinois, USA; chairman, IUPAC Committee on Chemistry and Industry</p>
11:40	<p>“Industrial Use of Metals, Risk Assessment and Prevention of Health Effects” Gunnar F. Nordberg, Department of Public Health and Clinical Medicine, Umea University, Sweden</p>
12:00	<p>“Distance Learning In Toxicology: The IUPAC Contribution” John H. Duffus, The Edinburgh Centre For Toxicology, Edinburgh, Scotland</p>
12:20	<p>Panel Discussion All speakers and presenters</p>

Check Congress Program for room assignment



Congress Scene

Under the theme “**Chemistry Protecting Health, Natural Environment, and Cultural Heritage**,” the IUPAC 41st Congress will address fundamental aspects of the sustainable chemistry endeavors of our age. Through plenary lectures, other oral presentations, poster sessions, workshops, symposia, and even a play, the whole Congress program will illustrate how important chemistry is to the most pressing challenge of our times, namely how to achieve a sustainable future. Here, sustainability is used in its widest sense; it is applied not only to the environment, but also to global human health and social issues, such as infant mortality, which is still a major problem. Moreover, the Congress will stress the role of chemistry in uncovering and preserving our cultural heritage and better understanding the cultural roots of our civilizations. Check the Congress program for details.

Each day of the Congress will begin with a plenary lecture at 9 AM, given by the eminent scientists listed in the table to the right.

In addition, as an integral part of the 41st IUPAC Congress, the Organic and Biomolecular Chemistry Division of IUPAC will hold a combined **Biomolecular-Biotechnology Symposium**. This four-day CHEM-BIO-TECH symposium will comprise IUPAC’s 1st Symposium on Chemical Biotechnology held jointly with IUPAC’s 8th Symposium on Bioorganic Chemistry.

PLENARY LECTURES

Prof. Vincenzo Balzani

Department of Chemistry, University of Bologna, Italy
“Molecular Devices and Machines”

Prof. Akira Fujishima

Kanagawa Academy of Science and Technology, Japan
“The Increasing Contribution of Photocatalysis to Comfort and Safety in The Urban Environment”

Prof. Roald Hoffmann

Nobel Laureate 1981, Department of Chemistry and Chemical Biology, Cornell University, USA
“Science and Ethics: A Marriage of Necessity and Choice for this Millennium”

Prof. Robert Huber

Nobel Laureate 1988, Max-Planck-Institut für Biochemie, Germany
“Proteins and their Structures for Basic Science and Application in Medicine”

Dr. Jan Wouters

President of ICOM-CC, Royal Institute for Cultural Heritage, Brussels, Belgium
“Reflections on the Position of Chemistry in Multidisciplinary Approaches, Aiming at Protecting Cultural Heritage”

Prof. Kurt Wüthrich

Nobel Laureate 2002, ET, Switzerland
“Protein Structure Biology Using NMR—At the Interface of Chemistry and Biology”

The session topics of the Congress are as follows:

Session 1—Chemistry Protecting Natural Environment

Session 2—Chemistry Protecting Health

Session 3—Chemistry Protecting Cultural Heritage

Session 4a—Materials Chemistry and Nanotechnologies

Session 4b—Polymer Session

Session 5—Theoretical Chemistry and Computer Chemistry

Session 6—Inorganic Chemistry

Session 7—Analytical Chemistry

Session 8—Organic Chemistry

Session 9—Biological and Biophysical Chemistry

Session 10—Advances in Chemical Education

Check Congress Program for details
www.iupac2007.org

Council Meeting

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created to examine the possibility of streamlining IUPAC operations. The report reviews the functions and current operations of the Union's governing bodies, Council, Bureau, and the Executive Committee. It then suggests improvements in communications and operations, especially of the various meetings of these bodies. The report's recommendation that the chairmen of the three operating standing committees (CCE, CHEMRAWN, and COCI), who are now *ex officio* members of the Bureau without voting rights, be made voting members of the Bureau, will require a change in the bylaws and cannot be addressed until 2009.

As standard procedure, the Council will be asked to approve the recommendations approved by the Interdivisional Committee on Terminology, Nomenclature and Symbols and published, or scheduled to be published, in *Pure and Applied Chemistry* from July 2005 through October 2007. The Council will receive a series of reports from all the Divisions and Standing Committees.

