

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF 50th MEETING OF BUREAU

École Supérieure de Commerce de Lyon: 4th-5th September 1985

Present: Dr. W. G. Schneider (Chairman), Prof. A. J. Arvía, Dr. J. W. Barrett, Prof. A. Björkman, Prof. A. D. Campbell, Prof. Y. Jeannin, Prof. A. Kjaer, Prof. V. A. Koptug, Prof. J. Michalski, Prof. C. G. Overberger, Prof. C. N. R. Rao, Prof. D. B. Tonks, Prof. A. A. Vlček, Prof. H. Gg. Wagner, Prof. T. S. West (Elected Members); Prof. C. H. Bamford, Dr. H. Frehse, Dr. Mary L. Good, Dr. D. R. Lide, Jr., Prof. G. Modena, Prof. F. Pellerin, Prof. F. W. Sunderman, Jr. - in part (Division Presidents)

Absent: Prof. S. Nagakura (Elected Member)

In Attendance: Dr. S. S. Brown (President-Elect, Clinical Chemistry Division) - in part, Prof. M. Chastrette (Secretary, Committee on Teaching of Chemistry) - in part, Dr. K. L. Loening (Chairman, IDCNS) - in part, Prof. J. Mathieu (Chairman, Working Party on Coordination of IUPAC-sponsored Symposia) - in part, Dr. D. P. den Os (Chairman, Publications Committee) - in part, Dr. B. W. Rossiter (Chairman, CHEMRAWN Committee) - in part, Dr. M. Williams (Executive Secretary), Dr. M. H. Freemantle (IUPAC Information Officer/Editor of CI) - in part

1/85 INTRODUCTORY REMARKS AND FINALIZATION OF AGENDA

The President regretted that Prof. Nagakura was unable to attend due to a recent operation.

The Agenda circulated by the Executive Secretary (85.08.07) was approved, but the order of discussion of some items was changed in order to deal first with matters of high priority.

2/85 MINUTES OF 49th MEETING OF BUREAU

2.1/85 Amendments and Approval of Minutes

The Minutes of the meeting in Oxford (circulated by the Executive Secretary 84.12.21) were approved, subject to the following additions recommended by the President:-

- (i) Minute 2.2.2.1/84, insert a new second sentence into the first paragraph:
"This had been a continuing matter of contrast between the Section (later Commission) and the Organic Chemistry Division and the Union as a whole.";
- (ii) Minute 2.2.2.1/84, add a new sentence at the end of the second paragraph:
"While agreeing with Dr. Schneider, Prof. Modena pointed out that the Working Party had followed perhaps too strictly the directives of the Bureau (Minute 18(i)/83).";
- (iii) Minute 11.2/84, add a new paragraph at the end: "Prof. Modena suggested that the Union should work out a general policy on how to handle IUPAC bodies having an inter-union interest and membership. In addition to biotechnology and medicinal chemistry, other cases would undoubtedly arise in the near future."

2.2/85 Matters Arising from Minutes

There were no matters arising which were not covered by items on the Agenda.

3/85 MINUTES OF 105th AND 106th MEETINGS OF EXECUTIVE COMMITTEE

The Minutes of the meetings in Oxford and London were recorded as having been received officially by the Bureau.

3.1/85 Nominations for Officers of ICSU (Minute 2.2.1/85, 106th Executive Committee)

The Secretary General reported that further efforts had so far failed to identify a suitable IUPAC person who was willing to accept nomination as a candidate in 1986. Prof. West was now exploring some other possibilities.

3.2/85 Document for Recruitment of Company Associates (Minute 3.1.6/85, 106th Executive Committee)

The Executive Secretary had prepared a representative list of recently published major reports and recommendations of IUPAC, and the revised draft was with Dr. O'Sullivan for comment. COCI at Lyon (see also Minute 6/85) had accepted the new draft, subject to:

- (i) insertion of "Committee on Chemistry and Industry" as a subtitle;
- (ii) inclusion of a list of current Company Associates;
- (iii) urgent publication in CI and provision of about 500 reprints to facilitate recruitment of new Company Associates.

The Secretary General preferred to issue the document separately from CI, in which case Dr. Good and the Executive Secretary advocated the use of colour to produce an attractive brochure for multiple purposes. The Bureau left it to Prof. West to decide, in conjunction with the Treasurer and the Secretariat, how best to proceed.

3.3/85 Legal Obligations of IUPAC (Minute 3.1.10/85, 106th Executive Committee)

The Secretary General said that he would be reporting back to the Bureau not later than its meeting in Summer 1986, on the need for recommendation of any statutory changes to Council at Boston. Meanwhile legal opinion was being sought whether the changes already considered by the Executive Committee would be fully effective in UK, particularly in view of the location of the Secretariat at Oxford.

4/85 FINANCIAL MATTERS

4.1/85 Treasurer's Report

Prof. Björkman said that he had agreed in detail with Dr. H. F. Wilson, Chairman of the Finance Committee, about their presentations to Council, so as to avoid overlap and duplication. The Treasurer then considered briefly with the Bureau some aspects of his written report to Council:

- difficulties in implementing the Leuven/Lyngby national subscriptions structure were under active discussion with some member countries
- the need for earlier budgetary input had been mentioned to the Division Presidents at Lyon, so that financial allocations could become part of the pre-General Assembly preparative work, with Council to decide more

meaningfully on the future total national subscriptions income and hence of IUPAC activity

- there was now more direct involvement of the Treasurer in financial aspects of CHEMRAWN Conferences
- Lyon was the largest General Assembly yet, but the costs to IUPAC appeared to be within budget
- Dr. Schneider had signed a President's ruling (Statute 14.4) with regard to delegation by the Treasurer (Statute 9.5) from 86.01.01 for wider handling of expenditures by the Executive Secretary, and for which detailed guidelines were to be established
- appointment of Blackwell Scientific Publications (BSP) as the new IUPAC main official publisher from 85.01.01 would ensure further improvement in publications income

The Treasurer tabled a national subscriptions structure summary document, which had been presented at Lyon to the Division Presidents and Finance Committee and would be submitted to Council. He acknowledged the receipt, via Prof. Campbell, of a communication from the New Zealand NAO (85.07.29), suggesting that subscriptions might be based on gross domestic production. This would be referred to the Subscriptions Advisory Group of the Finance Committee.

