

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF XXIIInd MEETING OF BUREAU

HELD AT PALAIS DES CONGRES, MONTE CARLO

on

TUESDAY-WEDNESDAY, 29-30th OCTOBER, 1968 at 9.00

Present:

Prof. V.N. Kondratiev	-	President, in the chair
Dr. A.L.G. Rees	-	Vice-President
Prof. W. Klemm	-	Past President
Dr. R. Morf	-	Secretary General
Prof. J.C. Bailar, Jr.	-	Treasurer

Dr. C.O. Gabrielson)	
Prof. D. Ginsburg)	
Prof. J. Lecomte)	
Prof. H. Malissa)	
Prof. G. Sartori)	Elected Members
Prof. S. Shibata)	
Sir Harold Thompson)	
Prof. O. Wichterle)	

Prof. R. Truhaut	-	Ex-officio Member
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Prof. J. Benard)	
Prof. P.D. Bartlett)	
Prof. O. Wichterle)	Division Presidents
Prof. P.W. West)	
Dr. W. Gallay)	

Prof. G. Emschwiller	-	representing Division President
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In Attendance:

Dr. M. Williams	-	Executive Secretary
Mr. R.J.M. Ratcliffe	-	Assistant Secretary
Prof. B.C.L. Weedon	-	Scientific Editor
Dr. A. Perez-Vitoria	-	UNESCO (in part)

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15. Company Associates Plan
16. Proposal of International Atomic Energy Agency re International Analytical Laboratory
17. Establishment of Physical Property Task Group (Commission I.4)
18. Association between IUPAC and International Conference on Crystal Growth
19. Report by Committee on Teaching of Chemistry
20. New Titular and Associate Members
21. Ad hoc Committee on Plasma Chemistry
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24. Any other Business:
 - (a) IUPAC Representative for COWAR
 - (b) Names of Elements 102 and 103
 - (c) Machine Documentation in Chemical Field
 - (d) Journal of Chemical Thermodynamics (Academic Press)
 - (e) Tentative Nomenclature in Inorganic Chemistry
 - (f) Possible Meeting of Commission I.1, January 1969
 - (g) XXIIth General Assembly of ICSU
 - (h) Section on Medicinal Chemistry
 - (i) Soliciting Funds for IUPAC Symposia
 - (j) Regional Meetings of Chemistry Journal Editors

Minute 12

INTRODUCTION

In opening the meeting the President, Prof. Kondratiev, asked the Bureau to stand and observe silence for a minute in memory of a good friend of IUPAC, Otto Hahn who died in July 1968.

Prof. Kondratiev welcomed the Bureau Members to the meeting and was grateful for the attendance of Prof. Weedon who was to speak about IUPAC publication matters. Apologies for non-attendance had been received from Prof. V. Deulofeu, Dr. T.R. Govindachari, Prof. L. Marion, Prof. F. Weygand and Sir Harry Melville. The Bureau approved Sir Harry Melville's wish that, in his absence, Prof. G. Emschwiller (Secretary) should officially represent the Physical Chemistry Division.

Minute 13

FINALIZATION OF AGENDA

The Agenda, as circulated before the meeting, was approved.

Minute 14

MINUTES OF XXIst MEETING OF BUREAU

Annex Z - Sir Harold Thompson reported that a number of the listed symposia could not be considered as having received full sponsorship approval because they had not been referred to the Editorial Board for a decision on publication. Prof. Bartlett confirmed that the Carbohydrate Chemistry Symposium listed for Paris in "1968 or later" was actually the Symposium on Carbohydrate Chemistry sponsored by the Division of Organic Chemistry in "1970".

It was Resolved:

that, subject to the necessary amendments to Annex Z, the Minutes of the XXIst Meeting of the Bureau be approved - Executive Secretary to act and to inform symposia organizers of the relevant amendments.

(Note: The amended Annex Z is given at the end of these Minutes).

Minute 15

MATTER ARISING FROM MINUTES OF XXIst MEETING OF BUREAU

Minute 5 - Prof. Kondratiev reported that Prof. Talrose had written to several experts in the field of mass spectroscopy. When he had received more replies to these letters Prof. Talrose would prepare a statement for consideration by the Division Presidents.

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Minute 16

MATTERS ARISING FROM MINUTES OF CO-ORDINATING COMMITTEE MEETING
(12th March, 1968)

Minute 1 - In reply to a question from the Executive Secretary, Prof. Truhaut said that the original name of this Committee was "Co-ordinating Committee for Co-operative Programmes Between IUPAC and Other International Organizations" rather than the title "Co-ordinating Committee for Analytical Methods" used in the recent Comptes Rendus. The terms of reference of this Committee limited its activities to analytical chemistry investigations relevant to the environment of man, particularly of food.

The Bureau is to decide on a more precise title for the Co-ordinating Committee.

Minute 2 - Prof. Bailar asked that the second line be altered to read "co-operation between the Analytical Chemistry and Applied Chemistry Divisions was effectuated".

Minute 17

MEMORANDUM OF PROF. V.N. KONDRATIEV RE COMMISSION ACTIVITIES

After considerable discussion there was general agreement that a more critical appraisal of the need for continuation of each Commission should be made by the Council at its biennial Conference. Prof. Klemm supported Sir Harold Thompson's suggestion of placing any temporarily inactive Commission in abeyance during which period the Chairman and Secretary could remain in contact by correspondence until it became necessary to revive the Commission for full activity.

