

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF 56th MEETING OF BUREAU

St. Peter's College, Oxford: 18th-19th September 1988

Present: Prof. V. A. Koptug (Chairman), Prof. M. T. Beck, Prof. A. Björkman, Prof. A. D. Campbell, Dr. Mary L. Good, Prof. W.-Y. Huang, Prof. S. Itô, Prof. Y. P. Jeannin, Prof. J. Jortner, Prof. G. Modena, Prof. C. N. R. Rao, Prof. N. Sheppard, Prof. H. A. Staab, Prof. I. Wadsö, Prof. T. S. West (Elected Members); Prof. K. I. Zamaraev, Prof. E. Fluck, Prof. Sukh Dev, Prof. T. Saegusa, Prof. G. H. Nancollas, Dr. P. C. Kearney, Dr. S. S. Brown, Prof. C. G. Wermuth (Division/Section Presidents); Prof. J. M. Thomas (CHEMRAWN Committee) - in part; Dr. D. Wyrsh (Committee on Chemistry and Industry)

Absent: Prof. A. J. Arvía

In Attendance: Prof. M. Chastrette (Chairman, Committee on Teaching in Chemistry) - in part, Dr. N. Koga (Secretary, Section on Medicinal Chemistry) - in part, Prof. E. Pungor/Mrs. M. Takács (Organizing Committee, 33rd IUPAC Congress) - in part, Dr. M. Williams (Executive Secretary), Miss A. Troughton (Deputy Executive Secretary)

1/88 INTRODUCTORY REMARKS AND FINALIZATION OF AGENDA

In opening the proceedings, the President welcomed Profs. Jortner and Staab to their first meeting as new Elected Members of the Bureau. He regretted that, due to family illness, Prof. Arvía was unable to attend.

The Agenda circulated by the Executive Secretary (88.09.02) was approved, but the order of discussion of some items was changed, in order to deal first with matters of high priority.

2/88 MINUTES OF 53rd-55th MEETINGS OF BUREAU

2.1/88 Amendments and Approval of Minutes

The Minutes of the Bureau meetings at Boston (circulated by the Executive Secretary 87.12.15, 88.01.12, 88.02.29) were approved.

2.2/88 Matters Arising from Minutes

2.2.1/88 Report of Study Group on Involvement of Chemistry in Biosciences
(Minute 4.2.2/87, 54th Bureau; see also Minute 2.2.1/88, 111th Executive Committee)

This matter was considered in conjunction with Item 4.1.

3/88 MINUTES OF 110th and 111th MEETINGS OF EXECUTIVE COMMITTEE

3.1/88 Receipt of Minutes by Bureau

The Minutes of the Executive Committee meetings at Boston and Moscow were recorded as having been received officially by the Bureau.

3.2/88 Matters Arising from Minutes

3.2.1/88 Proposed IUPAC-UNESCO Initiative in Latin America
(Minute 2.2.2/88, 111th Executive Committee)

The letter from the Secretary General (88.08.16) to Prof. Arvía and the latter's telex reply (88.08.31) were noted by the Bureau. Prof. West referred specifically to the Directive Council, as mentioned in the new programme proposal (88.03.17). Two of the six Council members were to be appointed by the Bureau, which would also be involved in selection of the other four members. Prof. West envisaged at least one of the two IUPAC members being drawn from within the Bureau, at least in the initial stages. He doubted if the draft budget (USD 4 500) for an annual meeting of the Council was realistic, bearing in mind that the two IUPAC members would almost certainly require high air travel costs to Latin America: there should be no expense to IUPAC. The Directive Council would receive from the National Focal Points proposals for activities under the programme, and it would review the progress of the activities once initiated.

The Bureau agreed to support the programme proposal, the Secretary General to inform Prof. Arvía accordingly, so that the proposal could be submitted for funding and technical assistance from relevant international agencies.

The Executive Secretary reported that ICSU was still trying to enlist a main national sponsor for the application for USD 25 000 from the UNESCO Participation Fund, in respect of the IUPAC Seminars/Visiting Professorships (IVPs) programme.

3.2.2/88 Continuing Dispute between Commissions I.3 and V.5
(Minute 2.2.7/88, 111th Executive Committee)

The Chairman of the Commission on Electrochemistry (I.3: Prof. G. Gritzner) had prepared a draft on the dispute. It was to be considered when the Commission met recently (Linz, 88.09.12-14), prior to submission to the President.

3.2.3/88 Brazilian Membership of IUPAC
(Minute 2.3.2/88, 111th Executive Committee)

Notification had been received that, on 88.06.24 in Rio de Janeiro, representatives from the four major chemically-orientated learned societies

Associação Brasileira de Química
Associação Brasileira de Engenharia Química
Associação Brasileira da Indústria Química e de Produtos Derivados
Sociedade Brasileira de Química

had signed a document creating, and with terms of reference for a Brazilian Chemistry Committee for IUPAC. The Conselho Nacional de Desenvolvimento Científico e Tecnológico was ready to assume responsibility for paying the annual subscription to the Union already in 1988, following the resolution of Council at Boston (Minute 20/87, 34th Meeting). The Bureau agreed to recognize the Brazilian Chemistry Committee for IUPAC as officially constituting the NAO of the Union for Brazil.

3.2.4/88 Proposal for IUPAC Initiative to meet Problems Connected with Adverse Effects of Chemical Compounds
(Minute 5.6/88, 111th Executive Committee)

It was planned to consider this matter in conjunction with Item 4.1 but, in the

event, it was taken separately.

Prof. Wadsö summarized his proposal, which advocated the creation by IUPAC at Lund of a Standing Committee to engage in the problems, in the widest sense, caused by the production and use of chemical compounds. The Executive Secretary was concerned at the potential overlap with work already in progress under the United Nations Environment Programme, ICSU, and other organizations. Prof. West mentioned the ICSU deliberations a few years ago on the safe disposal of toxic wastes, which had not proceeded beyond 1986, as a possible topic.

Following preliminary consideration of the proposal by the Executive Committee at Moscow, it had been referred for comment by COCI and some other IUPAC bodies. Dr. Wyrsh indicated that this would be done when COCI met shortly (Basle, 88.09.25). However, he stressed that the size and cost of what was proposed should not be underestimated. Prof. Wadsö felt that it was important for the Union to take a lead to collect information and to distribute it, with advice, to developing countries. In this respect, Prof. Nancollas said that a critical evaluation of rules existing in developed countries would be needed, before any advice was made to developing countries.

As a start, the President suggested that it would be helpful to publish in CI information on existing international (even regional and national) bodies, programmes, and activities relevant to the subject. The Secretary General said that this might possibly be started off by the IUPAC Secretariat, but Dr. Wyrsh pointed out that it was an enormous task.

3.2.5/88 Proposed Eligibility of Affiliates from Non-Member Countries for Participation in IUPAC Subcommittees
(Minute 6/88, 111th Executive Committee)

In the spirit of trying to increase their participation in the activities of the Union, the Executive Committee at Moscow had recommended to the Bureau, that Affiliates from non-Member countries should be eligible for membership of subcommittees of IUPAC bodies (i.e. working groups/parties, task groups, etc.). Prof. Saegusa reported that, on the assumption that Affiliates were able to offer relevant expertise, the Division Presidents at Oxford on the previous day (Minute 3.1/88) gave their unanimous support to the recommendation. The recommendation was accepted by the Bureau, and it would become effective immediately. The Officers of Divisions and Commissions should be notified of this new decision in time for the General Assembly at Lund.

3.2.6/88 Application for Membership by Nigeria
(Minute 7.1/88, 111th Executive Committee)

Noting that the Chemical Society of Nigeria had been an Observer Country since 1986, the Bureau approved the proposal of the Executive Committee, that Council at Lund should be recommended to accept the application of the Society (88.02.01) for full Membership of the Union.

