

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF 106th MEETING OF EXECUTIVE COMMITTEE

Royal Society, London: 15th-16th April 1985

Present: Dr. W. G. Schneider (Chairman), Prof. A. Björkman, Prof. Y. Jeannin, Prof. J. Michalski, Prof. S. Nagakura, Prof. C. G. Overberger, Prof. T. S. West

Absent: Prof. C. N. R. Rao

In Attendance: Dr. M. Williams (Executive Secretary), Miss A. Troughton (Deputy Executive Secretary), Dr. M. H. Freemantle (Information Officer/Affiliate Affairs Secretary)

1/85 INTRODUCTORY REMARKS AND FINALIZATION OF AGENDA

The President regretted that Prof. Rao was unable to attend due to unavoidable personal circumstances. He then introduced Dr. Freemantle, who had taken up appointment as IUPAC Information Officer (including editorship of CI)/Affiliate Affairs Secretary from 85.04.01 and was present at the meeting as an observer. It was noted that Mr. R. W. Fennell would continue as part-time editor of CI until 85.05.03 in order to overlap with Dr. Freemantle.

The following items were added to the agenda circulated by the Executive Secretary (85.04.03):

- 8.5 International Biosciences Network Steering Committee
- 8.6 ICSU Activities related to Developing Countries
- 11.7 Scheduling of Second Circulars

2/85 MINUTES OF 103rd-105th MEETINGS OF EXECUTIVE COMMITTEE AND OF IUPAC OFFICERS (84.06.22-23)

2.1/85 Amendments and Approval of Minutes

The minutes of the meetings at Lyngby (circulated by the Executive Secretary 83.12.20 and 84.05.11) and at Oxford (circulated by the Executive Secretary 84.08.10 and 84.11.20) were approved. Prof. Jeannin reported that Dr. T. D. Coyle had resigned on 84.07.12 as Secretary of the Commission on Nomenclature of Inorganic Chemistry, and therefore a vacancy also existed on IDCNS for a Member from the Inorganic Chemistry Division (cf. Appendix A to Minutes of IUPAC Officers Meeting).

2.2/85 Matters Arising from Minutes

2.2.1/85 Nominations for Officers of ICSU (Minute 2.2.8/84, IUPAC Officers)

The Executive Secretary reported that, due to changing personal circumstances, Prof. G. Ourisson would be unable to offer himself as a candidate in 1986. Prof. Ourisson had informed Prof. J. Bénard accordingly.

2.2.2/85 Soil Science Society of America (Minute 2.2.9/84, IUPAC Officers)

The Secretary General reported that, at the 1984 ICSU General Assembly, Dr.

W. G. Sombroek had agreed it was inappropriate for SSSA to become an Associated Organization of IUPAC. In a subsequent telephone conversation with a representative of SSSA, Prof. West had suggested that they might liaise with the US National Committee for IUPAC.

3/85 MINUTES OF MEETINGS OF:

3.1/85 49th Bureau

The minutes were recorded as having been received officially by the Executive Committee.

3.1.1/85 Commission on Medicinal Chemistry (Minute 2.2.2.1/84)

The Executive Committee noted that the Working Party Chairman, Prof. C. G. Wermuth, had taken action to involve the International Committee on Medicinal Chemistry and chemical industry in further discussions about the future international status of medicinal chemistry. A preliminary paper had been prepared for finalization at a meeting in Amsterdam (85.03.18) and circulation to national societies. Prof. Wermuth had advised the Executive Secretary by telephone (85.04.11) that the atmosphere in Amsterdam was very positive and constructive: it had been decided to recommend the formation of only one international medicinal chemistry body, which should remain within IUPAC, preferably with independent Section/Division status.

Contrary to his previous convictions, Dr. Schneider said that the International Union of Pharmacology was not enthusiastic to set up an inter-union Commission. Prof. West now favoured retaining medicinal chemistry within IUPAC, even as an independent Section attached to the Bureau: bio-oriented life sciences were currently attracting good financial support both from industry and within ICSU. Prof. Jeannin was concerned about allowing medicinal chemistry to solicit financial support outside IUPAC from industry. However, Dr. Schneider felt that this was in order if it was similar to the involvement of industry in the working parties of the Macromolecular Division. Profs. Michalski, Overberger, and West stressed the inter-divisional scope of the subject: in due course, it might become associated with any broader evolution of the present Clinical Chemistry Division.

It was decided that the outcome of the Working Party deliberations should be considered by the Bureau at Lyon, when the views of the Organic Chemistry Division should also be taken into account.

3.1.2/85 Commissions on Atmospheric Chemistry and on Water Chemistry (Minute 2.2.2.3/84)

Minutes were available from preparatory meetings for Lyon of the reconstituted Commissions on Atmospheric Chemistry (Lübeck, 84.11.26-27) and on Water Chemistry (London, 85.03.08-09). The Executive Committee approved the following Officers (Bylaw 4.303) for the Atmospheric Chemistry Commission:

Chairman	-	Dipl. Ing. K. Leichnitz
Vice-Chairman	-	Prof. J. G. Calvert
Secretary	-	Dr. C. J. Purnell

Dr. Schneider reiterated the requirement for good geographical representation in the nomination of additional Titular and Associate Members for both Commissions.

3.1.3/85 Proposed IUPAC-UNESCO Initiative in Latin America (Minute 3.2/84)

A document, prepared at a consultative meeting in Rio de Janeiro (84.10.16 and 18) and containing objectives and lines of action for a Latin American Chemistry Programme, had been received and the official reactions of UNESCO were awaited. Dr. Schneider was disappointed at the lack of imaginative proposals, and was not attracted personally by the specific request for IUPAC sponsorship of the 5th Latin American School of Theoretical Chemistry (Habana, 86.11.17-29). He suggested that Prof. Rao should meet at Lyon with Profs. A. J. Arvía and D. J. Waddington to discuss the matter further and report back to the Bureau, particularly with respect to the Theoretical Chemistry School and active involvement of Federación Latinoamericana de Asociaciones Químicas as an Associated Organization of IUPAC.

3.1.4/85 Wolf Foundation Prizes 1983-4 (Minute 3.3/84)

The Executive Committee noted that the renomination by IUPAC of Dr. B. W. Rossiter for 1984-5 had been unsuccessful. Because preference was clearly given to experimental scientists, it was decided not to nominate Dr. Rossiter for 1985-6.