Dr. Rees emphasized that it was not essential to have the statutory eight members in every Commission. Some restriction in this membership might result in more productive work by a Commission. Prof. Bailar felt that one of the greatest problems in continuing the life of a Commission was the expense involved in convening its meetings. The Division Presidents could give a stronger lead here: it was not necessary automatically to convene meetings of all their Commissions at the time of the biennial Conference.

Dr. Morf believed that if greater care was taken in elections to Commissions, this would ensure more effective work from them. The Division Presidents were invited to pay more attention to this matter. It should be noted that they were ex-officio members of each of their Commissions and could therefore exert a very active influence in the Commissions, even by delegation.

Sir Harold Thompson recommended that the article by Prof. Klemm describing the work of IUPAC, particularly of its Commissions, would

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be best published in a form separate from Pure and Applied Chemistry and the Information Bulletin. The article should be available gratis and publication would therefore be a direct cost to IUPAC. However, if well circulated, it could be effective in producing additional Company Associates. Dr Rees supported the proposal for publication in a separate form and suggested that a good reserve of copies be printed. Prof. Malissa thought that the article should also be distributed to National Adhering Organizations for republication in appropriate national journals.

It was agreed that Prof. Klemm's article should be published in separate form and that it be distributed initially to addresses on the mailing lists of Pure and Applied Chemistry and the Information Bulletin.

Minute 18

MEMORANDUM OF PROF. V.N. KONDRATIEV RE CRITICAL DATA ON CHEMICAL KINETICS

Prof. Emschwiller reported several comments which had been received as a result of circulating the memorandum. It was quite obvious that the entire task was enormous and could not be tackled at once.

Prof Klemm pointed out that the CODATA Committee of ICSU would shortly be considering this matter. Collaboration between CODATA and IUPAC would be inevitable should it be decided to compile and assess kinetics data as proposed by Prof. Kondratiev.

It was Resolved:

that Prof. Kondratiev be given the authority to form an ad-hoc Committee of three persons and to convene a meeting of the Committee to study what action IUPAC should take on this matter bearing in mind the deliberations of CODATA. The Committee should prepare a report for discussion at the IUPAC Conference in Cortina d'Ampezzo.

With regard to problems from the field of catalytic reactions requiring international agreement, to which attention had also been drawn in his memorandum, Prof. Kondratiev thought that the terms of reference of Commission I.6 (Colloid and Surface Chemistry) might be enlarged to include catalysis. Prof. Bailar pointed out that this Commission would only seem to be competent to cover heterogeneous catalysis: other arrangements would be necessary to deal with homogeneous catalysis.

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Minute 19

REPORTS OF DIVISION PRESIDENTS (SEE ANNEXES A-F TO THESE MINUTES)

In the spirit of the memorandum of Prof. Kondratiev re Commission Activities, the Executive Committee at its LXth Meeting had asked (see Minute 392) the Division Presidents to obtain a concise statement of the present activities and future programme of each of its Commissions for discussion by the Bureau at Monte Carlo. This request had been endorsed by the Division Presidents when they met in Zurich (See Item 3 of Minutes).

Physical Chemistry Division - Prof. Emschwiller presented a status report for each Commission. Several matters arising therefrom were considered in detail by the Bureau elsewhere on the Agenda. (Items 8, 17, 21, 24(d), 24(f)). It was regretted that page 32 of the Comptes Rendus XXIVth Conference stated "Status not yet finalized" for Commission I.3: the Bureau agreed to delete these words from the records. The relationship between CITCE and the Division was reported to be satisfactory (see Minute 378, LXth Meeting of Executive Committee).

Inorganic Chemistry Division - After presenting the status reports, Prof. Benard recommended that a meeting of each Commission be convened at the XXVth Conference in 1969 when it should be possible to evaluate the work currently in hand.

Organic Chemistry Division - The report by Prof. Bartlett made several important recommendations. Some matters were considered in detail by the Bureau elsewhere on the Agenda (Items 8, 20, 24(i)). By a most unusual error all mention of the correct Commission III.2 (Chemical Plant Taxonomy) had been omitted from the Comptes Rendus XXIVth Conference; Commission III.3 (Biochemical Nomenclature) was incorrectly listed as III.2. Commission III.2 lacked the generality and urgency of the other two Commissions of Division III and the case for its continuance appeared correspondingly less strong.

Re the decision to ask Prof. P.A. Plattner to chair an ad-hoc Committee to study the desirability of establishing a Section on Therapeutic Chemistry, Prof. Plattner thought it best that the Secretary General contact WHO, FAO and two UNESCO agencies, with the purpose of having one or more qualified therapeutic chemists added to their committees which deal with standards.

An ad-hoc Committee, consisting of Prof. G.S. Hammond (Chairman) Prof. G.J. Hoytink and Prof. G. Quinckert, would report at the XXVth Conference re the desirability of establishing a Commission on Organic Photochemistry.

Macromolecular Division - In his report Prof. Wichterle stressed the interdisciplinary nature of the field but regretted that attempts to collaborate with other International Unions had so far been unsuccessful. Some matters were considered in detail by the Bureau elsewhere on the Agenda (Items 8, 20).