4.2/85 Matters Arising from Lyon Meeting of Finance Committee

The Treasurer reported that, because IUPAC expenditure had been increasing faster than its income, some recent surpluses were used to maintain the level of assets equivalent to biennial expenditure. Maintenance of any supplementary assets was becoming more difficult, despite a more aggressive investment policy than earlier. A small change in short-term investments had been agreed, recognizing the drop in value of the US-dollar and the need for much of the Secretariat costs to be paid in pounds sterling.

4.3/85 UNESCO Contracts in Teaching of Chemistry

The Executive Secretary said that a copy of the contract (108.029.4), signed between CTC and UNESCO, had now been received at the Secretariat (Minute 3.5.1/85, 106th Executive Committee - London). Three further such contracts (108.078.5, 201.275.5, and 106.066.5) had been seen by the Treasurer, signed by the President, and were ratified by the Bureau. The legal responsibility of the Union, rather than of CTC, was again stressed.

4.4/85 Financial Burden of National Representatives (Minute 3.1.7/85, 106th Executive Committee - London)

Despite his request (85.01.04) for NAOs to recommend reappointment of only active National Representatives and for new nominees to be ready to involve fully in IUPAC work, it was clear to the Secretary General that there was no significant diminution in the number of National Representatives to be endorsed at Lyon. Although he had urged Division Presidents at the Briefing Meeting to direct their Commissions to be critical in accepting National Representatives for the next biennium, Prof. West had no alternative but to request funds for additional staff at the Secretariat (see Minutes 5.4 and 13/85).

4.5/85 Insurance Cover

Contrary to previous advice (Minute 3.1.10/85, 106th Executive Committee - London), the travel claim form in current use by ICSU did allow reimbursement of travel and medical insurance. It was left for the Officers to evaluate if similar allowances might be introduced within IUPAC.

Due to pressure of work in the Secretariat preparing for Lyon, a completed 1984 tax return had been submitted late (85.08.15) to the US Inland Revenue Service. The Executive Secretary was unable to foresee any prospect of preparing the very complicated Return of Organization Exempt from Income Tax forms 990 for the years 1978-1982, though the requirement was now reduced to 1979-1982.

5/85 ITEMS FROM AGENDA OF 33rd MEETING OF COUNCIL REQUIRING DISCUSSION, RESOLUTION, OR RECOMMENDATION BY BUREAU

5.1/85 Council Item 1 - Introductory Remarks and Finalization of Agenda

Some aspects were considered of the precirculated list (as at 85.07.24) of NAO delegates and assignment of votes:

- (i) In the absence of Profs. Jeannin and Pellerin, the President read out a letter (85.09.04) from the French NAO, drawing attention to the payment by France in 1984 of a national subscription equivalent to the former A1 Category (six votes). In the spirit of Statute 3.3, the Bureau agreed unanimously that France should be allowed six votes in Council at Lyon rather than the four votes assigned to it at Lyngby (Minute 9/84, 49th Bureau - Oxford).
- (ii) Notification from the IUPAC Banker had been received at Lyon that, because its outstanding national subscription had been cleared completely, Romania was no longer in violation of Statute 9.2. The Bureau agreed that at Lyon Romania should be allowed four votes in Council as was the case at Lyngby.
- (iii) The Bureau noted that sanctions against Brazil and Yugoslavia in respect of outstanding national subscriptions had not been introduced, while the Treasurer was undertaking consultations to try and resolve the financial difficulties. Since no warning had been issued about withdrawal of their voting rights, the Bureau decided that the votes assigned at Lyngby (four and two, respectively) should continue.

5.2/85 Council Item 3 - Nominations for Officers and Bureau Members

- (i) The Bureau accepted the President's proposal that Council should be recommended to retain the total number of Elected Members of the Bureau (Statute 7.2) at eleven during 1985-7.
- (ii) Assuming that Prof. V. A. Koptug, as the only candidate, was elected Vice-President of the Union, the Bureau noted that there would be six vacancies for Elected Members of the Bureau.
- (iii) The President referred to the circular letter from the Secretariat (85.07.23), detailing the nominations received for the Bureau by the statutory deadline (85.07.06). A nomination for Dr. Mary L. Good (USA) had been sent by surface mail on 85.06.13, but unfortunately it was not received at the Secretariat until 85.08.07. The Bureau approved Dr. Schneider's proposal that it should make an additional nomination for Dr. Good (Bylaw 2.222).
- (iv) In the absence of Profs. Campbell and Good, there was some discussion of the need to take into consideration the nationality of the new Division Presidents, in order to ensure fair geographical representation in the new Bureau. A consensus felt that such representation was intended in Statute 7.2 only for Elected Members of the Bureau. In a written and secret vote, the following recommendations to Council were agreed for filling the

vacancies in the Bureau (Bylaw 2.222): Prof. A. D. Campbell, Prof. V. Gold, Dr. Mary L. Good, Prof. Wei-Yuan Huang, Prof. S. Itô, Prof. I. Wadsö.

- (v) The Bureau decided to recommend Council to appoint as Tellers for all voting: Prof. A. Björkman (Treasurer), Prof. W. Sobótka (Secretary to Polish Delegation), Dr. W. Spindel (Secretary to USA Delegation).

5.3/85 Council Item 4 – Time of Elections

In view of the long agenda, the Bureau would recommend Council to start its deliberations at 09.00 hours on 85.09.07, with the election of Officers of the Union and of Elected Members of the Bureau to take place at 10.00 on that day.

5.4/85 Council Item 8 – Tentative Budgets for 1986 and 1987

Prof. Björkman outlined the general purposes and publications budgets for 1986 and 1987 as revised at Lyon (Appendixes B and C to Finance Committee Minutes). In addition to increased provision for the Secretariat (US-\$13 000) to meet its most pressing needs and for additional Titular Members (US-\$30 000 – see later), there were US-\$10 000 in 1986 for specific new activities (Chemical Databases Committee, Medicinal Chemistry Section, Nominations/Elections Committee). Possible relocation of the Secretariat in Oxford would be studied after Lyon by a small subcommittee of UK experts, and any major expansion of the Secretariat word processing system had been deferred accordingly. Relocation could, in any case, only be financed from supplementary assets.

Regarding the Affiliate Membership Scheme, of the nearly US-\$24 000 raised by the Secretary General some US-\$15 000 would be required in 1985, leaving US-\$4 500 for each of 1986 and 1987. Predicted income from subscriptions for the two years was now based on an expected 5 000 and 6 000 Affiliates, respectively. No IUPAC financial support for the Scheme was envisaged for the period 1986-7.