3.1.5/85 US National Research Council Reports (Minute 3.4/85)

The reports had been considered by Dr. S. S. Brown and his comments (84.11.20) accepted, in general, by Dr. Schneider (84.12.17). A "scissors-and-paste" version of Prudent Practices for Handling Hazardous Chemicals in Laboratories had been submitted to Blackwell Scientific Publications and the preliminary results of its market survey (85.04.01) were doubtful about a large market for an IUPAC manual. The Executive Committee accepted the President's suggestion that the final BSP survey should be discussed at Lyon by Dr. Brown with Dr. M. L. Good and Prof. D. J. Waddington, and they should report back to the Bureau.

3.1.6/85 Document for Recruitment of Company Associates (Minute 3.5/84)

The Executive Committee noted that Dr. P. J. Agius had recently drafted a completely new document (Minute 2.2(ii)/85, Finance Committee). The Executive Secretary was to supply a representative list of recently published major reports and recommendations of IUPAC. The revised draft would then be submitted to Dr. D. A. O'Sullivan prior to Lyon.

3.1.7/85 Financial Burden of National Representatives (Minute 4.5/84)

In accordance with the Bureau resolution, the Secretary General had requested NAOs (85.01.04) to adopt a more critical approach to the nomination/renomination of National Representatives. However, the Deputy Executive Secretary reported that so far there was no significant decrease. It remained to be seen if Divisions/Commissions would accept renominations of persons who had been inactive in project work: Division Presidents should be reminded about the matter at the Briefing Meeting in Lyon. From his personal experience with the Commission on Nomenclature of Inorganic Chemistry, Prof. Jeannin said that the active involvement was worse for developing countries: letters were not answered and attendance at meetings was too expensive.

Prof. West reiterated his warning that, unless the burden of work in respect of National Representatives was controlled sufficiently, he would have to come back to the Bureau to request funds for additional staff at the Secretariat. It was decided to refer for consideration by the Division Presidents at Lyon, a letter from the US National Committee for IUPAC (85.03.13) seeking, in future, an

activity statement on each National Representative from the relevant Commission Chairman.

3.1.8/85 Report of Advisory Committee on Chemical Data Bases (Minute 6/84)

The President reported that he had deferred action to disband the ad hoc Committee and set up a Standing Committee on Chemical Data Bases. At Lyon he planned to consult Dr. D. R. Lide and Prof. V. A. Koptug about membership and to ascertain what role, if any, Prof. Koptug was prepared to undertake on the new Standing Committee. However, it had already become clear that Dr. S. R. Heller (USA) would be the most suitable candidate as IUPAC Data Bases Coordinator. Dr. Heller had therefore been invited to sit in at meetings in Lyon of those Commissions involved in data compilation. The Executive Committee noted that Council at Lyon would need to approve creation of the new Standing Committee, so it was important for the Bureau first to receive definite proposals on membership and a budget forecast for the activities.

3.1.9/85 Certificate of Service to IUPAC (Minute 10/84)

The Executive Secretary drew attention to a previous suggestion of a similar nature by Prof. P. W. West. However, the President felt that a personal letter of thanks was better appreciated than a routine certificate. On his proposal, an earlier resolution of the Executive Committee (Minute 493, 75th Meeting - Oxford, 1970) was reaffirmed:

that it is preferable for official letters of thanks for their work, if so merited, to be sent by Division Presidents or Commission Chairmen to retiring Members of IUPAC bodies.

3.1.10/85 Legal Obligations (Minute 12.4/84)

Dr. A. Hartmann had advised that legal requirements for incorporation of IUPAC in 1919-1920 were unknown. However, the Union was acting since 1975 as if incorporated in Zürich and in accordance with Articles 60 and following of the Swiss Civil Code (IUPAC Statutes 4.3 and 4.4). Because IUPAC was not trading directly, it was unnecessary to be entered in the Zürich Register of Commerce (Minute 2.2(vii)/85, Finance Committee).

The Executive Committee accepted Dr. Hartmann's advice and his suggestions for the following changes to the IUPAC Statutes:

- (i) Statute 1 should be entitled "Definition of the Union and Incorporation".
- (ii) The present wording of Statute 1 ("The International Union ... has joined the Union.") should become Sl.1.
- (iii) Sl.2 should be introduced with the following wording:

"The Union has been organized and incorporated in accordance with Articles 60 and following of the Swiss Civil Code."
- (iv) A new Statute on "Liability" should be added after the section on "Finance" (page 6), along the same lines as in the statutes of the International Union of Crystallography.

Dr. Schneider suggested that the provisions for liability should include a clause covering the permanent employees of IUPAC.

Following recent consultations with the International Association on Water

Pollution Research and Control, the Executive Secretary would look further into the possibility of charitable registration in UK. Charitable status would entitle IUPAC to a 50% reduction in general rates (local tax) for the Secretariat in the Oxford district. In addition, the Secretary General drew attention to wording on the ICSU claim form, advising persons to take out their own insurance cover, which was not provided by ICSU. Similar wording might advantageously be included on the IUPAC claim form.

3.1.11/85 Status of Commission on Biotechnology (Minute 11.2/84)

Following the meeting of ICSU bio-unions with IUPAC representatives (Ottawa, 1984) to consider establishment of an ICSU Committee or an Inter-Union Commission on Biotechnology, the Secretary General had invited the Officers of IUPAC's Commission on Biotechnology to help him report back to ICSU on the interests, intentions, and capabilities of our Union in this area. The Commission Vice-Chairman, Prof. M. Ringpfeil, had reacted very positively. President Schneider endorsed Prof. West's resulting position paper (85.01.04), and expressed concern at the activity of the bio-unions in Ottawa to press their involvement in preference to a leading influence for IUPAC. Prof. West indicated that the International Union of Microbiological Societies favoured formation of an ICSU Committee, whereas all the other bio-unions advocated an Inter-Union Commission, i.e. ICSU should play a coordinating rather than controlling role. In his critical assessment (Minute 7/85 below), Prof. Rao felt that IUPAC should take the leadership in any agreed ICSU activity.

Dr. Schneider reiterated his previous conviction of the need for IUPAC to strengthen its Commission on Biotechnology at Lyon, including expertise in enzyme chemistry and process technology. This view was shared by the in-coming President of the Applied Chemistry Division, Dr. P. C. Kearney (85.04.01). The Executive Committee noted that the Secretary General would chair the ad hoc inter-divisional meeting on biotechnology in Lyon (85.09.03). Prof. Rao should also be present and Prof. Michalski expressed a personal wish to attend. Prof. Björkman cautioned against assigning too all-embracing a coverage to the scope of biotechnology.