3.2.7/88 Union of International Technical Associations
(Minute 7.3/88, 111th Executive Committee)

Further to the deliberations of the Executive Committee at Moscow, the Executive Secretary reported that no international council of chemical industries associations or similar body seemed to exist. ICSU had advised that its experience of working with UITA since 1976 in the joint Committee on Water Research was not impressive. Further, the possible amalgamation was under consideration of UITA with the World Federation of Engineering Organizations (nationally based by country, unlike UITA). IUPAC should wait and see what

happened over the next two years: if the amalgamation was successful, the resulting body should be more like ICSU, and hence acceptable to IUPAC. The Bureau decided to defer a decision about IUPAC joining UITA, pending the outcome of the amalgamation of UITA with WFEO.

3.2.8/88 International Organization for Chemical Sciences in Development
(Minute 7.4/88, 111th Executive Committee)

Further to the deliberations of the Executive Committee at Moscow, the Secretary General had accepted an invitation to attend the next meeting of the IOCD Executive Committee (London, 88.10.24-25), in order to consider some preliminary steps of cooperation with IUPAC. The Bureau approved the proposal of the IUPAC Executive Committee, that Council at Lund should be recommended to accept the application of IOCD (88.04.18) for Associated Organization status of the Union.

3.2.9/88 International Centre for Chemistry
(Minute 7.5/88, 111th Executive Committee)

Some background information was now available on the purposes, activities, and funding of the International Centres for Theoretical Physics (Trieste, 1964) and for Pure and Applied Mathematics (Nice, 1978), and about the creation of an International Centre for Chemistry. Prof. Rao said that the Director of ICTP (Prof. A. Salam) had already called a meeting, with the participation of some international chemists, to discuss an ICC. Prof. Modena had attended the meeting, actually convened by the Third World Academy of Sciences (located at ICTP), which had received some funding from the Italian government. A number of new Centres of excellence were envisaged (on advanced materials, pure and applied chemistry, earth sciences, etc.), to help in the education, training, and provision of research facilities for young scientists from developing countries. Short courses were likely to be held on kinetics, catalysis, instrumentation in organic chemistry, etc. Prof. Rao advised against any official approach by IUPAC to Prof. Salam on the matter, and it was agreed to wait for Profs. Rao and Modena to report back to the Bureau.

4/88 IUPAC BODIES

4.1/88 Reports of Division Forward Activity Planning Groups, including Future of Committee on Teaching of Chemistry (Minute 7.8/87, 54th Bureau; see also Minute 2.2.6/88, 111th Executive Committee)

The Division Presidents were invited to make short summary presentations of the precirculated reports (with updates) of their Division Forward Activity Planning Groups (see Appendix A, which also covers the ensuing Bureau discussions, including Item 2.2.1; Minute 3.2/88, Division Presidents - Oxford, includes discussion on the future of IUPAC-CTC).

The President attempted to summarize the main points emerging from the Bureau discussions:

- the image of chemistry and the role of IUPAC within ICSU/with other international scientific unions were both decreasing: IUPAC needed to react positively, and restructure as necessary
- however, the Division Forward Activity Planning Groups, in general, proposed only a slow evolutionary change in structure

- because some Divisions had few and others had several Commissions, perhaps the Divisions should be allowed more freedom in how to accomplish their new ideas, i.e., restructuring within the individual Divisions
- the challenge was how to increase IUPAC activity in respect of new frontiers, proposals from industry, etc.; it should be borne in mind that there were some common divisional themes, like nomenclature and symbols
- chemistry and biology was only one of the major issues at stake: in some cases, the current Division Presidents could be asked to take action, while in other cases it would be necessary to create a new 'Standing Committee'
- IUPAC activity and external relationships were particularly poor for chemistry and the environment; he was much impressed by the work of the United Nations Environment Programme and its recommendations: IUPAC's Officers might well meet with UNEP to ascertain if there was any role for our Union, but the Officers would first need to be well briefed
- IUPAC should identify (from chemistry and safety, electronics, advanced technologies, informatics, materials, etc.) at least three major interdivisional ('horizontal') areas, in which it might play a significant role
- it was desirable for the Bureau (or Executive Committee acting for it) to become more responsible for the selection of initiatives in new directions, and to ascertain the financial implications, i.e., to act as a central "think tank"
- the Secretary General should prepare expeditiously a memorandum for circulation to and comment by the Bureau: it was important to make some progress by Lund

The following Bureau Members agreed to assume responsibility for implementing some of the new ideas, for which there was already a consensus:

- Prof. Zamaraev for a series of monographs under the heading "Chemistry for the 21st Century", covering new frontier areas of chemistry, and with some volumes to be in collaboration with other international scientific unions; he asked for assistance in a working group from Prof. Thomas (CHEMRAWN aspects), Prof. West (ICSU aspects), and Dr. Good (ACS aspects); the Bureau minuted its debt to Prof. Rao for coordinating the monograph ('symposium-in-print') on Chemistry and Oxide Superconductors, which have been published within one year from the concept at Boston
- Dr. Good for new and advanced materials
- Dr. Brown for chemistry and safety; he drew attention to the monograph currently being produced jointly by IUPAC and the WHO International Programme for Chemical Safety (Minute 8.2/88, 111th Executive Committee), and to the concern of the Clinical Chemistry Division on the whole subject of risk assessment

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On the second day of the Bureau meeting, the Secretary General distributed a memorandum on restructuring, which he had drawn up on the basis of the deliberations the previous day. The memorandum had been considered briefly by the Executive Committee on the previous evening, and the submission of comments in writing to Prof. West was invited from Bureau Members within ten days.

4.2/88 Reports of Division Presidents on Activities since Boston

The reports (Statute 5.406) had been precirculated, and they were taken as having been read by all Bureau Members before coming to Oxford.

4.3/88 Vice-Presidential Critical Assessment of IUPAC Projects and Programmes (Minute 5.5/88, 111th Executive Committee)

The Vice-President said that it was impossible for him to be an expert on all aspects of chemistry and to assess the scientific aspects of all IUPAC projects and programmes. Furthermore, he had not yet considered the reports of Division Presidents on activities since Boston (Minute 4.2/88), which he had received only recently. His conclusions were therefore based largely on the submitted project revision sheets, which were poorly completed in many cases. He hoped to make a few suggestions in this respect to improve the situation for the next Vice-President. Meanwhile, he had prepared a provisional evaluation for each Division President at the personal interviews held at Oxford prior to the Bureau meeting, and requested the submission of comments/corrections by 88.10.31 in order to finalize his critical assessment by the end of the year. Two Division Presidents had disagreed with his provisional evaluations.

Prof. Jeannin's general conclusion was that much active project work was going on in the Union. However, there were too many projects in some Commissions, and some were incomplete after being initiated several years ago. Division Presidents had been asked to investigate all projects started before 1980. Unfortunately, some projects were abandoned too late or without obvious reason. "One man, one project" sometimes caused problems on retirement from membership. Outside experts should be recruited if a Commission no longer had the relevant expertise.

There appeared to be a communication difficulty for interdivisional Commissions (kinetics, photochemistry, radiochemistry, biotechnology), and also to communicate outside the Union (ICSU International Geosphere-Biosphere Programme: Minute 4.1/88 and Appendix A). Comments had recently been received from observers at Boston appointed by the US National Committee for IUPAC, and these would be passed on to the relevant Commissions. He agreed with Prof. Rao (Appendix A) that, whatever restructuring was envisaged, Divisions should not simply drop their existing projects.

Regarding interdivisional Commissions, Prof. Sheppard wondered if, for say kinetics, it might be better simply to have Members only from Division I and to coopt experts as necessary from elsewhere. The Executive Secretary said that this could lead to financial problems for meetings. Prof. West pointed to multi-commitments of some persons also preventing their participation in all relevant meetings at the General Assembly: perhaps interdivisional bodies should meet immediately prior to the Assembly. Prof. Modena suggested that each Division might be allocated a budgetary sum for interdivisional activities.