Predicted income from interest/dividends earned had been raised slightly, and provision made for the support of publication activities by BSP and Pergamon Press. Attention was drawn to the greatly increased provision (excluding General Assembly) in 1986-7 for scientific activities (US-\$300 000) compared with spending on them during 1983-4 (US-\$190 000).

It was stressed by Prof. Björkman that the revised budgets indicated a two-year operating expenditure of nearly US-\$1 390 000, compared with present securities of US-\$1 340 000 (as at 85.08.14), thereby most likely eliminating the possibility of any supplementary assets. The Finance Committee felt that the total national subscriptions income for 1987 should be raised to US-\$490 000, rather than leave it at US-\$460 000 as for 1986. In view of the excess of income over expenditure in both 1983 and 1984, however, Prof. Jeannin suggested that the total should be set, as in 1985, at US-\$430 000 for 1986, but to allow an increase for 1987 in line with inflation, say 5%. The Bureau decided to leave the total at US-\$460 000 for both 1986 and 1987, and to await the reactions of the national delegations in Council.

Questions were raised about the inclusion of any item for CHEMRAWN activities during the coming biennium. The Treasurer answered by referring briefly to the operation of the CHEMRAWN Rolling Fund, augmented by any unused committed expenditure in 1985 to cover the remaining deficit on CHEMRAWN III.

On behalf of the Officers, the Secretary General recommended that no increase should be allowed in the present permitted level of Division Committee membership (eight), but an increase by one Titular Member on average per Commission be allowed, subject to scrutiny by the new Bureau at Lyon (cf. Minute 3.4/80, 42nd Bureau – Zürich). Also, Prof. West reminded the Bureau of the

Presidential ruling (Minute 3/84, Division Presidents - Oxford) that Bylaw 4.307 did not exclude the possibility that Division Presidents could make financial contributions to non-Titular Members.

The Bureau accepted the recommendation of the Officers on partial lifting of the restriction of Titular Membership of Commissions, and approved without change the revised budgets for 1986 and 1987 for presentation to Council.

5.5/85 Council Item 10 - Applications for Associated Organization Status and Review of Existing Associated Organizations

An application (85.08.12) for AO status from the Association of Faculties of Science of African Universities - Chemistry Committee was considered by the Bureau and would be recommended for acceptance by Council at Lyon. It was noted that AFSAU-CC was already in liaison with IUPAC-CTC.

The Secretary General had reviewed the activities reports submitted by all 29 existing AOs and found them to be satisfactory, except that the Association of Editors of European Chemistry Journals had ceased to exist. The Bureau accepted his proposal to recommend Council to allow the existing AOs to continue such status for the next four years (Bylaw 5.5 as modified by Minute 11/83, 32nd Council - Lyngby).

5.6/85 Council Item 13 - Report of CHEMRAWN Committee
(Dr. Rossiter in attendance)

Dr. Rossiter tabled copies of his report to Council, elaborating briefly on the follow-up to CHEMRAWN II, completion of CHEMRAWN III, and preparations for CHEMRAWN IV, V, and VI. Prof. Jeannin was dissatisfied with statements about the financial outcome of CHEMRAWN III and the current balance of the CHEMRAWN Rolling Fund. The Treasurer agreed on the need to produce a financial summary of CHEMRAWN activities for future meetings of the Bureau and Council. The Bureau approved the following proposals for future membership of the CHEMRAWN Committee:

(i) Prof. C. G. Overberger (USA) to continue further as an Associate Member (1985-1986) in order to help organize the postponed CHEMRAWN IV, following his maximum term as a full Member (1976-1984);

(ii) Dr. W. G. Schneider (Canada) to be appointed an Associate Member (1985-1989), having served previously as a full Member (1978-1982).

Also, Dr. Rossiter reported on the outcome of CHEMRAWN Committee-COCI joint discussions at Lyon on safety aspects of chemical industry (Minute 9.4/85, 106th Executive Committee - London). It was recommended that IUPAC should assume, under its statutory objects, the responsibility to address matters of chemical safety in their broadest aspects and in a continuing way. Further, and in view of the importance of safety and its practice and perceptions in both the developing and developed world, Dr. Schneider should be appointed to convene a study group to identify objectives and initial activities proposed for the new IUPAC initiative. Although Prof. Björkman expressed reservations about the recommendations, there was a strong consensus in their support from the Bureau as a whole. The study group should report back urgently to the Executive Committee, and Council should be informed at Lyon (under Item 20 of its Agenda) of the Bureau decision to act. In reply to Prof. Pellerin, Dr. Rossiter said that it was unnecessary for ICSU to assume a coordinating role in CHEMRAWN or chemical safety matters: when relevant, other international scientific unions could be involved by IUPAC itself.

The Secretary General elaborated briefly on progress since his report earlier in the year to the Executive Committee (Minute 6/85, 106th Meeting - London). To date 16 member countries had agreed to operate the scheme. Only one country (Finland) had declined, but it would review the matter later. Some 500 Affiliate memberships had been offered, at a nominal IUPAC service charge of US-\$1, on a quota system to developing countries. On behalf of the Bureau, Prof. Overberger expressed a vote of thanks to Prof. West for pursuing the matter to fruition.

Prof. West tabled a written apology for incorrect use of the words "individual member" in his recent open letter (blue leaflet), inviting chemists worldwide to become Affiliates, and in a further letter (yellow leaflet) addressed to Committee and Commission members at Lyon. "Affiliate Member" would be used exclusively on all future occasions. It was agreed to present the apology also to Council.

A proposal was considered by the Bureau from Dr. Freemantle (Affiliate Affairs Secretary) for an additional benefit - IUPAC Affiliate Travel Awards - to the eight already listed by the Secretary General. Prof. West emphasized that it would encourage a more active role for Affiliates in IUPAC affairs. The Treasurer said that the Finance Committee at Lyon (Minute 14.7/85) had been unable to recommend adoption of the proposal until it became clear that the US-\$7.5 component of the Affiliate subscription was sufficient to cover expenditures incurred by the Union. The Bureau approved the proposal, in principle, and agreed to review the financial aspects at its meeting in Summer 1986, with a view to possible introduction in 1987.

