41st IUPAC COUNCIL MEETING

Brisbane, Australia, 7-8 July 2001

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1. Introductory Remarks and Finalization of Agenda

President Hayes welcomed the delegates to the 41st Council meeting, noting that this was the first Council meeting in Australia, and in the Southern Hemisphere. He thanked the Royal Australian Institute of Chemistry for their generous hospitality and the excellent arrangements.

Dr. Hayes then asked the delegates to stand for a moment of silence in honor of deceased colleagues.

Dr. Hayes noted the excellent guidelines for Council discussion prepared by the Secretary General. He then asked the Secretary General to review the voting procedures.

Dr. Becker reviewed the procedures as presented in the material provided to the delegates. Detailed procedures specific to the election of Officers and Bureau Members would be described at the appropriate point in the agenda.

Dr. Hayes reported that the Bureau had recommended the following persons to act as tellers for voting: Dr. S. Langer (UK), Dr. J. Malin (US) and Dr. N. S. Nhlapo (South Africa). The tellers were accepted unanimously by the Council.

2. Approval of Minutes of 40th Council Meeting and Matters Arising

Dr. Hayes noted that two changes had been proposed to the Minutes of the Berlin Council Meeting as distributed. These changes were approved and the Minutes were then approved as amended.

3. Ratification of Decisions Taken by Bureau and Executive Committee since 40^{th} General Assembly

Council ratified the decisions taken by the Bureau and Executive Committee since the $40^{\rm th}$ General Assembly.

4. Announcement of Nominations for Union Officers and Bureau Members

Dr. Hayes reported that the Bureau had not made any additional nominations for Vice-President or for the Bureau, nor had it made any recommendations concerning the candidates. He directed the delegates' attention to the poster at the rear of the hall containing the brief CVs of the candidates for Vice-President and for the Bureau.

5. Announcement of Time of Elections

Dr. Hayes announced that the elections for Vice-President and the Bureau would be held at 10 AM Sunday 8 July 2001.

6. Statutory Report of President on State of the Union

Dr. Hayes introduced his remarks by noting that the chief task of this biennium has been to prepare for the new organization of IUPAC. He referred the delegates to the report that they had received and then said he would touch on a few highlights in his oral remarks.

The planned update of the Strategic Plan is an important activity since the Strategic Plan needed to be revised in light of the changed situation of the Union. He expected that the revised Plan would

address among other subjects the expansion of the Union, the financial situation of the NAOs, and how to better focus the activities of the Union.

Dr. Hayes noted the work that had been done to prepare for the full implementation of the project system in 2002. He pointed out that the high standard set for the IUPAC Congress continued to be met. He briefly reviewed the activities that had led to the recommendation on the Agenda for the formation of a new Division of Systematic Nomenclature and Structure Representation. The work of the Education Strategy Development Committee and of the Working Party on Education Proposals was described. The Bureau had adopted the recommendations of the WPEP and they would be discussed later in the Agenda. He described the efforts of the Working Party on IUPAC/Industry relations to improve communication with industry, noting especially the difficulties faced by all scientific organizations in dealing with this issue.

Dr. Hayes pointed out the growth in value of the Union's web resources and the plans for improvements in *Chemistry International*. The IUPAC Prize for Young Scientists was awarded on Sunday 1 July at the joint General Assembly/Congress opening ceremony. This new initiative, approved by Council at Berlin, has increased the visibility of IUPAC in the chemistry community. He noted the high quality of the applicants for the IUPAC prize and thanked Prof. Jortner and the Committee for their work in judging the applications.

The successful CHEMRAWN conference on Green Chemistry held in June in Boulder, Colorado, USA, was a continuation of one of the most visible activities of IUPAC. The promotion of the DIDAC materials for the teaching of chemistry was an example of the cooperation of two IUPAC committees, CTC and COCI with UNESCO. He noted the successful program to help conferences in developing and economically disadvantaged countries bring noted international speakers to conferences in those countries. The effort to recruit new NAOs and ANAOs continued as part of the goal to expand IUPAC as a global organization, and would be a major focus of the coming biennium.

Dr. Hayes concluded by noting that the six points listed in Prof. Jortner's address to the Council in 1999 were still relevant. He also noted the need to always ask "Why IUPAC?" and "What does the customer want?" when considering what activities IUPAC should undertake.

Dr. Hayes then expressed his thanks to all the members of IUPAC bodies for their hard work during the current biennium and urged them to continue their participation in IUPAC by undertaking projects in the new system.

7. Vice-President's Critical Assessment

Prof. Steyn noted the challenge areas for IUPAC described in his Critical Assessment. He reported that the new project system is functioning well and pointed out the increased role and responsibilities of the Division Committees. He referred the Council to his written report for details and then summarized his Recommendations for 2002/2003:

a. The establishment of a task group to evaluate and prioritize the long range goals of the Union as to ensure better focus on fewer, more clearly stated goals, and to insure that a sound "customer focus" is provided.

- b. The establishment of a Division of Systemic Nomenclature and Structure Representation to retain IUPAC's leadership in this area of the chemical sciences.
- c. Concerted efforts should be made to attract eminent chemists to serve on Division Committees to manage the scientific programs in close collaboration with the IUPAC Secretariat
- d. The provision of the Committee on Chemical Education with sufficient resources to fulfill the important educational functions in the Union.
- e. The sound management of the Investment Policy of IUPAC to ensure sufficient resources for the Biennium Operating Reserve Fund, Southern Hemisphere Sinking Fund, Young Scientists Award Fund, and the Endowment Reserve.
- f. The active promotion of IUPAC-sponsored conferences. The CHEMRAWN program and Workshops on New Areas of Chemistry, *e.g.* New Materials and Chemical Biology, are highly commended.
- g. The improvement of the image of IUPAC by the IUPAC website and by publishing an interesting, easily readable and attractive *CI*.
- h. The provision of assistance in chemical information and literacy to developing countries in Africa.
- i. The new IUPAC Vice-President to be tasked to increase the geographic base of the Union, particularly in Eastern Europe, Asia, Africa and South America.

He noted that many of these recommendations were the subject of items on the Council Agenda.

Prof. Steyn concluded by asking for the help of the NAOs in recruiting new members for IUPAC especially among the developing and economically disadvantaged countries of Asia, Latin America, and the former Soviet Union.

8. Report of Secretary General

The Secretary General reported on the activities of the Secretariat in four areas supporting the work of IUPAC's Divisions and Committees:

- Administrative services
- Management of publications
- Communications, inside and outside IUPAC
- Services to specific IUPAC programs

Dr. Becker went on to discuss the functioning of the project system. He noted that three meetings at the General Assembly had been devoted to various aspects of the project system. The first was an open meeting to encourage current commission members to participate in the project system, the second had focused on an exchange of information among members of Division Committees on ways to encourage project proposals by reaching out to the worldwide chemistry community, and the third had reviewed the mechanics of the process for the Division Presidents, Standing Committee Chairmen, and others concerned with the review of projects. Dr. Becker briefly noted

the criteria for selection of projects that had been developed over the biennium as experience has been gained with the system.

Dr. Becker noted the changes in the management of both *Chemistry International* and *Pure and Applied Chemistry* that had been implemented. The change from an official publisher to direct management of the publication process had been successful both financially and in the quality of the publications. This is described in more detail in the report from CPEP. He drew attention to the section of his written report describing a number of improvements planned for the content and format of *CI* adopted as a result of the report of the *CI* Strategy Development Committee. He noted that the Bureau had approved the modest additional expenses required and that the "new look" for *CI* is expected to be in place by the beginning of 2002.