3.1.12/85 History of IUPAC (Minute 16.1/84)

A suggestion was approved from the Executive Secretary that, after discontinuing work for CI, Mr. Fennell should be invited to produce a shorter, more readable version of the historical survey compiled by Prof. S. Veibel. If possible, Mr. Fennell should review the material before Lyon and the views of Blackwell Scientific Publications should also be sought. Publication should be arranged to coincide with a suitable anniversary of the formation of the Union.

Prof. Jeannin stressed the urgent need for an information brochure about IUPAC. Action on this matter had already been agreed by the Bureau in connexion with the IUPAC Handbook 1985-1987 (Minute 13.3/84, 49th Bureau), and Dr. Freemantle should become actively involved.

3.2/85 Division Presidents (84.09.15)

3.3/85 CHEMRAWN Committee (84.06.29)

3.4/85 Committee on Chemistry and Industry (84.06.29)

3.5/85 Committee on Teaching of Chemistry (84.07.21-22)

The four sets of minutes were recorded as having been received officially by the Executive Committee.

3.5.1/85 New Contract with UNESCO (Minutes '83/3(e)', 84/8, 84/14)

A contract had been signed between CTC and UNESCO for three different actions without seeking the approval of an Officer of the Union (Statute 9.42). Prof. Björkman had reminded (85.03.29) the Chairman of CTC, Prof. Waddington, that all contracts involving IUPAC bodies must be seen by the Treasurer and signed by the President. This was reaffirmed as the official policy of the Union, which would have financial responsibility in case of any liability.

The President drew attention to the required production by CTC of a draft booklet on safety in school chemistry and rules for technicians and beginning teachers (cf. Minute 3.1.5/85 above).

3.5.2/85 IUPAC Medal for Tertiary Teachers (Minute 84/12)

The need to stimulate development of chemical education at the tertiary level through an IUPAC medal for excellence in teaching was under consideration by CTC. Its National Representatives had been asked to comment on the matter and to report if any national awards existed and the criteria for them. The Executive Committee noted previous considerations of a similar nature (Minute 16/80, 96th Executive Committee - Zürich; Minute 2.2.8/81, 97th Executive Committee - Villefranche).

3.5.3/85 Chairmanship of CTC

It was noted that Prof. Waddington would complete his maximum term of service as an Officer of CTC in 1985. The Executive Committee decided to await the outcome of discussions between Profs. Rao and Waddington, which would hopefully lead to proposals for consideration at Lyon. Meanwhile, the President would welcome any suggestions from the Executive Committee as to suitable candidates.

3.6/85 Interdivisional Committee on Nomenclature and Symbols (85.09.10-11)

The minutes were recorded as having been received officially by the Executive Committee.

In his capacity as Chairman of the Commission on Nomenclature of Inorganic Chemistry, Prof. Jeannin was receiving regular nomenclature enquiries from Prof. A. J. C. Wilson, editor of Acta Crystallographica. He suggested that IUPAC should offer to send a representative to meetings of the IUCr Commission on Crystallographic Nomenclature (IDCNS Minute 3(c)/84).

3.7/85 Finance Committee (85.02.18-19)

The minutes were recorded as having been received officially by the Executive Committee.

3.7.1/85 Financial Control of CHEMRAWN Conferences (Minute 2.3.1/85)

Prof. Overberger presented a status report on arrangements for CHEMRAWN IV (Woods Hole/Massachusetts, 85.09.23-27), tabling a memorandum from the organizers (85.03.22) plus copies of the first circular and a draft for the second circular. Fund raising from government agencies and industrial companies was in hand (memorandum of 85.04.10), with confidence of obtaining at least US-\$125 000 plus US-\$30 000 committed by ACS in goods and services. The only expenditure so far was the IUPAC seed money of US-\$6 000, but the initial grant of US-\$10 000 from Year of the Ocean sources, would be required shortly to pay for the second circular. The organizers had agreed on a postponement date to 1986, if necessary, but the YOTO financial support of US-\$40 000 would then be lost.

The Treasurer felt that the overall financial situation for CHEMRAWN IV was now more reasonable than at the start of the year. Dr. Schneider was anxious that efforts should be made to raise money from foundations to assist participation from developing countries. In his opinion the subject was timely and a good scientific programme should ensure worthwhile attendance: postponement would be impossible once the second circular was distributed (end April) and registration fees were coming in.

Noting the financial risks taken for CHEMRAWN I and II, both of which ended in surplus, the Executive Committee endorsed the President's support for CHEMRAWN IV.

3.7.2/85 Statement of Accounts for 1984 and for Biennium 1983/4 - Reappointment of Official Auditor (Minutes 2.3.1 and 3.1/85 and Appendix A)

The financial position of the Union at the end of 1984 - as for 1983 - was better than anticipated: a surplus of US-\$220 000 compared with a budgetted surplus of US-\$105 500. For the biennium 1983-4 there was a surplus of US-\$248 000. Although the 1984 accounts were more detailed than previously, the Treasurer said that they were still very difficult to read for the uninformed. The figures were prepared in accordance with accountancy practice rather than for general information. Prof. Björkman had noted the President's recent suggestion that a reconciliation of budget with actual income and expenditure would be more useful to the Executive Committee/Bureau (Minute 4.1/84, 49th Bureau - Oxford).

Prof. Björkman summarized the latest available financial information on CHEMRAWN III, for which the Finance Committee had recommended inclusion in the 1984 accounts of provision for US-\$41 000 to cover the Conference deficit. Re-examination of the data, however, indicated that the deficit might only be about US-\$15 000. Subject to confirmation by the Treasurer with Prof. W. J. Beek of the required deficit provision, the Executive Committee approved the accounts for auditing. Also it was agreed to recommend that Council at Lyon should reappoint Neutra Treuhand AG as official auditor to the Union for 1985-6.

Prof. Overberger spoke strongly in favour of better direct financial support by IUPAC of the CHEMRAWN programme, for which the intellectual input/output was no different from that of the scientific Divisions of the Union. President Schneider pointed out that there was no risk normally in Division operations. On the other hand, if financial difficulties arose in future for CHEMRAWN, a loan (with interest payable) might be sought from IUPAC reserves.