Christoph Buxtorf will present the treasurer's report in which he will note that while the Union's reserves are adequate for the near to midterm, there are possible long-term financial issues that could arise due to the decline in income from the Union's journal *Pure and Applied Chemistry*. He also will note a number of other developments, including the introduction of a Strategic Opportunities Fund and the success of the project system in promoting the work of IUPAC. The treasurer will comment on the positive outcome of the new method of calculating National Subscriptions in national currencies, which has reduced exchange-rate-related payment problems for National Adhering Organizations.

From the Finance Committee report, one can note that the overall IUPAC portfolio performed well in 2006, with an overall return of almost 14 percent. IUPAC's investments are in both Euro and USD denominated securities (equities and bonds), with a total value of USD 5 551 193 as of 31 December 2006. The conservative posture adopted by the Finance Committee has served IUPAC well in the past two years by minimizing the impact of the fall in equity prices in 2005. The IUPAC portfolio is not managed to maximize investment gains but rather to generate current income and to preserve capital.

Three organizations have applied for IUPAC National Adhering Organization status, and the Council will be asked to approve these applications: the Sociedad Cubana de Química (**Cuba**), the Chemical Society of Ethiopia (**Ethiopia**), and the Programa de Desarrollo

de Ciencias Básicas (**Uruguay**). The Federación Latinoamericana de Asociaciones Químicas has applied for Associated Organization status.

Updates on plans for the 45th General Assembly and the 42nd Congress to be held in Glasgow, Scotland, in 2009, will be presented by Prof. Paul O'Brien. The Council will have to decide where the 2011 Congress will be held. Proposals have been received from the Colegio de Químicos de Puerto Rico and the Turkish Chemical Society to host the General Assembly and Congress. Representatives of each organization will make a presentation concerning their plans and the proposed facilities. Prof. R. Lamba will present the proposal from Puerto Rico and Prof. M. Mahramanlioglu will present the proposal from Turkey.

IUPAC Elections

According to IUPAC statutes, Council must elect officers of the Union and elected members of the bureau. Nominations for the various positions that fall vacant at the end of 2007 had to be received by the secretary general at the IUPAC Secretariat before 11 June 2007 (i.e., two months before the start of the Council meeting).

The president to be elected at the 44th Council Meeting will be president on 1 January 2008. The vice president to be elected will be president-elect for two years, and will become president on 1 January 2010. The retiring president, Bryan R. Henry (Canada), will remain an officer and a member of the Bureau for a period of two years. Secretary General David StC. Black is running for re-election for a second four-year term. As of 11 June 2007, there were no other nominations for secretary general. Christoph F. Buxtorf (Switzerland), the present treasurer, completes eight years (2000–2007) of service and is not eligible for re-election.

Full bios of candidates were provided with the Council Agenda documentation and will also be available on the delegations table at the time of the Council meeting.

NOMINATIONS RECEIVED FOR PRESIDENT



Jung-II Jin (Korea) is the president of the Polymer Division (Division IV) and vice president (president-elect) of the Korean Association for the Promotion of Scientific Culture. Recently, he led the launch of the Samsung-IUPAC Young Polymer Scientist Award.

Anders Kallner (Sweden) is a member of the IUPAC Bureau, where he has mainly been involved in the Project Committee, but also in the continuing reorganization of IUPAC. He is also an ex officio member of the IUPAC Chemistry and Human Health Division (Division VII).



Nicole J. Moreau (France) was an elected member of the Bureau and a member of the Project Committee from 2000–2005. Since 2006, she has been a member of the Executive Committee. She is also general secretary of the French National Committee for Chemistry.

NOMINATIONS RECEIVED FOR VICE PRESIDENT

- Jung-Il Jin (Korea)
- Nicole J. Moreau (France)

NOMINATIONS RECEIVED FOR SECRETARY GENERAL

David StC. Black (Australia) has been secretary general since 2004. His current term expires at the end of 2007. He has been a member of the Subcommittee on Green Chemistry since 2001 and is currently chair of the Editorial Board of *Pure and Applied Chemistry*.



NOMINATIONS RECEIVED FOR TREASURER



John Corish (Ireland) has served IUPAC at many levels since 1979 and has extensive experience with its organization and function. He is chairman of the Subcommittee on Materials Chemistry and is a member of the Finance Committee.

David Schutt (USA), a member of the IUPAC Finance Committee, served as the chief strategy officer and director of external affairs for the American Chemical Society until recently.



