

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF 57th BUREAU MEETING

Lund University, Sweden: 14th-15th August 1989

Present: Prof. V.A. Koptug (Chairman), Prof. A.J. Arvíá, 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 - in part, Dr. S.S. Brown, Prof. C.G. Wermuth - in part (Division/Section Presidents)

Absent: Prof. J.M. Thomas (CHEMRAWN Committee), Dr. D. Wyrsh (Committee on Chemistry and Industry)

In Attendance: Dr. E.D. Becker (Chairman, Committee on Publications) - in part, Prof. M. Chastrette (Chairman, Committee on Teaching of Chemistry) - in part, Dr. L.E. Coles (Vice-President, Applied Chemistry Division), Dr. D.R. Lide, Jr. (Chairman, Committee on Chemical Databases) - in part, Prof. N.-G. Vannerberg (Committee on Chemistry and Industry) - in part, Dr. M. Williams (Executive Secretary)

1/89 INTRODUCTORY REMARKS AND FINALIZATION OF AGENDA

The President regretted that, for personal reasons and due to other commitments, Prof. Thomas and Dr. Wyrsh were unable to attend. Noting that a similar situation had occurred at Leuven (Minute 1/81, 43rd Bureau), the Bureau accepted the recommendation of the Executive Committee (Minute 4.6/89, 112th Meeting - Lisbon) that, in the absence of Dr. Kearney, Dr. Coles should deputize for him and be granted the power of voting.

The Secretary General asked for the following item to be added to the agenda circulated by the Executive Secretary (89.07.26):

17.2 Letter from Union of Arab Chemists

In order to allow various persons to report to the Bureau, it was agreed that the order of discussion of some items should be changed.

2/89 MINUTES OF 56th MEETING OF BUREAU

2.1/89 Amendments and Approval of Minutes

The Minutes of the meeting at Oxford (circulated by the Executive Secretary 88.12.21) were approved.

2.2/89 Matters Arising from Minutes

2.2.1/89 Proposed IUPAC-UNESCO Initiative in Latin America  
(Minute 3.2.1/88)

The Secretary General had written to Prof Arvía on 88.12.12, but Prof. West learned only at Lund that his two letters had not been received. Despite the apparent lack of action by IUPAC, Prof. Arvía indicated that matters had been proceeding, and he expected the money to finance the proposed initiative to be available in one-two years from now.

The Bureau noted that the application for USD 25 000 from the UNESCO Participation Fund, in respect of the IUPAC Seminars/Visiting Professorships (IVPs) programme, had been delayed by the recent change in Executive Secretary of ICSU.

2.2.2/89 International Centre for Chemistry (Minute 3.2.9/88)

Profs. Modena and Rao reported that, building on the success of the International Centre for Theoretical Physics (ICTP) at Trieste, its Director, Prof. A. Salam, was anxious to carry through his vision of high technology for all. He had proposed the establishment at Trieste of a new International Centre for Science and High Technology (ICS), to be promoted by the Third World Academy of Sciences and implemented by the UN Industrial Development Organization with the support of the Italian government. Prof. Salam envisaged ICS to incorporate ICTP and to have three additional components:

- a centre for chemistry, devoted to research into industrially important areas, such as catalysis, polymers, and drugs
- a centre for high technology and advanced materials, focusing initially on micro-processors, photonics (optical fibres and lasers), high-temperature superconductors, semiconductors, and composites
- a centre for earth and environmental sciences, particularly earthquake prediction and climate, with a formal link to the International Geosphere-Biosphere Programme

The first official activity of the International Centre for Pure and Applied Chemistry (ICC) was to be a Conference on Lasers in Chemistry (Trieste, 90.06.11-15), organized in collaboration with ICTP.

2.2.3/89 System for Literature References in Publications (Minute 4.8.1/88)

Prof. Sheppard reported that IDCNS advised against any wider dissemination of

the document from the Publications Committee, or any attempt to give it the status of an IUPAC recommendation (Minute 13.1/88, IDCNS - Oxford). The only way to achieve a uniform approach in chemical journals would be by agreement amongst editors themselves. Noting that the Chairman of the Publications Committee, Dr. E.D. Becker, did not consider it worthwhile to issue the truncated version of the document in CI (letter of 89.03.10), the Bureau decided to declare the matter closed.

3/89     MINUTES OF 112th MEETING OF EXECUTIVE COMMITTEE AND MATTERS ARISING

The Minutes of the meeting at Lisbon were recorded as having been received officially by the Bureau.

(i) Minute 4.3/89 - Prof. Saegusa reported that at Lund the Macromolecular Division had conducted its elections strictly in accordance with the IUPAC Bylaws. Changes to the Division Rules were being drafted which, in due course, would be submitted for consideration by the Bureau.

(ii) Minute 4.5/89 - Prof. Fluck referred briefly to some motions passed at the Inorganic Chemistry Division open meeting in Lund, as a result of which he had offered to resign from the Division Presidency. A subsequent motion had led him to withdraw his resignation.

(iii) Minute 4.7/89 - Prof. Wermuth enquired what was the concern at some aspects of the work of the Medicinal Chemistry Section. The President said that the Executive Committee was not satisfied by the projects so far being started by the Section. Prof. Rao awaited news of the formation of additional Working Parties, and Prof. Wermuth promised to report accordingly at Council in Lund.

3.1/89     Report of Study Group on Involvement of Chemistry in Biosciences  
(Minute 2.2.1/89)

The Executive Secretary reported that the Division Presidents at Lund (Minute 3.1/89) had favoured the establishment of a "horizontal" interdivisional programme on Chemistry and the Biosciences, in the context envisaged by Dr. Good but incorporating the recommendations of the Study Group. It should collect together all existing and future bio-related projects within IUPAC, collaborating as necessary with relevant other bio-unions and international organizations. The President decided to defer further consideration of the matter to agenda item 6.

3.2/89     Continuing Dispute between Commissions I.3 and V.5  
(Minute 2.2.2/89)

The Secretary General reported that the Division Presidents at Lund (Minute 3.2/89) had agreed to support the general proposal of Prof. Koptug, subject to omission of "only" from the last sentence. Also, there was general agreement that the adjustment of experimental data (by design) should never be allowed. Prof. Rao was unhappy for IUPAC to publish material using recalculated data. However, the President said that it was permissible if the

emphasis was moved to the recalculation procedure.

The Bureau approved the proposal that:

It is not recommended to publish in IUPAC reports sets of data derived from different series of experimental results, using recalculation procedures which are not accepted by IUPAC as a whole. If there exists a need for such data, the preferable response to the need should be the publication of a recommendation on possible procedures for recalculated data to one scale, together with a detailed analysis of all assumptions made in each procedure. The recalculated data should be included in such reports as examples.

3.3/89      Proposal for IUPAC Initiative to Meet Problems Connected with Adverse Effects of Chemical Compounds (Minute 2.2.3/89)

In general, Prof. Wadsö agreed with the personal views of the COCI Chairman, Dr. Wyrsh (letter dated 89.02.22). However, he felt that COCI's standpoint favoured chemical industry rather than society as a whole. Prof. Wadsö said that his letter of 89.01.30 was now redundant, and he was ready to withdraw his proposal.

Several Bureau Members spoke in favour of IUPAC taking a higher profile in the matter of chemical safety. The President concluded that the Union should involve in such activity not only through the efforts of COCI, but also through the new horizontal programme on Chemistry and the Environment.

3.4/89      Re-evaluation of Presidential Rulings (Minute 2.2.6/89)

Due to lack of time, this matter was deferred for consideration by the Executive Committee at its meeting in Spring 1990.