3.7.3/85 Subscriptions from NAOs (Minute 5.2/85)

The Executive Committee noted that:

- (i) despite an official warning from IUPAC, Colombia was still in arrears for two years. It had therefore automatically ceased to be a Member of the Union (Statute 9.2).
- (ii) the Category Subcommittee had been replaced by a Subscriptions (Dues) Advisory Group. The Group would work by correspondence to advise the Treasurer and consist of the Chairman of Finance Committee, Dr. A. Hartmann, Dr. Williams as Secretary, and with input from Bayer. Prof. G. E. Zaikov would be consulted when East European countries were under consideration.

3.7.4/85 Proposed Subscriptions System for 1986-7 Based on Biennial CT Average
(Minute 5.4/85)

National subscriptions for 1986-7 had been computed by the Chairman of the Finance Committee, based on the biennial CT average for 1982-3 and a total national subscriptions income requirement of US-\$460 000 in both 1986 and 1987. Subject to the addition for comparison purposes of the invoiced subscription figures for 1985, the Executive Committee decided to circulate the data to NAOs for consideration prior to Lyon.

3.7.5/85 Per Diem Allowance 1985 (Minute 6/85)

The Executive Committee accepted the recommendation that the daily subsistence allowance, apart from Lyon, should remain at US-\$55 in 1985.

3.7.6/85 Revised Budget for 1985 (Minute 7/85)

The revised publications surplus (as of 85.02.19) was US-\$72 500, and the general purposes excess of income over expenditure was US-\$94 000. The Finance Committee had pointed out that, on purely financial grounds, it could be considered possible after Lyon to lift the restriction to six Titular Members of Commissions/eight Members of Division Committees. Dr. Schneider felt that complete lifting of the restriction was inappropriate. It was left for the Secretary General and Treasurer, in conjunction with the Secretariat, to table a proposal for consideration by the Bureau at Lyon, based on a stepwise increase in membership but with some flexibility of interpretation by the Division Presidents.

3.7.7/85 Draft Budgets for 1986 and 1987 and Financial Forecast for Biennium 1985-6 (Minutes 8.1, 8.2 and 8.3/85)

Tentative general purposes and publications budgets for 1986 and 1987 were noted by the Executive Committee: they would be reviewed by the Finance Committee at Lyon before presentation to the Bureau/Council. The Executive Secretary gave warning that Prof. H. Gg. Wagner was likely to submit a request at Lyon for financial support (6 x US-\$2 000) of three IUPAC seminars (Minute 16.3/84, 49th Bureau - Oxford) in each of 1986 and 1987. The Treasurer reminded the meeting that the CA-unit had been raised at Leuven to US-\$350 from the start of 1982. At Lyon the Finance Committee might wish to revive the suggestion of a further rise in 1986. In view of the recent and projected annual financial surpluses, Prof. Nagakura felt that the provision of US-\$260 000 for A/B-budgetting in 1986 of biennial IUPAC activities was too low. The Executive Committee left it open for the Bureau at Lyon to recommend whether to increase the provision and by how much.

3.7.8/85 Membership (Minute 9/85)

The Executive Committee considered the recommendations to fill two vacancies in the membership of the Finance Committee after 1985. The recommendation of Prof. J. M. Ward (UK) was accepted but, in view of the time which had elapsed since the nomination of Dr. V. Roubajilov (USSR), reconfirmation would be sought from the National Committee of Soviet Chemists.

4/85 FINANCIAL MATTERS

4.1/85 Treasurer's Report

In his opening remarks, the Treasurer reiterated his recent comments to the

Bureau (Minute 4.6/84, 49th Meeting) and Finance Committee (Minute 2.2(ix)/85). Prof. Björkman then tabled a sample letter from his dialogue now started with Divisions on budgetting, etc., and an analysis of his efforts to date with respect to those NAOs in arrears since introduction of the Leuven subscriptions scheme. His firm but flexible and courteous approach to NAOs was approved by the Executive Committee. The submission of a plan by which an NAO might reach an agreed level of subscription, with consequent writing off by IUPAC of transitory bad debts, was also accepted. The specific actions/recommendations of the Treasurer were endorsed for GDR, Spain, Belgium, Netherlands, Poland, Romania, Hungary, Austria, Turkey, Iraq, Yugoslavia, Ireland, Portugal, Syria, and Venezuela. In the case of Brazil, President Schneider agreed to make a personal approach to Prof. M. da Frota Moreira (Brazilian Research Council). Regarding Australia, the Executive Committee was less willing to allow the partially outstanding 1984 subscription to be set against bad debts: if the 1986 subscription was paid in full, however, bad debts could be applied for 1985.

4.2/85 Reallocation of Unspent Activities Funds

The Executive Secretary summarized his recent correspondence with the President on any prospective unspent funds remaining from the allocations made for 1984-5. In general, Dr. Schneider felt that reallocations mid-term or late in a biennium were not good practice. Nevertheless, the Executive Committee agreed:

(i) to reallocate for use by the Commission on Nomenclature of Inorganic Chemistry in expediting revision of Nomenclature of Inorganic Chemistry (the Red Book), the US-\$750 supplementary allocation provisionally made in 1984 to the Commission on High Temperature and Solid State Chemistry;

(ii) to reallocate from the incompletely spent budgets for the 1984 Bureau/1985 IUPAC Officers meetings -

a) US-\$2 500 to assist completion of Prof. V. Gold's Compendium of Chemical Terminology,

b) US-\$2 000 to CTC (with the possibility to carry over to 1986) for use in defined and acceptable projects.

4.3/85 Allocation of Funds to Working Parties (Minute 3/84, Division Presidents - Oxford)

It was decided to refer for decision by the Treasurer, outside the Executive Committee, a request (85.03.25) for financial assistance to convene a preparatory meeting of a new Macromolecular Division working party.

5/85 FUTURE IUPAC GENERAL ASSEMBLIES AND CONGRESSES

5.1/85 Status of 33rd General Assembly (Lyon, 85.08.30-09.07)

The Executive Committee noted that total expenditure on the Assembly was now envisaged at about US-\$283 500 (as at 85.02.15), so the budget allocation had been reduced from US-\$300 000 by US-\$10 000 (Minute 7/85, Finance Committee). The subsistence allowance had been confirmed at US-\$40 per day and, in view of the continued strength of the US-dollar compared with the French franc, it seemed unlikely for a supplementary allowance to be necessary. The Deputy Executive Secretary would be visiting Lyon during 85.05.12-16 for a final check on local arrangements. She would be accompanied by Dr. Freemantle, who would try to initiate some publicity through the press, etc.