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Analytical Chemistry Division - Prof. West was able to emphasize the high level of activity in his Commissions by reference to 6 reports submitted for publication in Pure and Applied Chemistry since the XXIVth Conference. Two further reports were in the final stages of processing by the Division. Some matters were considered in detail by the Bureau elsewhere on the Agenda (Items 8, 16, 20).

Applied Chemistry Division - Some matters were considered in detail by the Bureau elsewhere on the Agenda (Items 8, 20). Dr. Gallay was of the opinion that the future programme of the Fermentation Industries Section needed strengthening and greater broadness in scope, which would be discussed firmly with the Section. He regarded the Organic Coatings Section's programme as weak; continuance of the Section should be probationary pending strengthening of the programme. The Pulp, Paper and Board Section had not been able to formulate a programme of any consequence. The Bureau approved Dr. Gallay's recommendation that this Section be put into abeyance until such time as might be considered opportune for its revival.

Clinical Chemistry Section - Dr. Morf reported that in spite of repeated efforts he had so far been unsuccessful in obtaining a status report. As soon as it was forthcoming, it would be circulated amongst the Bureau members.

The Division Presidents had recommended at their meeting in Zurich (see Item 3 of Minutes) for consideration by the Bureau, that a definite sum of money be assigned annually to each Division President for allocation by him according to his assessment of the non-administrative needs within his Division, including the provision of a contingency fund.

It was Resolved by the Bureau:

that a contingency item of \$2,000 be included in the annual budget for each Division in 1969, the matter to be reviewed thereafter. On application to the Treasurer money from this fund can be made available immediately to a Division President for specific activities not provided for in the budget, with the exception of providing financial support for symposia.

Minute 20

ACTIVITY OF IUPAC SECRETARIAT

After a short historical introduction on the matter from Prof. Kondratiev, Dr. Williams gave an account of the work done by the Secretariat office since its opening at Oxford in June 1968. A start had been made in taking over the administrative and implementation work of the Secretary General and Treasurer. A clear statement of the relations between the Executive Committee, Officers and Executive Secretary, particularly the responsibilities and authorizations of the Executive

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Secretary, was being prepared by the Executive Committee at Monte Carlo. This statement would be circulated to Bureau members. It was confirmed that IUPAC has only one Secretariat, namely that in Oxford; in Zurich was situated the office of the Secretary General.

All Divisions, Sections, Commissions and Committees had been circularised as to the assistance which the Secretariat could offer them. The immediate response was clear from a list of 18 major tasks undertaken at Oxford during the 4 months prior to the Bureau meeting. A considerable expansion of this work was to be expected.

A formal certificate had recently been obtained from the U.K. Tax Authority granting exemption from Corporation Tax in respect of the IUPAC Oxford Bank Account. The latter merely served the day-to-day financial requirements of the Secretariat. IUPAC's main funds continued to be handled by Union Bank of Switzerland in Zurich.

It was confirmed that all correspondence, including that of a formal nature addressed to the Secretary General, should go to the IUPAC Secretariat. The Executive Secretary will deal with this correspondence in accordance with relevant decisions or agreed procedures on his own judgement sending copies to the Secretary General and Treasurer and, as necessary, to the President and Vice-President.

Minute 21

REPORT BY FINANCE COMMITTEE

On behalf of the Finance Committee, Dr. Gabrielson emphasized the following points:

- (i) In order to ensure full protection of IUPAC's rights with regard to reports it produced, IUPAC should have a properly registered trade-mark or seal. The Executive Committee had considered the matter at its LXth Meeting and would make proposals for action at the XXVth Conference.
- (ii) A new structure for annual dues from National Adhering Organizations was vital in order to place IUPAC's income on a secure basis for a number of years to come.
- (iii) The royalties paid by Butterworths, the official publishers of IUPAC, had been falling in recent years. Sir Harold Thompson agreed to look into this matter and then report back to the Bureau.

Prof. Kondratiev requested that a vote of thanks be recorded to the Finance Committee for its untiring efforts on behalf of IUPAC.

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Minute 22

SPONSORSHIP

It was agreed that future requests for IUPAC sponsorship of symposia should be handled by the Secretariat by a mechanism based on the following points:

- (i) In general a provisional application for sponsorship should be made two years in advance of the actual symposium.
- (ii) Endorsement of the scientific quality of the symposium should be given by the appropriate Division(s).
- (iii) There should be a satisfactory settlement of the publishing rights via the Editorial Board.
- (iv) The final decision on granting sponsorship should be the responsibility of the Executive Committee or Bureau, including any decision necessary on allocation of financial subvention.

Dr. Morf believed that it was more important for IUPAC to grant sponsorship to symposia in those countries where chemistry was not already well established.

Prof. Bartlett suggested that many of the apparent inconsistencies in IUPAC's records would be removed if sponsorship was termed "provisional" once a Division had reported favourably, but only "approved" or "rejected" when the Executive Committee or Bureau had given its decision. Dr. Rees recommended that the Information Bulletin should carry two lists of meetings in future: a Calendar of non-IUPAC meetings; and an IUPAC Sponsorship List. It was preferable for the Sponsorship List only to include fully approved IUPAC symposia. Distribution of a list of symposia under consideration by IUPAC should be restricted to the Bureau, Editors and Butterworths.