Dr. Becker reported that the Affiliate Membership Program and the IUPAC Fellows program continue to be successful. However, the fact that almost 75% of the affiliates are in the US points out the need to increase efforts in other countries to recruit new Affiliates. The NAOs could be of great help in this area.

The success of the IUPAC web site is an example of how IUPAC can increase its visibility to chemists who are not involved in IUPAC. He noted that the potential of the web site and the e-Newsletter to reach out to chemists worldwide had only begun to be fully utilized.

Prof. De Bièvre noted that with the elimination of Commissions links to colleagues all over the world would be lost. He asked how would the review process be conducted to ensure that the reviews are competent. Dr. Becker replied by describing the review process and noting that work was underway to create a database that would help the Division Committees find reviewers. Dr. Kebir asked what would be the role of the NAOs in the project system. Dr. Becker replied that the National Representative nomination process would be described later in the Agenda.

9. Biennial Report of Treasurer/Report of Finance Committee and Accounts for 1999-2000/Appointment of Auditors for 2001 and 2002

Dr. Buxtorf briefly reviewed his written report. He noted that the finances of the Union were in good condition. However, certain problems should be noted as important issues for the future. The ability of some NAOs to pay their national subscriptions continued to be exacerbated by the strength of the US dollar versus most currencies; publications income was threatened by the continuing decline of subscriptions to *Pure and Applied Chemistry*; and the value of the Union's reserves was decreasing due to the general decline of equity markets world wide.

Dr. Przybylowicz reviewed the investment performance of the IUPAC portfolio. He noted that increases in the portfolio were mainly due to transfers from operations. These were from one-time increases in efficiency at the Secretariat, higher than expected income from publications, and less than planned expenditures on projects. A comparison of the performance of the portfolio to that of various markets indicated that, while the IUPAC portfolio had done well, investment returns were expected to be low in the current climate.

The composition of the funds that made up the IUPAC investment portfolio was then described. The components are: Biennium Operating Reserve Fund, Southern Hemisphere Sinking Fund, Young Scientists Awards Fund, Endowment Fund Reserve Fund. Dr. Przybylowicz then noted that

the Bureau had approved two policy statements, one on Investment Policy, and the other on Fund Policy. The latter included definitions of the funds mentioned above.

Prof. De Bièvre asked if any problems had arisen regarding IUPAC's independence in its investment program. Dr. Przybylowicz replied that there were none.

Prof. Somsen expressed his thanks for the development of the Investment Policy and hoped that IUPAC's investments would meet the goal expressed of service to mankind.

Dr. Hayes asked that the appointment of Batchelor, Tillery & Roberts, LLP, of Raleigh, North Carolina, USA as IUPAC Auditors for 2001 and 2002 be approved. There were no votes against and the appointment was approved.

10. Reports of Division Presidents

10.1. Physical and Biophysical Chemistry

Prof. Wilson began by noting the structural changes to the Division in the current biennium. The name of the Division had been changed to Physical and Biophysical Chemistry to better reflect the importance of physical methods in the characterization of biological molecules. The Division Committee will have 12 members, including the four officers. Four new members have been elected at the General Assembly, three of whom have no previous IUPAC experience. The Division Committee plans to develop a wide network of experts to help in the review of new projects. Information on these experts will be contained in a database maintained at the Secretariat using keywords to identify areas of expertise defined by the Division Committee. The Division currently sees no need for subcommittees.

The activities of the Division are focused on three areas:

- Critical Evaluation of Databases
- Quantities, Units and Symbols
- Workshops

The present 35 projects will be reduced to 10-12 thus making possible the allocation of higher levels of individual project funding. One of the new projects deserves special mention, "Selected Free Radicals and Critical Intermediates". This is collaboration between theoreticians and experimentalists will establish reliable thermodynamic data for unstable species found in the atmosphere. Without the specific encouragement of IUPAC, it is unlikely that these two groups of scientists would be collaborating. The Division has also initiated several projects with other Divisions.

The Division is very concerned that better means of informing the chemical sciences community about IUPAC activities need to be developed. Prof. Wilson noted that in some instances journal editors have been persuaded to republish terminology recommendations that have previously appeared in *PAC* or to refer to the *PAC* article or IUPAC website in their instructions to authors. The Division is also planning an interactive version of the Green Book.

10.2. Inorganic Chemistry

Prof. Corish focused his review on the future work of the Division. He commented that more Science will be done in the Division Committee than has been usual in the past. He then noted the project review and approval process was already a major part of the Committee's work, with six projects already submitted, refereed, funded, and up and running. Ten more projects were submitted and considered at Brisbane. Project management will be done by three coordinating groups, Elements/Atoms, Molecules, and Materials. These groups met with the existing Commissions and set up portfolios of projects that they will monitor and manage. A projects contact person has been designated to assist the Division President to establish, maintain, and direct the project portfolio of the Division.

Prof. Corish noted that Council was being asked to approve the formation of a new Commission on Isotopic Abundances and Atomic Weights (see Item 14.3). He pointed out that there was general agreement on the need for such a Commission and that, after discussion with the President and other officers; agreement had been reached on the form of the new Commission. The Division will have a number of advisory subcommittees in this area as in the past. It expects to continue, and if possible expand, the work in this area. In particular, the work of the International Measurement Evaluation Programme (IMEP) will be continued and expanded so that the benefits of the chemical metrology on which this program is based can be passed on to an even wider community.

Prof. Corish reported that the Joint Working Party with IUPAP had assigned the discovery of element 110 and a report had been prepared and will appear in the June 2001 issue of *Pure and Applied Chemistry*. The same group, chaired by Prof. Karol, will investigate claims regarding elements 111-112, 114, 116, and 118.

The *ad hoc* Committee on Materials met at Brisbane with four divisions represented. The committee plans to begin the process of deciding how to proceed forward by organizing a group to study how best to incorporate materials in the structure of IUPAC. Alternatives to be considered include an interdivisional committee or a new division. An initial meeting will be held in six months with a proposal to ready for the next General Assembly.

10.3. Organic and Biomolecular Chemistry

Prof. Norin noted that the Division had used the new nominating committee procedure to select nominees for the Division Committee. The new Division Committee will have six new members and seven continuing members. There will be six subcommittees representing the following areas: Organic Synthesis, Structural and Mechanistic Organic Chemistry, Photochemistry, Biomolecular Chemistry, Green Chemistry, and Biotechnology. The four latter subcommittees are interdivisional in scope. Prof. Norin noted that the work of the Commission on the Nomenclature of Organic Chemistry would be transferred to the proposed new Systematic Nomenclature and Structure Representation Division. The major current projects in this area are: preferred names, phane nomenclature, fullerene nomenclature (proposed project), and guidelines for

abbreviations of protecting groups in organic synthesis. The major activity in the area of Organic Synthesis is in interdivisional projects on Green Chemistry and the guidelines for abbreviations of protecting groups in organic synthesis mentioned previously. The major project in the area of bioorganic chemistry is on the Molecular Bases of Biodiversity, Conservation, and Sustainable Innovative Utilization. Prof. Norin noted that the Division would continue its efforts to bring chemists from developing countries into the work of the Division's committees and task groups.

Prof. Collins (Brazil) asked for more information about the subcommittees described by Prof. Norin. She would like to know how they are regulated, that is how they are funded and who determines how representative is their membership. Prof. Norin responded that projects will determine the funding and the membership is a core group, not the entire group working on the projects in that area.