4.4/88 Report of Committee on Chemistry and Industry, including IUPAC Workshop on Safety in Chemical Production (Minute 2.7.1/88, 111th Executive Committee)

A second position paper on the Workshop, together with a more detailed programme outline, completed Advance Information Questionnaire, and draft budget, had been precirculated. Dr. Wyrsch indicated that a detailed list of speakers would not be available until after the next meeting of the Workshop Committee (88.11.14). The organizers were convinced that the question of protection of the general public was treated much more competently by other bodies than by IUPAC, e.g., OECD and UNEP. IUPAC must make a unique contribution through the Workshop,

otherwise it would not receive the necessary support from industry. There was to be further discussion whether safety education in universities was relevant to safety in chemical plants. Also, care was being taken to ensure adequate participation from East European countries.

Dr. Good strongly recommended the early involvement of US chemical industry and from other countries outside Europe (Japan) in the arrangements, in order to ensure their support and participation. Prof. Sheppard was happier now that more programme details were available, but he felt that the first-day programme was too concentrated. The President asked about the relationship to CHEMRAWN, and Prof. Thomas said that Profs. J. B. Donnet and E. J. Grzywa had been appointed as liaison representatives to the Workshop Committee. Regarding publications from the Workshop, Dr. Wyrsh thought that a perspectives and recommendations volume might be issued as for CHEMRAWN Conferences.

The Bureau agreed to grant the official sponsorship of the Union to the Workshop. Although the use of IUPAC funds was not anticipated, on the recommendation of the Treasurer it was further agreed by the Bureau, that the IUPAC guarantee against any deficit liability for CHEMRAWN Conferences (Minute 2.4.1/86, IUPAC Officers - New Delhi) should apply also to the Workshop.

Dr. Wyrsh mentioned that since Boston COCI had played an active part in identifying candidates for membership of the new Section on Medicinal Chemistry. At its forthcoming meeting (Basle, 88.09.25-26), COCI would also be discussing the proposal of the Finance Committee (Minute 5.5/88, Zürich meeting) to increase the CA subscription unit from USD 350 to 450. COCI was concerned at the heavy loss of CAs in USA during 1987: a more attractive brochure was needed on IUPAC's merits for industrial companies.

4.5/88 Report of CHEMRAWN Committee, including Plans for Conference on Atmospheric Chemistry

CHEMRAWN offered a unique possibility to improve the image of chemistry, particularly with the general public and government. Too often today specialists were simply speaking to specialists.

In order to proceed as quickly as possible with organizing the next CHEMRAWN Conference, a subcommittee had met recently (Wilmington, 88.08.20-21), and issued a detailed proposal for CHEMRAWN VII: The Chemistry of the Atmosphere - Its Impact on Global Changes. The proposal was tabled by Prof. Thomas, and received with interest by the Bureau. Prof. J. G. Calvert (Chairman, Commission on Atmospheric Chemistry) was to chair the Programme Committee. A location in North America was advocated, possibly during 1990, and the involvement of UNEP, World Meteorological Organization, and ICSU, was foreseen. A general IUPAC-CHEMRAWN press release, announcing the Conference, should be issued within the next two months or so. Prof. Nancollas drew attention to the existing atmospheric environment programme of the Analytical Chemistry Division. Dr. Kearney was worried if 1990/1 would be too late for a CHEMRAWN Conference on atmospheric chemistry to make any impact. However, the consensus in the Bureau was that other present initiatives should by then have progressed sufficiently, for CHEMRAWN VII to provide a valuable overall forum.

At its next meeting (Montreal, 89.04.22-23), the CHEMRAWN Committee would be considering other possible major topics (waste as a raw material, CHEMRAWN II followup on post-harvest technology) in order to initiate CHEMRAWN VIII. Prof. Koptug said that the Soviet government was now giving priority attention to ecological problems, and he suggested protection of the environment as a pertinent CHEMRAWN theme for a Conference in USSR during 1991/2. Dr. Good advocated emerging technologies for cleaning up the environment as the focus.

Another main theme put forward by Prof. Rao was chemistry and energy production. Furthermore, one of the future Conferences should be held in a less developed country.

Prof. Thomas indicated that active consideration was now being given to a paper by Prof. M. Gardiner (CTC, 1983) on the potential use of CHEMRAWN material for educational purposes. The possible involvement of IOCD in CHEMRAWN programmes was to be discussed shortly with the IOCD Executive Committee (Minute 3.2.8/88).

4.6/88 Report of Section on Medicinal Chemistry (Minute 2.1.2.1/88 and Appendix A, 111th Executive Committee)

Prof. Wermuth reported briefly on the progress since the appointment of Officers for the new Section. Their recommendation to fill the remaining vacancies on the Section Committee with:

Prof. R. G. Glushkov (USSR)
Prof. A. V. Rama Rao (India)
Prof. H. König (FRG)

was approved by the Bureau. It was proposed to convene a meeting of the Section Committee at the end of 1988 or early in 1989. A working party on computer assisted molecular modelling, of the now defunct Provisional Section, would publish its conclusions (publication guidelines, software/hardware surveys) outside the Union. However, future reports from the new Section should be issued in PAC, with simultaneous publication elsewhere if required. The Secretary General reminded the meeting of the views from Boston [Minute 14(i)/87, 34th Council], that the initial activities should be restricted to those which were specified, in order to demonstrate that the Section could quickly and successfully complete IUPAC-type project work.

There was some discussion about the present status of the International Committee on Medicinal Chemistry. In addition, Prof. Wermuth indicated that the European Federation for Medicinal Chemistry was searching for a strong role, and had been critical about lack of consultation on the membership of the new Section. Dr. Wyrsh stressed that the most important factor was for the Section to develop a high quality work programme.

4.7/88 Minutes of Committee on Chemical Databases
(Minute 2.8.1/88, 111th Executive Committee)

The Minutes of the meeting at Bolzano (88.05.20) were recorded as having been received officially by the Bureau.

Having reviewed the file on the matter, Dr. Good was no longer worried about the granting by IUPAC of exclusive licences for the initial dissemination of IUPAC databases as diskettes for personal computers, including search and retrieval software, e.g., enthalpies of vaporization. It was clear that CCDB favoured a policy of non-exclusive licences to on-line vendors, so that IUPAC databases, together with many other sources of chemical information, would also be accessible on international networks.

Prof. Jeannin was concerned at the slow progress with the compilation of conductance data, started before 1976 by the Commission on Electrochemistry. However, the Treasurer had recently approved payment of about USD 6 000 for computer equipment, in order to finish off the personal computer version of this database during 1989.

Prof. Wadsö raised the question of data compilers who, rather than work through

IUPAC, preferred to collaborate directly with data distributors in order to receive part of the royalties. He was requested to refer the matter to CCDB, and to report back to the Bureau on the outcome. The Executive Secretary hoped that a vital factor would continue to be the critical evaluation of data compilations carried out by IUPAC Commissions. The Treasurer pointed out that income arising from investments in databases from IUPAC assets was to be returned to the assets.

Dr. Good and the Executive Secretary felt that Prof. Wadsö's question had wider implications for the future of voluntary work within IUPAC as a whole. Profs. Thomas and Staab asked about remuneration, so as to attract top authors for the proposed series of monographs on "Chemistry for the 21st Century" (Minute 4.1/88).

4.8/88 Minutes of Committee on Publications
(Minutes 8.1 and 8.3/88, 111th Executive Committee)

The Minutes of the meeting at Oxford (88.07.13-15) were recorded as having been received officially by the Bureau.

The Bureau noted requests from Blackwell Scientific Publications for increases in pricing of books and in subscription rates for PAC and CI in 1989. So far the Publications Committee had only briefly considered the concern of the Executive Committee whether BSP had increased IUPAC book sales compared to Pergamon. However, it was pressing BSP to issue cheap flexicover editions of the latest Green and Orange (and forthcoming Red) Books, for which the IUPAC royalty and discount to IUPAC bodies would need to be waived. Arrangements had recently been made for BSP to take over all production aspects of PAC from the Scientific Publications Secretary: Mr. Gujral must spend much less time in future, processing camera ready material, in order to deal expeditiously with his various publication responsibilities. It was to be regretted that no 1987 index for PAC had yet been published.