In addition to AMS, the Secretary General referred to other ways of improving the visibility of IUPAC amongst the world's chemists as discussed at Lyon by the ad hoc Committee on Maximization of Participation in IUPAC's Affairs (COMPAC). These included publication of more information about the Union in national chemistry news journals or its display at symposia. The Bureau approved continuation of COMPAC under the Chairmanship of the Secretary General, but on an ad hoc basis, with no special financial provision, and to meet only at the General Assembly.

Prof. Modena said that the Organic Chemistry Division Committee was also keen to capitalize on the potential for IUPAC publicity at its sponsored symposia. Specifically it advocated preparation of an attractive poster about IUPAC activities and publications. The Executive Secretary suggested that a poster should be investigated by Dr. Freemantle, as the new IUPAC Information Officer, for use in conjunction with the appointed official representatives to speak at the opening ceremony of IUPAC symposia. However, depending on the contents of the poster, it might need updating regularly. Also, Prof. Modena suggested that it might be worthwhile investigating if ICSU/UNESCO would finance say ten bursaries for attendance from developing countries at IUPAC Congresses.

A letter was considered from the US National Committee for IUPAC (85.04.26), suggesting that the Union should avoid the term "country" in its Statutes and Bylaws (particularly S3.3), when it was really referring to a National Adhering Organization. The Secretary General pointed out that "country" was mentioned several other times (S1, S2.1, S2.5, S3.1, etc.), and considerable checking/rewording would be necessary before presentation to Council; there was also the possibility of competing applicant NAOs from the same country (S3.1). The Bureau concluded that it was not practicable to implement the US suggestion at this time and Council would be advised accordingly.

- (i) The conclusions and recommendations of the Working Party on Medicinal Chemistry (85.07.30) had been precirculated. Its subsequent discussions at Lyon (85.09.02) with Officers of the Union and of the Organic Chemistry Division were summarized by the Executive Secretary. Prof. Modena was pleased that the International Committee on Medicinal Chemistry was now willing to come under the auspices of IUPAC.

Formal dissolution of the currently suspended IUPAC Commission on Medicinal Chemistry was deferred. Meanwhile, the Bureau agreed to create a Provisional Section Committee on Medicinal Chemistry within IUPAC attached to the Bureau:

- consisting of Prof. C. G. Wermuth (France) as Chairman, Dr. W. Bartmann (FRG) as Secretary, Prof. H. Timmerman (Netherlands) and three other members (chosen with due regard to geographical representation and international expertise)
- to suggest terms of reference for a Section on Medicinal Chemistry
- to develop specific and detailed project programmes
- to report back to the Bureau preferably by mid-1986, but no later than 87.07.01

Council should be informed at Lyon (under Item 20 of its Agenda) of the Bureau decision. Some financial support for the Provisional Section Committee had already been indicated by the Treasurer (Minute 5.4/85).

- (ii) The Secretary General tabled a summary of an interdivisional meeting on biotechnology at Lyon (85.09.03). General enthusiasm had been expressed for a restructured Commission on Biotechnology within the Applied Chemistry Division and for its proposed eight principal tasks for the immediate future. Various suggestions for membership of the Commission were in process of being made, and the Division President would be responsible for making the final decisions. In addition to the focus on uses of biological processes in applied chemistry, other Divisions had been encouraged to develop biotechnology-related programmes. IUPAC would then be ready to take a leading role in any ICSU initiative in the field.
- (iii) The Executive Secretary had been advised at Lyon by the General Secretary of IUB (telephone - 85.08.29), that its Executive Committee had just decided to withdraw financial support from the IUB-IUPAB-IUPAC Joint Commission on Biothermodynamics as from an agreeable date, but as soon as possible. IUB suggested that the Joint Commission members might wish to seek affiliation with the IUB Bioenergetics Interest Group. However, Dr. Lide drew attention to discussions at Lyon about the increasing attention being given by physical chemists to studies of biological systems. A Working Party was therefore being created under the Chairmanship of Prof. I. Wadsö, to make a thorough investigation of emerging needs in biophysical chemistry and to report back at Boston. In addition to a representative from each Commission in the Physical Chemistry Division, other Divisions would be invited to contribute (e.g. Macromolecular on biopolymers) and liaison would be established with the biological unions and other bodies outside IUPAC.

In view of the earlier decision of IUPAB to discontinue its support (Minute 12.1/84, 49th Bureau - Oxford), the Bureau would recommend Council to dissolve the Joint Commission, which had completed its existing programme of work.

(iv) Following discussions at Lyon (Minute 3.1.8/85, 106th Executive Committee - London), a proposal was tabled to create a Standing Committee on Chemical Databases, including terms of reference, membership, objectives, and budget. The intention was for the Union to begin to produce and disseminate appropriate databases in a coordinated manner, rather than to leave each Commission to deal independently with the problems. The Bureau agreed to recommend approval of the proposal by Council at Lyon.

(v) The Vice-Presidential critical assessment of IUPAC projects and programmes had been circulated (85.06.05) to NAOs and Bureau three months prior to the Council meeting. Prof. Rao felt that a Commission devoted to Teaching in Clinical Chemistry was not more warranted than for many other Divisions. In view of the inability to establish any major links with the main Committee on Teaching of Chemistry of the Union and noting the present joint involvement with the International Federation of Clinical Chemistry, he advocated dissolution of the Commission at Boston. This action was acceptable to the Clinical Chemistry Division, though it might seek to retain some activity within IUPAC through a subcommittee. Apart from the suspended Commission on Medicinal Chemistry, Council should be recommended to allow all other existing Commissions of the Union to continue for the next two years (Bylaw 4.302).

5.10/85 Council Item 22 - Ratification of Dates and Places of 34th General Assembly and 31st Congress

The Treasurer reported that a number of potential difficulties for the 34th General Assembly, identified by the Deputy Executive Secretary, had been clarified by him at a meeting in Lyon with Prof. R. A. Alberty, Chairman of the Local Organizing Committee. Prof. Björkman was therefore able to recommend the Bureau to ask Council to ratify Boston University as the location and 87.08.21-29 as the dates for the 34th General Assembly.

The Bureau noted that the recently available first circular for the 31st Congress had been considered when the Division Presidents met at Lyon (Minute 2.2.2/85), and that the Executive Secretary would shortly be presenting in person their views to the Bulgarian organizers. In accordance with Statute 13.1, the Bureau was now ready to recommend Council to ratify Sofia as the location, 87.07.13-18 as the dates, and the proposed scope of the 31st Congress.