NOMINATIONS RECEIVED FOR ELECTED MEMBERS OF THE BUREAU

Dusan Berek (Slovakia) has been chairman of the Slovak National Committee of Chemistry for IUPAC since 1993. From 1998–2003, he was chair of the IUPAC Working Party on Molecular Characterization of Commercial Polymers. Since 2005, he has been vice president of the Slovak Chemical Society.



Giuseppe Della Gatta (Italy) was president of the Promoting Committee for the organization of the IUPAC 41st Congress. He has been a member of the Italian delegation at the four previous IUPAC General Assemblies.

Vladyslav Goncharuk (Ukraine) is an academician of the National Academy of Sciences of Ukraine, and is currently director of the A.V. Dumansky Institute of Colloid and Water Chemistry. He was a member of the CHEMRAWN XV—Chemistry for Water, International Scientific Committee.



Minoru Isobe (Japan) is president of the Organic and Biomolecular Chemistry Division (III). He has been a titular member of the Subcommittee on Organic Synthesis since 2002. He is task group chair of a project to develop an East Asian Network for Organic Chemistry.



Anders Kallner (Sweden)—reappointment *vide supra*

Venceslav Kaucic (Slovenia) has been president of the Slovenian Chemical Society since 1996. He was a member of the IUPAC Committee on National Subscriptions and the Union Advisory Committee. Currently he is a member of the Committee for Streamlining IUPAC Operations.





Werner Klein (Germany) has been a member of the IUPAC Bureau since 2004. Klein was president of the Chemistry and Environment Division from 2000–2003. He has been involved with IUPAC since 1978 when he became a member of the Commission on Agrochemicals.

Ram S. Lamba (Puerto Rico) has been a titular member of the Committee on Chemistry Education since 2002 and has been involved formally and informally with the committee since 1992. Lamba's research focus is making chemistry more understandable and interesting to students.



Natalia Tarasova (Russia) is a titular member of the Committee on Chemistry Education and a member of the Subcommittee on Green Chemistry. She is the deputy chair of the National Committee of Russian Chemists for IUPAC and the chair of the International Committee of the XVIII Mendeleev Congress.



“Chemistry in the ICT Age”

The 20th International Conference on Chemical Education

ICCE 2008

www.uom.ac.mu/20icce.htm

3-8 August 2008
Le Méridien Hotel
MAURITIUS

President's Address

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involved changing the agenda of the Council meeting to allow Council delegates to deal more expeditiously with routine matters, and to free up time for them to think strategically and engage in matters of real importance to the Union and its members. This year, for the first time, the Union will hold a series of round table discussions during the GA. These discussions will allow small groups of Council delegates to discuss subjects of mutual interest in a setting conducive to the easy exchange of ideas. This initiative shall address the concern that all IUPAC members have a means by which to get their issues “on the table.”

President Henry will also explain

how the principal strength of IUPAC lies in the talent, knowledge, and commitment of the more than 1000 volunteers who are involved in the IUPAC project system. He will use a few successful projects to exemplify how the project system continues to allow the Union to meet its strategic goals.

One of IUPAC's priorities is to nurture relationships with organizations whose aims and activities are in harmony with those of the Union. One such organization is the European Association for Chemical and Molecular Sciences, EuCheMS. Henry had the opportunity to present a brief address at the opening ceremonies of their 1st European Chemical Congress last year in Budapest. Another important relationship involves the International Council for Science (ICSU). Chemistry has played an important

role in ICSU from its founding in 1931. Although IUPAC was one of its original members, it has not been fully involved with ICSU over the last few years. ICSU recently opened regional offices for Africa, Asia and the Pacific, and Latin America and the Caribbean, and IUPAC participated in the opening conferences at all three sites: Pretoria, Kuala Lumpur, and Panama. The hope is to use contacts within these regional offices to help IUPAC become more involved with underdeveloped countries and to extend its programs more effectively to these regions.

President Henry believes that these are exciting times for IUPAC; although the Union can celebrate many achievements, it should continue to search for effective ways for the chemical sciences to improve our global environment and human condition. 🌍

Council Round Table Discussions

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registering for the Council, delegates interested in participating in a discussion have been asked to prioritize their interest in the discussion topics. Assignments to the various round tables will be based as much as possible on these priority interests. In each case, two members of the Bureau will chair and mediate the discussion.

Here, only the discussion topics are presented, along with the names of the chair and moderator. For a more in-depth preview of the discussion topics, see the May-June 2007 issue of *Chemistry International*, page 16 (enclosed with the registration materials).