The Secretary General was concerned about some statements made in the Minutes on the disbursement of the annual travel grant from BSP, and especially about the tone of comments on CI. In future, the Chairman of the CI Editorial Advisory Board should be present at Publications Committee meetings, to ensure that accurate unbiased views about the news magazine were made to the Committee.

There was much interest within the Bureau in respect of the evaluation by the Publications Committee of the impact of PAC on the chemical community at large. Dr. Brown, who had raised the matter originally with the Division Presidents at Boston (Minute 5.1/87), was adamant that 926 paid subscriptions in 1987 in no way could be construed as a major impact. Dr. Good was also critical about the level of subscriptions and impact of PAC. She felt that the comparison (via SCI Journal Citation Reports) with primary journals was unjustified, because PAC was a tertiary publication, and a poor one at that.

Unfortunately, the Publications Committee discussions about lists of Commission reports for CI did not convey clearly what transpired. The suggestion by Dr. E. D. Becker was actually to set up databases for IUPAC Commission recommendations on nomenclature and symbols and for symposia material issued in PAC. This would provide a useful service and help to publicize the journal. Prof. Sheppard said that compilation of an up-to-date listing of N/S recommendations had been supported at the recent meeting of IDCNS (Oxford, 88.09.09-10). A listing could be assembled relatively easily by checking back through PAC to its start in 1960. Also, he expressed concern whether BSP was publicizing IUPAC material sufficiently widely throughout the world. Prof. Saegusa reiterated his suggestion (Appendix A) for mention of the contents of PAC issues in national

chemistry news journals. Some reservations were expressed that this could be construed as free advertising for BSP, but the Bureau decided to refer the suggestion to the Publications Committee.

4.8.1/88 System for Literature References in Publications

Following the original request of the Executive Committee (Minute 17.4/83, 103rd Meeting - Lyngby) for the Publications Committee to look into the possibilities for a common system for literature references in publications, a discussion paper had been issued in CI [1986, 8 (4), 10-12]. A recent statement by the Publications Committee (88.08.11) was considered by the Bureau, with the recommendation that IUPAC should not endorse a single style or format for references. There was general support for publication of the statement in CI (not in PAC), but subject to the omission of certain sections of the statement. The views of IDCNS were still awaited (Minute 8.1/88, 111th Executive Committee). Meanwhile, no decision was taken by the Bureau whether any further discussion of this subject was needed.

4.9/88 Matters Arising from Division Presidents Meeting at Oxford, including Statutes and Bylaws Problems (Minute 5.4/88, 111th Executive Committee)

Prof. Saegusa reported that the proposals for statutory change, as requested by the Executive Committee, had been considered by the Division Presidents on the previous day (Minute 3.5/88). They supported the proposed changes 1 and 2 (second alternative) to Bylaw 4.103. Regarding changes 4 and 5 (Bylaws 4.104 and 4.303), the Division Presidents were unanimously in favour of allowing new Division and Commission Officers to be chosen from among the newly elected and existing Division Committee and Commission Members. The Union should recruit the very best person for a particular office, irrespective of whether that person had any previous experience on the relevant IUPAC body. Consequently, proposed change 3 (Bylaw 4.103) might not now be important. The Division Presidents were also in favour of maximum flexibility for the period of service of Commission Officers (Bylaws 4.303 and 4.304), and against similar limitations to those for Division Officers. Proposed change 6 was therefore unnecessary. Concerning the suggestion for new Members of IUPAC bodies to start their period of service from 1st January of the year following their election at a General Assembly (Statute 4.2), there was broad support from the Division Presidents.

The Bureau noted the views of the Division Presidents, and requested the Secretary General, in conjunction with the Executive Secretary, to amend the proposals accordingly. If possible, the changes should be presented for approval by Council at Lund.

4.10/88 Re-evaluation of Presidential Rulings (Minute 5.4/88, 111th Executive Committee)

The Executive Secretary tabled a list of Presidential rulings, extracted from minutes of meetings of the Executive Committee/Division Presidents/Bureau/Council held since the major revision of Statutes and Bylaws in 1975. The Secretary General, in conjunction with the Executive Secretary, was asked to evaluate the need for appropriate statutory changes, and to come forward with recommendations to the next meeting of the Executive Committee (Bureau).

4.11/88 Membership of Finance Committee

The Bureau noted that Dr. H. F. Wilson (Chairman and ordinary Member) and Dr. W. Fritsche (ordinary Member) would complete their periods of service at the end of 1989. At the same time, Dr. V. L. Roubailo (ordinary Member) would complete

his first term of four years. The Treasurer had been asked (Minute 2.5.10/88, 111th Executive Committee) to make some informal contacts for filling the vacancies, bearing in mind that a new Treasurer would also be required in 1992. In addition, the Bureau Members were invited to make suggestions for consideration by the President (Executive Committee) in filling the vacancies.

4.12/88 Ratification of Memberships Approved by Correspondence

The appointment, made through correspondence by the President since Moscow (Minute 5.2/88, 111th Executive Committee), of Prof. R. M. Hollingworth as an Associate Member of CTC representing the Applied Chemistry Division, was ratified by the Bureau. The written nomination by Prof. Nancollas on 88.09.02 of Prof. J. Jordan, as the Associate Member for the Analytical Chemistry Division, was held up in the current UK postal strike, but it was noted by the Bureau.

Pending any decision on the restructuring of CTC (Minute 4.1/88), the current Associate Members representing the various Divisions of the Union would continue until Lund. However, in most cases there would be very little effective collaboration, unless current Division funds enabled them to attend the CTC meeting at LUnd.

4.13/88 Nominations of New Members

The Bureau approved the appointment of Prof. J. F. G. Vliegthart (IUB) as Chairman of the IUB-IUPAC Joint Committee on Biochemical Nomenclature from 89.01.01. The Executive Secretary indicated that there was currently an unfilled vacancy on JCBN for an IUPAC Member, and Prof. J. Reedijk (IUPAC) would complete his maximum period of service at the end of 1989. Dr. A. Cornish-Bowden (IUPAC) was expected to resign as Secretary during 1989, but to serve out his membership to 1991.

5/88 FINANCIAL MATTERS

5.1/88 Treasurer's Report

Under this item the Treasurer reported only that problems for some NAOs in adapting to the Leuven/Lyngby/Lyon national subscription scheme, had now mostly been settled. However, Romania and Turkey were under one-year sanctions (Statute 9.2) for non-payment of their 1986 subscriptions, and Ireland had recently questioned its chemical turnover figure. An overpayment of subscription by Australia during 1983-7 was in process of being settled.

5.2/88 Use of Soft-Currency IUPAC Funds (Minute 2.5.2/88, 111th Executive Committee)

The Bureau noted that AMS subscription monies were being accumulated, under full control of IUPAC, in Eastern Europe (Bulgaria, Czechoslovakia, Hungary, USSR) on behalf of the Union. The President had confirmed that the relevant NAOs must each identify bona fide ways to utilize these monies for IUPAC budgetary purposes, thereby ensuring that IUPAC did not suffer financial loss. The Treasurer said that arrangements were being made to use the monies held in Hungary and USSR, but there were difficulties in the case of Czechoslovakia. Furthermore, part of the Bulgarian national subscription for 1987 had been contributed as national currency, and used to facilitate the participation of the IUPAC Information Officer in the IUPAC Congress that year at Sofia.