3.5/89      Working Group on Possible Restructuring of IUPAC Publications (Minute 2.2.7/89)

Prof. Jeannin said that he had met with Dr. Good during June in USA and with the Secretary General and Dr. Becker at Lund. Dr. Becker considered the present composition of the Publications Committee to have the necessary expertise so that, in future, it could function more efficiently, without any need for further changes in the membership or in the terms of reference.

Regarding the considerable criticism of the present system of IUPAC publications:

(i) PAC - The main problem was to improve its visibility and dissemination. However, the Citation Index impact showed that the journal was well regarded. Following discussions by the Publications Committee at Lund there might be some changes in the scope.

(ii) Publicity by BSP for IUPAC - Some new ideas were under consideration, such as mentioning IUPAC publications in the abstracts and programme booklets of IUPAC-sponsored symposia.

(iii) CI - In order to help the financial situation, a lunch meeting was being held at Lund with some NAOs, which had significant numbers of CAs, to try and encourage CAs to make prestige advertisements in the magazine. The Division Presidents at Lund had proposed (Minute 6.1/89), that the Union should provide 50-100 free copies of CI plus some AMS brochures for participants at IUPAC-sponsored symposia.

In the opinion of Dr. Good, the Executive Committee/Bureau should not run a journal: a scientific editor and a good editorial board of the normal type were necessary. Prof. Rao agreed with her views. PAC was not widely read by chemists, being simply a reference work. Therefore, she advocated the division/repackaging of its contents into the symposium material and the official reports of IUPAC bodies. Prof. Rao suggested that short topical reviews, by invitation, should form a significant part of the journal.

The Secretary General said that no single scientific editor could cover competently the whole spectrum of contents of PAC. The existing Editorial Advisory Board had not worked very effectively. However, the journal had contributed significantly to the financial income of the Union. It would be difficult to keep records, if IUPAC recommendations were published elsewhere and, in any case, their reproduction was already allowed in other journals. Prof. West suggested that an article should be obtained from each new Nobel Laureate, and that they should be collected for eventual publication in a compendium. It was difficult to see how to implement a short communications section in the journal.

Dr. Brown proposed the inclusion of a letters-to-the-editor section. Prof. Zamaraev suggested to select, once per year, the most exciting lectures published during that year, and to combine them with some invited contributions. Also, the Commissions should be encouraged to seek sponsorship by the Union of new frontier area topics.

The President concluded the discussion by asking Prof. Jeannin to continue his efforts on the restructuring of IUPAC publications, taking into account the various points raised by Bureau Members.

3.6/89      COCI Membership from China and USSR (Minute 2.5.1/89)

The President said that only recently had the new system of governmental ministries in USSR been decided. One of these ministries would shortly be selecting two or three chemical plants to become CAs and identifying a Soviet representative to COCI.

Prof. Huang had no clear idea of how to proceed in China, but some progress might be made when Dr. Wyrsh visited Beijing later in the year.

3.7/89      CCDB-BRUNO Programme (Minute 12/89 - Dr. Lide in attendance)

At Lund the Commission on Nomenclature of Organic Chemistry had considered the recommendation of CCDB to distribute the BRUNO software programme of Beilstein to Members of IUPAC bodies and Affiliates. The Commission had concluded that the value of the programme, which converted the IUPAC name for an organic

compound into a molecular formula, was not worth the cost of distribution. Accordingly, Dr. Lide decided to withdraw the recommendation.

3.8/89      Membership of Division Committees (Minute 4.3/89)

The Executive Secretary referred briefly to the election procedures of the Macromolecular Division, which incorrectly allowed Coopted Members to vote. Prof. West saw no difficulty in changing Bylaw 4.103 to designate Division Officers and ordinary Members of Division Committees as "Titular Members", who alone could vote. As an interim measure, the word "Members" should be moved above the Officers in the Division/Section Committee membership listings in the new IUPAC Handbook. Prof. Zamaraev felt that it was sufficient simply to amend Macromolecular Division Rule 3 in terms of Rule 4(c-iii) of the Physical Chemistry and other Divisions.

3.9/89      Proposed Change to Bylaw 5.5 (Minute 7.2/89)

The Bureau approved the recommendation of the Executive Committee, that Bylaw 5.5 should be amended in accordance with the present practice of the Union, namely to require a four-years review of the existing AOs, instead of a review by Council at each General Assembly.

3.10/89     Applications for ICSU Grants in 1990 [Minute 7.5(vi)]

The Secretary General regretted that each international scientific union was now allowed to submit only three applications. He had made a selection from the projects, submitted by the IUPAC Divisions, on the basis of interdisciplinary interest and applicability to developing countries: Safety in Schools, Biotechnology Database, Environmental Analytical Chemistry.

4/89      MINUTES OF CHEMRAWN COMMITTEE MEETING (89.04.22-23)

The Minutes of the meeting at Montreal were recorded as having been received officially by the Bureau. A video report from Prof. Thomas was shown, covering the current and possible future activities of the CHEMRAWN Committee. A late paper from the CHEMRAWN Committee at Lund, briefly updating the video report, was tabled.

4.1/89      CHEMRAWN VII: Chemistry of the Atmosphere

The Bureau received a completed Advance Information Questionnaire in respect of the CHEMRAWN VII Conference. It noted with satisfaction, that the General Chairman was to be Dr. W.O. Roberts. The names were not yet available of two persons being sought to raise money for the Conference. The Treasurer indicated that he had approved a sum of USD 12 500 from the CHEMRAWN Rolling Fund as seed money for CHEMRAWN VII, which would almost exhaust the Fund.

The Bureau granted the official sponsorship of IUPAC to CHEMRAWN VII. However, it was unwilling to guarantee covering any deficit on the Conference until more definite financial information was provided.

4.2/89      Publication Matters

The Executive Secretary drew attention to the statement in the Montreal Minutes (page 3), that Prof. Thomas anticipated royalties from two books relating to CHEMRAWN activities should be paid into the Rolling Fund. The Bureau confirmed that royalties could only be so credited for books arising directly from CHEMRAWN Conferences, and not for any of the Chemistry for the 21st Century monographs.

4.3/89      Financial Principles for Management of CHEMRAWN Activities  
(Minute 2.7.4/89, 112th Executive Committee)

The Treasurer said that consideration of his revision of the draft document (Appendix A) had been delayed until Lund, where it was reviewed and given general approval by the CHEMRAWN Committee.

4.4/89      Membership

Despite his continuation as an Associate Member for two more years having recently been approved (Minute 4.2/89, 112th Executive Committee), the Bureau noted that Dr. W.G. Schneider did not wish to continue after Lund. It approved the recommendation (Montreal Minutes, page 5), that Dr. A. Hayes and Prof. J. Klein should be reappointed as Members for a further term of four years from the start of 1990.

5/89      ITEMS FROM AGENDA OF 35th MEETING OF COUNCIL REQUIRING DISCUSSION, RESOLUTION, OR RECOMMENDATION BY BUREAU

5.1/89      Council Item 3 - Nominations for Officers and Bureau Members  
(Profs. Sheppard and Zamaraev absent in part)

The President and Secretary General reported the recommendations of the Nomination/Election Committee [89.08.13 - see Minute 6.1(ii)/88, 56th Bureau], which took account of the changes in location of the Division/Section Presidents after Lund (cf. Minute 3/87, 34th Council - Boston). The Bureau agreed to present the recommendations to Council:

(i) The Union was fortunate to have four candidates for Vice-President, who were distinguished and able. It found no reason to distinguish between them, except on a regional-geographical basis, when it recommended Prof. A.J. Bard (USA).