10.4. Macromolecular

Prof. Gilbert reviewed the major areas in which the Division worked:

- Polymer nomenclature
- Polymer characterization
- Special projects (reports, educational activities)
- Conference organization, sponsorship

The major effort in the Division for the past biennium has been to complete outstanding projects (those with completion date by 2001). Prof. Gilbert noted that 21 projects were completed or will be substantially completed by end 2001, six probably completed mid-2001, five questionable, one abandoned, and twelve projects commenced under the new system. The effort to complete projects has led to 26 publications appeared/submitted (plus many more in the pipeline). All recent papers and the "Purple Book" are on the IUPAC website. The Division sponsored two Graduate Courses/schools (Prague, Stellenbosch) and an International Student Forum.

The Division sponsored an Editors' Round Table to promote usage of IUPAC nomenclature/terminology that led to the "Purple Book" and a new Guide to Macromolecular Terminology & Nomenclature being prepared for use on the IUPAC website. The URLs for both of these references are to be included in Instructions to Authors and Instructions to Referees in all major polymer journals. This is seen as a major advance: IUPAC nomenclature and terminology are now easily accessed, commended, and, it is expected, will be widely used.

Prof. Gilbert noted that many of the Division's projects have over 50% industrial members. The Division has now completely converted to the new project system, with coordinators managing the Division's portfolio of projects in particular areas. The Division will propose a new Terminology Commission to the Bureau next year. The work of the Commission would be in an area not covered by the new Systematic Nomenclature and Structure Representation Division.

10.5. Analytical Chemistry

Prof. Ingman described the organization of the Division's work into four main areas: Promotion and Guidelines, Guidelines for Critical Reviews, Nomenclature (terminology) for specific techniques, and Data compilation. The Division Committee will cover the following specific fields: Electroanalytical chemistry, environmental analytical chemistry, general aspects of analytical chemistry, human health, nuclear chemistry, separation methods, and spectrochemical analysis. The Division will have two subcommittees, one on Equilibrium Data, and one on Harmonization of Quality Assurance Schemes. Prof. Ingman noted that each of these areas had links to the work of other IUPAC divisions. One of the goals of the Division is to strengthen these links to ensure that the work in the Division complements and supports the work of other parts of IUPAC.

The new structure of the Division will ensure that the core work of the Division continues in Quality Assurance, Nomenclature and Techniques, Data Evaluation, and Critical Reviews and Guidelines.

Prof. Ingman concluded by giving examples of current projects in the Division:

- Redefinition of the pH scale and traceability of pH measurements
- IUPAC stability Constants Database
- Compendium of Analytical Nomenclature

10.6. Chemistry and the Environment

Prof. Klein began by describing the work of the Division as a matrix that covered certain areas and their impact on particular media. The areas are:

- Processes, protection objectives, methodologies
 - chemical safety
 - chemical hazard
 - modeling environmental processes
 - environmental fate
 - environmental analytical chemistry
 - comprehensive risk assessment
 - (human risk assessment)
- Groups of chemicals
 - agrochemicals
 - pharmaceuticals and veterinary drugs
 - natural toxicants
 - biochemicals and chemical safety of genetically modified organisms.

The media are air, water, food, soil, constructions, and waste. The Division plans to have four subcommittees manage the projects in different areas.

The Division represents IUPAC in an international program on the environmental sound management of chemicals, the International Forum for Chemical Safety. The IFCS has asked IUPAC, through the Division, to manage a new award to be made to a Non Governmental Organization (scientific institution) in a developing/transitional country at

USD 100 000 each year. The funding source and implementation of this award are still to be determined.

Prof. Klein noted that the Division had implemented a process to identify societal or specific customer interests and to address the scientific challenge to get top people involved. This was being done by using outreach workshops.

Prof. Klein then described the work of the Division in one special area that had been a major area of activity in the past two biennia. This is the subject of endocrine disruptors. The initial outcome was the special issue on Environmental Oestrogens published in *Pure and Applied Chemistry* (70, 1617-1865, 1998). The next report on the subject will be from the Commission on Soil and Water Chemistry Project on Environmental Exposure, to be completed 2001. This will be followed by an IUPAC/SCOPE Project, Environmental Implications of Endocrine Active Substances, Chairmen Dr. J. Miyamoto and Dr. J. Burger. This project began in 1999 and will be completed in 2003. The final report will cover four main topic areas with more than 60 contributions and will be published as a special issue of *Pure and Applied Chemistry*.

10.7. Chemistry and Human Health

Prof. Kallner noted that this is the third biennium since the Division of Clinical Chemistry and the Section of Medicinal Chemistry were merged to form the Chemistry and Human Health Division. This process will be completed by the end of 2001. The merging of the sections has been a gradual process in which the Division Committee has searched for new projects that would better reflect the widened scope of the Division. This was reflected in the instructions to the Nominating Committee to seek candidates with interests in fields such as:

- biodiversity,
- bioinformatics,
- nutrition,
- gene modified food,
- industrial waste,
- screening of drugs,
- DNA technology.

Prof. Kallner noted that the nomination process took longer than anticipated and the election of officers and members of the Division Committee will take place after the General Assembly. He encouraged the NAOs to use their right to appoint National Representatives to the Division Committee.

The International Federation of Clinical Chemistry and Laboratory Medicine (the IFCC) and the Division will continue a very close collaboration, particularly in the field of nomenclature, properties and units. This joint project of IUPAC and IFCC, with close cooperation with the European Union, has resulted in 16 publications and a database containing some 20 000 items. The syntax and principles of the nomenclature that has been developed is now being introduced to other clinical examinations e.g. in microbiology and transfusion medicine. Prof. Kallner described the work of the Division

in toxicology that had resulted in publications on risk assessment and modeling of toxic threats in workplaces. Educational material has been produced and published as a monograph and as a form of multimedia. The latter has been made available to UNESCO for wider distribution.

Several glossaries have been completed related to pharmaceutical process chemistry and pharmaceutical technology. A significant contribution from ICSU has made it possible to start working on a drug metabolism database. This work is carried out in collaboration with the IUPHAR, the International Union of Pharmacology.

The new structure of the Division will have three subcommittees to coordinate efforts in the field of drug discovery and development, toxicology, and nomenclature. New projects that do not fit into this structure will be operated separately.

11. Reports of Standing Committee Chairmen

11.1. Committee on Printed and Electronic Publications

Dr. Warr said her report would focus on five topics:

- PAC content
- declining print subscriptions
- pricing
- focus of CPEP
- online versions of color books

The content of *PAC* continues to be mainly reports and recommendations plus plenary lectures for IUPAC sponsored conferences. The quality of the journal has been improved with the move away from camera-ready copy to electronic submission of manuscripts and the use of desktop tools to convert the submitted manuscripts into a consistent format. She then noted the continuing decline in the number of institutional subscriptions, despite holding the price steady for three years. This has led the Committee to recommend a ~3% price increase in institutional subscriptions, both print and electronic only. Personal subscriptions will remain unchanged.

The focus of CPEP is on the development of electronic publishing as the principal means of distributing IUPAC publications. This is viewed as being of great strategic importance to the Union. An important initiative in this area is the assumption by the Union of a leading role in the development of Chemical Markup Language as a standard for online publication of chemical information. CML is one of a number of specialized markup languages being developed as part of the worldwide shift from HTML to XML (Extensible Markup Language). Specialized markup languages are already being developed by spectroscopists, mathematicians, and physicists, among others.