5.3/88 Need to Increase National Subscriptions/Company Associate Unit
(Minutes 2.5.3 and 2.5.6/88, 111th Executive Committee)

The Treasurer said that, by the end of 1989, the total national subscriptions income would have remained virtually at the same level for six years. A main reason for this favourable state of affairs had been the increased income from assets (interests and dividends) and publications. However, the financial predictions were for continued inflation worldwide and less income from assets, which had been comfortably large during a number of years, but were expected to decrease as a result of the budgeted deficit for the biennium 1988-9. In addition, some IUPAC bodies tended to be starved of funds, new activities had been decided (Section on Medicinal Chemistry) and others were being considered under restructuring (advanced materials), and provision should be made to enhance the commencement of a new period of CHEMRAWN endeavours. Therefore, Prof. Björkman felt that the 1990-1 budget must include a rise, say up to 10%, in total national subscriptions. The rise could be covered in part by increasing the CA subscription unit (Minute 4.4/88), which had remained unchanged since 1982.

Prof. Rao felt that difficulties would arise due to rapidly changing currency exchange rates. However, the Treasurer reconfirmed that he intended to propose, for consideration by the Finance Committee, the "freezing" of the US-dollar at the exchange-rate levels applicable at the time of the Council budget approval. Prof. Sheppard drew attention to the recent resolution from UK for ICSU to recommend strongly to all international scientific unions not to seek an increase in national subscriptions if their assets exceeded biennial expenditure. The Treasurer anticipated that, by the end of 1989, IUPAC assets could have decreased to this level, which was in line with IUPAC's own policy of maintaining its assets. Prof. Jeannin pointed out that most other unions had much lower subscriptions than IUPAC, and it was increasingly difficult nationally to meet any rise requested by IUPAC. Dr. Good emphasized that chemistry was unique amongst the unions in having a large and well defined industry, which was able to contribute to national subscriptions via the CA scheme.

The President concluded that there were strong arguments for seeking to raise national subscriptions at Lund. The Bureau agreed that the Treasurer should circularize NAOs and give an early warning on the matter.

5.4/88 Guidelines for Handling Costs for Travel and Subsistence
(Minute 2.5.4/88, 111th Executive Committee)

The Treasurer referred to his precirculated memorandum (88.08.28), which attempted to clarify the various items involved, and he tabled an actual list of items. He hoped to reach consistency in the use of money by issuing IUPAC bodies with a set of guidelines, thereby improving on the present rather ad hoc procedures. No objections to or criticisms of the principles outlined by Prof. Björkman, were raised by the Division Presidents at Oxford (Minute 3.3/88), and they had recommended him to draft the guidelines accordingly.

Prof. Campbell stressed that a good travel agent could reduce costs considerably in many cases, but Prof. Nancollas said this was difficult for short duration meetings. Prof. Rao had reservations about the general proposal to pay subsistence for extra days at a two-day meeting, even if there was an overall saving on travel. In any case, Prof. Staab felt that most people were too busy to stay for extra days.

5.5/88 Financial Review of Chemistry International

At Moscow (Minute 2.5.5/88, 111th Executive Committee), with the support of the Treasurer and Finance Committee, the Secretary General had suggested that it might be appropriate for the Union to make provision in future general purposes budgets, of say USD 25 000 per biennium, for publicity and information on its activities. On the basis that CI, through AMS, was the Union's main mechanism for disseminating the information worldwide, Prof. West recommended that the budgeted money should be invested in the production of CI.

In order to justify the provision, the Secretary General outlined, with the help of overhead projection transparencies, costings for production and distribution of a less sophisticated information piece (like Royal Society News or ICSU's Science International) as an alternative to CI. His conclusion was that the proposal to add USD 12 500 to the annual budget constituted only 10% of the cost of the alternative mechanism. Prof. West stressed that the CI/AMS mechanism was an investment in engaging the attention of chemists, not only in IUPAC member countries but above and beyond that in about fifty developing countries, and a mechanism much envied by other unions. The proposal was likely to increase the involvement of chemists and to raise the visibility and credibility of IUPAC, not only amongst chemists but amongst other scientists.

Profs. Campbell and Sheppard spoke in favour of maintaining CI, and the Bureau agreed to recommend to Council at Lund, that USD 25 000 per biennium should be provided for IUPAC publicity and information.

5.6/88 Computerized Financial Accounting at Secretariat (Minute 2.5.7/88, 111th Executive Committee)

The Treasurer said that the intention was to set up an accounting system at the Secretariat, which allowed full statements (management accounts) to be issued at any reasonable time of the year. The system should also allow other reports of interest to be retrieved. The formal accounting and audit, as well as handling of the assets and payments of income, must remain in Zürich so as not to invalidate the Union's tax-free status in Zürich and Oxford.

Following preliminary advice from a management accountancy expert from the Royal Society of Chemistry in London, a detailed report had recently been received for a software system to handle the accounting with the COMPAQ computer in the Secretariat. The report was to be considered in detail with, and the software demonstrated to the Secretariat staff early next month. Although fully committed to the principle of an improved accounting system, the Executive Secretary reiterated his concern about a potential increase in costs and bureaucracy to the Union.

5.7/88 CHEMRAWN Rolling Fund (Minute 2.6.2/88, 111th Executive Committee)

The Treasurer estimated that the Rolling Fund would amount to about USD 20 000 by the end of 1988 (about USD 14 000 carried forward from 1987 plus USD 5 000 provided from IUPAC budget 1988-9 plus USD 6 000 return of seed money from CHEMRAWN IV, less about USD 5 000 expenditure in 1988). It was hoped that CHEMRAWN VII (Minute 4.5/88) might, in due course, provide a contribution to the Rolling Fund. Meanwhile, in order to enhance the commencement of a new period of CHEMRAWN endeavours, the Treasurer suggested that the Union should budget USD 10 000 for the biennium 1990-1.

5.8/88 Trust Fund for International Newsletter on Chemical Education

A decision on the proposal to set up a trust fund had been deferred by the

Executive Committee (Minute 2.9.1/88, 111th Executive Committee). Prof. West and Dr. Good reiterated the suggestion for CTC to include provision for the Newsletter in its budget request for 1990-1. The future format of CTC was then not so relevant, because the Newsletter could, if necessary, be stopped quickly.

5.9/88 Proposed Paolo Franzosini Fund
(Minute 3.1/88, 111th Executive Committee)

The Treasurer reported that he and the Solubility Data Commission were now ready to incorporate monies arising from SDS Vol. 33 (about USD 5 500) with the IUPAC assets, at a fixed rate of interest of 8.5.% for five years (level of interest then to be reviewed). Dr. Good said that the American Chemical Society operated a number of similar small funds within its general assets, and she would like to see such initiatives encouraged within IUPAC. The Bureau approved the proposal to create the Paolo Franzosini Fund.

5.10/88 Budget Procedure 1990-1 (Minute 3.2/88, 111th Executive Committee)

The Treasurer had presented his revised schedule for the 1990-1 budget procedure to the Division Presidents at Oxford (Minute 3.4/88). After consulting the Chairmen of their Commissions in respect of their financial needs for A- and B-programmes, the Division Presidents were required to submit their Divisional budget requests to Prof. Björkman by 88.12.15. The Chairmen of Standing Committees would be invited to present their budget requests by the same deadline. Pre-allocation figures would be circulated, following a meeting of IUPAC Officers in April 1989. Confirmation of their previous requests plus any revised or new demands was now envisaged at Lund, prior to approval of the 1990-1 budget by Council. Final allocations would be made by 89.11.30. If some major restructuring of the Union would be anticipated at decisions at Lund, an alternative budget might be necessary.

5.11/88 Proposed Grant for IUPAC-sponsored Symposia
(Minute 9.4/88, 111th Executive Committee)

The Treasurer reminded the Bureau of the recommendation by the Publications Committee at Boston [Minute 12.1(iv)/87, 54th Bureau] that, for a two-years trial period and subject to a maximum of USD 70 000, a sum of USD 1 000 should be granted to each IUPAC-sponsored symposium, provided publication aspects were resolved to the Union's satisfaction. This would counteract the financial inducements of other publishers for traditional IUPAC material, and hopefully attract additional high-quality meetings to the Union.