An agenda for the Council meeting, drafted and precirculated by the Executive Secretary, was approved, subject to amalgamation of items 8 and 9. In response to a circular letter to NAOs from the Secretary General (85.01.04), inviting nominations for vacancies amongst the Officers of the Union and for Elected Members of the Bureau, one candidate for the Bureau had so far been nominated. Dr. Schneider reiterated his suggestion (Minute 8(4(iii))/84, 49th Bureau), that, like ICSU, IUPAC should consider establishing a nominating committee for presentation of sufficient candidates to fill the vacancies: recommendations would not be made if there was more than one candidate, unless geographical representation was of importance. The Secretary General was asked to prepare a discussion paper for the Bureau at Lyon which, if acceptable, could be circulated subsequently to NAOs.

5.2/85 Arrangements for 34th General Assembly (Boston, 87.08.21-29)

A report by the Deputy Executive Secretary (85.01.11), following a visit to Boston University, indicated the campus to be an acceptable location for the Assembly. Despite a provisional estimate of US-\$52 for the per diem and possible extensive use of APEX air fares (most of which required a minimum stay of seven days), the Finance Committee (Minute 8.1/85, Zürich) had recommended that a budget provision of US-\$450 000 should be made for Boston. Miss Troughton was concerned at the complete lack of response from USA to her report, although it had apparently been considered by the local organizing committee. Prof. Overberger agreed to press the US National Committee for a reply.

A request (84.09.20) was discussed for the Commission on Oils, Fats, and Derivatives to meet in Europe in mid-1987 and for only its Officers to travel to Boston. Permission had been granted in 1971 under similar circumstances, because of the large number of Associate Members, National Representatives, and Observers at meetings of the Commission. The Executive Committee was keen to retain the policy for all Commissions to meet at the General Assembly during an Assembly year, in order to promote full collaboration between IUPAC bodies. The President suggested that the Commission's working groups might meet first in Europe, followed by the Commission at Boston. The Secretary General would write accordingly to the Commission Chairman.

5.3/85 Arrangements for 31st Congress (Sofia, 87.07.13-18)

In his capacity as IUPAC representative on the Congress organizing committee (Minute 5.2/84, 49th Bureau), the Executive Secretary had received an invitation to attend the 3rd International Conference on Chemistry and Biotechnology of Biologically Active Natural Products (Sofia, 85.09.16-21). That Conference was considered as a rehearsal for the 1987 Congress.

5.4/85 Arrangements for 35th General Assembly and 32nd Congress
(Lund, 89.08.09-18/Stockholm, 89.08.02-07)

The Swedish National Committee for Chemistry had now confirmed (84.11.26) that it was ready to host the Congress in Stockholm, immediately prior to the Assembly in Lund.

A provisional invitation had also been received from Associação Brasileira de Química (85.01.23) to hold the 33rd Congress (1991) in Rio de Janeiro. The Executive Committee deferred consideration of the invitation, pending formation of a suitable Brazilian NAO, which could meet the full financial requirements of IUPAC membership (see Minute 4.1/85 above).

In addition to the previously reported promises of US-\$23 500, Prof. West said that some smaller amounts had been received or announced by other NAOs: in some cases the money was specifically earmarked to help continuation of CI. The request for funding from the Dreyfus Foundation had been unsuccessful, but US-\$15 000 (US-\$5 000/ICSU plus US-\$10 000/UNESCO) were available to enrol Affiliates from developing countries.

The Secretary General had now written to the five NAOs, which participated in the 1982 opinion poll, to initiate the mechanism in those countries for operating the Scheme from 86.01.01. All the other NAOs had been invited to take part and some positive responses had already been received. On the basis of the contractual agreement with Blackwell Scientific Publications to supply CI to Affiliates at US-\$5 per year, Prof. West had proposed an annual IUPAC service charge of US-\$7.5 per Affiliate (cf. Finance Committee estimate of US-\$10: Minute 8.1/85, Zürich). To this sum each NAO would need to add a national service charge, probably of a similar dimension. For developing countries, Prof. West suggested a nominal IUPAC service charge of US-\$1, the remainder to be met by a subsidy from the ICSU/UNESCO funds. The Executive Committee was in favour of publication by IUPAC of a register of names of Affiliates, though not necessarily in the biennial Handbook.

Prof. Nagakura spoke strongly in support of the efforts of the Secretary General to launch the Scheme and its importance to the future of the Union. A follow-up letter from Prof. West to East-European countries, reflecting the deliberations at the present meeting, was recommended by Prof. Michalski. For these and other countries with non-convertible currencies, it was reaffirmed that the IUPAC service charges could be accumulated by the relevant NAOs, then used to send Titular Members to IUPAC meetings outside their countries or for subsistence of Titular Members at meetings in those countries. Contact with developing countries might be first to those with IUPAC-Observer Country status and secondly through university professors of chemistry, regional organizations, and embassies. The hope was expressed that the Scheme would allow a continuing role and link for those who had served their time in the Union. Prof. Overberger suggested that Affiliates in developing countries might be provided with copies of the recommendations volume from CHEMRAWN Conferences.

No financial decision was taken whether the Scheme could definitely continue in 1987, but the Executive Committee was ready to recommend that US-\$10 000 should be set aside for IUPAC to subsidize Affiliates from developing countries in that year.

7/85 VICE-PRESIDENTIAL CRITICAL ASSESSMENT OF IUPAC PROJECTS AND PROGRAMMES
1983-5

The assessment was received during the course of the meeting and its consideration by the Executive Committee was necessarily limited. The information on forthcoming CHEMRAWN Conferences (p. 3) needed updating. The two bodies listed by Prof. Rao as 'unsatisfactory' - IUB-IUPAB-IUPAC Commission on Biothermodynamics, Commission on Biotechnology - were already under discussion by the Executive Committee (see Minutes 8.1/85 below and 3.1.11/85 above) and the Bureau would need to act at Lyon. For the three bodies listed as 'fair' - Commissions on Photochemistry, on Automation and Clinical Chemical Techniques, and on Teaching in Clinical Chemistry - Dr. Schneider commented that it was a clear message for the respective Division Presidents to act: these bodies should be monitored carefully during 1985-7. The work of COCI had not been critically

assessed by Prof. Rao, but Prof. Björkman felt that COCI was not far from being a failure.

The Executive Committee agreed that, after incorporation of any amendments, the final assessment should be circulated to the NAOs and Bureau three months prior to Lyon.