The actual sessions will take place on the morning of Friday 10 August. Participation is restricted to delegates attending the Council.

"It is a relatively easy task to outline the questions, but much more difficult to provide practical answers. It is hoped that the round table discussions will lead to some really good suggestions and plans for future IUPAC activity," said Secretary General David StC. Black.

Topic A



How can we attract more students to chemistry?
Do we need to modify the curriculum?
Can IUPAC play a role?

Chair: Maria C.E. van Dam-Mieras (Netherlands)

Moderator: David StC. Black (Australia)

Topic B



How can we help regions and small countries to have a more effective voice within IUPAC?

Chair: Christoph F. Buxtorf (Switzerland)

Moderator: Stanislaw Penczek (Poland)

Topic C



How can we interact more effectively with governments and other decision makers?
How can we improve our interactions with industry, other unions, ICSU, UNESCO, and others?

Chair: Bryan R. Henry (Canada)

Moderator: Nicole J. Moreau (France)

Topic D



How can we increase the global visibility of chemistry, enhance public understanding of chemistry, and improve its public image?
How can we improve the visibility and image of IUPAC?

Chair: Peter G. Mahaffy (Canada)

Moderator: Leiv K. Sydnes (Norway)

Introducing the Young Observers

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Tamara Basova (Russia) has been a senior research scientist since 1992 at the Nikolaev Institute of Inorganic Chemistry of the Siberian Branch of Russian Academy of Sciences in Novosibirsk. Over the last seven years, Basova's research has involved the investigation of structural features of new phthalocyanine films; investigation of sensor properties of new phthalocyanine films on NO₂, H₂S gases, and the vapor of organic compounds; and the development of new approaches and techniques for the analysis of different systems by Raman spectroscopy. After receiving her Ph.D. in 1999, she was a post-doctoral fellow at the School of Engineering at Sheffield Hallam University in Sheffield, South Yorkshire, UK, and at the TUBITAK-Marmara Research Centre, Gebze, Turkey. Basova was previously a Young Observer in 2005 in Beijing, and her engagement and participation helped her become the National Representative for Russia on the Inorganic Chemistry Division (since January 2006).

Eric Borguet (USA) is an associate professor of chemistry at Temple University in Philadelphia, Pennsylvania, USA. Born in Dublin, Ireland, where he spent his formative years, he attended college in France at the Université de Paris-Sud (XI-Orsay) studying chemistry and physics. He obtained his Ph.D. in physical chemistry at the University of

Pennsylvania in 1993, under the mentorship of Prof. Hai-Lung Dai, where he investigated adsorption and intermolecular interactions on stepped metal surfaces. His post-doctoral training was carried out at Columbia University in the group of Prof. Kenneth Eisenhal, where he carried out nonlinear optical studies of spectroscopy and dynamics at liquid interfaces. Chemical and physical processes at surfaces and interfaces are the principal focus of Borguet's ongoing research program at Temple University. His current research themes include nanoporous carbon materials, nanoscale dynamics at interfaces, ultrafast processes at interfaces, and electrical conductivity in single molecules. Current international collaborations include Nagoya, Japan; Hokkaido, Japan; and Bordeaux, France. Borguet most recently served as a visiting fellow of the Japan Society for the Promotion of Science in June 2007.

Matthew Clarke (UK) carried out his Ph.D. at the University of Bath under the supervision of Prof. Jonathan Williams. During this time, Clarke developed an interest in homogeneous catalysis that led him to move to the University of St. Andrews, where he took up a post-doctoral research position working with Derek Woollins and David Cole-Hamilton. From 2001 to 2003, he held a fixed-term lectureship at the University of Bristol, where his research focused on developing ligands for carbonylation reactions. He also collaborated on several projects with Prof. Paul Pringle. In 2003, Clarke was appointed to a lectureship at the University of St. Andrews, where he has a research group working

on many different problems in homogeneous catalysis, with research interests in both organic and inorganic chemistry. He is last year's recipient of the RSC Meldola Medal.