The Secretary General reiterated his concern that there were often considerable delays in reaching agreement about publication responsibility after sponsorship was granted, so that actual payment of the USD 1 000 might be made too late by IUPAC to influence symposia organizers. Furthermore, Prof. West stressed that the Secretariat had no time to spend on handling even more symposia material: greater emphasis was needed in expediting other priority publication matters. In his opinion the USD 70 000 could be spent advantageously elsewhere within the Union. At Moscow the Executive Committee had reaffirmed its previous guidance on publication philosophy and policy [Minute 3.7.1(ii)/83, 102nd Meeting - Tokyo], namely for wider dissemination of IUPAC publications (through lower prices) rather than maximization of income.

Prof. Sheppard observed that there was no apparent lack of symposia material for PAC, and even some doubts about the inclusion of too much already in the journal. Prof. Saegusa was also against the recommendation, despite increasing pressure on organizers from commercial publishers. He was worried at the growing use by the Union, for macromolecular symposia, of publishers other than

BSP. Unless PAC could make a greater impact, Dr. Kearney advocated publication by the Union of more books on timely topics.

Dr. Good suggested that a small group - not the Publications Committee - should be appointed to investigate the real value to the public image of IUPAC, from including high-quality symposia in PAC. If the conclusion was positive, then the Union should increase the number of symposia sponsored and published, and it should recruit additional staff to handle the material. In such circumstances, IUPAC might even wish to approach organizers about its sponsorship, instead of the present ad hoc practice of waiting for applications for sponsorship from organizers.

Profs. Itô and Sukh Dev proposed that, contrary to current IUPAC policy, subventions to its sponsored symposia should be allowed even in General Assembly years, especially for symposia originating within the Union. Prof. Jeannin was still worried about the requirement for organizers to make a 10% reduction in registration fee for Affiliates. However, Prof. Itô said that the impact was small at the recent 16th International Symposium on Chemistry of Natural Products (Kyoto, 88.05.29-06.04).

The President concluded that there was no strong support for the recommendation of the Publications Committee, but the Bureau definitely favoured, in future, the consideration of requests for financial subventions in General Assembly years. He appointed a working group, comprised of Prof. Jeannin (coordinator), Prof. West, Dr. Good, and the Chairman of the Publications Committee, to take up Dr. Good's suggestion, but with wider terms of reference by also discussing possible restructuring of the present range of IUPAC publications.

6/88 FUTURE IUPAC GENERAL ASSEMBLIES AND CONGRESSES

6.1/88 Arrangements for 35th General Assembly (Lund, 1989) (Minute 4.1/88, 111th Executive Committee)

- (i) The Deputy Executive Secretary tabled the documentation, which was to be mailed to participants at the end of October (invitation letter, participation questionnaire, registration form, information booklet/schedule of meetings; a letter from Bob Warren Travel Service had already been seen by the Executive Committee at Moscow, and the claim form was still being finalized by the Treasurer). Miss Troughton would be visiting Lund immediately after the Bureau meeting, in order to finalize the meeting rooms.

The Treasurer outlined a new policy for claiming travel monies, which it was hoped would lead to lower expenditure by the Union. Titular Members would be asked to state their required airfares by 89.01.13 (with encouragement to use reduced-cost flights): a contingency fund might be necessary to deal with a few late submissions. Only if the total claims exceeded the sum available for travel, would an agreed sliding scale be imposed for reimbursement. Profs. Rao and Sheppard preferred the use of a sliding scale from the start, but the Bureau otherwise supported the new policy for travel claims.

- (ii) The Secretary General drew attention to the arrangements made for a Nomination/Election Committee at Boston, regarding vacancies for Officers of the Union and Elected Members of the Bureau (Minute 2.2.1/86, 52nd Bureau - Oxford; Minute 3.1.1/87, 109th Executive Committee - Veszprém). The Bureau agreed that the composition of the N/E Committee to operate for Lund should be: President of the Union (Chairman), immediate

Past-President, Vice-President, Secretary General, Chairman of Division Presidents group (Prof. Saegusa), and one other Bureau Member (the President nominated Dr. Kearney).

- (iii) The Secretary General reminded the meeting that the principles of a new basis for the assignment of votes to NAOs had been approved at Lyon (Minute 14/85, 33rd Council), and they became operative at Boston. A precirculated proposal, drawn up by Prof. West in conjunction with the Treasurer and Executive Secretary (88.08.31), recommended that the votes at Lund should depend on the invoiced national subscriptions for 1988 (this implied a trust that NAOs would pay accordingly). An NAO, which paid more than its invoiced 1988 minimum subscription, would qualify for increased voting rights if the paid subscription was equivalent to a higher voting level. Prof. West expected Brazil to join the Union in 1988 (Minute 3.2.3/88), and he urged the President to press Romania to clear its outstanding subscriptions for 1986 and 1987.

Dr. Good was against the possibility for an NAO to pay more than its invoiced 1988 subscription, in order to qualify for a higher voting level. However, in the opinion of Prof. Rao, this was acceptable if an NAO was near the border line between two levels. The Secretary General said one of the principles, adopted by Council at Lyon, was that any change in the number of votes for an NAO should be marginal, compared to the number of votes assigned at Lyngby. He interpreted this as allowing an NAO to move up by one vote as envisaged for Lund.

The President suggested that the votes at Lund should not depend on invoiced subscriptions, but on paid 1988 subscriptions; if there was no payment for 1988, the votes should depend on the payment for 1987. In any case, Council at Lund must approve the recommended subscription dependency. There was general support within the Bureau to review the relationship, accepted at Lyon, between the number of votes and NAO subscription, and even to consider the introduction of higher votes than the maximum of six, presently imposed by Statute 5.1.

6.2/88 Registration Fee/Geographical Spread of Plenary and Invited Lecturers for 32nd Congress (Stockholm, 1989)

The Secretary General tabled recent letters from the Swedish organizers in response to concerns of the Executive Committee at Moscow (Minute 4.2/88, 111th Meeting). The Bureau noted the breakdown supplied of the registration fee, the intention to reduce the fee by SEK 200, and details of some recently invited speakers from Czechoslovakia, GDR, and USSR. Prof. Rao felt that additional speakers should have been invited from throughout the world, rather than from East Europe alone.

6.3/88 Preliminary Arrangements for 36th General Assembly (Athens, 1991)

A report from the Deputy Executive Secretary on her visit to Athens (88.06.27-07.03), had been precirculated. Two options were suggested:

- (i) to meet in non-air-conditioned rooms at the Technical University on the outskirts of the city, using shuttle buses from moderate-price hotels, which were apparently air-conditioned (approximate per diem USD 70); the student dormitories on campus were not air-conditioned
- (ii) to meet in air-conditioned rooms at de luxe hotels and at the University Department of Sociology in the city, with accommodation also in de luxe hotels (approximate per diem USD 115)

Based on the heat during her stay (40°C+), Miss Troughton believed that the use of non-air-conditioned meeting rooms was unacceptable. Also, she expressed concern whether the infra-structure existed to deal satisfactorily with the local arrangements for an Assembly.

Attention was drawn by Dr. Brown to a recent report on heat-related illness during the July 1987 Athens heatwave (The Lancet, No. 8610, 88.09.03, p. 573), when the maximum daily temperatures in the city centre were 41-44°C, with minimum temperatures of 26-28°C. The Executive Secretary pointed out that the provisional choice of Athens was made on the basis that the budget would be in line with Lyon (1985: USD 290 000), rather than with Lund (1989: USD 550 000). If de luxe hotels were required for Athens, a budget in line with Lund would be needed. Dr. Kearney was worried about the security situation in Athens, which might reduce participation in an Assembly held there.

Prof. Modena enquired if the Assembly dates (91.08.07-15) could be changed to late September, but this was judged to be difficult for many persons, because of the start of the new academic year in several countries. An alternative was to reconsider the original invitation from Hungary to hold both the Assembly and the Congress in Budapest. However, Prof. Wermuth observed that it was very hot this year during August in Budapest. Prof. Beck suggested that Vienna might be a suitable alternative location to Athens for the Assembly.