5.11/85 Council Item 23 - Provisional Places of 35th General Assembly and 32nd Congress

The Bureau agreed to recommend Council to accept, in principle, proposals from the Swedish National Committee for Chemistry to hold the 35th General Assembly at Lund during 89.08.09-18, with the 32nd Congress immediately beforehand in Stockholm during 89.08.02-07.

6/85 REPORT OF COMMITTEE ON CHEMISTRY AND INDUSTRY

On behalf of its Chairman, Prof. K. H. Büchel, the Executive Secretary tabled a summary report of the discussions of COCI at Lyon. The document for recruitment of CAs had been considered already by the Bureau (Minute 3.2/85). It was noted that an official letter was being prepared by COCI, asking the Bureau to make IUPAC Nomenclature Commissions responsible officially for advising authorities in legal difficulties over classifying (nomenclature of) chemical compounds. The President of the Applied Chemistry Division agreed to confer with the Commission on Food Chemistry and to report back on the need to set up a study group to prepare a tolerance list of byproducts in food.

7/85 REPORT OF COMMITTEE ON TEACHING OF CHEMISTRY
(Prof. Chastrette in attendance)

In his capacity as Secretary of CTC, Prof. Chastrette said that its main activities were currently:

- (i) low-cost equipment regional workshops in conjunction with UNESCO, initiated in India but now spreading elsewhere throughout the world;
- (ii) organization of the biennial International Conferences on Chemical Education - there had been 500 participants from 53 countries at the 8th Conference in Tokyo (August 1986);
- (iii) preparation of books in conjunction with UNESCO (e.g. Teaching School Chemistry/1984, Safety in Schools/third draft reviewed at Lyon) and of the International Newsletter on Chemical Education (3 000 copies each issue), financed partly by UNESCO and partly from national contributions.

The existing good liaison with ICSU's Committee on Teaching of Science (CTS) would be strengthened when the present CTC Chairman, Prof. D. J. Waddington, became the new CTS Secretary.

8/85 REPORT OF INTERDIVISIONAL COMMITTEE ON NOMENCLATURE AND SYMBOLS
(Dr. Loening in attendance)

Dr. Loening made the following points:

- (i) the new procedure for dissemination of provisional recommendations on nomenclature and symbols was working well - 13 documents had been handled to date through a network of 18 or so national/regional centres, with one of the documents shortly to be issued in revised form in PAC;
- (ii) an additional US-\$2 000 were needed to ensure completion of Prof. V. Gold's Compendium of IUPAC Terminology (cf. Minute 4.2/85, 106th Executive Committee - London) - photocopies of the recently drafted initial text were distributed to the Bureau;
- (iii) official liaison had now been established with the International Union of Crystallography and with the Organisation Internationale de Métrologie Légale;
- (iv) in view of its publication commitments and discussions, a more formal cross-representation mechanism was needed between IDCNS and IUPAC publication bodies.

Prof. Sunderman was concerned that material from some IUPAC Divisions had been excluded from the Guide to Sources of IUPAC-Approved Terminology of Pure Chemistry (CI, 1984, No. 6, pp. 42-46), the precursor to the Compendium. Dr. Loening said that the work was a stepwise process and would extend later to the Applied Chemistry and Clinical Chemistry Divisions.

9/85 IUPAC BODIES

9.1/85 Ratification of Members Approved by Correspondence

No appointments had been made through correspondence by the President since the 106th Executive Committee meeting.

9.2/85 Membership of Finance Committee (Minute 3.7.8/85, 106th Executive Committee - London)

The National Committee of Soviet Chemists had reconfirmed its nomination of Dr. V. L. Roubajlo and his appointment through correspondence by the President was ratified by the Bureau.

9.3/85 Membership of Publications Committee (Minute 3.7.8/85, 106th Executive Committee - London)

The Bureau noted that Dr. D. P. den Os had announced his wish to retire from the Chairmanship and Membership at the end of the General Assembly in Lyon. It was left for the President in conjunction with the Executive Committee to appoint a new Chairman and to fill the other vacancy, taking into account any recommendations from the Publications Committee.

9.4/85 Membership of Committee on Teaching of Chemistry
(Minute 3.5.3/85, 106th Executive Committee - London)

The Bureau approved the suggestion of Prof. Rao that Prof. D. J. Waddington should be allowed exceptionally to continue as Chairman until the end of 1986. This would enable any other changes in membership to be made simultaneously.

9.5/85 Membership of IUB-IUPAC Joint Commission on Biochemical Nomenclature

Dr. Loening would complete his maximum period of service at the end of 1985, and Prof. J. Reedijk would simultaneously complete his first four-year term. Pending receipt of advice from the relevant IUPAC Divisions, it was left for the President of the Union to decide how best to proceed.

9.6/85 Proposed Nomination/Election Committee re Vacancies for Officers of Union and Elected Members of Bureau (Minute 5.1/85, 106th Executive Committee - London)

The discussion paper prepared by the Secretary General had been precirculated and comments arising from his fellow Officers of the Union were tabled. Prof. West said that the main issue appeared to be whether the N/E Committee should report to Council, which implied the need for statutory changes, or to the Bureau. A wide range of views was expressed by Bureau members. There being no strong consensus for statutory changes and reporting directly to Council, Dr. Schneider deferred further discussion until the Summer 1986 meeting of the Bureau to decide if it wished to proceed.

9.7/85 Matters Arising from Lyon Meeting of Division Presidents

Dr. Lide drew attention to the following matters:

- (i) Despite Dr. Schneider's wish to avoid inflexibility by not setting up elaborate rules for Interdivisional Commissions (Chemical Kinetics, Photochemistry, Radiochemistry and Nuclear Techniques), the ad hoc guidance on membership and finance available so far was insufficient to resolve difficulties.
- (ii) At present there was no high-level review within the Union prior to publication of Commission technical reports, including major data compilations and monographs. There needed to be a check whether IUPAC recommendations on nomenclature, symbols, and units were used and on scientific quality, and that other relevant Divisions had been consulted and their advice heeded.

There was also some interest in knowing the sources of expert opinion sought by

Prof. Rao in compiling his Vice-Presidential critical assessment, and of his criteria in allocating ratings to the various Commissions. Prof. Rao indicated that, in addition to the submitted project initiation and progress forms, he had drawn on the assessment of Dr. Schneider and especially the views of Observers at Lyngby.