Oleh M. Demchuk (Ukraine, Poland) is an assistant professor at the Marie Curie-Sklodowska University in Lublin, Poland. He received his Master of Sciences degree in 1997 from I. Franko Lviv State University, Ukraine, and his Ph.D. in 2004 from the Institute of Organic Chemistry, Polish Academy of Sciences, Warsaw. His Ph.D. thesis on "Optimization of Structure of Atropoisomeric Ligands for Asymmetric Synthesis" was completed under the guidance of Prof. K. Michal Pietrusiewicz. Demchuk was awarded a NATO Science fellowship to perform post-doctoral research in Prof. Victor Snieckus' group at Queens University, Kingston, Ontario, Canada, where he has led his own independent research project on "Non-Symmetric Chiral Phosphorus Ligands." From 2005–2006 Demchuk contributed to the heterocyclic section for SYNFACTS, published by Thieme. He is interested in the exploration of the origin of asymmetric catalysis, in a wide sense. His major research interests involve the design and synthesis of new chiral phosphorus ligands and the application of their transition metal complexes in homogeneous asymmetric catalyses, especially in asymmetric X-couplings.

Danièle J. Gibney (UK) studied chemistry at the Free University of Amsterdam, the Netherlands, obtaining her Master's degree in 2004 with a major in biochemistry and a minor in science journalism. Following her graduation

she worked for the Royal Netherlands Chemical Society (KNCV) as Coordinator for Young Members, Education and Careers. Since 2005 she has been working at the Royal Society of Chemistry as a technical editor for various journals including *Organic & Biomolecular Chemistry*, *Journal of Materials Chemistry*, and *Molecular BioSystems*, and for two of the database products. She also coordinates the production of *Soft Matter*.

Ruth Hearn (UK) is the leader of the mass spectrometry team at LGC. The team comprises 19 inorganic, bio-organic, and speciation analysts and forms a part of the UK National Metrology Institute, providing research into high-accuracy chemical analysis methods for certified reference materials and proficiency scheme reference values. Hearn's own research has focused on high-accuracy inorganic and speciation analysis using Inductively Coupled Plasma-Isotope Dilution Mass Spectrometry. She has worked at LGC for five years and before that for three years at the Australian National Metrology Institute in Sydney. Hearn received her Ph.D. in analytical chemistry from Birkbeck College, London, in 1999. Her research, under the supervision of Prof. Mike Thompson, focused on applications of magnetic sector ICP-MS.

Katherine Holt (UK) currently holds an EPSRC Advanced Research Fellowship at University College London, where she carries out research in electrochemistry. Her research interests are broad, ranging from using Scanning Electrochemical Microscopy to investigate the respiratory

chain function of *E. coli* and mitochondria, to understanding the electrochemical properties of diamond materials, such as boron-doped diamond and diamond nanoparticles. Holt obtained her M.Chem. and D.Phil. in chemistry at the University of Oxford, with a thesis concerning the use of boron-doped diamond as an electrode material, researched under the supervision of Prof. John S. Foord. Following this, she undertook postdoctoral research in the laboratory of Prof. Allen J. Bard at the University of Texas at Austin on various aspects of SECM. In 2004, she returned to the UK to take up a Ramsay Fellowship at UCL.

Richard A. Layfield (UK) obtained his Master's in chemistry at the University of Leeds, West Yorkshire, UK, and his Ph.D. at Cambridge in 2002, working under the supervision of Dr. D.S. Wright. After a two-year spell as the Denman Baynes Research Fellow with Clare College, Cambridge, Layfield was appointed to a temporary position as lecturer in inorganic chemistry at Cambridge. In September 2007, he will take up an appointment as lecturer at the University of Manchester. He is the recipient of the 2006 Meldola Medal and Prize. His current research interests include synthetic, structural, and applied aspects of transition and main group metal allyl chemistry; the organometallic chemistry of manganese(II) and the s-block metals; and the synthesis and magnetic properties of transition metal clusters.

Euan Kay (UK) received his Master of chemistry degree from the University of Edinburgh in

2002, winning a Salters' Institute Graduate Prize that year. He was then awarded a Carnegie Trust Scholarship to work in the group of Prof. David Leigh at Edinburgh on developing and demonstrating mechanisms for the control of molecular-level motion. In particular, Kay has applied concepts originally developed in nonequilibrium statistical physics to the design of novel molecular machines constructed from interlocked molecular architectures. He received his Ph.D. in 2006 and is currently a post-doctoral research fellow at Edinburgh. He is a recipient of the 2007 IUPAC Prize for Young Chemists.