(ii) There should be twelve Elected Members of the Bureau during 1989-1991, thereby increasing the number of vacancies to six.

(iii) The six vacancies for Elected Members of the Bureau should be filled by

- Prof. R.D. Brown (Australia)
- \* Dr. Mary L. Good (USA)
- \* Prof. Huang Wei-Yuan (China)
- \* Prof. S. Itô (Japan)

\* Prof. I. Wadsö (Sweden)  
Prof. K.I. Zamaraev (USSR)

(\* re-election for a further period of four years)

(iv) The Tellers during all voting in Council should be

Prof. A. Björkman (Bureau Member, Treasurer)  
Dr. Anne E. Alper (Secretary, Canadian Delegation)  
Dr. R.M. Simon (Secretary, USA Delegation)

5.2/89 Council Item 4 - Time of Elections

The Bureau agreed to recommend to Council, that the election of Officers of the Union and of Elected Members of the Bureau should take place at 9.30 hours on Thursday, 17th August 1989.

5.3/89 Council Item 7 - Appointment of Auditors

The Treasurer said that the matter had been discussed by the Finance Committee at Lund [Minute 13.2(iii)/89]. After careful consideration of the costs involved, it advised the Bureau to recommend Council to reappoint Neutra Treuhand AG as auditors for 1989-1990. The Bureau endorsed the recommendation.

5.4/89 Council Item 12 - Affiliate Membership Scheme

The Secretary General said that AMS constituted the main mechanism for dissemination of information about IUPAC: there were currently nearly 8 000 Affiliates from over 80 countries. The Executive Committee had recommended (Minute 5/89, 112th Meeting) that:

(i) Council at Lund should be requested to authorize continuation of the Scheme until further notice rather than simply for the biennium 1990-1.

(ii) an AMS Advisory Group should be formed from within the Bureau itself (to minimize costs to the Union) to assume responsibility for and development of AMS when Prof. West retired as Secretary General in mid-1991.

Prof. West suggested that the Advisory Group might consist of a Chairman, five persons from the Elected Members of the Bureau, and the Chairman of the Division/Section Presidents Group. Some Bureau Members preferred the Scheme not to be continued indefinitely. However, after some debate the two recommendations of the Executive Committee were accepted by the Bureau.

The Secretary General reported that introduction of a plastic membership card for Affiliates (Appendix A to Minutes, 56th Bureau) would cost the Union about USD 3 000 per annum for production and dissemination. Therefore, he was unable to recommend that the card should be introduced at this time.



5.5/89      Council Item 14 - Continuation/Dissolution of Existing IUPAC Bodies  
and Proposals for New Bodies

Prof. Nancollas tabled a paper, summarizing proposals for restructuring of the Analytical Chemistry Division. Prof. Jeannin drew attention to proposals in his Vice-Presidential Critical Assessment for new IUPAC bodies on Bioinorganic Chemistry (no action needed now, because no activities had yet been outlined), on References for Toxic/Essential Element Assay, and on Functional Polymers.

Detailed consideration of this item was deferred to the evening of the second day of the Bureau meeting (Appendix B).

5.6/89      Council Item 15 - Proposals from NAOs

The Secretary General drew attention to the deliberations of the Executive Committee earlier in the year (Minute 7.6/89, 112th Meeting). There was still no reply from the Greek NAO, so that the letter and resolution from the Committee of Greek Chemists for Abolition of Chemical Weapons could not now be discussed formally in Council at Lund and any vote taken. The President and Prof. Rao felt that ICSU was the proper channel for discussion. The Bureau agreed that the letter from the Greek NAO could be tabled under Council Item 25 - Any Other Business (discussion only): Council should be asked to delegate any action to the Executive Committee.

5.7/89      Council Item 16 - Locations and Dates for 1991 General Assembly and Congress

The Secretary General reminded the Bureau, that Council at Boston had accepted, in principle, an invitation from Greece to host the 36th IUPAC General Assembly at Athens University (Minute 19.1/87, 34th Meeting). However, further consideration of the the temperature conditions prevailing at Athens in August during recent years had shown that air-conditioned meeting rooms and living accommodation would be essential, which would require an IUPAC per diem of not less than about USD 125 (cf. about USD 100 in Lund and USD 65 at Boston). This was unacceptable to the Union, and he had been asked to make enquiries into holding the 1991 Assembly in FRG or UK (Minute 3.2/89, 112th Executive Committee). The UK NAO was unable to help, but the FRG NAO had responded positively. At Lund the Greek NAO had agreed to withdraw its invitation for 1991, but the Executive Committee would meet at Athens in 1990 as a compensation. Urgent action should be recommended by Council in respect of the FRG response.

A completed Advance Information Questionnaire for the 33rd IUPAC Congress (Budapest, 91.08.17-22) had been precirculated, and the first circular was available at Lund. The Secretary General pointed out that IUPAC's note about freedom of participation by bona fide scientists from throughout the world had not been included: the Union must insist that this deficiency was remedied in the second circular. Prof. Jortner felt that the organizers were to be congratulated on the scope of the scientific programme.

5.8/89 Council Item 17 - Revised Budgets for 1990-1

The Treasurer tabled the revised budgets and preallocation of funds to Standing Committees and the Divisions/Section on Medicinal Chemistry (Appendix C). A 10% increase was now proposed for national subscriptions immediately in 1990, but no further increase in 1991. At present a lower transfer from publications was foreseen in 1990 than in recent years [the present contract with Blackwell Scientific Publications (BSP) was under consideration of renewal]. Prof. Björkman drew attention to the provision for information services/developing countries. Amongst a number of overhead projection transparencies, he presented figures for the excess of income over expenditure during the period 1984-1989, from which trend it was clear that national subscriptions must be increased in 1990. There was also the need to finance the new mission-oriented programmes. The Bureau agreed to recommend approval of the revised budgets by Council.

5.9/89 Council Item 18 - Important Matters Discussed by Bureau

There appeared to be no important matters discussed by the Bureau at Lund, which were not covered by items on the Council agenda.

5.10/89 Council Item 20 - Locations for 1993 General Assembly and Congress

The Secretary General reported that invitations to host the 37th General Assembly had been received from Chile, Israel, and Portugal (Minute 3.3/89, 112th Executive Committee). His latest evaluation indicated that the cost of air travel for IUPAC to Chile was prohibitive. Prof. Jortner regretted that the financial requirements of IUPAC made it necessary for him to withdraw the invitation from Israel. Prof. West said that the information presently available from Portugal in respect of per diem, travel costs, meeting rooms, and temperature at Lisbon were favourable. Therefore, the Bureau agreed to recommend Council to accept the invitation from Portugal.

Invitations to host the 34th IUPAC Congress had been received from China and Israel (Minute 3.3/89, 112th Executive Committee). Noting the letter from the Chinese Chemical Society (89.08.03) in the late papers and that the 25th IUPAC Congress was held at Jerusalem in 1975, the Bureau decided to recommend Council to accept the invitation from China.

5.11/89 Council Item 21 - Applications for Membership of IUPAC

The Bureau agreed to recommend Council to accept the applications from the Kuwaiti Chemical Society (Minute 7.1.1/89, 112th Executive Committee: it was noted that it was impossible to form a National Committee of Chemistry) and the Chemical Society of Ethiopia (Minute 7.1.2/89, 112th Executive Committee: an assurance had been received that the annual subscription could be met by the Society).