Dr. Warr then noted that progress had been made in putting the IUPAC "color books" online. In addition to a searchable version of the *Compendium of Chemical Terminology*, Adobe Acrobat versions of the *Compendium of Macromolecular Nomenclature* and the *Compendium of Analytical Nomenclature* were now or

would soon be available on the IUPAC web site. As new versions of the other color books were introduced in next few years, these will also be available online.

Prof. Leigh (UK) noted that some published reports and recommendations do not follow IUPAC recommendations on nomenclature. Dr. Becker replied that this was the responsibility of IDCNS.

11.2. CHEMRAWN Committee

Dr. Norling began by reminding the Council of the purpose of the CHEMRAWN Committee. As described in the words that stand behind the acronym, CHEMical Research Applied to World Needs, CHEMRAWN organizes conferences on topics of global interest that involve not just scientists but public, private, NGO's, academic sectors with a focus on issues. A key feature of these conferences is the Future Action Committee. This develops a set of actionable recommendations -- and works on follow up.

Dr. Norling then reviewed the 12 CHEMRAWN Conferences that had been held since 1978. He noted that an assessment of CHEMRAWN IX was available online, http://www.iupac.org/standing/chemrawn.html. The most recent conference, CHEMRAWN XIV-- Boulder, Colorado (2001): Toward Environmentally Benign Processes and Products, had been held the previous month, June, and was viewed as having been very successful. Two quotes from participants reflect this, "The session made an indelible impression.", "A truly outstanding program, superbly executed..." Four conferences are in the planning stages:

- CHEMRAWN XII: Chemistry, Sustainable Agriculture, and Human Welfare: South Africa: 2004
- CHEMRAWN XIII: Chemistry for Cleaner Energy: India 2003+
- CHEMRAWN XIV: Chemistry and Water: Paris November 2002
- CHEMRAWN ??? Innovation- its way to the market-- Europe

Other topics being considered include: food purity, chemical aspects of biodiversity, transport properties of halogenated hydrocarbons and mixtures.

Dr. Norling pointed out that there are three determining factors in choosing a topic for a CHEMRAWN conference:

- Funding, organizing.
- Are there important issues for discussion that can lead to actionable recommendations?
- Is this a subject appropriate for the CHEMRAWN format -- and not being duplicated elsewhere?

The Committee continues to address the issues of finding new funding sources, evaluating alternative formats for conferences, and improving the effectiveness of the Future Actions Committees. CHEMRAWN remains an important initiative of IUPAC, the CHEMRAWN concept is valued, there are numerous opportunities for conferences, ways of using the IUPAC website for communications are being

considered, and the Committee continues to seek different, possibly novel, ways to assure that CHEMRAWN has impact.

Dr. Norling concluded by stating the Mission of the Committee as: to develop periodic conferences around the world to explore issues relevant to meeting human needs where chemical research and the products of chemical research can help to meet those needs.

11.3. Committee on Chemistry and Industry

Dr. Wright described the work of the Committee in four significant areas.

The "Training Program for Safety and Environmental Protection", joint with UNESCO/UNIDO was successfully reactivated in 2001, financed by COCI. Two companies were first time American hosts. UNESCO has contracted to financially support trainees in 2001. Potential candidates include those from China.

"DIDAC", the joint program with the CTC and UNESCO for the teaching of chemistry especially in developing countries, has been successful beyond expectation. This Belgian-developed tool has been translated into French, Arabic, Korean, Russian, etc., and over 30 developing countries have become involved. COCI's financial support was multiplied by UNESCO expenditure >\$100K. Colored poster versions are now being prepared by Agfa-Geveart for use in countries where even transparencies are not practical. Industry in China has just offered to translate, as has the Chemical Society in Japan.

The "Oestrogen" Special Publication has now been distributed by UNESCO to decision-makers in >70 countries.

The April 2001 Visit of the Chairman to China resulted in the commitment of SINOPEC to sponsor a Safety Workshop in 2002 (or 3?) in Beijing, to purchase DIDAC to translate into Chinese for the Ministry of Education, and to identify a candidate for the Training Program. The "Society of Chemical and Petrochemical Industry of China" also committed to "co-sponsor" the Workshop and to identify candidates for Training. This is part of the effort by the Committee to increase participation of chemical companies in developing countries in the Company Associate program.

As was noted in the President's State of the Union report. COCI will be restructured in 2002 to improve its ability to represent the needs of the worldwide chemical industry in IUAPC.

Prof. Gültekin (Turkey) asked if the DIDAC materials were available in Turkish. Dr. Wright replied that they were not available in Turkish but that COCI and UNESCO would be interested in a proposal to have them translated.

Prof. De Bièvre (Belgium) noted that the Council Minutes from Berlin mentioned that the Division Presidents had been asked to inform COCI of activities of relevance to industry. He hoped that this was being done.

Prof. Pungor (Hungary) pointed out that poor appreciation of chemistry by students is often the result of bad instructors.

11.4. Committee on Teaching of Chemistry

Prof. Bradley began by noting that the past biennium had been a period of accommodation. Firstly to the new project system, secondly to recognition of CTC as an Operational Committee with a place on the Bureau, thirdly to the awareness of a probable larger role for education in the future IUPAC. This third point reflects the recommendations of the Education Strategy Development Committee that will be discussed after this presentation. Communication with other IUPAC bodies is improving, and cooperation with UNESCO continues to strengthen, particularly in projects involving developing countries and countries in transition.

Prof. Bradley noted some of the projects in the Committee and referred the Council to his written report for information on the complete program of the Committee. He also noted that The International Conference on Chemical Education (ICCE) remains a regular, important responsibility of CTC. The 16th ICCE was held in Budapest in August 2000 and attracted more than 500 delegates, including 200 school chemistry teachers from the region.

The International Newsletter on Chemical Education is now electronic thanks to the efforts of Professors Takeuchi and Ito. This is expected to become a valuable mechanism for global enhancement of chemistry education.

The Source Books for Teaching of Chemistry project has been reactivated following a long period of indecisiveness. Following extensive investigations by Professors Bucat and Lagowski, it is now proposed to publish the two volumes of Selected Papers in Chemical Education Research electronically, making them available free. These will be one of the underpinning resources for the proposed new project "A Glossary of Chemical Concepts: a Pedagogical Content Knowledge Resource for Teachers".

The Education in Chemistry and Human Health project continues in active collaboration with Commission VII.C.2 led by Professor Duffus, the Division Representative. Draft versions of Introduction to Toxicology – informally referred to as Toxicology for Teachers – have been quite widely circulated and a workshop conducted at the 16th International Conference on Chemical Education. The feedback is being digested, and meanwhile UNESCO has expressed interest in global dissemination.

The Small-Scale Chemistry project continues with particular vigor, in collaboration with UNESCO. During this biennium, UNESCO – IUPAC/CTC workshops have been conducted to introduce and to advocate the benefits of small-scale, low-cost practical chemistry in Armenia, Belarus, Benin, Burkina Faso, Burundi, Cameroon, Chad, Estonia, Gabon, Gambia, Georgia, Guinea, Guyana, Iran, Jamaica, Lesotho, Lithuania, Mali, Mexico, Niger, Senegal, Trinidad and Yemen. In a number of countries, they have been inspired to initiate pilot projects to assess the local applicability of the concept using individual student kits. Some countries have gone beyond this stage and embarked on wider, national implementation in the school system. A leading example is Cameroon, where a Centre of Excellence has been established recently in Yaoundé to underpin this implementation and to support its diffusion in the CEMAC (Communaute Economique Et Monetaire De L'Afrique Central) region.