10/85 RELATIONS WITH OTHER ORGANIZATIONS

10.1/85 Vice-Presidential Review of Official Representatives of IUPAC on Other Organizations

Prof. Rao had made a preliminary review and in most cases would be inviting the present representative to continue during the next biennium (cf. pp. 13-14, IUPAC Handbook 1983-1985). Prof. Chastrette should replace Prof. Waddington in the case of ICSU-CTS (cf. Minute 7/85), while the new Officers of the Clinical Chemistry Division would act regarding IFCC. Dr. Lide recommended Prof. J. Haber to continue as representative to the International Congress on Catalysis and Dr. N. Kallay to ISO/TC 12, to the SUN Commission of IUPAP, and to Comité Consultatif des Unités du Comité Internationale des Poids et Mesures. A replacement for Dr. R. W. F. Hardy on the ICSU Scientific Committee on Genetic Experimentation (COGENE) might be drawn from the restructured Commission on Biotechnology of the Applied Chemistry Division.

10.2/85 Proposed IUPAC-UNESCO Initiative in Latin-America

Prof. Arvíá retabled a document containing objectives and lines of action for a Latin American Chemistry Programme, already presented to the Executive Committee (Minute 3.1.3/85, 106th Meeting - London). The official reactions of UNESCO were still awaited, although the Executive Secretary understood that Dr. J. V. Kingston shared Dr. Schneider's disappointment at the lack of imaginative proposals. Prof. Rao had not yet had an opportunity to discuss the matter with Dr. Kingston at Lyon, but hoped to do so shortly. According to Prof. Vlček, the draft UNESCO budget for the next two years included provision for an IUPAC-UNESCO chemistry programme in Latin America, for low-cost equipment activities in chemistry and physics in the Caribbean (strongly favoured by Prof. Waddington), and for natural products chemistry (in collaboration with IOCD).

10.3/85 International Council for Scientific and Technical Information

Dr. Lide reported briefly on the ICSTI Council Meeting at Baden-Baden during 85.05.29-06.02. Although ICSTI was the successor to the ICSU Abstracting Board, it was not connected officially to ICSU. Presently dominated by the world's leading abstracting and indexing services in science and technology, the participation of international scientific unions was being encouraged. An enlarged programme of activities was being developed, oriented towards issues relating to the impact of new technology on information transfer. Dr. Lide recommended that an IUPAC observer should attend the next ICSTI Council meeting (York, UK: May 1986) to ascertain whether the programmes on electronic publishing and numerical data warranted IUPAC official membership.

10.4/85 Possible Coordination of IUPAC Efforts for Developing Countries with COSTED

Reiterating his previous views (Minute 11.4/85, 106th Executive Committee - London), Dr. Schneider said that part of his Statutory Report on the State of the Union to Council was devoted to the matter. He hoped that this might generate some comment and feedback, so that it could be raised at the Summer 1986 meeting of the Bureau. In order to be more effective, various and largely uncoordinated IUPAC current projects (e.g. Minute 12.6/85), might be better channelled in conjunction with any improved ICSU approach to activities related

to developing countries (Minute 8.6/85, 106th Executive Committee).

11/85 PUBLICATIONS (Dr. den Os in attendance)

11.1/85 Matters Arising from Lyon Meeting of Publications Committee

Dr. den Os elaborated on his tabled paper dealing with membership of the Publications Committee in the light of existing and announced vacancies and with respect to future activities. The present terms of reference (IUPAC Handbook 1983-1985, p. 40) were only defined in general outline. Last year the Publications Committee had recommended (Minute 13.1(ii)/84, 49th Bureau - Oxford) that it should be renamed "Committee on Publications and Communications" or "Committee on Publications and Information Transfer". Even if a separate Standing Committee on Chemical Databases was created, the Publications Committee would still need to consider such matters, since the same IUPAC data might have to be available in both electronic and hard-copy form: Dr. Lide remarked that requirements for electronic publishing were not necessarily an easy extrapolation to setting up a searchable database. A detailed list of future activities for an enlarged Publications Committee had been drawn up and the expertise to consider these activities defined in terms of membership.

Also, Dr. den Os said that the transition from Pergamon Press to BSP as main official publisher to the Union had been made without great difficulty. Already he was pleased to note a lower pricing in our new books: Dr. Good mentioned that the Divisions were favourably impressed so far in their dealings with BSP. Dr. S. Maricic had prepared a discussion paper on System for Literature References in Publications (Minute 13.1(iii)/84, 49th Bureau), a revised version of which was to be published in CI in order to seek comments from throughout the world. An initiative of ICSU Press in issuing symposia preprints as part of the registration fee, so that the cost of any subsequent proceedings could be set lower to libraries, might be worth adopting by IUPAC.

11.2/85 Reproduction/Translation of Material from PAC (Minute 10.1(i)/85, 106th Executive Committee - London)

Dr. Schneider reiterated his concern that the new wording on the inside cover of PAC since the start of 1985 was not positive enough. Consideration was deferred of his proposed wording amendment

"For articles appearing in this issue under the section 'IUPAC Recommendations on Nomenclature and Symbols and Technical Reports from Commissions' permission is hereby given to reproduce or translate such material, in whole or in part, provided that it is accompanied by a reference to the original publication in this journal. Requests for permission to reproduce other material from the journal should be addressed to the IUPAC Secretariat."

until the Publications Committee had first been able to discuss it.

11.3/85 US National Research Council Reports (Minute 3.1.5/85, 106th Executive Committee - London)

Dr. Good reported on her discussions at Lyon on 85.09.04 with Dr. S. S. Brown, Prof. Chastrette (on behalf of Prof. Waddington), Dr. W. Spindel, and the Executive Secretary. It had been decided to invite Blaine McKusick and Robert Joyce (Wilmington, Delaware), who were very knowledgeable about the contents of the two reports, to produce an amended version of Dr. Brown's "cut-and-paste" document, taking into account all comments received to date. Hopefully the amended document might be available by mid-1986 for review by Dr. Brown, by IUPAC-CTC, and by say ICSU-CTS if it was to be multi-disciplinary. There was

general agreement on the need for good photographs and illustrations, so that an attractive text could be produced at low cost.

11.4/85 History of IUPAC (Minute 3.1.12/85, 106th Executive Committee - London)

Mr. R. W. Fennell had reviewed the historical survey compiled by the late Prof. S. Veibel and accepted, in principle, an invitation to produce a shorter, more readable version. The Bureau approved the suggestion that publication might be arranged to coincide with the 70th anniversary in 1989 of the formation of the Union, and it should be discussed with BSP.