Sponsorship of the following symposia was considered by the Bureau (no financial support requested unless specifically mentioned):-

IIInd Pre-Symposium on Carotenoids (New Mexico State University, Las Cruces, April 1969). Now supported by Organic Chemistry Division; Editorial Board wished to publish main papers; approved by Bureau.

VIIth Natural Products (Mexico City, April 1969). The Bureau endorsed the decision of the Executive Committee (IXth Meeting, see Minute 386) that in view of the special circumstances, sponsorship be granted with financial subvention of \$4,000; Editorial Board wished to publish main papers.

Nature of Metal-Ammonia Solutions (Cornell University, USA, June 1969).

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Supported by Inorganic Chemistry Division; no information yet available for Editorial Board decision; view of XXIInd IUPAC Congress Committee to be sought; Bureau decision deferred.

Atomic Absorption Spectroscopy (Sheffield, July 1969). Supported by Analytical Chemistry Division; Editorial Board wished to publish main lectures; no objection from XXIInd IUPAC Congress Committee; approved by Bureau.

Surface Area Determination (Bristol, July 1969). Supported by Physical Chemistry Division; Editorial Board wished to publish main lectures; no objection from XXIInd IUPAC Congress Committee; approved by Bureau.

Analytical Chemistry (Birmingham, July 1969). Supported by Analytical Chemistry Division; insufficient information yet available for Editorial Board decision; no objection from XXIInd IUPAC Congress Committee; approved by Bureau.

IVth Organometallic Chemistry (Bristol, July-August 1969). Opinions of Organic and Inorganic Chemistry Divisions not previously sought; no information yet available for Editorial Board decision; no objection from XXIInd IUPAC Congress Committee; in view of the special circumstances, approved by Bureau.

XXIInd IUPAC Congress/XIIIth International Conference on Co-ordination Chemistry (Sydney, August 1969). Insufficient information yet available for Editorial Board decision.

Kinetics and Mechanism of Polyreaction (Budapest, August 1969). Supported by Macromolecular Division; no information yet available for Editorial Board decision; no objection from XXIInd IUPAC Congress Committee; written assurance necessary from Hungarian Academy of Sciences re visas; Bureau decision deferred.

Rheology of Polymer Solids (Prague, September 1969). Supported by Macromolecular Division; Editorial Board wished to publish main lectures; view of XXIInd IUPAC Congress Committee to be sought; provisionally approved by Bureau.

Light Scattering in Polymer Science (Prague, September 1969). Supported by Macromolecular Division; Editorial Board wished to publish main lectures; view of XXIInd IUPAC Congress Committee to be sought; provisionally approved by Bureau.

Ist Calorimetry and Thermodynamics (Warsaw, September 1969). The Bureau endorsed the decision of the Executive Committee (see Minute 403, Minutes of LXIst Meeting) not to grant sponsorship because the organizers had already arranged for publication of the proceedings outside Butterworths

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Conformational Analysis (Brussels, September, 1969). Supported by Organic Chemistry Division; Editorial Board wished to publish main lectures; approved by Bureau.

VIIth Clinical Chemistry (Geneva, September, 1969). The Bureau endorsed the decision of the Executive Committee (see Minute 403, LXIst Meeting) not to grant sponsorship because the organizers had already arranged for publication of the proceedings outside Butterworths. However, the Congress literature may refer to "collaboration with the IUPAC Section of Clinical Chemistry".

Spectroscopy of Solid State (Liege, October, 1969). No information yet available for Editorial Board decision; view of XXIIInd IUPAC Congress Committee to be sought; provisionally approved by Bureau.

Thermodynamics (Cardiff, April, 1970). Support of Commission I.2 being requested; clarification of publication rights needed for Editorial Board decision; Bureau decision deferred.

IIIrd Photochemistry (St. Moritz, July, 1970). Supported by Organic Chemistry Division; no information yet available for Editorial Board decision, provisionally approved by Bureau

VIIth Natural Products (Riga, July, 1970). Supported by Organic Chemistry Division; no information yet available for Editorial Board decision; draft budget required for decision on financial subvention; written assurance necessary from USSR Academy of Sciences re visas; provisionally approved by Bureau.

Non-Aqueous Electrochemistry (France, July, 1970). Being organized by Commissions I.3 and V.5; insufficient information yet available for Editorial Board decision; provisionally approved by Bureau.

Vth Carbohydrate Symposium (Paris, August, 1970). Supported by Organic Chemistry Division; no information yet available for Editorial Board decision; Bureau decision deferred.

Non-Benzenoid Aromatic Compounds (Sendai, August, 1970). Supported by Organic Chemistry Division; Editorial Board wished to publish main lectures; approved by Bureau.

XIIIth Co-ordination Chemistry (Zakopane/Cracow, September, 1970). Supported by Inorganic Chemistry Division; no information yet available for Editorial Board decision; draft budget required for decision on financial subvention; written assurance necessary from Polish Academy of Sciences re visas; Bureau decision deferred.

Vth Microchemistry (Graz, September, 1970). Supported by Analytical Chemistry Division; Editorial Board wished to publish main lectures; approved by Bureau; draft budget required for decision on financial subvention.