5.12/89 Council Item 22 - Applications for Associated Organization Status

The Bureau agreed to recommend Council to accept the applications from the International Association of Colloid and Interface Scientists and the

International Group for Correlation Analysis in Organic Chemistry (Minute 7.3.1/89, 112th Executive Committee) and from the Federación Latinoamericana de Química (Bureau Item 17.1).

Regarding an application from the International Mechanochemical Association, the Executive Committee (Minute 7.3.2/89, 112th Meeting) had deferred a recommendation on acceptance, because the period of existence of IMA (formed only in 1988) was deemed inadequate to establish its stability and the quality of its activities [Bylaw 5.1(i)]. Subsequently, it had been emphasized that IMA had been in existence de facto since about 1984. In view of the strong support given by Prof. Zamaraev, the Bureau decided to recommend Council to accept the application.

The Secretary General had evaluated the reports of their current activities, which had been submitted by twenty-eight of the thirty existing AOs. These were satisfactory for twenty-seven AOs, and Council should be recommended to continue their AO status for the next four years (Bylaw 5.5 as modified by Minute 11/83, 32nd Council - Lyngby). A decision on the International Society of Electrochemistry should be deferred, in order to check that its activities did not overlap seriously with those of the IUPAC Commissions on Electrochemistry and on Electroanalytical Chemistry. Despite reminders, activity reports had not been received from the Association of Faculties of Science of African Universities-Chemistry Committee and from the Federation of Asian Chemical Societies. Council should be asked to set 89.12.31 as a deadline for receipt of the outstanding reports, otherwise AO status would be withdrawn.

6/89 RESTRUCTURING OF IUPAC (Minute 6/89, 112th Executive Committee)

The President proposed that the Union should start two mission-oriented (horizontal) interdisciplinary programmes after Lund:

Chemistry and the Environment  
Chemistry and Advanced Materials

A revised draft booklet was available from the IUPAC Information Officer, containing details of all environment-related reports published by IUPAC during 1983-8 and of all appropriate ongoing projects. Prof. Koptug tabled a document entitled "The IUPAC Environment Programme: Next Steps", which was considered in some detail by the Bureau. Dr. Good followed up her draft proposed context for IUPAC restructuring, introduced in Lisbon, by presenting a series of colour overhead projection transparencies. The President suggested that the transparencies should be shown to Council at Lund in conjunction with his report on the State of the Union. Prof. Nancollas cautioned that at least one significant current IUPAC activity was not included in the transparencies, namely the considerable efforts made since Boston by the Analytical Chemistry Division's Subcommittee on Environmental Analytical Chemistry.

Prof. Saegusa enquired about the next steps for the advanced materials programme; the Macromolecular Division had identified four possible areas of activity - membranes, information storage and display, interfaces in

composites, structure-related transport phenomena. Prof. Koptug suggested that an inventory should be prepared of relevant existing activities and of what else might be done. Prof. Zamaraev reported on several aspects of restructuring of the Physical Chemistry Division. Also, he advocated the creation of an Advisory Board of Division/Section Presidents, with maximum flexibility of format for publication, in order to expedite progress on the Chemistry for the 21st Century monographs. The Advisory Board might convene with Prof. Zamaraev at the annual meeting of Division/Section Presidents.

The Bureau endorsed the appointment of Prof. Koptug as Chief Coordinator for the Chemistry and the Environment Programme (CEP). Profs. Fluck (inorganic materials) and Heitz (organic materials) should coordinate the Chemistry and Advanced Materials Programme (CAMP), while Prof. Wadsö should undertake a feasibility study of a third mission-oriented programme on Chemistry and the Biosciences.

7/89 REPORT OF COMMITTEE ON CHEMICAL DATABASES (Dr. Lide in attendance)

Dr. Lide said that CCDB was created at Lyon in 1985 (see IUPAC Handbook 1987-1989, page 45 for terms of reference). It had been fortunate to have a high level of expertise within its membership. CCDB had focussed on numerical data and structure-search possibilities. Some articles had been generated for publication in CI, and one on graphics software was being investigated. Guidelines for database design were in an advance state of preparation. A glossary of computer terms was presently in abeyance.

CCDB had been working closely with various IUPAC bodies involved in data assembly and critical evaluation. A separate agreement had recently been signed by the Union with BSP for dissemination of the ENTVAPOR database as a diskette for personal computers (Minute 2.6.1/89, 112th Executive Committee). It would serve as a model agreement for other databases. CCDB considered that ENTVAPOR would need to be updated, say every two-three years. A conductance database and one on thermodynamic properties of elements were at an advanced state of preparation. Promising discussions had taken place at Lund with respect to databases on solubility data, on stability constants, and on IUPAC recommendations on nomenclature and symbols. Several other possible databases were only in an early stage of consideration. Dr. Lide envisaged that there would be some modest requests for financial support from assets for database developments during the next biennium.

At Lund Prof. Fluck had presented to CCDB a proposal for the establishment of a central databank for all new experimental data (EXPERIDAT). CCDB had expressed reservations about the practicability of such a proposal, but it would consider the matter further.

8/89 REPORT OF COMMITTEE ON CHEMISTRY AND INDUSTRY (Prof. Vannerberg in attendance)

Prof. Vannerberg reported on three aspects of the work of COCI:

- 1st IUPAC Workshop on Safety in Chemical Production (Basle, 90.09.10-13: cf. Minute 4.4/88, 56th Bureau - Oxford), the planning for which was now at an advanced stage
- identification of possible candidates from chemical industry for membership of the new Medicinal Chemistry Section
- efforts to increase the number of CAs (Eastern Europe as well as the Developing World was not appropriately represented in COCI) via preparation of an attractive brochure on IUPAC's merits for industrial companies

Prof. Jortner suggested that COCI should involve in more advanced technology as an attraction for new CAs. Prof. Koptug asked about the provision of information on new technologies developed by chemical industry and on measures taken at their plants throughout the world to minimize pollution. Prof. Vannerberg agreed to bring these matters to the attention of COCI.

9/89 REPORT OF COMMITTEE ON TEACHING OF CHEMISTRY (Prof. Chastrette in attendance)

Prof. Chastrette divided his report into two sections:

(i) Traditional activities of CTC

- production of low-cost locally-produced equipment for chemistry teaching, which was now running for some ten years, although much still remained to be done
- dissemination of information about chemistry teaching via the biennial International Conferences on Chemical Education/Symposia in conjunction with CTC meetings and the International Newsletter on Chemical Education (two issues per year)
- maintain contact with research into chemical education, particularly to teachers regarding secondary education

(ii) New activities

- attendance of the new Divisional Members at CTC meetings in Boston, Lisbon (1988), and Lund was disappointing
- preparation by Profs. Yu.D. Tretyakov and L. Kihlberg of the monograph on solid-state chemistry, oriented to the needs of chemistry teaching, was progressing
- review of a compilation of experiments by Commission on Photochemistry
- collaboration with Analytical Chemistry and Clinical Chemistry Divisions in preparation of a booklet on quality control analysis

- cooperation in UNESCO Workshop on Energy and Environment as Related to Chemistry Teaching (Berkeley/California, 89.12.03-08), with ICSU Committee on Teaching of Science to produce teaching materials using data from the Global Change project, and possibly with CHEMRAWN Committee to hold a joint Conference

In the opinion of Prof. Rao, CTC need not produce books specially for the tertiary level, but it was important for CTC to draw the attention of the secondary level to new "hot spot" developments in chemistry. He stressed that chemical education needed to have a higher profile in IUPAC. In order to improve the participation of the Divisional Members in CTC meetings, Prof. West advocated that CTC (and other interdivisional bodies like IDCNS) should meet immediately prior to the General Assembly: the increased efficiency of working would justify the additional costs to the Union.