Report of the Education Strategy Development Committee

Prof. Jortner reviewed the charge to the Committee and noted that the Chairman, Prof. Peter Atkins and the ten members of the Committee, including two Bureau members, Prof. Bradley and Prof. Sydnes, had produced an excellent, very complete report that had been presented to the Bureau in 2000. The Bureau then formed a Working Party on Education Proposals to evaluate the recommendations in the report and report to the Executive Committee on how best to implement them. The WPEP solicited advice from NAOs and national chemical societies and reported to the EC in April 2001. Its recommendations were approved by the EC and presented to the Bureau at Brisbane. Prof. Sydnes was then asked to present the recommendations of the Bureau to the Council.

Prof. Sydnes noted that while IUPAC had an important role to play in education it should avoid duplication of programs of national organizations. IUPAC should play a coordinating role and act as a source of "known" information to national organizations. He emphasized that good projects in education will be funded. The current CTC will be restructured into a Committee on Chemistry Education with broader Terms of Reference, as follows:

- (1) To advise the President and the Executive Committee on matters relating to chemistry education, including the public appreciation of chemistry.
- (2) To maintain a portfolio of educational projects and to coordinate the educational activities of IUPAC.
- (3) To monitor chemistry education activities throughout the world and to disseminate information relating to chemical education, including the public appreciation of chemistry.
- (4) To develop liaisons with international organizations such as UNESCO, national and regional chemical societies, chemical education committees, and organizations concerned with the public appreciation of science.

The Working Party had agreed with the ESDC that Curriculum Development was mainly a national and regional activity, but that IUPAC could provide support by providing a clearinghouse function.

Prof. Sydnes noted that both the ESDC and the WPEP had emphasized that IUPAC should not produce teaching materials, but rather should provide information to those who will do the production. That is, IUPAC should develop the chemical and pedagogical basis for educational material, but not get involved in production and distribution.

A new role for the CCE, as compared with CTC, is in the public appreciation of chemistry. IUPAC is seen as a communicator of information around the world both to national groups, the media, and individuals.

The CCE will have eight Titular Members, including a Chairman and Secretary, one Associate Member from each Division, and a National Representative from each NAO

not already represented on the Committee. There will be a Subcommittee on Public Appreciation of Chemistry and a Subcommittee on Chemistry Education in Developing Countries. Prof. Sydnes noted that both the Secretary General and the Executive Director had promised that resources would be made available at the Secretariat as required to support an increased level of work by the Committee members.

Prof. Kebir (Egypt) asked about the role of National Representatives on the Committee and on projects. Prof. Sydnes replied that the WPEP saw a role in both areas. In addition to the anticipated large number of National Representatives on the new Committee, it is hoped and expected that National Representatives will be active in projects.

Prof. Collins (Brazil) commented that the translation of materials into local languages is often made difficult by the difficulty of reproducing figures and illustrations. She asked what use of figures and illustrations was allowed by copyright. Dr. Becker replied that there were no copyright restrictions on IUPAC reports and recommendations; the only requirement set by IUPAC on translations is that the relevant NAO(s) for the language in question should be consulted. Conference reports published in *PAC* require permission from IUPAC, this is generally granted with no charge or restriction. Books have contract conditions with each publisher that are specific to that book. In most cases, this involves, for instance, a delay period before all or part of the book can be put online.

Dr. Hayes concluded the discussion by noting that the Bureau had approved the plan recommended by the WPEP and again thanked both the ESDC and the WPEP for their excellent work.

- 11.5. Project Committee (written report only)
- 11.6. Evaluation Committee (written report only)

12. Proposed Changes to Statutes and Bylaws

12.1. Revision of Bylaw 4.103 - Division Electorate – Bureau

Dr. Becker noted that with the dissolution of Commissions at the end of 2001, the electorate for the Division Committees as defined in the Bylaws would, in most cases, be reduced to the current members of the Division Committee. After much discussion at the Division Presidents meeting in 2000 and the subsequent Bureau meeting, the Secretary General was asked to draft an amendment to the Bylaws to accomplish what the Division Presidents and the Bureau had agreed. The current amendment defines part of the electorate, and gives the Bureau the power to define the rest of the electorate. This was done to allow flexibility as IUPAC gains experience with the new system. The text of the changes proposed is as follows:

B4.103 The Titular Members of each Division Committee shall be chosen by an electorate comprising the Titular Members, Associate Members and National Representatives on the Division Committee, together with the members or officers of such other bodies within the

Division that the Bureau may specify. The number of Titular Members shall not exceed ten unless otherwise determined by the Bureau. [Continue unchanged to end of current text.]

New paragraph following current text: Additionally, a Division Committee may elect no more than six National Representatives on the nomination of Adhering Organizations, with no more than one representative from a given Adhering Organization. The term of a National Representative shall be two years, with the possibility of renomination and reelection consecutively for only two more years. Exceptional circumstances must be established and special permission obtained from the Bureau for the election of a National Representative from a country already represented on the Committee by a Titular or Associate Member.

The Bureau has already defined the additional members of the Division electorate for 2003 to be members of the Division's nominating committee who are not included above (usually three individuals); and chairmen of all active task groups in the Division, along with chairmen of task groups whose projects have been completed within the period 2000-2002.

Dr. Becker commented that the role of National Representatives on Division Committees was seen as being very important and noted that they are now part of the Division electorate, whereas the National Representatives to Commissions were not permitted to vote. National Representatives will also participate in the project approval process. Since NAOs will need to know the composition of the Division Committees before making nominations, the letter requesting nominations will be sent out after the General Assembly.

Prof. Leigh (UK) noted that the reduced electorate is a concern to the UK delegation and proposed an amendment to the proposed text of Bylaw 4.103:

The Titular members of each Division Committee shall be elected by the an electorate comprising the Titular Members, Associate Members and National Representatives on the Division Committee, together with the members of Division Commissions and task groups whose projects are in progress or have been completed during the current biennium. Division membership in this category should not be automatic but subject to the approval in each individual case by the Division President to ensure a balanced representation within the Division.

This amendment was seconded by Prof. Hegarty (Ireland). Dr. Becker noted that there are technical issues with the proposed amendment. The amendment uses terms that are not defined in the Bylaws, such as project task group. The amendment would also allow each Division to set its own electorate. The Bureau sought to maintain uniformity.

Dr. Becker was asked to describe the system for choosing AMs and NRs. He noted that the system is based on the current Bylaws and it is intended to ensure an equitable geographic distribution of members of IUPAC bodies.

Prof. Wilson (US) commented that all the Division Presidents are greatly concerned about the dramatic decrease in the size of the electorate. He proposed that the original motion be adopted with a recommendation that the problem be addressed.

Prof. Berek (Slovakia) asked why the number of NRs on Division Committees was limited to six. Dr. Becker replied that this was done to maintain the Committees at an optimum size for conducting their business. The number six was selected to match the number of Associate Members.

Prof. Collins (Brazil) noted that the CCE would have an unlimited number of National Representatives. She suggested that Division Committees should have more NRs or a contact person from each NAO. Dr. Becker replied that it might be a good idea to have such designated contacts for each Division at each NAO in order to facilitate identification of representatives on task groups.