Kathleen Kelly (USA) is a senior research investigator with Bristol Myers Squibb in New Brunswick, New Jersey, USA, where she serves as an analytical project team leader to two projects focusing on developed and validated methods. Kelly joined Bristol Myers Squibb as a research investigator in 2000 upon receiving her Ph.D. in Analytical Chemistry from North Carolina State University, under the mentorship of Morteza G. Khaledi. She also holds a B.S. in chemistry and B.A. in biology from Florida Atlantic University (1994). In addition to analytical method validation within the pharmaceutical industry, her research interests involve thermodynamics and the physical, biophysical, and ecological processes regarding marine natural products. Kelly has co-authored a number of publications, her most recent being "Strategies For Baseline Noise Reduction in a Gradient IC Method For the Determination of Trace Level Anions in an Early Drug Candidate."

Mohammad Movassaghi (USA) is the Firmenich assistant professor of chemistry at the Massachusetts Institute of Technology, USA. He received his B.S. in chemistry from the University of California, Berkeley, and his Ph.D. in organic chemistry from Harvard University in 2001. His research interests include complex natural product synthesis and discovery, development, and mechanistic studies of new reactions for organic synthesis. Movassaghi has received several awards, including the GlaxoSmithKline Chemistry Scholar Award, Beckman Young Investigator Award, and National Science Foundation's CAREER Award.

Scott Oliver (USA) is an associate professor of chemistry at the University of California, Santa Cruz. He received his Ph.D. in materials chemistry from the University of Toronto, Canada, in 1997 and was subsequently a Natural Sciences and Engineering Research Council postdoctoral fellow at Harvard University. Before coming to the University of California in 2004, Oliver was an assistant and associate professor at the State University of New York, Binghamton. His research expertise is in the area of materials chemistry, specifically the solvo-thermal synthesis of nanoporous materials. He also studies self-assembled monolayers and swollen polymer matrices. Oliver received the SUNY Research Foundation Innovation Award in 2003 and has received a National Science Foundation CAREER Award. He recently served on a National Science Foundation Division of Materials Research panel for the program "Materials World Network: Cooperative Activity in Materials Re-

search between US Investigators and their Counterparts Abroad."

Aurelia Pascariu (Romania) is a research scientist in the Department of Organic Chemistry at the Institute of Chemistry Timisoara of the Romanian Academy. She received her B.S. and M.S. degrees in chemistry from the West University of Timisoara, Romania, in 2000. Her Ph.D. research was carried out at Timisoara and the University of Leipzig, Institute for Analytical Chemistry, Germany, under the guidance of Prof. Mircea Mracec and Prof. Stefan Berger. Pascariu's research focuses on the mechanism and stereochemistry in the synthesis of C=C double bond compounds by phosphorus reagents, using low-temperature NMR methods and quantum chemical calculation. Another research interest is the study of the green chemistry production of polyphosphonates and polyphosphates by phase transfer catalysis and inverse phase transfer catalysis.

Ponnadurai Ramasami (Mauritius) received his Ph.D. in physical chemistry from the University of Delhi, India, under the guidance of Dr. Ramesh K. Wadi. He joined the Department of Chemistry of the University of Mauritius in 2000 and he is now an associate professor. His present research interests are focused to theoretical and computational chemistry. In particular, he uses theoretical methods to predict structural, thermodynamical, and vibrational parameters of molecules. He is also interested in studying solvent effects on the named parameters. In terms of international activities, Ramasami is involved in collaborative research and is a reviewer for chemistry journals.

Since 2006, he has been the organizer of the annual workshop on Computational Chemistry and Its Applications (part of the International Conference on Computational Science). He is also the chairman of the 20th International Conference on Chemical Education to be held 3-8 August 2008 in Mauritius.

Chang Y. Ryu (USA) is an associate professor of chemistry at Rensselaer Polytechnic Institute in Troy, New York, USA. He received his B.S. and M.S. degrees from Seoul National University in Korea. Upon earning his Ph.D. (1998) in chemical engineering at the University of Minnesota, under Tim Lodge, he worked as a postdoctoral researcher in the Materials Research Laboratory at the University of California, Santa Barbara for two years with Ed Kramer. Ryu joined Rensselaer in November 2000 as an assistant professor of chemistry, and was promoted to an associate professor with tenure in July 2006. He will also serve as a program director of the POLYMER Education and Research Partnership between US and Korea" from 2007 to 2012. This project is funded through the National Science Foundation's Partnership for International Research and Education Program. Ryu's research focuses on liquid chromatography analysis, large-scale separation, and physical properties of complex polymers, including block copolymers and pi-conjugated polymers. He won the NSF CAREER Award (2005), RPI Exploratory Research Award (2002), Mettler-Toledo Thermal Analysis Education Grant (2001), and the Arthur K. Doolittle Award from the American Chemical Society Division of Polymeric Ma-

terials Science and Engineering (1998).