The Bureau decided that an Officer of the Union should visit Athens as soon as possible, together with the Deputy Executive Secretary, in order to check on all aspects of holding the 1991 General Assembly there. Depending on the outcome, the Union might need to undertake urgent investigations of an alternative location to Athens.

6.4/88 Preliminary Arrangements for 33rd Congress (Budapest, 1991)
(Prof. Pungor and Mrs. Takács in attendance)

Prof. Pungor distributed folders of documentation about Hungary, and he announced that there would be a video presentation about Budapest and Hungary to the Bureau on the evening of 18th September. The Congress was scheduled for 91.08.17-22 at the Technical University of Budapest. Prof. Pungor's precirculated letter (88.07.19) suggested six main topics and some sub-topics.

Council at Lund was required to approve the scope of the scientific programme, and to ensure that there was some rotation in the main topics from those at recent IUPAC Congresses (Statute 13.1). Meanwhile, extensive comments were made by Members of the Bureau on the suggested programme. Together with those arising at the Division Presidents meeting on the previous day, the comments (Appendix B) would be conveyed in writing by the Executive Secretary to the organizers.

Division Presidents were urged to discuss the suggested programme with their fellow Division Committee Members and Commission Chairmen, and to send additional comments to Prof. Pungor by 88.12.31. Other Members of the Bureau were also encouraged to comment to Prof. Pungor. He would consider the comments made at Oxford, and any submitted to him by 88.12.31, with the Scientific Committee for the Congress by the end of January 1989. A revised and probably more detailed scientific programme would then be sent to the Union for further discussion. At that stage Division Presidents and Bureau Members would also be invited to suggest speakers for the various programme topics.

7/88 SPONSORSHIP OF SYMPOSIA

7.1/88 Ratification of IUPAC Sponsorship of Symposia

The sponsorships of symposia (Appendix C) approved through correspondence by the Secretary General on behalf of the President since the 11th Executive Committee meeting, were ratified by the Bureau.

7.2/88 Ratification of Official Representatives to IUPAC-sponsored Symposia

The appointments of official representatives of IUPAC to its sponsored symposia in 1988 (Appendix D), as made on behalf of the President since the 11th Executive Committee meeting, were ratified by the Bureau.

8/88 DATES AND PLACES OF NEXT BUREAU MEETINGS

The next meetings were confirmed for Lund on 89.08.14-15 ('old' Bureau) and 89.08.17 ('new' Bureau) during the 35th General Assembly.

9/88 ANY OTHER BUSINESS

9.1/88 Nominations of New Members of IUPAC Bodies

The appointment was approved by the Bureau of Dr. J. J. O'Rangers (USA) as an additional Associate Member (1987-1991) to the Commission on Food Chemistry.

VOTE OF THANKS

The Bureau asked for a vote of thanks to be recorded to the Royal Society of Chemistry in London for the provision of hospitality.

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CHAIRMAN:

V. Raptys

DATE:

89.08.14

REPORTS OF DIVISION FORWARD ACTIVITY PLANNING GROUPS

Prof. Zamaraev said that the Physical Chemistry Division preferred there to be a continuous evolution rather than any drastic major restructuring of IUPAC. The Union was better at dealing with established areas of chemistry, rather than identifying and responding to the development of novel ideas and new trends ("hot points"). His Commission Chairmen would be reporting back at Lund in this respect. Also, it might be worthwhile to invite active researchers from outside IUPAC to prepare feature articles about their fields for publication in PAC or as IUPAC books (a series on "Chemistry for the 21st Century"). Furthermore, it should be ascertained, which recommendations on nomenclature and symbols were needed for new frontier areas. Each Titular Member should have responsibility for a project. Some interdivisional projects, oriented to the outside in key areas (a chemical safety book of wide appeal; chemistry and the environment: impact of industry, and how to minimize), and with relevant experts invited to participate, should be initiated.

On behalf of the Inorganic Chemistry Division, Prof. Fluck considered that the actual selection of the best possible persons to work for IUPAC was more important than restructuring the Union. He agreed with Prof. Zamaraev that continuous evolution of the present structure from within was the way to proceed. Solid state chemistry and bioinorganic chemistry were two major fields, in which the activity of the Division should be extended.

The Organic Chemistry Division was concerned about the continuing poor image of chemistry held by the general public, and by the need to attract many more Affiliates, especially young chemists, into IUPAC activities. Prof. Sukh Dev advocated periodic review of the impact of the various existing series of Divisional symposia, to ascertain if they were evolving satisfactorily or whether they should be terminated. Newer topics of interdisciplinary character should be identified for future symposia. The Division's three current Commissions should evolve towards a single body on "Language of Organic Chemistry". It should consist of several small subcommittees, assigned specific tasks, and time limited in duration. There was an urgent requirement to produce guidelines for good practices in organic chemistry laboratories.

The need to improve publicity about the activities and accomplishments of the Union was also stressed by Prof. Saegusa of the Macromolecular Division. He reiterated his suggestion to the Division Presidents at Oxford (Minute 2.2.3/88) for an IUPAC forum every biennium at a leading symposium sponsored by each Division. In addition, he recommended the introduction of a membership card for Affiliates, and the distribution of contents lists of issues of PAC for publication in national chemistry news journals. In order to deal more efficiently with the ever expanding preparation and production of new polymers, the Division proposed to replace its present Commission IV.2 (polymer characterization and properties) by a modified IV.2 (commodity polymers) and a new Commission IV.3 (functional polymers and polymers of high performance).

After considerable discussion throughout the Analytical Chemistry Division, Prof. Nancollas proposed a restructuring, on an approximately 50/50 basis, into method-oriented and problem-oriented Commissions. There should also be a Commission dealing with standards, nomenclature and similar topics (harmonization, chemometrics), while the Commissions on Equilibrium Data and on Solubility Data should be combined into a single unit.

Dr. Kearney reconfirmed the decision of the Applied Chemistry Division at Boston (Minute 7.8/87, 54th Bureau), to reorganize by grouping its existing Commissions

under subdivisions of environment, agriculture, and technology. The three subdivisions had been assigned coordinators from the Division Committee. It was hoped to have more outreach initiatives, like the recent sending of a party of IUPAC pesticide experts to China. In addition, Dr. Kearney strongly advocated asking industry to set up a committee of eminent scientists from industry, academia, and government. It should examine the Union's current programmes and projects, and suggest realignments to focus on those areas of chemistry which would be important up to the year 2 000. A critical appraisal was required of PAC, to ascertain if it was a viable method of disseminating the results of IUPAC. Also, the Affiliate Membership Scheme should be examined in order to improve it.

Dr. Brown of the Clinical Chemistry Division suggested that more IUPAC effort should be devoted to various interdisciplinary matters (chemistry of preventative medicine, chemical safety, professional and public awareness of chemistry). AMS should be supported and extended, as a means of chemical contact throughout the world. The present IUPAC structure and function combined to make it very inward looking: a Standing Committee (permanent "think tank") should be created to cope with initiatives from bodies outside the Union (like ICSU) and for making initiatives to them. In the longer term, the present Commissions of the Clinical Chemistry Division should probably be replaced by two subdivisions: chemical methods and techniques for clinical laboratory measurements, chemical principles in health promotion and protection of health.

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Prof. Rao emphasized that, in the considerations on restructuring, it was not the intention to stop all existing activities. Rather it was hoped to restrict the number of Titular Members involved therein, then to redeploy the capacity so released, to set up working parties in new areas. Additional money would not be necessary for all new activities. Prof. Nancollas pointed out that such redeployment was already envisaged in the Analytical Chemistry Division.

Prof. Jeannin agreed with Prof. Fluck, about the importance of selecting experts who were ready to commit themselves to IUPAC work. The President asked about the suggestion of the Organic Chemistry Division to dissolve all its present Commissions. Prof. Sukh Dev replied that this should be done by evolutionary development, say a drop in Titular Membership as existing projects were completed. Several Bureau Members spoke about the need for IUPAC to deal with the impact of computers on organic (and inorganic) chemical nomenclature, possibly through an interdivisional body involving experts from outside the Union. The President regretted the lack of response to the article on the subject of modern chemical nomenclature in CI [1987, 9 (4), 139-142].