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Chemistry of Pesticides under Metabolic and Environmental Conditions (Bonn, September, 1970). Supported by Applied Chemistry Division; Editorial Board wished to publish main lectures; draft budget required for decision on financial subvention; approved by Bureau.

Industrial Wastes (Vienna, November, 1970). Supported by Applied Chemistry Division; insufficient information yet available for Editorial Board decision ; provisionally approved by Bureau.

Cycloaddition (Munich, 1970). Supported by Organic Chemistry Division; no information yet available for Editorial Board decision; provisionally approved by Bureau.

Chemistry of Terminal Pesticide Residues (Tel Aviv, February, 1971). Supported by Applied Chemistry Division; Editorial Board wished to publish main lectures; decision re financial subvention deferred while views of XXIIIrd IUPAC Congress Committee obtained for consideration of Treasurer; approved by Bureau.

IInd Pesticide Chemistry (Tel-Aviv, February-March, 1971). Supported by Applied Chemistry Division; insufficient information yet available for Editorial Board decision; Bureau decision deferred.

IIIrd Crystal Growth (Marseille, 1971). The Bureau endorsed the decision of the Executive Committee (LXth Meeting, see Minute 386) to grant sponsorship; Editorial Board had released the publication rights; Executive Secretary to prepare, for signature by Secretary General, a letter to the organizers.

XXIIIrd IUPAC Congress (USA, 1971). Insufficient information yet available for Editorial Board decision re publication.

Analytical Chemistry (Kyoto, April, 1972). Supported by Analytical Chemistry Division; Editorial Board wished to publish main lectures; approved by Bureau.

IVth Fermentation (Kyoto, April-May, 1972). Supported by Applied Chemistry Division; insufficient information yet available for Editorial Board decision; draft budget required for decision on financial subvention; Bureau decision deferred.

IVth Crystal Growth (Japan, 1974). Organizers wish to offer publication rights outside Butterworths; Bureau decision deferred (See Item 18).

Organic Reaction Mechanisms (Canterbury). Request for sponsorship withdrawn.

Minute 23

INSTRUCTIONS FROM CHAIRMAN OF EDITORIAL BOARD RE IUPAC PUBLICATIONS

The Bureau endorsed the Executive Committee's decision that three volumes of Pure and Applied Chemistry be published in 1969. ICSU

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had recommended that all papers in scientific journals should carry an author abstract. The Bureau agreed that this should be the official policy of Pure and Applied Chemistry.

At this point in the meeting, Sir Harold Thompson and Prof. Weedon reported on problems encountered in publishing symposia papers in Pure and Applied Chemistry and the reasons for some of the recent delays. Greater co-operation from authors and symposia organizers was vital if more rapid publication was to be achieved. The President's letter should be revised to emphasize the responsibility of symposia organizers for:

- (i) not only collecting all the manuscripts but checking their completeness with regard to illustrations, references and abstracts;
- (ii) ensuring that the manuscripts conform with IUPAC recommendations on nomenclature and the use of symbols.
- (iii) undertaking or arranging for preliminary editing of papers by authors writing in a language not their own.

Prof. Weedon was to discuss with the Division Presidents, at their meeting on 31st October, ways in which they could help expedite publication of symposia and other IUPAC material

Dr. Gallay raised the matter of reports from within the Applied Chemistry Division which would not reach the necessary specialist audience if published in the Information Bulletin.

The Bureau thought it preferable that all IUPAC reports should first be published in the Information Bulletin and subsequently reprinted, as necessary, in outside specialist journals. Sir Harold Thompson indicated that after publication of definite nomenclature rules, etc. in Pure and Applied Chemistry, Butterworths would not unreasonably withhold reprinting rights nor fix too high a fee for same.

Minute 24

PREPARATIONS FOR XXVth IUPAC CONFERENCE (CORTINA D'AMPEZZO, 1969)

The following main programme was agreed:

Thursday, 3rd July	-	Executive Committee Meeting
Friday, 4th July	-	Bureau Meeting
Saturday, 5th July	-	Council Meeting
Monday, 7th July	-	Council Meeting
Tuesday, 8th July	-	Bureau Meeting

The Division Presidents proposed that meetings be convened,

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in advance of the main programme, if necessary, of:

Physical Chemistry Division	- Division Committee and all Commissions
Inorganic Chemistry Division	- Division Committee and all Commissions
Organic Chemistry Division	- Division Committee and Commissions III.2 and III.3
Macromolecular Chemistry Division	- Division Committee (preferable for Commission IV.1 to meet at Oberursel, near Frankfurt, in conjunction with Commission III.1, May-June, 1969).
Analytical Chemistry Division	- Division Committee and all Commissions
Applied Chemistry Division	- Division Committee and all Sections except Pulp, Paper and Board. (Section VI.8 also wished to have an additional meeting in 1969).

In addition to the above programme, the Bureau approved meetings at Cortina d'Ampezzo, subject to their need to meet, of the Section of Clinical Chemistry and all Standing Committees normally convened at the biennial Conference.