#### 10/89 REPORT OF INTERDIVISIONAL COMMITTEE ON NOMENCLATURE AND SYMBOLS

Prof. Sheppard said that, during the past biennium, IDCNS had dealt with thirty nomenclature/symbols reports and eight technical reports from IUPAC bodies. The availability of the Compendium of Chemical Terminology (Gold Book) and Quantities, Units and Symbols in Physical Chemistry (new Green Book) had increased the level of comments submitted from within IDCNS for modification of reports. To improve the situation, the Division Presidents at Lund (Minute 2.2.2/89) had agreed henceforth to provide from Division Funds to the Chairman and Secretary of each Commission, soon after their appointment, copies of the Gold and Green Books, together with other IUPAC nomenclature books relevant to their Division, for use by their Members.

A number of modifications to the Guidelines for Drafting IUPAC Recommendations (Minute 2.4.1/89, 112th Executive Committee) had been agreed by IDCNS at Lund, and the document would henceforth be reviewed annually. In future, the Divisions should look more closely at an early stage of preparation of their technical reports/monographs/reference books/data compilations, regarding the use of IUPAC nomenclature/symbols recommendations.

#### 11/89 FINANCIAL MATTERS

The Treasurer said that there were no extraordinary matters, which he needed to present to the Bureau (but see Minute 12.3/89).

#### 12/89 IUPAC BODIES

##### 12.1/89 Ratification of Memberships Approved by Correspondence

The following appointments to the IUB-IUPAC Joint Commission on Biochemical Nomenclature, made by the President through correspondence since the 112th Executive Committee meeting, were ratified by the Bureau:

Dr. A. Chester (Sweden) - as Member and Secretary (1989-1992)  
Dr. H.B.F. Dixon (UK) - as Associate Member (1990-1993)

12.2/89      Continuation of IUB-IUPAC Joint Commission on Biochemical  
Nomenclature

Subject to endorsement by the IUB Executive Committee, the Bureau accepted the recommendation of Prof. Sheppard (89.06.22) that JCBN should be allowed to continue for three more years, i.e., until the end of 1992.

12.3/89      Matters Arising from Finance Committee Meeting at Lund

The Treasurer reported that

- use of chemical turnover data from the UN Industrial Statistics Yearbook 1986 led to very significant rises in national subscription for some NAOs, which might require a graduation period for them to reach the full subscription
- Romanian membership of the Union had been discontinued (89.05.22), due to non-payment of outstanding subscriptions (Statute 9.2)
- he still had to finalize Guidelines for Handling Costs for Travel and Subsistence and a Listing of IUPAC Differentiated Daily Allowances
- arrangements were being made to introduce computerized accounting at the IUPAC Secretariat from 90.01.01, but with income still to be received by and most expenditures to paid through the IUPAC Banker in Zürich
- under no circumstances were National Representatives as such to be supported financially from IUPAC funds

12.4/89      Matters Arising from Division Presidents Meeting at Lund

The Secretary General said that several matters arising had already been dealt with earlier in the Bureau meeting. He drew attention to the following additional items:

- (i) Student Guide on Uncertainties in Chemical Measurements (Minute 2.2.4/89, Division Presidents) - A feasibility study of how to proceed was to be initiated under Dr. K.N. Marsh, within the Physical Chemistry Division, in conjunction with CTC.
- (ii) Provision of Free CI at IUPAC-sponsored Symposia (Minute 6.1/89, Division Presidents) - There was general support for the provision of 50-100 free copies of CI plus some AMS brochures for participants. The Treasurer had agreed to make a financial evaluation within the budget for 1990-1.
- (iii) Divisional Liaison with CHEMRAWN Committee (Minute 6.2/89, Division Presidents) - Prof. Saegusa had proposed the appointment of Divisional liaison persons to the CHEMRAWN Committee, in order to improve the involvement of Divisions in CHEMRAWN Conferences and particularly to have an opportunity to

comment on the scientific programmes.

The Bureau accepted a suggestion from Prof. West, that it would be advantageous to invite all incoming Division Presidents to sit in as observers at the Bureau meeting immediately before Council at the 1991 General Assembly.

13/89 RELATIONS WITH OTHER ORGANIZATIONS

13.1/89 ICSU Matters

Due to an overlap with the 56th IUPAC Bureau meeting at Oxford, the Secretary General regretted that he had been unable to participate in the 22nd ICSU General Assembly (Beijing, 88.09.11-16). However, he hoped to represent IUPAC at the forthcoming 26th ICSU General Committee meeting (Lisbon, 89.10.11-14). Prof. Björkman had attended the second meeting of ICSU Treasurers (Paris, 89.04.25), but he was disappointed in the deliberations. At Lund Prof. West had devoted considerable time preparing an IUPAC input to ICSU, in respect of a proposal to UNDP for a long-term project on Strengthening Scientific Training and Research in the Third World.

13.2/89 Vice-Presidential Review of Official Representatives of IUPAC on Other Organizations

Prof. Jeannin referred briefly to his review carried out at Lund, and he gave details of the representatives which he had appointed for the next biennium (IUPAC Handbook 1989-1991, page 14).

14/89 PUBLICATIONS

14.1/89 Matters Arising from Publications Committee Meeting at Lund (Dr. Becker in attendance)

Dr. Becker said that the Publications Committee membership had changed almost completely during the past two years. It was opportune to review how to improve the dissemination of IUPAC information and publications throughout the world:

(i) Books - Symposia material had only a limited potential circulation. However, the compendia of IUPAC nomenclature/symbols recommendations needed to be distributed much more widely, hopefully through the availability of soft-cover editions at significantly reduced prices (possible by the Union forgoing its royalty on such editions).

(ii) PAC - The price was high but, in a period of generally declining journal sales, the subscriptions were holding up well. No price rise was envisaged for 1990. He was against subdividing PAC into sections, which might be counter productive in terms of subscriptions. The front cover design was to be improved for 1990. Desk-top publishing might become practical with BSP within perhaps the next two years, while the use of video-disc technology was a possibility in the longer term.



(iii) Bibliographic Database of IUPAC Recommendations - Preliminary database software had been developed for the Publications Committee by Prof. D.V.S. Jain, and a diskette for personal use demonstrated to IDCNS at Lund. It was hoped to finalize the product by the 1991 General Assembly, then to keep it up-to-date.

The contract with BSP (1985-8) had been carefully reviewed at Lund. Dr. Becker tabled a unanimous recommendation from PC, that the best interests of the Union would be served by continuing the collaboration with BSP. The Bureau agreed that the existing contract should be augmented for the years 1990 and 1991, by the elaboration of a supplementary contract, covering those clauses which now required amendment, based on the joint experience over the past five years.

There was a wide ranging discussion about PAC and other aspects of IUPAC publications. The Bureau supported the concern of Dr. Becker that BSP should significantly increase its advertising/marketing of the Union's publications, taking proper account of the advice of IUPAC.

Prof. Wadsö expressed concern that authors of main articles in CI should always have an opportunity to read "proofs" and, in any case, the magazine news content was somewhat out-of-date. The Executive Secretary indicated that one way forward was to move to monthly publication. Dr. Becker felt that desk-top publishing would also help. [Subsequently, Dr. Freemantle indicated that, even by using fax, often he had only about one week to turn round the proofs prior to printing. Furthermore, the Secretariat staffing for CI consisted of himself (half time) and one secretary (one third time).]