8/85 RELATIONS WITH OTHER ORGANIZATIONS

8.1/85 IUB-IUPAB-IUPAC Commission on Biothermodynamics (Minute 12.1/84, 49th Bureau)

The IUB Executive Committee was as yet undecided whether to continue sponsorship of the Commission (84.12.26). IUPAC should press for an answer before Lyon. No consideration was given to a suggestion from its Chairman (84.12.3), that the three unions might allow the Commission to exist without their financial support.

8.2/85 Review of Associated Organizations of IUPAC

Although a biennial review of AO status was required by Bylaw 5.5, Council at Lyngby (Minute 11/83, 32nd Meeting) had agreed to carry out the review only every four years. Activity statements, stressing any new developments since mid-1981, had therefore been requested for Lyon and received from all AOs except:

Association of Editors of European Chemistry Journals
Federation of European Chemical Societies
International Association of Geochemistry and Cosmochemistry
International Carbohydrate Organization
International Society of Heterocyclic Chemistry

At first reading the reports seemed satisfactory to the Secretary General, but he would submit a full review and recommendations to the Bureau at Lyon.

8.3/85 Requests for Grants and Loans from ICSU in 1985

Of the three applications submitted (Minute 12.3/84, 49th Bureau), only that in respect of the solubility data compilation had been successful (US-\$4 000). However, the basic allocation to IUPAC for 1985 was higher by US-\$4 517 than budgetted (US-\$15 000).

The following suggestions were made by the Executive Committee for grants in 1986, the Secretary General to act as coordinator:

- (i) biotechnology programme(s) - Prof. Ringpfeil,
- (ii) teaching of chemistry - Prof. Waddington,
- (iii) IUPAC Seminars (3 at US-\$2 000 - see Minute 3.7.7/85 above) - Prof. Wagner

No action should be taken in 1986 on behalf of solubility data, and a request for further support of Affiliates in developing countries should be deferred to 1987.

8.4/85 ICSU's Contemporary and Future Role in International Scientific Cooperation

Member unions had been invited to send their views on the objectives, themes, and discussion topics, for a special conference convened by ICSU (Schloss

Ringberg/München, 85.10.07-09), just prior to its 1985 General Committee meeting. Prof. West agreed to draft an IUPAC paper for comment by the Executive Committee and input to ICSU. The President felt that, if ICSU expanded to include medical science and engineering, it would become too diluted for good efficiency and effectiveness. Prof. Jeannin suggested that the reactions of Dr. Rossiter, on behalf of the CHEMRAWN programme, might be worth soliciting.

8.5/85 International Biosciences Network Steering Committee

In order to enhance collaboration, IUPAC had been invited to send a representative to a meeting of the IBN Steering Committee (Bogor/Indonesia, 85.11.04-07). Biotechnology was clearly stated as part of IBN's objectives and programme of activities. The Secretary General was unable to go to Indonesia, but the Executive Committee considered it vital for IUPAC to be represented, preferably by Prof. Rao (alternatively by Dr. Schneider or the Executive Secretary).

8.6/85 ICSU Activities Related to Developing Countries

The Secretary General tabled documentation from the Study Group on ICSU Activities Related to Developing Countries. ICSU unions were invited to provide, via answers to a questionnaire, information about their present activities in this area, future projects, and suggestions for an improved approach to such activities. Prof. West identified teaching of chemistry/clinical chemistry, CHEMRAWN, Affiliate Membership Scheme, and subventions to sponsored symposia, as main relevant IUPAC activities. He agreed, in conjunction with the Executive Secretary, to prepare the IUPAC reply to ICSU.

9/85 IUPAC BODIES

9.1/85 Ratification of Members Approved by Correspondence

The following appointments to membership of the CHEMRAWN Committee, made through correspondence by the President since the 49th Bureau meeting (Minute 11.1/84, Oxford), were ratified by the Executive Committee:

- Dr. A. Hayes (UK) to be upgraded to full Member (1985-1989)
- Prof. J. Klein (FRG) to be upgraded to full Member (1985-1989)
- Prof. C. G. Overberger (USA) to be appointed an Associate Member (1985 only) to help organize CHEMRAWN IV, following maximum term of eight years as full Member
- Dr. S. Varadarajan (India) to be appointed an Associate Member (1985-1989)

9.2/85 Nominations of New Members

The Executive Committee noted that:

- (i) Dr. S. C. Abrahams was to be the official representative of the International Union of Crystallography to IDCNS,
- (ii) Dr. R. H. Marchessault had replaced the late Dr. H. Egan as representative of CHEMRAWN Committee on the Editorial Advisory Board of CI.

9.3/85 Dr. K. S. Kasprzak

On the basis of his domicile in USA, the Secretariat had obtained the

endorsement of the US National Committee for IUPAC for the appointment of Dr. Kasprzak as an Associate Member of the Commission on Radiochemistry and Nuclear Techniques (Minute 3.1.6.2/84, IUPAC Officers). Subsequently Prof. F. W. Sunderman pointed out that Dr. Kasprzak was, in fact, working in USA for a prolonged period under a Polish-American Scientific Exchange Agreement. The President advised that the Polish NAO should be informed belatedly of the situation.

9.4/85 Safety Aspects in Chemical Industry

Dr. Rossiter had drawn attention to increasing public concern because of the recent Bhopal disaster and gas explosion in Mexico City. Prof. K. H. Büchel had agreed that safety in chemical industry should be discussed at the joint CHEMRAWN/COCI meeting in Lyon. The President had requested a report back to the Bureau in Lyon, to see if IUPAC could play a useful role in improving the situation, especially in developing countries. Prof. Björkman doubted if anything realistic would arise, the theme being mainly outside present IUPAC activities: in any case, some professional organizations already dealt with this matter. Dr. Schneider stressed that if COCI and the CAs did not wish to become involved, then the Union should take no action.

9.5/85 Terms of Reference for Divisions and Commissions

The Vice-President (84.12.14) had indicated that no substantial changes were needed to the terms of reference supplied by the various IUPAC bodies (Minute 3.3.2/84, IUPAC Officers; Minute 10/84, 49th Bureau). The Executive Committee agreed that, unless any suggestions were made by Prof. Rao before Lyon, the information should be included unchanged in IUPAC Handbook 1985-1987.