The Secretariat should immediately circularize all Chairmen and Secretaries of Committees, Divisions, Sections and Commissions to ascertain the number of meetings that will be necessary at the Conference, and dates on which they will be held. Subsequently, claim forms should be circulated to Titular Members in order to make exact reservations for accommodation.

A draft letter was presented by the Secretary General with regard to nomination of candidates and elections to the Bureau and Executive Committee at the Conference. Subject to corrections in the English to be made by the Executive Secretary, the Bureau approved the distribution of the letter to National Adhering Organizations.

Minute 25

SYMPOSIUM ON CHEMICAL EDUCATION

The Executive Committee (see Minute 375, LXth Meeting) had invited the Italian national authorities to consider holding a symposium on chemical education as part of the XXVth IUPAC Conference at Cortina d'Ampezzo. Because Sir Ronald Nyholm, who had consented to the Italian's request to act as chairman of the symposium but cannot be present at that time, Prof. Sartori reported that tentative arrangements had been made to hold the symposium at Frascati in October, 1969.

A more favourable time for the Symposium might be the Spring of 1970 and the Bureau asked the organizers to consider postponing it until then. IUPAC sponsorship would be granted and the Editorial Board was happy to publish the papers in Pure and Applied Chemistry.

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Approval was given for Prof. Sartori to arrange a 2-3 day Symposium on air pollution at the time of the Cortina d'Ampezzo Conference, but to ensure there was no clash with the dates fixed for meetings of the Bureau and Council. Prof. Truhaut said that Section VI.4 (Toxicology and Industrial Hygiene) was exploring air pollution problems and he recommended that the symposium organizers collaborate with this Section.

Minute 26

REPORT OF CO-ORDINATING COMMITTEE FOR CO-OPERATIVE PROGRAMMES BETWEEN IUPAC AND OTHER INTERNATIONAL ORGANIZATIONS

Prof. Truhaut reported that the work on establishment of analytical methods for controlling the purity of a number of food additives, for which IUPAC was officially contracted with the European Economic Community (CE), was progressing satisfactorily. This augured well for a possible future extension to contracts with fully international organizations.

The Co-ordinating Committee had now defined a clear working procedure in order to despatch 10 methods in good form to CE. Collaboration between the Analytical Chemistry and Applied Chemistry Divisions was a feature of this procedure. It should be noted that sooner or later IUPAC would have to revise the methods in the light of rapidly developing technological progress.

Prof. Truhaut emphasized the necessity for a permanent liaison between himself and Dr. Morf, in whose Zurich office all the CE documentation was stored; and between themselves and the CE authorities in Brussels. The Bureau agreed that he should feel free to contact the Treasurer for funds if it became imperative to travel for contractual business.

In reply to a question from Dr. Gallay, Dr. Morf said that Section VI.1 (Food) would shortly be receiving for comment the 10 methods for 1968 approved by Commission V.1 (Analytical Reactions and Reagents). Dr. Gallay pointed out that there already existed in the Applied Chemistry Division several analytical methods which were worthy of consideration by the Co-ordinating Committee. Prof. Klemm asked that if there was sufficient time in future years, the approved methods be sent to appropriate Commissions to check that official IUPAC nomenclature was being used.

FAO had enquired about the availability for reference of IUPAC-approved analytical methods and particularly the position re copyright. It seemed unlikely that access could be prevented entirely, nor was this thought advisable by the Bureau. However, no alteration of its methods should be permitted without written consent from IUPAC.

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Dr. Gallay pointed out that IUPAC was not consistent in charging for the preparation of methods. The Bureau agreed to his proposal that the Executive Committee should explore in detail the whole matter of reimbursement of IUPAC for carrying out contractual work.

Prof. Kondratiev asked that a vote of thanks be minuted to the Co-ordinating Committee and Commissions responsible for ensuring the success of the CE contract.

Minute 27

MOTION OF U.S. DELEGATION RE STUDIES OF DUES STRUCTURE

Based on the decision of Council (Comptes Rendus XXIVth Conference, page 105) in consideration of a motion made by the U.S. Delegation with a view to placing the regular IUPAC income into line with needs, a Working Document had been prepared by Drs. Morf and Paul for consideration and criticism to better the existing proposals. This document, recently circulated to National Adhering Organizations, suggested that the annual chemical turnover, which is easily defined and known, could be used as a basic guide in enabling them to determine realistically what their annual dues might be.

Hungary and New Zealand had already accepted, in principle, the proposals in the Working Document. The Treasurer urged each member of the Bureau to ensure that his country's views were available for consideration well in advance of the XXVth IUPAC Conference. The Bureau endorsed Prof. Wichterle's suggestion that the Secretariat should write to the National Adhering Organizations to stimulate discussion of the proposed new dues scheme within each National Body and submission of its definite reply.

The Working Document contained two errors:-

- (i) Page 2, Category VII: Number of Council Votes should read "8"
- (ii) Page 3, under (d): this should read "Council meeting (15th March, 1969)".

Dr. Morf hoped that the Working Document would stimulate sufficient discussion so that definite recommendations could be put to Council at Cortina d'Ampezzo. It seemed that a final decision could not be implemented at the 1969 Conference because changes in the Statutes would be necessary.