Andreea R. Schmitzer (Canada) obtained her Ph.D. at Université Paul Sabatier in France under the supervision of Prof. Isabelle Rico-Lattes and was a Canadian National Cancer Institute post-doctoral fellow in the group of Prof. Joelle Pelletier at the Université de Montréal. Schmitzer is currently an assistant professor in the Department of Chemistry at the Université de Montréal. She is engaged in a multidisciplinary research effort to uncover new chemical and biochemical approaches for the design of functional molecular, supramolecular, and complex self-organized systems. Her endeavors span dis-

ciplines ranging from synthetic organic, bioorganic, and physical organic chemistry to nanotechnology, biophysics, enzymology, and molecular biology. The main driving-force for research on interlocked molecules in her group is perhaps not the synthetic challenge, but the interesting properties and potential applications of the molecules themselves.

Michael J. Scott (USA) is an associate professor in the Department of Chemistry and the Director for the Center for Catalysis at the University of Florida in Gainesville. He obtained his B.S. in chemistry from the University of California, Berkeley (1988), and his Ph.D. from Harvard University (1994), working with

Richard H. Holm. He completed his postdoctoral studies with Stephen J. Lippard at the Massachusetts Institute of Technology in Cambridge with the support of a National Institutes of Health Fellowship. Scott's research interests focus on the design of ligands and metal complexes for the selective recognition and sequestration of heavy metal cations and for biomimetic catalysis. He is the secretary-elect for the American Chemical Society, Division of Inorganic Chemistry, and is an associate editor for the *New Journal of Chemistry*. He is also a fellow of the Royal Society of Chemistry and the Alfred P. Sloan Foundation.

The Whole of Nature and the Mirror of Art

Images of Alchemy from the Roy G. Neville Historical Chemical Library

Alchemy was intriguing, inspiring, and mystifying to early modern society, and the engaging duality of its nature continues to fascinate today: it can be seen as a practical laboratory exercise and a powerful metaphor of change and transformation, as an exercise of human power in the natural world, and as a philosophical search for the inks that bind diverse aspects of the universe.

The Chemical Heritage Foundation (CHF) acquired the Roy G. Neville Historical Chemical Library in early 2004. The collection spans six centuries of print and contains over five thousand titles dealing with all aspects of chemistry and closely related subjects.

Alchemy is extremely well represented in the Neville collection and that is Alchemy's role in art that is highlighted in the CHF exhibit *The Whole of Nature and the Mirror of Art*. The permanent exhibit is hosted at CHF, in Philadelphia, Pennsylvania, USA. **A brief preview will be on display during the IUPAC Congress, in Torino, from 4-12 August 2007.**

To order images from this exhibit, or from the entire Roy G. Neville Historical Chemical Library, please contact <digitallibrarian@chemheritage.org>.

 www.chemheritage.org



DE NATURÆ SIMIA [Of the Ape of Nature]

Engraved by Matthias Merian (1593–1650)

Robert Fludd, *Utriusque cosmi historia* [The History of Both Worlds], Oppenheim: Johann Theodor de Bry, 1617

World Chemistry Leadership Meeting: *Emerging Chemical Regulatory Environment*

Friday 10 August at 14:00
(room to be announced)

The purpose of the World Chemistry Leadership Team Meeting (WCLM) is to address topical issues facing the world of chemistry and its application, with the objectives of identifying specific contributions IUPAC can make through projects or through working with others. The focus of the Torino WCLM is the health and environmental safety of chemical products, emerging issues of societal concern, and the resulting regulatory trends.

See May-June 2007 *Chemistry International*, pages 8 and 34, for more information. Following is the agenda for the meeting.