14.2/89      Collaboration of Soviet Scientists in Solubility Data Series  
(Minute 8.1/89, 112th Executive Committee)

The Executive Secretary reported that a satisfactory agreement had now been signed with the All-Union Copyright Agency of USSR.

14.3/89      History of IUPAC (Minute 8.2/89, 112th Executive Committee)

The Secretary General reported that, unfortunately there had been no response from the UK Open University (Department of History of Science and Technology) to the set of chapter summaries. Prof. West and the Executive Secretary had recently received drafts of the first two chapters from Mr. R.W. Fennell. Completion of the text was anticipated by the 1991 General Assembly.

14.4/89      Future Format of IUPAC Handbook

The Treasurer said the the Handbook was rather costly. In future, he would prefer not to include the Current Programmes and Division Rules. The Executive Secretary spoke strongly in favour of not only retaining all the present sections, but of adding Guidelines for Applying for Sponsorship of Symposia/ Financial Subventions, Guidelines for Drafting IUPAC Recommendations (Minute 10/89), and Guidelines for Handling Costs for Travel and Subsistence (Minute 12.3/89). In the opinion of Dr. Williams, it was vital for all relevant information about the Union to be contained in a single handbook. Several

Members of the Bureau supported the Executive Secretary, and the President concluded that the consensus was for a status quo.

14.5/89      Catalogue of Currently Available IUPAC Publications

The Executive Secretary tabled copies of a draft Catalogue, which had been drawn up by the Information Officer, with the aim of generating publicity for IUPAC publications. The draft had been circulated recently within IUPAC for comment. Dr. Freemantle hoped that BSP, Pergamon Press, etc., would assist the Union with the costs of reproducing and distributing the Catalogue. The Bureau approved this initiative by Dr. Freemantle.

14.6/89      IUPAC-IPCS/WHO Monograph on Safe Use and Disposal of Chemicals in Laboratories (Minute 8.2/88, 111th Executive Committee - Moscow)

The Bureau noted that a publishing agreement had now been drawn up with Cambridge University Press (UK) by IUPAC and WHO's International Programme on Chemical Safety.

15/89      SPONSORSHIP

15.1/89      Ratification of IUPAC-sponsorship of Symposia

The sponsorships of symposia (Appendix D), approved through correspondence by the Secretary General on behalf of the President since the 112th Executive Committee meeting, were ratified by the Bureau.

15.2/89      Ratification of Official Representatives to IUPAC-sponsored Symposia

The appointments of official representatives of IUPAC to its sponsored symposia (Appendix E), as made on behalf of the President since the 112th Executive Committee meeting, were ratified by the Bureau.

16/89      DATES AND PLACE OF NEXT BUREAU MEETING

This item was deferred for consideration by the new Bureau at Lund on the afternoon of 17th August 1989. In order that the Bureau should not be under such duress in dealing with the business immediately prior to Council at the 1991 General Assembly, the Secretary General suggested that two whole days should be allowed in the meetings schedule.

17/89      ANY OTHER BUSINESS

17.1/89      Letter from Union of Arab Chemists

The Secretary General tabled a letter from the Union of Arab Chemists (89.08.11), an AO of IUPAC. It urged that greater care should be taken in the selection of locations for the IUPAC General Assembly/Congress and for

symposia sponsored by the Union. Concern was expressed, not only to ensure that freedom of participation was possible in the widest sense, but also the physical safety of participants from possibility of civil or political disturbance. Prof. West observed that, even if an entry visa was granted, there might be difficulty to obtain an exit visa from the participant's own country, or the participant might be ostracized by fellow national chemists. The Secretary General recommended that the Union should bear these points in mind for the future.

In agreeing wholeheartedly with the basic principle of freedom of circulation of scientists, Prof. Jortner said that the letter was ambiguous and vague in referring to "other factors". It raised the danger of imposing an arbitrary exclusion principle on the location of scientific activities, which was totally unacceptable. The guideline should be a symmetry principle, which required the freedom of circulation of scientists, granted by both the host country and the country of origin. International organizations like IUPAC must strive to eliminate all restrictions on international scientific collaboration.

\* \* \* \* \*

CHAIRMAN: Y. Jeannin  
DATE: 23rd September 1990

FINANCIAL PRINCIPLES FOR MANAGEMENT OF CHEMRAWN ACTIVITIES

The CHEMRAWN activities are directed within IUPAC by the CHEMRAWN Committee (Standing Committee). The Standing Orders from the Executive Committee are given in the IUPAC Handbook 1987-1989 (page 44). The positions of IUPAC and its Treasurer with respect to CHEMRAWN finances are defined at the end of this Appendix, which statement was endorsed by the Bureau (Minute 6.1/87, 54th Meeting - Boston). The financial needs of CHEMRAWN are outlined below through a short account of the activities.

Activities

The activities of CHEMRAWN are mainly the running of Conferences, at which chemical research applied to world needs is exposed. The principles governing CHEMRAWN were presented on several occasions by Dr. B.W. Rossiter, the first Chairman of the Committee:

- To provide leadership for identifying new research directions
- To serve not only scientists but all of humanity as well
- To involve decision makers in Conferences on topics of world importance
- To communicate the recommendations and to follow up

In keeping with these objectives, CHEMRAWN has gone beyond the running of Conferences, and it is starting to hold workshops, which are usually "follow ups" from a Conference itself. Accordingly, it is highly desirable that the overall budget for a given CHEMRAWN Conference should include funds for the follow up application of the recommendations.

Historical Financing of CHEMRAWN

The organizing committees for CHEMRAWN Conferences have benefitted from "seed money" from IUPAC and from industrial and institutional support of its Conferences (by host countries, host organizations, and other bodies). Some Conferences have ended in surplus, some broke even, and one ended in deficit. The two latter situations are not acceptable for any CHEMRAWN Conference. IUPAC has assumed the general financial responsibility, but a drain on its assets would endanger its many other activities.

If CHEMRAWN is to continue as a viable endeavour, able to accomplish its objectives, it should be "self financing" from the surplus derived from any given Conference. The CHEMRAWN name and IUPAC blessing is a franchise and the users owe something to the owner of the franchise.

A list of CHEMRAWN Conferences is attached to this Appendix. The financial situation governing each one was different, and the financial consequences at the end of each Conference to the benefit of future CHEMRAWN Conferences was also different. It is difficult to enunciate firm principles, which should govern the ongoing financial support of CHEMRAWN activities. Nevertheless, based on the experience of over a decade, it should be possible to outline a desirable process.

#### Financial Dispositions

The Conferences as such are not dealt with as a part of the IUPAC budget and each Conference is financially independent. Surplus money, and contributions from IUPAC or other sources, are placed in a CHEMRAWN Rolling Fund, which is part of the IUPAC assets and appears in the balance sheet of the Union. This Fund should be large enough at any time to take care of the expenses for planning the start of new Conferences, etc., and it may cover small deficits on Conferences. Any large deficit must be handled separately by finding additional support and/or using IUPAC assets. The IUPAC Treasurer approves payments from the Rolling Fund and he has a responsibility to pay attention to the financial aspects of the CHEMRAWN activities and intervene to consider possible support or issue warnings.

As regards money, used by the CHEMRAWN Committee in dealing with an activity, which transcends the classical mission of IUPAC, it seems reasonable to expect regular contributions to the Rolling Fund from the IUPAC budget. Once a new Conference is approved, its organization by a Conference Committee and the procurement of money is at the discretion of that Committee, with the IUPAC Treasurer kept informed.

The Rolling Fund receives royalties from CHEMRAWN Conference publications. These monies, together with other surpluses, should be available to CHEMRAWN for ongoing activities in keeping with the general principles and objectives of CHEMRAWN.