Despite CHEMRAWN VI, there was much discussion about the need for a concerted effort by the Union on new and advanced materials. Dr. Good felt that this might best be accomplished through the Applied Chemistry Division, even though some progress was obvious elsewhere within IUPAC (polymeric materials in the Macromolecular Division). However, Prof. Thomas preferred to see an interdivisional, even interdisciplinary approach by the Union. He urged IUPAC to meet with the materials research societies now established in many developed countries. Prof. Rao stressed that if IUPAC remained too insular, there might be no major role for chemistry in advanced materials. Prof. Saegusa was worried about the ability of the Union to involve top industrial experts. If COCI was to be involved, Dr. Wyrsh said that all its members (particularly from USA) would need to be more active. Prof. Modena enquired if new materials extended to enzymes.

Consideration was then given by the Bureau to the report of the Study Group on Chemistry and the Biosciences (Minute 2.2.1/88). Prof. Wadsö drew attention to the conclusions and recommendations, particularly the proposal to form a Coordinating Committee for Chemistry in Basic and Applied Biology. Prof. Zamaraev was in favour of allocating funds to a 'flexible' IUPAC body, responsible for initiating biological projects, but against creating a Standing Committee. Prof. Wermuth pointed out that no mention was made in the Study Group report of the new Section on Medicinal Chemistry. Regarding the apparent lack of bio-related projects in the Organic Chemistry Division, Prof. Sukh Dev said that there was some coverage of biology in the Division's sponsored symposia on natural products and carbohydrates.

Prof. Chastrette reported that IUPAC-CTC had tried unsuccessfully to involve biology (IUBS) in a recent international symposium on chemistry teaching at Lisbon. Dr. Brown observed that tertiary chemistry teaching did not normally cover biological aspects. These were dealt with in other departments, in which chemistry was only a component. Prof. Beck thought that it was important to involve IUPAC-CTC in interdisciplinary matters, because educational aspects of chemistry were preferably dealt with by chemists. Prof. Wermuth agreed, citing a five-day course at Strasbourg in chemistry for medical students, so that they were able to understand chemical structure, formulae, and molecular models.

Prof. Thomas said that chemistry was a victim of its own success, starting with the separate development of biochemistry some sixty years ago. Such evolutions could not be stopped. He wondered if IUPAC should think of holding joint meetings, like that of IUCr and IUPAP at Perth in 1987. Prof. Staab supported these views, referring to such movements away from chemistry (and consequent diminution in chemical content) as molecular biology and pharmacology, which presented difficulties even nationally. Dr. Wyrsh felt that in its research and development activities, chemical industry covered a wider range of aspects of chemistry than did academia.

In order to tackle new fields, Prof. Thomas recommended that IUPAC should drop its classical chemistry barriers, and it should set up an interdisciplinary body to look at its relationships with other organizations. Dr. Good advocated a Bureau subcommittee for handling interactions within the Union and especially interdisciplinary external relationships. Prof. Sheppard also favoured this approach: in addition, such a subcommittee should cover environmental matters. Prof. Wadsö felt that his proposed Coordinating Committee could be a subcommittee of the Bureau, but it must include some other experts.

Prof. West was concerned at the declining role of IUPAC in ICSU affairs, due to over-involvement with its own existing internal activities. In addition to biological problems, chemical participation was needed in geoscience (International Geosphere-Biosphere Programme), cosmoscience, environmental science, etc. Also, he favoured the idea of a central IUPAC body ("think tank" to react to outside developments. It need only meet occasionally. For example, it might be worth trying something like ICSU's Ringberg Conference (1985) - a retreat for deliberations by a collection of very high level scientists from academia, industry, and government (cf. Dr. Kearney's report) - which was being repeated in 1990.

SCIENTIFIC PROGRAMME FOR 33rd CONGRESS

Prof. Fluck asked why inorganic chemistry was not featured as a main topic (with such sub-topics as solid-state chemistry and super-conducting ceramics), to which Prof. Pungor replied that this was partly covered under the main topic of physical chemistry (coordination chemistry).

Prof. Björkman queried the emphasis on oscillatory reactions under the reaction kinetics sub-topic of physical chemistry. Prof. Pungor said that this was a Hungarian speciality, and the emphasis would in fact also be inclined towards biological aspects.

Profs. Björkman and Saegusa both felt that the main topic of chemistry of polymers was very broad, and it would be better to restrict the scope somewhat by reference to a few specific sub-topics.

Prof. Pungor explained that "analytical operations with special emphasis on sample preparation" referred to robotics.

It was suggested that the main topic of teaching of analytical chemistry should simply be considered as a sub-topic of the main analytical chemistry topic. For instance, Prof. Wermuth said that discussion of teaching of other specific areas of chemistry, such as medicinal, could equally well be justified. Prof. Pungor wondered if it might be better simply to feature as a main topic the general teaching of chemistry and involve CTC. However, it was normal practice to hold the biennial International Conference on Chemical Education in an odd-numbered year, such as 1991, often near to the time of the General Assembly/Congress.

President Koptug queried the meaning of "sensor research" under analytical chemistry and "energetic chemistry" under physical chemistry.

With reference to the sub-topic of "chemistry of heterocyclic compounds", Prof. Staab drew attention to the well established biennial series of International Society of Heterocyclic Chemistry symposia (this organization was, in fact, an Associated Organization of IUPAC: see page 7 of **IUPAC Handbook 1987-1989**). These were held in odd-numbered years, for instance in 1989 the symposium was scheduled for Jerusalem in mid-August, at almost exactly the same time as the IUPAC General Assembly in Sweden. The same clash might well happen again in 1991, and it did not therefore seem particularly opportune to have this as a sub-topic.

Prof. Wermuth suggested that the organizers should consult Hungarian pharmaceutical industry to find out some suitable new frontier themes under the sub-topic of pharmaceutical chemistry, such as new developments in Alzheimers Disease or AIDS.

Rather than have several main topics as was current practice at IUPAC Congresses, Dr. Brown preferred to see fewer main topics, but to cover these in much greater depth than was usual.

Several participants suggested that the Swedish approach to the programme at Stockholm was particularly good in seeking to look into the future, and with some emphasis on interdisciplinary subjects. A preference was expressed for project-oriented main topics rather than the traditional headings listed for Budapest.

There was general agreement that, in addition to established Hungarian specialities, some new frontier subject areas should be identified for 1991. In

fact, Prof. Pungor said that he would take care to replace the present traditional headings for the main topics with some more general topic headings, when redrafting the programme early next year. Further, Prof. Rao wondered whether it would be good to have an overall general title for the Congress, such as "Chemistry for the 21st Century" (New Perspectives or Horizons).

Dr. Kearney wondered why consideration of biotechnology as a main topic was apparently being limited to food chemistry aspects.

Prof. Thomas was anxious to avoid overlap of plenary lectures from the various main topics. However, Prof. Pungor said the current thinking was that there would be 16-20 non-parallel plenary lectures, with the rest of the programme held in parallel main topic streams.

Prof. West stressed that the final topics agreed for the Congress should be of direct interest to Hungary and neighbouring countries, in order to ensure good support and participation. He wondered whether it might be possible to have a few general themes between the main topic sessions, such as chemistry and the environment, in particular perhaps some from the ICSU International Geosphere-Biosphere Programme (IGBP).

Also, Prof. West advised the organizers to keep the registration fee as low as possible. In addition, attention should be paid to obtaining a reasonable geographical distribution of the main invited speakers.

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Letter of greetings

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Prof. I. WADSO

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Prof. P. PAOLETTI

4th International Workshop on Vapour-Liquid Equilibria in 1-Alkanol + n-Alkane
Mixtures: Applications
Thessaloniki, Greece: 24th-26th October 1988
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