Prof. Cvitaš (Croatia) asked why only Task Group Chairmen were part of the electorate and not all task group members. Dr. Becker replied that the membership of Task Groups was sometimes not well defined.

Prof. Leigh requested a serious undertaking from the Officers to consider this issue further. With the approval of the seconder, he then withdrew the proposed amendment.

Dr. Hayes put the question; voting was by cards; the motion was declared to have passed with no need for a formal count.

12.2. Revision of Bylaw-B4.1064 – Responsibilities of Division Committees – Slovak National Committee for Chemistry

Prof. Berek was asked to discuss the proposed amendment to the Bylaw. He pointed out that that he had in the past drawn attention to the fact that the Division Rules were in conflict with the Bylaws of the Union. He noted that his proposal addressed the need for democratic procedure in the Division Committee. There was no second to the motion and there was therefore no further discussion.

13. New Division Rules

Dr. Becker informed the Council that model Division Rules have been developed and are being considered by the Divisions. However, no Rules had yet been submitted for approval by Council.

14. Organizational Changes in Existing IUPAC Bodies, Proposals for New and Reconstituted Bodies/Terms of Reference

14.1. Proposed Division of Systematic Nomenclature and Structure Representation

Dr. Becker introduced the subject by noting the long IUPAC tradition of systematic nomenclature and the concern expressed about this area by Council at Berlin. He then described the origin and work of the Nomenclature Round Table, the recommendations

of this group, the formation of the *ad hoc* Committee on Chemical Identity and Nomenclature Systems, and the current proposal to create a new Division.

Prof. Collins (Brazil) asked if there were assurances that there will be no subcommittees on Nomenclature formed by the Divisions duplicating the work of the new Division. She also asked who would name the members of the new Division Committee.

Prof. Tabak (Brazil) expressed his belief that Division IV would continue to need to support source based nomenclature work.

Prof. De Bièvre (Belgium) expressed his support for the proposal.

Dr. Hayes called for a vote. There were no votes against and the proposal was passed.

Dr. Becker presented the names of the proposed Division Committee, noting that three AMs would be named later and that the NAOs would be asked to name NRs after the General Assembly.

Dr. Hayes called for a vote. There were no votes against and the members of the Division Committee were approved.

14.2. Continuation of the Joint Commission on Biochemical Terminology

Dr. Becker reviewed the material in the Agenda Book. Dr. Hayes called for a vote; there were no votes against and the proposal to extend the JCBN for two more years was approved.

14.3. Proposed New Commissions

Dr. Becker described the history of the proposals to create new Commissions on Quantities, Units, and Physicochemical Symbols and on Isotopic Abundances and Atomic Weights. He then described the procedure laid down in the Bylaws for the establishment of new Commissions. He noted that difficulties with each of the proposals had been resolved by discussion with the Division Committees.

There was no discussion and Dr. Hayes called for a vote on the proposal to form a new Commission on Quantities, Units, and Physicochemical Symbols. There were six votes against and the proposal was approved.

The membership of the new Commission was presented to Council. Dr. Hayes called for a vote. There were no votes against and the membership was approved.

Dr. Hayes called for a vote on the proposal to form a new Commission on Isotopic Abundances and Atomic Weights. There were no votes against and the proposal was approved.

Dr. Becker reported that the membership of the new Commission had not yet been decided and asked that Council delegate to the Bureau the authority to approve the membership of the new Commission. Dr. Hayes asked for a vote on this proposal and it was approved with no negative votes.

14.4. Restructuring of the Division of Chemistry and Human Health

Dr. Becker discussed the history of this proposal. There was no further discussion. Dr. Hayes asked for a vote. There were no votes against and the proposal to dissolve the Sections on Clinical Chemistry and Medicinal Chemistry was approved.

15. Budget Proposal and National Subscriptions for 2002-3

Dr. Buxtorf referred the Council to the material in the Agenda book. He noted that the National Subscription was being increased only by 1%; this is less than the OECD inflation rate for the past biennium. This is possible because of the good financial position of the Union. He pointed out that no dramatic changes had been made in Divisional Allocations; however, the Divisional Reserve would allow adjustments to made based on needs of the Divisions to fund new projects.

Prof. Ohtaki (Japan) noted that the total National Subscription for 2002-3 is less than that for 2000-1 ad asked for the reason. Dr. Buxtorf replied that while the total NS had been increased by 1%, the contributions from Saudi Arabia and Pakistan had been subtracted since they were not expected to be members of the Union in the next biennium.

Prof. De Bièvre asked if there were any Orange Lights in the Union's financial future. Dr. Buxtorf replied that there were none other than the changes being proposed to Council.

Prof. Collins (Brazil) asked how the Division allocations were determined. Dr. Buxtorf replied that they were based on history. He pointed out that the division reserve allowed adjustments to be made based on needs as they developed.

Prof. Kebir (Egypt) asked how the National Subscription for Egypt was calculated. Dr. Buxtorf replied that such issues were better discussed individually.

Dr. Hayes called for a vote. There were four votes against. The proposed Budget and National Subscriptions were approved.

16. Proposals Formally Received from National Adhering Organizations

16.1. Method of Calculation of National Subscriptions-Czech National Committee for Chemistry

Prof. Kratochvil was asked to present the proposal of the Czech National Committee. He noted the history of the proposal and presented a description of the current method of calculation of National Subscriptions. He pointed out that the formula used is non-linear and in the opinion of the Czech National Committee unfairly favors countries with large chemical turnovers. The proposal before the Council is to replace the current formula with a linear formula. He noted the Bureau proposal that had been distributed at the beginning of the Council session. He expressed his disappointment that the Bureau had not presented an alternative proposal that addressed the concerns raised by the proposal of the Czech National Committee before the Council meeting so that it could be discussed at Council.

The motion was seconded by Prof. Gültekin (Turkey).

Note: The Bureau had approved the following position paper, which was distributed to Council delegates:

The Bureau is aware of the difficulties that many NAOs are encountering in meeting the National Subscriptions in light of:

Variations in exchange rates

Reductions in funds available from governments and other supporting organizations

The cost of sending delegates to Council meetings

In addition, there are other concerns about the perceived fairness of the size of dues paid by small versus large countries and the method by which the National Subscriptions are calculated.

The Bureau proposes that a small *ad hoc* working group be set up (including representatives from countries of varying economic circumstances) to consider these issues and make recommendations to the 2002 Bureau meeting and for final action at the Council Meeting in 2003 (Ottawa).

This group will be working in parallel with the Strategic Plan Update Committee that will help define the nature and extent of the future activities of the Union and thus its financial needs.

In the meantime, the Bureau recommends to Council that in order to secure the operations for the coming biennium, the present basis of calculation of National Subscriptions remain in place.

Prof. Henry (Canada) commented that he was sympathetic to the concerns expressed but noted that the adoption of this proposal would risk the loss of one or more of the large contributors. He then noted that dramatic changes such as this are not the norm for international bodies such as IUPAC.

Prof. Gilbert (Australia) also expressed sympathy for the concerns expressed but felt that this too dramatic a measure and supported the Bureau proposal to discuss the issue of equity in National Subscriptions.

Prof. Herold (Portugal) noted that his first reaction was to support the proposal. He then had second thoughts. He pointed out the comment in the minutes of the Executive Committee when this issue discussed that "In many respects, the benefits of IUPAC membership are more important to the smaller NAOs and they should be expected to contribute proportionately more to the Union." He noted that he had discussed this with other chemical societies. He then commented that the priority to keep in mind is that IUPAC should survive; his chemical society wanted to participate and it therefore felt that it was necessary to pay what is required by the other members.