#### Statement of Treasurer's Responsibilities in CHEMRAWN Activities

In 1980 the Executive Committee decided, that IUPAC should be responsible for any deficit liability on future CHEMRAWN Conferences (Minute 3.5.2/80, 95th Meeting - Villefranche-sur-Mer). The matter has been subject to reconsideration by the Finance Committee and other IUPAC bodies.

In reconfirming the financial responsibility of the Union for CHEMRAWN Conferences (Minute 2.4.1/86, IUPAC Officers - New Delhi), and subject to the statutory involvement of the Treasurer (Statute 6.51), the Officers decided that henceforth the Treasurer should be an ex officio Member of the CHEMRAWN Committee and its Standing Orders should be amended accordingly. In addition, they asked the Treasurer to draft a statement with regard to implementation of his responsibilities in CHEMRAWN Conferences, for consideration by the CHEMRAWN Committee and approval by the Bureau for presentation to Council at Boston.

After finalization of the discussions of the Treasurer's Statement proposal at the CHEMRAWN Committee meeting in Tokyo (87.05.16-17), it was decided that the implementation of the responsibilities of the Treasurer, in addition to participation in CHEMRAWN Committee meetings, will be carried out by:

- (i) Authorization by the Treasurer of payments from the CHEMRAWN Rolling Fund
- (ii) Provision of information by the Chairman of the Committee on developments and decisions, which are likely to have financial implications
- (iii) Provision of pertinent information by the Chairman of the Organizing Committee of each Conference, Workshop, etc., about the planned and final budgets
- (iv) Responsibility of the Treasurer to warn the President of the Union, if there is any doubt about the balance of a Conference, Workshop, etc., budget
- (v) Forwarding of the audited accounts of each Conference, Workshop, etc., to the Treasurer for inspection

#### CHEMRAWN CONFERENCES

CODE	DATE	PLACE	SUBJECT	"ORGANIZER"	PUBLICATION	FINANCIAL (USD)	ATTENDANCE	COMMENTS
I	1978 July 10-13	TORONTO CANADA	Future Sources of Organic Raw Materials	W. Schneider	Perspectives & Recommendation	+ 25,000	800	Poster Session
II	1982 February 2-6	MANILA PHILIPPINES	Chemistry and Wood Food Supplies	B. Rossiter	Perspectives & Recommendation	+ 62,000	1000	3-4 Workshops in Asia, South America, Africa as follow up
III	1984 June 25-29	DEN HAAG NETHERLANDS	Resource Material Conversion	W. Beek	Perspectives & Recommendation	-66,000	123	Deficit was "paid off"
V	1986 September 22-26	HEIDELBERG GERMANY	Current and Future Contributions to Health-The New Frontiers	H. Machleidt W. Fritzsche	Perspectives & Recommendation	0	250	Poster Sessions Press Conferences
VI	1987 May 17-22	TOKYO JAPAN	Advanced Materials for Innovations in Energy, Transportation & Communications	M. Uchida	Perspectives & Recommendations	0	620	Poster Session and High Tech. Mats. Show
IV	1987 October 4-9	KEYSTONE CO, USA	Chemical Resources of the Ocean	D. Spencer	Perspectives & Recommendation	0	80	Workshop Style

## APPENDIX B

### CONTINUATION/DISSOLUTION OF EXISTING IUPAC BODIES AND PROPOSALS FOR NEW BODIES

Present: Prof. V.A. Koptug (Chairman), Prof. Y.P. Jeannin, Prof. J. Jortner, Prof. H.A. Staab, Prof. T.S. West (Elected Members); Prof. K.I. Zamaraev, Prof. E. Fluck, Prof. T. Saegusa, Prof. G.H. Nancollas, Dr. S.S. Brown (Division/Section Presidents)

In Attendance: Dr. L.E. Coles (Vice-President, Applied Chemistry Division), Prof. G. den Boef (Vice-President, Analytical Chemistry Division), Prof. N. Montalbetti (Vice-President, Clinical Chemistry Division), Dr. M. Williams (Executive Secretary)

After careful consideration of the proposals of various Division Presidents, the Bureau resolved to recommend to Council:

#### 1. Physical Chemistry Division (I)

Creation of an Interdivisional Ad Hoc Subcommittee on Solid-State Chemistry, with representation from Divisions I, II, III, and probably IV, and from the Committee on Teaching of Chemistry, and with Prof. B. Delmon to act as Convenor. To undertake a feasibility study on the need for IUPAC activity in the field, reporting back to the Bureau not later than the 1991 General Assembly. Financed (one meeting) from IUPAC General Contingency Fund (estimate: USD 2 000).

#### 2. Inorganic Chemistry Division (II)

Creation of an \*LLTC Commission on Isotope Specific Measurements as References for Toxic/Essential Element Assay (jointly with Division VII). Membership (provisionally five Titular Members plus some Associate Members) and terms of reference/projects to be settled by correspondence with IUPAC President (Executive Committee). Financed under IUPAC Mission-oriented Programme on Environment (assets).

#### 3. Macromolecular Division (IV)

Creation of an \*LLTC Commission on Functional Polymers. Membership (four Titular Members) and terms of reference/projects to be settled by correspondence with IUPAC President (Executive Committee). Financed under IUPAC Mission-oriented Programme on Advanced Materials (assets).

\* LLTC = Limited Life Time Commission, with a duration of only four years.  
Not to receive any Divisional numbering.

#### 4. Analytical Chemistry Division (V)

(i) Dissolution (in view of reorientation) of existing Commissions on Analytical Reactions, Reagents, and Separations (V.1) and on Analytical Nomenclature (V.3).

(ii) Creation of a new Commission on General Aspects of Analytical Chemistry (V.1). Membership (nine Titular Members plus eight Associate Members) to be financed from Division Funds. Terms of reference:

- a. All matters relating to general nomenclature in analytical chemistry. Participation in the coordination of specialized nomenclature formulated by the method-oriented Commissions of Division V.
- b. Characterization and optimization of analytical procedures based on analytical reactions.
- c. Chemometrics applied to analytical chemistry.

(iii) Creation of an \*LLTC Commission on Chromatography and Other Analytical Separations. Membership (three Titular Members and five Associate Members) to be financed from Division Funds. Terms of reference:

- a. To develop and publish critical guidelines and recommendations for the operation of analytical methods of separation.
- b. To consider and recommend analytical nomenclature and definition of terms used in analytical methods of separation.

(iv) Creation of an \*LLTC Commission on Environmental Analytical Chemistry. Membership (four Titular Members and nine Associate Members) to be financed under IUPAC Mission-oriented Programme on Environment (assets). Terms of reference:

To study and assess analytical methodologies for the characterization of the environment, including atmosphere, hydrosphere, sediments, and soils

- Identification, for each environmental compartment, of (a) qualitative factors which control its state and dynamics, and (b) physico-chemical parameters which enable their quantitative characterization
- Compilation of numerical values available for the above parameters
- Critical evaluation and standardization of current methodologies
- Development of standardized procedures to validate and interpret experimental data in terms of sound physico-chemical parameters
- Identification of future methodological needs



5. Clinical Chemistry Division (VII)

(i) Dissolution of existing Commission on Automation and Clinical Chemistry Techniques (VII.1).

(ii) Creation of an \*LLTC Commission on Instrumentation and Software. Membership (two Titular Members) to be financed from Division Funds. Terms of reference: to complete existing projects not later than 1993 General Assembly.