Prof. Klemm enquired who would decide to which category each country belonged and whether it was obligatory for it to comply with the decision. The Treasurer advised that the decision would not be obligatory: there would only be a moral obligation for each country

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to reach the recommended level of dues as soon as possible. Sir Harold Thompson wondered if the proposed scheme might deter a voluntary excess payment of dues as was done at present by some countries.

Dr. Rees thought that there would be no reason to alter the Statutes provided the proposed scheme complied with the number of votes specified in Statute 5.1; Council was already empowered to change the dues applicable to each category.

Minute 28

MOTION OF U.S. DELEGATION RE STANDING COMMITTEE ON CONGRESS
ORGANIZATION AND PROGRAMMES

In consequence of a resolution of the Executive Committee (see Minute 396(iv), LXth Meeting), Prof. Kondratiev had appointed Dr. Morf and Dr. G. Aulin-Erdtman (Sweden) as the two IUPAC representatives to collaborate with the National Organizing Committee for all future IUPAC Congresses. Their work would start with the preparation of the XXIIIrd Congress (USA, 1971). In effect, Drs. Morf and Aulin-Erdtman constituted the IUPAC Standing Committee on Congress Organization and Programmes. These appointments were endorsed by the Bureau.

Prof. Bartlett presented, on behalf of the U.S. National Committee, proposals for Terms of Reference of the Standing Committee. In his capacity as Chairman of the Programme Committee for the 1971 Congress, he said there was still time for the Standing Committee to advise, especially in so far as it could ensure no overlap of subjects between consecutive Congresses and provide continuity between Congresses. Prof. Bailar emphasized that the standing Committee existed in order to encourage a country organizing a Congress to seek its expert advice.

Minute 29

COMPANY ASSOCIATES PLAN

Prof. Shibata reported that some 9 Japanese firms (totalling 14 subscription units) would be joining the Plan in 1969. The numbers of firms currently in the plan were: 67 - USA; 16 - Germany; 14 - U.K.; 4 - Belgium; 3 - Italy; 1 - Portugal; 1 - Czechoslovakia; 1 - Greece.

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A report had been drawn up by Mr. Ratcliffe on more rapid dissemination, via audiotape, of information from IUPAC-sponsored symposia. There was insufficient time for the Bureau to assimilate its contents on this occasion. It was agreed that each Member of the Bureau should consider the report and submit his comments to the Secretariat so that a statement could be available for discussion at Cortina d'Ampezzo.

Minute 30

REPORT BY COMMITTEE ON TEACHING OF CHEMISTRY

The Bureau approved the following recommendations of the Executive Committee (see Minute 408, LXIst Meeting):

- (i) Prof. R.W. Parry (University of Michigan, USA) be appointed the new Chairman of the Committee on Teaching of Chemistry and that Sir Ronald Nyholm be consulted as to the best time for Prof. Parry to take over this office.
- (ii) Consideration of replacements and further appointments to the Committee be deferred until a new programme of work had been prepared.
- (iii) IUPAC should contribute \$200 in 1968 and in 1969 to the CIES Committee of ICSU without prejudice to further annual commitments.
- (iv) The Committee should recommend to the Executive Committee who should be the IUPAC representative on CIES.

Minute 31

NEW TITULAR AND ASSOCIATE MEMBERS

The Bureau endorsed the election of new Titular and Associate Members, already approved by the respective Division Committees, as follows:

Organic Chemistry Division. Mr. S.P. Klesney (USA) as Titular Member (1968-71) and Secretary of Commission III.1 (Organic Nomenclature) to replace Dr. H.S. Nutting (resigned); Dr. H. Grunewald (Germany) as Associate Member to replace Mr. Klesney.

Macromolecular Division. Titular Membership (1967-71) of new Commission IV.1 (Macromolecular Nomenclature):

Dr. K. Loening (USA)	- Chairman
Dr. L.C. Cross (UK)	- Secretary
Prof. P. Corradini (Italy)	

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Dr. R.B. Fox (USA)
Dr. V.V. Korshak (USSR)
Prof. G. Smets (Belgium)
Dr. C. Suhr (Germany)
Prof. T. Tsuruta (Japan)

Following the recommendation of Prof. Wichterle,

It was Resolved:

that an ad-hoc Committee, under the Chairmanship of Dr. H.K. Livingston (USA), be appointed to study the question of machine language for polymers and then to report back to the Bureau with its recommendations.

Analytical Chemistry Division. Titular Membership (1968-71) of reconstituted Commission V.1 (Analytical Reactions and Reagents):

Prof. H. Malissa (Austria) - Chairman
Prof. R. Belcher (UK)
Dr. H. Kienitz (Germany)
Prof. F. Pellerin (France)
Prof. S. Siggia (USA)
Prof. J. Zyka (Czechoslovakia)

Dr. A.J.B. Robertson (UK) as Associate Member of Commission V.3 (Analytical Nomenclature) to replace Dr. K. Biemann (resigned).
Dr. K.M. Bills (UK), previously an Associate Member, to be an additional Titular Member (1968-71) of Commission V.4 (Spectrochemical and other Optical Procedures for Analyses).