11.5/85 Report on Lyon Meeting of PAC Editorial Advisory Board (Minute 10.3/85, 106th Executive Committee - London)

Prof. Rao tabled brief minutes of the discussions held on 85.08.29, chaired by himself in the absence of Dr. den Os and attended by the appointed representatives of most Divisions of the Union. The Executive Editor of PAC, Mr. P. D. Gujral, had not so far found it necessary to consult the Divisional representatives about any papers of doubtful quality from IUPAC-sponsored symposia, which was presently the only function of the Board. The Board had agreed that it should discuss and make recommendations on the contents of PAC. Dr. den Os referred to remarks made by Mr. P. Saugman (BSP) at Lyon about the journal, which might also be considered by the Board.

The Secretary General proposed that Standing Orders should be established for the PAC Board, regarding its composition and terms of reference, like those already given to the Editorial Advisory Board of CI. It was suggested by the Executive Secretary and supported by Dr. den Os, that the Boards of PAC and CI should report in the first place to the Publications Committee, and thence to the Executive Committee/Bureau.

11.6/85 Report on Lyon Meeting of CI Editorial Advisory Board (Minute 10.4/85, 106th Executive Committee - London; Dr. Freemantle in attendance)

Prof. West tabled brief minutes of the discussions held on 85.08.31. Comments on the 1984 No. 6 issue of CI solicited from several prominent IUPAC people had been used by the new editor, Dr. Freemantle, to define aims and editorial policy for the magazine. CI was running above its agreed 1985 page budget and this was causing some difficulties. For 1987 onwards, the issues might appear in odd-numbered months, thereby facilitating the inclusion of relevant material prior to the General Assembly. For 1986 some changes in format had been drawn up with BSP, enabling two or three columns to be employed on any page and giving more flexibility in the use of photographs.

Prof. Rao enquired about the continued inclusion of non-IUPAC articles: they would be welcome provided the text was readable and interesting. Dr. Frehse proposed that CI should have an annual subject index to assist in retrieval of material.

12/85 SPONSORSHIP: REPRESENTATION, SPONSORSHIP, SUBVENTION

12.1/85 Ratification of Sponsorships Approved by Correspondence

The sponsorships of symposia, approved through correspondence by the President since the 106th Executive Committee meeting (see Appendix A below), were ratified by the Bureau.

12.2/85 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 106th Executive Committee meeting (see Appendix B below), were ratified by the Bureau.

12.3/85 Report on Lyon Meeting re Coordination of IUPAC-sponsored Symposia
(Minute 11.6/85, 106th Executive Committee - London; Prof. Mathieu in attendance)

Prof. Mathieu tabled brief minutes of the discussions held on 85.09.01, together with listings from several Divisions of forthcoming symposia already sponsored or to be considered for IUPAC sponsorship. Better coordination within the Union in long-range planning would help to avoid clashes in dates - some serious - especially when the topics were related. This would be difficult for symposia originating outside IUPAC. A high proportion of meetings occurred in July-September when accommodation in university dormitories was available, but peak air fares were then operative. More even spread over the IUPAC biennium would also help to ensure a regular flow of material for publication in PAC. Greater effort should be directed to ensure a more balanced geographical spread of locations and particularly to organize symposia in Third World countries.

At Lyon the meeting of Divisional representatives had proposed that, once a year, the President/Secretary of each Division should provide the IUPAC Secretariat with a list of future sponsored and proposed symposia, for circulation to all other Division Presidents/Secretaries. Dr. Schneider said that this might be done through a small ad hoc meeting at the General Assembly in odd-numbered years. The Secretary General agreed to look with the Executive Secretary into how the Secretariat could best collaborate with the Divisions to produce the necessary information. In addition to the listing of sponsored meetings already maintained for publication in CI, Dr. Williams felt that it would not be too onerous to produce a supplementary listing of symposia under consideration of sponsorship.

12.4/85 CHEMRAWN IV: Chemistry and Resources of the Global Ocean

The Bureau noted that the organizers had decided (85.06.26) to postpone CHEMRAWN IV until 86.03.24-29, but still to hold it at Woods Hole/Massachusetts, in order to ensure a better and more cohesive programme and a more secure financial structure.

12.5/85 CHEMRAWN V: Current and Future Contributions of Chemistry to Health - The New Frontiers

A completed Advance Information Questionnaire, preliminary budget and scientific programme, including the first circular, were now available. Dr. Schneider understood that the arrangements were endorsed by the CHEMRAWN Committee. The Treasurer was pleased to learn that Verband der Chemischen Industrie had accepted to act as a financial guarantor should that become necessary. The Bureau agreed to grant the official sponsorship of IUPAC, and it accepted the wish of the organizers to publish the perspectives and recommendations volume through VCH-Verlagsgesellschaft mbH (formerly Verlag Chemie GmbH). It was not clear if IUPAC had the possibility to issue the proceedings through BSP. Dr. Tonks would write to the organizers on behalf of the Clinical Chemistry Division with some suggestions for improvement of the scientific programme.

12.6/85 IUPAC Seminars

Prof. Wagner tabled a report (85.09.02), summarizing the status since the Study Group had reported previously to the Bureau (Minute 16.3/84, 49th Meeting - Oxford). Prof. Arvia was enthusiastic to make a start in Latin America, and

Prof. Campbell had made suggestions for an initiative in South-East Asia. Prof. Vlček proposed that the Union should solicit ideas for suitable topics through CI, from Observer member countries, and at Council. When the outcome was known shortly of an application to ICSU for funding of US-\$6 000, Prof. Wagner should recommend in detail how to utilize the money in 1986. If the initial Seminar(s) was successful, the Union might apply for further money from ICSU in 1987. Also, Prof. Wagner might apply for some of the US-\$7 000 included for contributions to symposia in the 1986 IUPAC budget. Council should be informed at Lyon (under Item 20 of its Agenda) that the FRG proposal at Lyngby was being started in 1986 for a two-year trial period.

13/85 REPORT ON IUPAC SECRETARIAT

The Secretary General reported briefly on his annual Secretariat staff inspection at Oxford (85.05.02-03). A detailed request for substantial funding to cover additional office space, expansion of the word processing system, and an extra secretary, had been considered by the Officers at Lyon. It had been deferred as inappropriate at a time when priority must be given to restoring the level of scientific activity of the Union (increase in Titular Members of Commissions). However, limited provision to meet the most pressing needs of the Secretariat had been included in the 1986 IUPAC budget (Minute 5.4/85).