(iii) Creation of an \*LLTC Commission on Biotechnology in Clinical Chemistry. Membership (two Titular Members) to be financed from Division Funds. Terms of reference: to undertake a feasibility study in collaboration with the Commission on Biotechnology (VI.2), with particular reference to systematic nomenclature.

6. All other existing Commissions of the Union should be allowed to continue for the next two years (Bylaw 4.302).

# IUPAC GENERAL PURPOSES BUDGET 1990

APPENDIX C

(as at 89.08.14: in USD)

<u>EXPENDITURE</u>		<u>INCOME</u>
<u>Office Expenses</u>		
IUPAC Officers	7 000	
IUPAC Secretariat (non-publ.)	250 000	
Audit & Bank Fees	<u>46 000</u>	
	303 000	
		<u>National Subscriptions</u>
		504 000
		<u>Company Associates Service Charges</u>
		6 000
<u>Expenses IUPAC Bodies</u>		
IUPAC Bodies Programmes	407 000	
IUPAC Representatives on Other Organizations	<u>10 000</u>	
	417 000	
		<u>Interests &amp; Dividends Earned</u>
		170 000
<u>Provision for Handbook 1989-91</u>	15 000	
<u>Contributions to Symposia</u>	10 000	
<u>Contributions to ICSU &amp; ICSU Committees</u>	12 000	
<u>Information Services/Developing Countries</u>	25 000	
<u>Provision for Bad Debts</u>	10 000	
<u>General Contingency Fund</u>	10 000	
<u>Excess of Income over Expenditure</u>	18 000	
	<u>820 000</u>	<u>820 000</u>

PREALLOCATIONS TO IUPAC BODIES: 1990-1  
(as at 89.08.14; in USD)

	<u>Programmes</u>	
<u>STANDING COMMITTEES</u>	<u>A</u>	<u>B</u>
Executive	11 000/15 000	-
Bureau	35 000	-
CHEMRAWN	10 000	-
COCI	-	-
Publications	10 000	-
CTC	14 500	4 000
Finance	7 000/7 000	
IDCNS	16 500	-
JCBN	9 000	-
CCDB	9 000	-
	<hr/> 144 000	<hr/> 4 000
	<hr/>	<hr/>
<u>DIVISIONS/SECTIONS</u>	<u>A</u>	<u>B</u>
Physical Chemistry	25 250	9 000
Inorganic Chemistry	30 290	5 000
Organic Chemistry	34 000	-
Macromolecular	27 000	8 000
Analytical Chemistry	27 200	11 500
Applied Chemistry	31 500	8 500
Clinical Chemistry	24 300	6 000
Medicinal Chemistry	9 300	-
	<hr/> 208 840	<hr/> 48 000
	<hr/>	<hr/>
<u>Stationery</u>	2 000	
	<hr/>	<hr/>
Total	406 840	
	<hr/>	

IUPAC GENERAL PURPOSES BUDGET 1991

(as at 89.08.14; in USD)

<u>EXPENDITURE</u>		<u>INCOME</u>
<u>Office Expenses</u>		
IUPAC Officers	7 000	
IUPAC Secretariat (non-publ.)	272 000	
Audit & Bank Fees	<u>40 000</u>	
	319 000	7 000
<u>Expenses IUPAC Bodies</u>		
General Assembly	620 000	
IUPAC Representatives on Other Organizations	<u>10 000</u>	
	630 000	170 000
		<u>24 000</u>
<u>Contributions to ICSU &amp; ICSU Committees</u>	12 000	103 000
<u>Information Services/Developing Countries</u>	31 000	
		<u>808 000</u>
<u>General Contingency Fund</u>	10 000	194 000
	<u>1 002 000</u>	<u>1 002 000</u>

# IUPAC PUBLICATIONS BUDGETS 1990-1: FIRST OUTLINE

(as at 89.05.05: in USD)

	<u>EXPENDITURE</u>		<u>INCOME</u>	
	<u>1990</u>	<u>1991</u>	<u>1990</u>	<u>1991</u>
IUPAC Secretariat (publications)	149 000	161 000	Royalties	275 000
Miscellaneous Expenses	10 000	11 000		
	159 000	172 000		
Transfer to General Income & Expenditure Budget	116 000	103 000		
	275 000	275 000		
			275 000	275 000

IUPAC AMS BUDGETS 1990-1: FIRST OUTLINE

(as at 89.04.24: in USD)

	<u>EXPENDITURE</u>		<u>INCOME</u>	
	<u>1990</u>	<u>1991</u>	<u>1990</u>	<u>1991</u>
Salaries	28 000	30 800	86 400	86 400
Share Secretariat Costs	10 900	12 000	Royalties Blackwell	4 000
Chemistry International	58 500	58 500	* Information Services/ Developing Countries	30 900
Miscellaneous Expenses	18 000	20 000		
	115 400	121 300	115 400	121 300

\* Transfer from General Purposes Budget

SPONSORSHIPS OF SYMPOSIA BY IUPAC APPROVED BY CORRESPONDENCE

SINCE 112th MEETING OF IUPAC EXECUTIVE COMMITTEE

(see Appendix F, 112th Executive Committee, Lisbon)

10th International Symposium on Polymer Networks  
Jerusalem, Israel: 21st-25th May 1990

International Symposium on Unsteady State Processes in Catalysis  
Novosibirsk, USSR: 5th-8th June 1990

13th IUPAC International Symposium on Photochemistry  
Warwick, UK: 22nd-28th July 1990

3rd International Symposium on Polymer Analysis and Characterization  
Brno, Czechoslovakia: 23rd-25th July 1990  
(change of location and date from Dresden, GDR: Spring 1990)

7th International Meeting on Boron Chemistry  
Torun, Poland: 30th July-3rd August 1990

4th International Symposium on Solubility Phenomena  
Troy, New York/USA: 1st-3rd August 1990

21st International Conference on Solution Chemistry  
Ottawa, Canada: 6th-10th August 1990

14th International Conference on Organometallic Chemistry  
Detroit/Michigan, USA: 19th-24th August 1990

2nd International Symposium "Organic Chemistry: Technological Perspectives"  
Baden-Baden, FRG: 15th-19th April 1991

27th Colloquium Spectroscopicum Internationale  
Bergen, Norway: 9th-14th June 1991

Addendum

15th International Carbohydrate Symposium  
Yokohama, Japan: 12th-17th August 1990

OFFICIAL REPRESENTATIVES TO IUPAC-SPONSORED SYMPOSIA

APPROVED BY CORRESPONDENCE

SINCE 112th MEETING OF EXECUTIVE COMMITTEE

(see Appendix G, 112th Executive Committee, Lisbon)

International Conference on Analytical Chemistry  
Cambridge, UK: 30th July-5th August 1989  
Dr. T. A. M. URE

12th International Congress of Heterocyclic Chemistry  
Jerusalem, Israel: 13th-17th August 1989  
LETTER OF GREETINGS

40th International Society of Electrochemistry Meeting  
Kyoto, Japan: 17th-22nd September 1989  
Prof. G. S. WILSON

3rd International Seminar on Flame Structure  
Alma-Ata, USSR: 18th-22nd September 1989  
LETTER OF GREETINGS

17th International Symposium on Chemistry of Natural Products  
New Delhi, India: 4th-9th February 1990  
Prof. G. OURISSON

4th International Symposium on Biological and Environmental Reference  
Materials  
Orlando, Florida/USA: 5th-8th February 1990  
Dr. S. S. BROWN

10th International Conference on Physical Organic Chemistry  
Haifa, Israel: 6th-10th August 1990  
Prof. H. ZOLLINGER