9.6/85 Commission on Chemical Kinetics

The Commission Chairman, Prof. K. J. Laidler had proposed seven additional Associate Members (85.03.06):

Prof. S. W. Benson (USA)	Prof. K. F. O'Driscoll (Canada)
Dr. L. I. Elding (Sweden)	Prof. B. A. Thrush (UK)
Dr. A. Kerr (UK)	Prof. E. T. Denisov (USSR)
Prof. I. Tanaka (Japan)	

whose candidature was supported by the President of the Physical Chemistry Division (85.04.03). Although all seven nominations were approved by the Executive Committee on behalf of the Bureau (Bylaw 4.304), it was still dissatisfied with the geographical distribution (cf. Minute 5.10/84, IUPAC Officers). Greater attention should be paid to that point when vacancies arose in future. Dr. Schneider advised that it was the responsibility of the lead Division for an inter-Divisional Commission to ensure good geographical representation, irrespective of whether nominations came from within the Commission or from other Divisions interested to participate in the work. Regarding the scope of the new Commission, Prof. Björkman enquired if any applied kinetics would be covered. It was unknown if there would be any connexion with the Catalyst Characterization Subcommittee of the Commission on Colloid and Surface Chemistry including Catalysis, but one of the Titular Members, Prof. J. Villiermaux, was a chemical engineer active in the European Federation of Chemical Engineering, an Associated Organization of IUPAC.

10/85 PUBLICATIONS

10.1/85 Minutes of Publications Committee Meeting (84.07.01-03)

Because of their late submission to the Bureau (Minute 13.1/84, 49th Meeting), further consideration was given to the minutes by the Executive Committee:

- (i) The President said that the new wording on the inside cover of PAC from the start of 1985 was not positive enough for what he intended in respect of reproduction/translation of material from the journal (cf. Minute 13.1(i)/84, 49th Bureau). He would be proposing further changes.
- (ii) The President preferred to wait until Lyon to consider filling the membership vacancy on the Publications Committee with an expert in data base handling/publishing (Minute 11/84, Publications Committee). Dr. S. R. Heller would participate in the meeting at Lyon and his eligibility could be judged at that time (see Minute 3.1.8/85 above).

10.2/85 Status Report on New Official Publisher to IUPAC/Solubility Data Series Contract (Minute 13.2/84, 49th Bureau)

The Executive Secretary reported that the formal agreement with Blackwell Scientific Publications had been concluded on 85.01.17 and was in full operation. There had been a smooth transfer in production of PAC and only minor difficulties with CI. However, IUPAC had been forced to exert strong pressure to ensure that Pergamon provided BSP with full details of PAC subscribers and passed over 1985 subscription monies which it had collected. After protracted negotiations, complete agreement had recently been reached on terms for leaving the solubility data series with Pergamon: the new contract was more advantageous to the Union than previously.

10.3/85 Terms of Reference for PAC Editorial Advisory Board

The Secretary General reminded the meeting that the EAB had been established, with a representative from each of the seven Divisions of the Union, as a referee body available to the Executive Editor of PAC for symposium papers of doubtful quality (Minute 17.1/83, 103rd Executive Committee - Lyngby). However, Mr. P. D. Gujral so far had not sought such assistance. Recently the Bureau (Minute 13.2/84, 49th Meeting) had supported a suggestion from Dr. M. L. Good that the terms of reference for the EAB should be enlarged to cover discussion of and recommendations on the contents. It also recommended that, if possible, the EAB should meet at Lyon. The Executive Committee accepted the suggestion of the Publications Committee (Minutes 6.1 and 6.2/84, Oxford) for the EAB to sit in with it at Lyon for discussions on the future policy of PAC.

10.4/85 Contents of CI

The Executive Secretary said that, as the new editor of CI, Dr. Freemantle needed a clear aim for the contents of the average issue of the news magazine. Dr. Williams felt that CI No. 6/1984 was the best issue to date, with plenty of pages and a good balance of IUPAC information and more general material. Several prominent IUPAC persons shared that view, although there was some disagreement about inclusion of professional affairs articles (e.g. trade unions in chemistry). In the opinion of the Secretary General, CI No. 4/1983 (Lyngby General Assembly) was also an outstanding issue and, if possible, should be repeated at Lyon. Prof. West stressed the importance of fully activating the CI Editorial Advisory Board at Lyon, to assist Dr. Freemantle in obtaining sufficient regular IUPAC material. The Executive Committee reaffirmed the direction on CI contents taken in the past few years by Mr. Fennell, with

emphasis on IUPAC news, but more effort should be devoted to increasing the general readability. No decision was taken to exclude articles on professional affairs.

11/85 SPONSORSHIP: REPRESENTATION, SPONSORSHIP, SUBVENTION

11.1/85 Ratification of Sponsorships Approved by Correspondence

The sponsorships of symposia, approved through correspondence by the President since the 49th Bureau meeting (see Appendix A below), were ratified by the Executive Committee.

11.2/85 Ratification of Official Representatives to Symposia in 1985

The appointments of official representatives of IUPAC to its sponsored symposia in 1985, as made by the President through correspondence since the 49th Bureau meeting (see Appendix B below), were ratified by the Executive Committee.

11.3/85 7th International Biotechnology Symposium

At the 20th ICSU General Assembly (Ottawa, 84.09.23-28), the Committee on Free Circulation of Scientists had discussed the requirement for South African applicants for visa entries, in connexion with the above symposium, to sign a declaration about the political philosophy of their country (Minute 14.4/84, 49th Bureau). This was in contradiction with IUPAC Statute 2.5 and with ICSU policy of non-discrimination, affirming the rights of all scientists throughout the world without regard to political philosophy to join in international scientific activities. CFCS had suggested that the invitation for India to host the 21st ICSU General Assembly should be deferred until the situation in that country concerning free circulation of scientists was remedied. The IUPAC Executive Committee supported the stand taken by CFCS: at present there were no forthcoming IUPAC-sponsored symposia scheduled for India, but future applications from India for sponsorship must exclude the need for visa applicants to sign a political philosophy declaration.

11.4/85 Definition of Developing Country

A condition increasingly imposed in granting subventions to IUPAC-sponsored symposia was that the money should preferably be used for travel and subsistence expenses of participants from developing countries. The organizers of a recently subvented symposium had requested that some guidelines should be formulated by IUPAC as to what constituted a "developing country". The Executive Committee approved the suggestion by the President of the following two principles as a basis for formulating such guidelines:

- (i) scientific criteria should be used to delineate preferences, rather than chemical turnover or economic criteria;
- (ii) preference should be given to countries "on the way to scientific and industrial development" with a potential of becoming an IUPAC NAO within a reasonable period of time (10-15 years).