14/85 DATES AND PLACES OF NEXT MEETINGS

Confirmation of the dates and locations of the meetings in Spring 1986 of the Executive Committee (Minute 13/85, 106th Meeting - London) and in Summer 1986 of the Bureau (Minute 13/84, 49th Meeting - Oxford) were deferred for consideration at Lyon after Council by the new Executive Committee and Bureau.

15/85 ANY OTHER BUSINESS

15.1/85 Distribution of CI

The Secretariat had been advised by the Argentinian NAO (85.08.15) that it had received the 1985 No. 1 (February) issue of CI only in August. The Secretary General asked members of the Bureau to ascertain if this delay was a more general problem and to report back to him any other very slow distribution times.

15.2/85 Publicity for IUPAC in National Chemistry News Journals

Prof. Wagner asked if anything was being done about this important matter. Prof. West said that in the past two years the text of his CI Secretary General's Column had been distributed for consideration of inclusion, in full or in part, in national chemistry news journals. He hoped that more regular IUPAC news might be disseminated in future by the new IUPAC Information Officer, Dr. Freemantle.

15.3/85 First International Scientific Conference

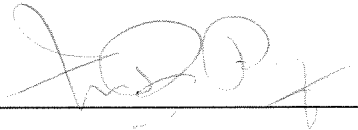
Dr. Good informed the Bureau that exactly 125 years ago the first ever international scientific conference - of chemists - was held at Karlsruhe (1860.09.03-05). There were 127 chemists in attendance, with participants from Austria, Belgium, France, Germany, Italy, Mexico, Poland, Russia, Spain, Sweden, Switzerland, and UK.

VOTE OF THANKS

Prof. Rao asked for thanks to be recorded to Dr. Schneider for his leadership of the Bureau over the past two years.

* * * * *

CHAIRMAN:



DATE:

Sept 28 '86

SPONSORSHIPS OF SYMPOSIA BY IUPAC APPROVED BY CORRESPONDENCE
SINCE 106th EXECUTIVE COMMITTEE MEETING

(see Appendix B, 106th Executive Committee - London)

2nd International Symposium on Biological Reference Materials
(Neuherberg/München, FRG: 86.04.24-25)

International IUPAC Conference on Chemical Thermodynamics
(Lisbon, Portugal: 86.07.14-18)

11th IUPAC International Symposium on Photochemistry
(Lisbon, Portugal: 86.07.28-08.01)

6th International Conference on Organic Synthesis
(Moscow, USSR: 86.08.10-15)

2nd International Symposium on Solubility Phenomena
(Newark/New Jersey, USA: 86.08.12-15)

10th International Conference on Raman Spectroscopy
(Eugene/Oregon, USA: 86.08.31-09.05)

30th Microsymposium on Macromolecules: Polymer-Supported Organic Reagents and Catalysts
(Prague, Czechoslovakia: 87.07.13-16)

25th International Conference on Coordination Chemistry
(Beijing, China: 87.07.26-31)

APPENDIX B

OFFICIAL REPRESENTATIVES OF IUPAC TO ITS SPONSORED SYMPOSIA IN 1985
APPOINTED BY PRESIDENT

(see Appendix A, 106th Executive Committee - London)

- 1st International Symposium on Bioorganic Chemistry
(New York City, USA: 85.05.06-08) - Prof. N. J. LEONARD
- International Conference on Theory of Structure of Non-crystalline Solids
(Bloomfield Hills/Michigan, USA: 85.06.03-06) - Prof. E. F. WESTRUM, Jr.
- 28th Microsymposium on Macromolecules: Polymer Composites
(Prague, Czechoslovakia: 85.07.08-11) - Prof. A. D. JENKINS (replacement)
- 7th International Symposium on Solute-Solute-Solvent Interactions
(Reading, UK: 85.07.15-19) - Dr. J. C. JUSTICE
- 6th International Symposium on Mycotoxins and Phycotoxins
(Pretoria, South Africa: 85.07.22-25) - Prof. G. BILLEK (replacement)
- 10th International Congress of Heterocyclic Chemistry
(Waterloo/Ontario, Canada: 85.08.11-16) - Prof. N. J. LEONARD
- 2nd International Symposium on Hydrothermal Reactions
(University Park/Pennsylvania, USA: 85.08.12-14) - Prof. E. U. FRANCK
- 7th International Symposium on Cationic Polymerization and Related Processes
(Jena, GDR: 85.08.12-15) - Prof. T. SAEGUSA
- 8th International Conference on Thermal Analysis
(Bratislava, Czechoslovakia: 85.08.19-23) - Prof. V. HEROUT
- 8th International Conference on Chemical Education
(Tokyo, Japan: 85.08.23-28) - Prof. D. J. WADDINGTON
- International Symposium on Applications of Mathematical Concepts to Chemistry
(Dubrovnik, Yugoslavia: 85.09.02-05) - LETTER OF GREETINGS
- 5th International Symposium on Marine Natural Products
(Paris, France: 85.09.02-06) - Prof. Sir Derek BARTON
- 3rd Noordwijkerhout Symposium on Innovative Approaches in Drug Research
(Noordwijkerhout, Netherlands: 85.09.03-06) - Prof. C. G. WERMUTH
- 2nd International IUPAC Workshop on Vapor-Liquid Equilibria in 1-Alkanol +
n-Alkane Mixtures
(Paris, France: 85.09.05-07) - Prof. G. M. SCHNEIDER
- 12th International Conference on Organometallic Chemistry
(Wien, Austria: 85.09.08-13) - Prof. V. GUTMANN
- 30th IUPAC Congress
(Manchester, UK: 85.09.09-13) - Prof. C. N. R. RAO
- 10th International Mass Spectrometry Conference
(Swansea, UK: 85.09.09-13) - Dr. J. F. J. TODD
- 24th Colloquium Spectroscopicum Internationale
(Garmisch-Partenkirchen, FRG: 85.09.15-21) - Prof. A. STRASHEIM
- International Conference on Applications of Mössbauer Effect
(Leuven, Belgium: 85.09.16-20) - Prof. F. C. DE SCHRYVER
- International Symposium on Organic Chemistry of Medicinal Natural Products
(Shanghai, China: 85.11.10-13) - Prof. J. MATHIEU