Prof. Ohtaki (Japan) pointed out that the National Subscriptions range from USD 1000 to over USD 100 000 but the voting rights range from one to six.

Prof. Berek (Slovakia) noted the decrease in membership and pointed out the financial difficulties of many small countries. He then asked what are the benefits to small countries spoken of in the EC minutes. He also asked if there were additional sources of revenue for the Union.

Dr. Hayes noted that outside funding is raised for various IUPAC projects.

Prof. Pungor (Hungary) commented that he had expected the Treasurer would have proposals in response to the Czech proposal.

Prof. Shani (Israel) suggested that the solution is too drastic. He would like to see proposals in two years.

Prof. Nefedov (Russia) commented that IUPAC should be looking at increasing participation by small countries not just at decreasing the National Subscriptions.

Prof. De Bièvre (Belgium) suggested that the problem of developing countries participating in IUPAC needs to be part of any future studies.

Prof. Tabak (Brazil) noted that the subsidiaries of multinational companies often do not participate in supporting IUPAC membership of the host country.

Prof. Kebir (Egypt) asked why the Saudi NAO resigned. Dr. Hayes replied that the only reasons given were in the letter reproduced in the Agenda book.

On behalf of the Bureau, Dr. Becker then moved approval of an amendment to the Czech proposal. The proposed amendment is:

Council recognizes the severe financial problems encountered by many NAOs in meeting National Subscriptions, as described in the Bureau Position Paper, but does not believe that drastic changes should be made at present in current procedures. Therefore,

- Council directs that the present basis of calculation of National Subscriptions continue in lieu of the change proposed by the Czech Republic.
- 2. Council directs the President to appoint an *ad hoc* working group, as described in the Bureau Position Paper, to consider the relevant issues and make recommendations to the Bureau for its meeting in 2002 and for final action by Council in 2003 (Ottawa).

Dr. Hayes presented the following list as possible members of the proposed *ad hoc* working group:

Dr. C. F. Buxtorf, Chairman

Dr. E. P. Przybylowicz, *ex officio* as chairman of the Finance Committee Representatives from the following NAOs: Canada, Czech Republic, France, Germany, India, and New Zealand.

Prof. Berek (Slovakia) stressed the need to have representatives of both the rich and poor countries. Dr. Hayes replied that he would be happy to receive views on possible members both during the Council meeting and after.

Prof. Lamba (Puerto Rico) stated that the committee should have a member from Latin America.

Dr. Oro (Spain) agreed with the proposal of Prof. Lamba and suggested a representative from Brazil would be appropriate.

Prof. Den Boef (Netherlands) asked that the proposals from the *ad hoc* Committee be circulated to the NAOs after the 2002 Bureau meeting.

Dr. Hayes called for a vote on the proposed amendment. Council voted by cards. There were 117 votes for, 7 against, and 11 abstentions. The amendment was therefore passed.

Dr. Hayes then called for a vote on the proposal as amended. The proposal was passed with no votes against.

16.2. Proposal from the French National Committee (discussion only)

At the suggestion of the French delegation, no discussion was held on this item.

16.3. Resolution from UK National Committee

Dr. Smith presented the proposal of the UK National Committee, which commented on the change to a project-driven system and called on NAOs, Associate NAOs and Associated Organizations to propose ideas for projects, especially those of a multi- or cross-disciplinary nature. The proposal was seconded by Prof. Wilson (US). Prof. Collins (Brazil) noted her support of the proposal and asked that Division Committees be asked to consider all proposals seriously. Dr. Hayes called for a vote on the proposal. The proposal was approved with no votes against.

Given the interest in the process of submitting projects, Dr. Jost was asked by the President to give the Council an abbreviated version of a presentation made at an open meeting for members of IUPAC bodies.

17. Official Language of IUPAC (Statute 5.405)

Dr. Hayes asked for a vote. With no negative votes, English was approved as the Official Language of IUPAC for the next four-year period.

18. National Adhering Organization Status of Pakistan and Saudi Arabia

Dr. Becker reviewed the situation. The Council accepted with regrets the resignation of the Saudi NAO. Dr. Becker proposed that the NAO of Pakistan be informed that pursuant to Statute 9.2 the Pakistan Chemical Society will cease to be a member of the Union if payment of the National Subscription in arrears is not made in full.

Prof. Leigh asked what the situation would be if a partial payment were made. Dr. Becker replied that the Statute specifically states that partial payment is not sufficient.

Dr. Hayes asked for a vote on the motion. The motion was approved with no votes against.

19. Plans for 42nd General Assembly and 39th Congress (Ottawa, 2003)

Prof. McAuley, Chairman of the International Advisory Board for the 39th Congress, reviewed plans for the General Assembly and Congress. The Theme of the Congress was Chemistry at the Interfaces. This is intended to refer not only to the boundaries between the traditional subdisciplines of chemistry, but also to the increasingly important interfaces between chemistry and biology, physics, computers and medicine. Other important sets of interfaces are those with society and its concerns.

The Congress will be held in the Ottawa Congress Centre and the adjacent Westin hotel, while the General Assembly will be held at the Ottawa University Campus. The latter is a five to ten minute walk from the Congress Centre. The 86th Conference of The Canadian Society for Chemistry will be held in conjunction with the Congress.

The schedule for the General Assembly will be similar to that used in Brisbane with the General Assembly and the Congress running concurrently. The Congress will open on 10 August 2003 and close on 15 August 2003. The exact schedule of the General Assembly has not been determined but it will probably begin the Friday before the Congress, 8 August, with the Council meeting on the following weekend, 16-17 August.

Prof. McAuley noted that Ottawa has a very compact downtown and that most of the hotels for participants in the Congress and General Assembly were in walking distance of the Congress Centre. Opportunities for tourism before or after the Congress were abundant. Not only is Ottawa the capital of Canada and a tourist destination in its own right, but also the nearby areas of Ontario and Quebec offer varied opportunities for exploring the natural wonders of Canada.

20. Approval of Dates and Sites of 43rd General Assembly and 40th Congress (2005)

Prof. Bai of the Chinese Chemical Society, Beijing and Dr. Garcia Dominguez of the Oficina de Ciencia y Tecnología presented overviews of their proposals to host the General Assembly and Congress in 2005.

Prof. Bai began by noting the increasing role played by Chinese scientists in science in general and in chemistry in particular. He reviewed statistics for journal articles that demonstrated the significant contributions being made to the chemical literature by Chinese chemists. China has also hosted a number of major scientific meetings in the last decade, including a number of IUPAC sponsored Conferences. He then reviewed the proposed location for the Congress and General Assembly, the Beijing International Convention Center and the adjacent Beijing Continental Grand Hotel. The Convention Center will be the location for both the Congress and General Assembly. The Continental Grand Hotel has over 1200 rooms and 24 restaurants featuring both Chinese and other cuisines. Prof. Bai pointed that there was a wide range of other accommodation in the area, including inexpensive dormitory style housing.

The exact date of the Congress and General Assembly will be chosen in consultation with the IUPAC Officers, but a date in late August is suggested due to the very high summer temperatures in Beijing. The arrangement, whether concurrent or sequential, of the Congress and General Assembly will be decided by IUPAC after an evaluation of the success of the format used at Brisbane. The Beijing International Convention Center has a main lecture hall that will seat 2500 and a smaller hall that seats 596 that would be suitable for the Council meeting. Prof. Bai also emphasized the large

number of Universities in Beijing that would contribute to the expected large attendance for the Congress. He also noted the many historically and culturally significant sites not only in Beijing but also in other cities such as Shanghai and Shenzen that make China an attractive venue for outside participants.