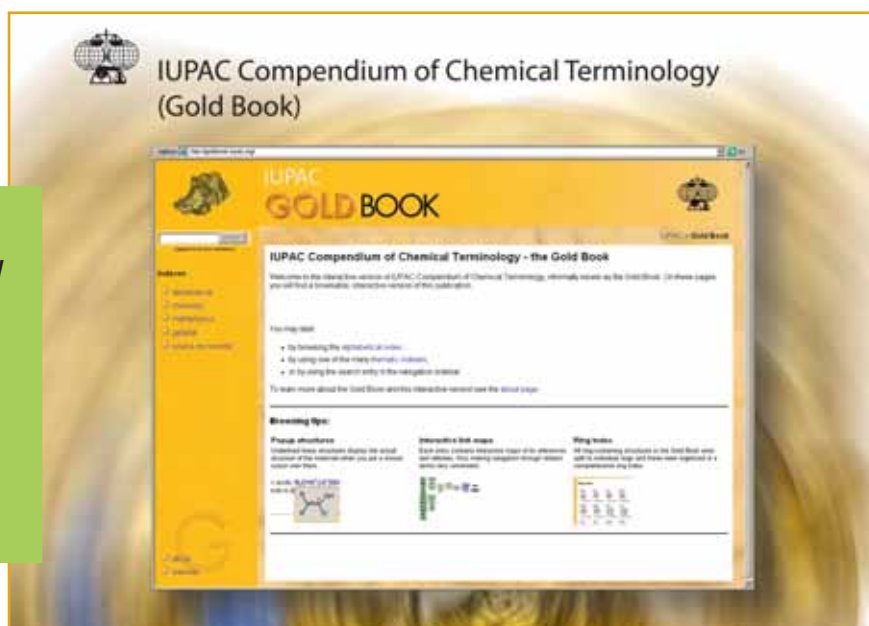
WCLM Agenda

14:00	Introductory Comments: Prof. Leiv Sydnes, IUPAC past president
14:10	Presentations New Approaches toward Chemicals Regulation: SAICM and REACH Dr. Rainer Koch, International Council for Chemical Associations Responsible Care and New Strategies for Product Stewardship Dr. Carol J. Henry, vice president, Science and Research, American Chemistry Council Emerging Issues for Applied Chemistry: An Industrial Perspective Dr. Richard Phillips, senior toxicologist, ExxonMobil (chair of the Cefic Long Range Research Initiative) An Academic Perspective Dr. John Duffus, chair of the IUPAC subcommittee on Toxicology and Risk Assessment (Chemistry and Human Health Division)
15:30	Panel Led Plenary Discussion Moderator: Elsa Reichmanis, Alcatel-Lucent Panel: The presenters will be joined by Dr. Maged Younes/Dr. Matthew Grubb, UNEP (SAICM Secretariat), Dr. Tim Meredith WHO (IPCS), and Prof. Alan Boobis (Imperial College School of Medicine), who will be invited to give short reflections on the presentations.
17:15	Wrap-Up and Conclusions: Bryan Henry, IUPAC president





The WCLM will be followed by an informal reception.

Learn about new
online features.

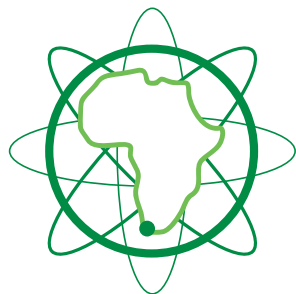
Monday 6 August
at 9 AM
(CPEP Open Hour
meeting)



Miscellaneous

-  The Lingotto building in which the General Assembly is held is a former FIAT factory that has been converted to multiple uses. The meeting rooms for the GA are used by departments of the University of Torino and the Politecnico of Torino.
-  The Congress Center is at the far end of the building, opposite the university and Politecnico. Le Meridien Lingotto Hotel is in the center.
-  The GA Registration desk will be on the third floor; it will open Friday 4 August from 14:00 to 17:00 and every day after from 8:00 to 18:00. All the meeting rooms (except for the Council meeting) are on the third floor of the university or the adjacent third and fourth floors of the Politecnico. The Council meeting on Saturday and Sunday, 11 and 12 August, will be in the "500 Room" of the Congress Center.
-  The GA schedule with room assignments is available as a separate document and is included with your GA registration package. Copies are available at the registration desk.

Notes



CHEMRAWN XII

STELLENBOSCH 2-5 DECEMBER 2007

THE ROLE OF CHEMISTRY IN SUSTAINABLE AGRICULTURE AND HUMAN WELLBEING IN AFRICA

AIM Improving the quality of life of the peoples of Africa through the provision of adequate food, with specific attention to the role of chemistry.

- THEMES**
- African agriculture in a global context: chemistry as the enabler
 - Adequate, safe and affordable food for Africa
 - Application of biotechnology in agricultural production
 - Water and soil quality for sustainable agriculture
 - Technologies to reduce post-harvest food loss
 - The role of chemistry in sustainable agriculture
 - Science-based capacity development at African universities to promote food security
 - Biofuels, value-added and niche products from agricultural produce



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