The logical course from (ii) was for symposia organizers to give first priority of financial support to participants from Observer Countries of the Union. Prof. Michalski proposed that, if finances permitted, IUPAC should grant more subventions to its sponsored symposia. Dr. Schneider agreed, but felt that such IUPAC resources should be channelled in conjunction with efforts being made by COSTED for developing countries.

11.5/85 CHEMRAWN V

The progress in arrangements for CHEMRAWN V on "Current and Future Contributions of Chemistry to Health - The New Frontiers", at Heidelberg during 86.09.22-26 (Minute 2.3.1/85, Finance Committee), was noted by the Executive Committee. Although the financial basis would not be clarified completely before mid-1985, the organizers should be asked to complete an AIQ, urgently and as far as currently possible for the scientific programme together with a statement on the publishing intentions. Official sponsorship by IUPAC should be granted no later than at Lyon.

11.6/85 Coordination of IUPAC-sponsored Symposia

The President drew attention to the suggestion of Prof. J. Mathieu (84.11.28) for better coordination within IUPAC in long-range planning of symposia by Divisions. Dr. Schneider had invited the Division Presidents to send representatives to a meeting at Lyon on 85.09.01 to discuss how to improve the situation. The Secretary General expressed some doubts about the value of such a meeting.

11.7/85 Scheduling of Second Circulars

In order to facilitate international participation in IUPAC-sponsored symposia, Prof. Michalski was concerned at the lateness in receipt of details and registration forms in some cases. For instance, copies of the circular for the 1st IUPAC International Symposium on Bio-organic Chemistry (New York, 85.05.06-08) arrived at the Secretariat in Oxford only in January 1985. The Executive Committee agreed to recommend six months prior to the meeting as the latest date for distribution of second circulars, which usually contained the official IUPAC statement on entry visas. This recommendation should be conveyed to organizers in the sponsorship-granting letter, so that intending participants could comply properly with the "three months/one month" visa application ruling.

12/85 REPORT ON IUPAC SECRETARIAT

The Secretary General announced that he would be conducting his annual Secretariat staff inspection at Oxford on 85.05.02-03. Urgent attention was being given to the need for some additional office space and for expansion of the word-processing system capacity.

13/85 DATES AND PLACES OF NEXT MEETING

The intention (85.03.04) was noted for representatives of the Chinese Chemical Society at Lyon to discuss details for the Executive Committee meeting at Beijing in Spring 1986.


VOTE OF THANKS

Dr. Schneider asked for thanks to be recorded to the Royal Society for the provision of facilities and hospitality.

* * * * *

CHAIRMAN: _____

DATE: _____



April 26, 1987

SPONSORSHIPS OF SYMPOSIA BY IUPAC APPROVED BY CORRESPONDENCE
SINCE 49TH BUREAU MEETING

(see Appendix B, 49th Bureau - Oxford)

8th International Conference on Solid Compounds of Transition Elements
(Vienna, Austria: 85.04.09-13)

2nd International Symposium on Hydrothermal Reactions
(University Park, Pennsylvania, USA: 85.08.12-14)

5th International Symposium on Marine Natural Products
(Paris, France: 85.09.02-06)

3rd Noordwijkerhout Symposium on Innovative Approaches in Drug Research
(Noordwijkerhout, Netherlands: 85.09.03-06)

2nd International Workshop on Vapor-Liquid Equilibrium in 1-Alkanol + n-Alkane
Mixtures
(Paris, France: 85.09.09-11)

International Conference on Applications of Mössbauer Effect
(Leuven, Belgium: 85.09.16-20)

International Symposium on Organic Chemistry of Technological Processes
(Jerusalem, Israel: 86.06.01-06)

5th International Symposium on Ring-Opening Polymerization
(Blois, France: 86.06.22-26)

29th Microsymposium on Macromolecules: Synthetic Polymer Membranes
(Prague, Czechoslovakia: 86.07.08-11)

9th Discussion Conference on Macromolecules: Crosslinked Epoxides
(Prague, Czechoslovakia: 86.07.15-18)

SAC 86: International Conference on Analytical Chemistry
(Bristol, UK: 86.07.20-26)

10th International Conference on Non-Aqueous Solutions
(Leuven, Belgium: 86.08.17-21)

24th International Conference on Coordination Chemistry
(Athens, Greece: 86.08.24-29)

CHEMRAWN VI: World Conference on Advanced Materials Needed for Innovations:
Energy, Transportation, and Communications
(Tokyo, Japan: 87.05.17-22)

OFFICIAL REPRESENTATIVES OF IUPAC TO ITS SPONSORED SYMPOSIA IN 1985

APPOINTED BY PRESIDENT

- Polymer 85: Characterization and Analysis of Polymers
(Melbourne, Australia: 85.02.11-14) - Prof. N. A. PLATÉ
- 5th International Symposium on Hydrogen in Metals
(Belfast, UK: 85.03.26-29) - Dr. G. SVEHLA
- 8th International Conference on Solid Compounds of Transition Elements
(Vienna, Austria: 85.04.09-13) - Prof. V. GUTMANN
- 2nd International Symposium on Analytical Chemistry in Exploration, Mining and
Processing of Materials
(Pretoria, Republic of South Africa: 85.04.15-19) - Prof. F. PELLERIN
- International Symposium on Non-Crystalline Order in Polymers
(Naples, Italy: 85.05.27-30) - Prof. G. ZERBI
- 5th International Conference on Surface and Colloid Science
(Potsdam/New York, USA: 85.06.24-28) - Prof. K. S. W. SING
- 7th International Symposium on Plasma Chemistry
(Eindhoven, Netherlands: 85.07.01-05) - Dr. S. VEPREK
- 28th Microsymposium on Macromolecules: Polymer Composites
(Prague, Czechoslovakia: 85.07.08-11) - Dr. G. C. EASTMOND
- 3rd International Symposium on Organometallic Chemistry directed toward
Organic Synthesis
(Kyoto, Japan: 85.07.12-15) - Prof. KAZUO SAITO
- 5th International Symposium on Novel Aromatic Compounds
(St. Andrews, UK: 85.07.15-19) - Prof. S. ITO
- 30th International Symposium on Macromolecules
(The Hague, Netherlands: 85.08.18-23) - Prof. C. H. BAMFORD