Dr. Dominguez Garcia began by noting that the 28th General Assembly, 1975 and the 9th Congress had been held in Madrid. It seemed to be time for IUPAC to visit Spain again. He then described the proposed venue in Oviedo. The city is inland from the Bay of Biscay on the northwest corner of Spain. The city's situation in the hills and near the ocean gives it a very temperate summer climate. The Congress would be held at the Congress Palace, a comparatively new facility that has a large lecture hall for 1500 and smaller halls for meetings of from 500 to 250. The General Assembly would be held at the Faculty of Chemistry of the University of Oviedo. The Faculty has classrooms that could be configured for IUPAC committee meetings and lecture halls that could be used for the Council meeting. The preferred time for the Congress and General Assembly would be decided by the IUPAC Officers, as was mentioned in the discussion of Prof. Bai's presentation.

Dr. Dominguez Garcia noted the many locations of great historical interest in Oviedo and its surroundings, some dating from the time of the Visigothic kingdom of Asturias. Oviedo is a city that is very pedestrian friendly. There are a large number of hotels and restaurants in the central city with in easy walking distance of the Congress Palace. The Congress Palace itself is located at the edge of the restored old town center, which is a pedestrian zone with many sidewalk cafes. The Faculty of Chemistry is a short bus ride away from the city center. There are a number of hotels, restaurants, and shops conveniently located in the area. The nearby areas in Asturias and Galicia offer many opportunities for tourism, including not only historic locations, but also both beaches and mountains.

Dr. Hayes reported that the Bureau had recommended that the proposal from the Chinese Chemical Society, Beijing be accepted. The Bureau had also suggested that the Spanish NAO submit a proposal to host the 2007 General Assembly and Congress at the Ottawa Council meeting.

Prof. Tabak (Brazil) noted that a number of IUPAC conferences would be held in China in 2002.

Prof. Collins (Brazil) pointed out that there had been an IUPAC Congress in Beijing within the past ten years.

Dr. Hayes called for a vote on the two proposals. Voting was by a show of cards. The results were: 69 votes for the proposal from the Chinese Chemical Society, Beijing and 59 votes for the proposal from the Spanish NAO. The proposal of the Chinese Chemical Society, Beijing was therefore approved.

21. Election of Union Officers and Bureau Members and Approval of Elected Officers of Divisions

As required, the election for Vice-President was conducted by secret ballot. Dr. Hayes announced the results of the voting as follows:

Ohtaki 59 Sydnes 79 Abstentions 0

Prof. Leiv K. Sydnes was declared elected as Vice-President (President-elect).

The election for six members of the Bureau was held by secret ballot. Dr. Hayes announced the results as follows:

Bai:	106
Chandrasekaran:	96
Gilbert:	90
Gültekin:	27
Horvai:	48
Jönsson:	60
Moo-Young:	77
Przybylowicz:	112
Smith	80
Somsen	114

The total votes cast were 135, therefore candidates needed 68 votes to be elected, under the Bylaws. The six candidates with the most votes all had more than 68 votes; therefore, there was no need for a second round of balloting. Prof. C. Bai, Prof. S. Chandrasekaran, Prof. R. G. Gilbert, and Dr. A. Smith were elected to the Bureau. Dr. E. P. Przybylowicz and Prof. G. Somsen were reelected.

22. Review of Associated Organizations

Dr. Becker reviewed his paper in the Agenda Book and requested the continuation of the 32 current Associated Organizations, contingent on payment of fees due at the end of 2001. The motion was approved with no votes against.

23. Strategic Plan 2002-3

Dr. Przybylowicz reviewed the planned scope and purpose of the strategic plan update. He described the membership of the Committee, noting that most of the work will be done by e-mail. The Committee will have one meeting in November and present a draft report at the special Executive Committee meeting in December. Dr. Przybylowicz then described the SWOT (Strengths, Weaknesses, Opportunities and Threats) methodology the Committee would use to gather input for its work. He urged all those who received questionnaires after the General Assembly to complete them and return them so that the Committee would have as broad a base on which to base its recommendations as possible.

24. Adoption of Recommendations on Nomenclature and Symbols

Dr. Hayes noted that the delegates had received an updated list of recommendations approved by IDCNS since the last Council meeting. The Council was requested to approve the recommendations as presented. They were approved with no votes against.

25. Important Matters Discussed by Bureau at 41st General Assembly not Covered by Items on Council Agenda

There were no matters to discuss under this Item.

26. Any Other Business (discussion only)

Dr. Damhus (Denmark) expressed his concern as to the future role of IDCNS and requested a report. Dr. Becker replied by noting that IDCNS is relatively unaffected by the changes in organization. He then described the process for publication of IUPAC recommendations and the review of Technical Reports. Plans are being studied to restructure IDCNS so that the workload is more evenly distributed. The current system depends on the Chairman and Secretary to review all reports submitted for publication in *PAC*.

Prof. Cvitaš (Croatia), the Chairman of IDCNS, concurred that the workload on the Chairman is very large. He commented that the authors seem to appreciate the assistance of IDCNS. He also agreed that the review of reports is the larger burden by far and that the proposal being considered to have two designated reviewers for symbols and terminology and two for nomenclature is a good one. He asked that if any of the delegates had names to suggest he would be happy to have them. He noted that it would be good if the other articles published in *PAC* could be brought into conformance with IUPAC recommendations.

Dr. Becker noted that plans are being formulated to see if more resources can be allocated to do more editing of the material that goes into *PAC*.

Prof. Cvitaš commented that IDCNS would seek to establish strong links with the new Division VIII.

Prof. Leigh (UK) asked for better and earlier communication of material to the NAOs.

Prof. De Bièvre (Belgium) supported the comments on the importance of IDCNS. He informed the delegates that the "International Vocabulary of Basic and General Terms in Metrology" is being revised by the BIPM Joint Committee on Guides on Metrology and this needs IUPAC input. Prof. De Bièvre also suggested that the editors of key chemical journals be assembled to encourage the use of IUPAC nomenclature and terminology.

Prof. Collins (Brazil) pointed out that many of the delegates represent chemical societies that publish journals. Shouldn't it be the responsibility of those societies to ensure that their journals follow IUPAC recommendations?

Concluding Remarks

Dr. Hayes asked that Council give a vote of thanks to the Australian Organizers of the general Assembly and Congress. He also expressed his appreciation of the work done by the Secretariat staff. Dr. Hayes noted his gratitude for the continuing commitment of all members of IUPAC bodies over the past biennium. He thanked the delegates for their active participation in the discussion during the Council meeting. He also thanked the departing Bureau members, noting especially that Prof. Jortner would be ending his six years of service as an officer at the end of 2001. Dr. Hayes concluded by wishing Prof. Steyn well in his coming presidential term and asking him if he had any concluding remarks.

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Prof. Steyn commented that he would like to address the issue of gender equity in the delegations before the next General Assembly. He pointed out that the new Bureau would need to deal with the first years of the new IUPAC. He told the delegates that he is looking for input and asked that all the delegates fill out the SWOT forms when they receive them. He then expressed his great admiration for the work done by Dr. Hayes during his term as President and wished all the delegates farewell until Ottawa in 2003.