Applied Chemistry Division. Dr. H. Hadorn (Switzerland) as Titular Member (1968-69) of Section VI.3 (Oils and Fats) to replace Dr. A. Bosshard (resigned). Dr. K.R. Hill (USA) as Titular Member (1968-71) of Section VI.5 (Pesticides) to replace Dr. H. Egan (resigned), and to replace Dr. Egan as Secretary of Commission VI.5.1 (Terminal Pesticide Residues). Dr. D.C. Abbott (UK) to be a Titular Member (1968-71) of Section VI.5 (Pesticides) and to replace Dr. Egan as Secretary of Commission VI.5.2 (Pesticides Residue Analysis). The Titular Membership of Section VI.5 was raised from 8 to 10 to accommodate Dr. Abbott and leave one position yet to be filled.

Titular Membership (1968-71) of reconstituted Section VI.8 (Water, Sewage and Industrial Wastes):

Dr. S. Freyschuss (Sweden) - Chairman
Mr. B. Goransson (Sweden) - Secretary
Dr. P.N.J. Chipperfield (UK)
Mr. H. Peters (Netherlands)
Prof. K. Stundl (Austria)
Prof. W. Teske (Germany)
Mr. A. Wery (Belgium)

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The Bureau also approved the election of Dr. K. Loening, in his capacity as Chairman of Commission IV.1, as a Titular Member of the Inter-Divisional Committee on Nomenclature and Symbols.

Minute 32

AD HOC COMMITTEE ON PLASMA CHEMISTRY

It was Resolved:

that an ad-hoc Committee, consisting of Dr. C.W. Beckett (USA) - Chairman, Dr. L. Deffet (Belgium) and Dr. V.V. Sytchev (USSR), be appointed to study the question of plasma chemistry and then report back to the Bureau with its recommendations.

Minute 33

BUDGET

Prof. Bailar went briefly through a revised budget estimate for 1969. Sir Harold Thompson thought it would be useful in future to have available the balance sheet for the previous year to that under discussion (as completely up-to-date as possible). The surplus or deficit would then be known and its implications could be taken into account in the budget estimates. Dr. Morf replied that IUPAC produced only a biennial account for presentation to Council. However, an annual account could be made available for the Bureau's information.

The Division Presidents would be considering their budgeting commitments for 1970 when they met on 31st October. Subsequently, the Treasurer and Secretariat would be able to produce a meaningful budget for 1970, which could be circulated to the Bureau at the end of the year. At that time the balance sheet for 1968 could also be included.

Prof. West asked if some of the money from the CE Contract could be used to enable the Co-ordinating Committee to meet occasionally and better implement its work. Dr. Rees pointed out that the EEC Contract was not financially profitable to IUPAC, because the funds provided did not even cover the administration and service charges in meeting the terms of the contract. Perhaps in future the Accounts should show the specific charges made against the income from such a contract.

Dr. Gabrielson said that although the Finance Committee had recommended an annual transfer of income in order to build up IUPAC's reserves, once the latter were considered adequate no further transfers would be necessary.

The Bureau approved the tentative budget for 1969.

Prof. Bailar mentioned that in preparing for the 1968 budget he had

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approached the retiring Division Presidents before the XXIVth Conference (Prague, 1967) for budgetary information, but had been informed that they were not responsible for 1968 commitments. Therefore, he had approached the incoming Division Presidents for the information; they had indicated it was too early to determine their requirements for 1968. Prof. Bailar hoped that the two sets of Division Presidents would collaborate in future to improve on this impossible budgetary situation.

Minute 34

LIAISON WITH INDUSTRY

The USSR National Committee, on the initiative of Prof. Kondratiev, had requested the appropriate USSR Ministries to ascertain what industry would like IUPAC to do for it. The replies would be made available for discussion, particularly within the Applied Chemistry Division. Prof. Kondratiev proposed that this idea be extended in order to obtain information through all our National Adhering Organizations.

Dr. Gallay reported on a recent meeting of the Applied Chemistry Division Committee at which industry's needs were discussed; some industrial persons had been present. Industry was particularly interested in special high-level subject areas and a number of themes were cited. It had been concluded that the full ramifications of one of these these be considered in detail, possibly via the holding of a symposium.

It was Resolved:

that an ad-hoc Committee of three people be formed by Dr. Gallay to study one of the following subject areas and then report back to the Bureau at Cortina d'Ampezzo:

- (i) Chemical contributions to present and future food supplies.
- (ii) Evolution and uses of new fabrication materials.
- (iii) Continuation of the 1969 South Africa Symposium theme "Chemical Control of the Human Environment".

The Division Presidents had recommended at Zurich (see Item 8 of Minutes) that it might be worthwhile convening a meeting of all Industrial Titular Members present at Cortina d'Ampezzo to discuss what industry would like from IUPAC. Dr. Gallay indicated that there was an insignificant number of Titular Members from industry except in the Applied Chemistry Division; therefore, the present initiative of the Applied Chemistry Division was probably sufficient on this matter.

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Dr. Gallay agreed with Prof. Kondratiev that it was essential for there to be an increase in the number of members from industry elected to all Divisions, Sections and Commissions of IUPAC.

Minute 35

ANY OTHER BUSINESS

- (i) Journal of Chemical Thermodynamics (Academic Press). Following the recommendation of the Executive Committee (see Minute 396(iii) LXth Meeting),

It was Resolved:

that Dr. H.A. Skinner can only proceed with the Journal on a basis entirely independent of IUPAC and in particular of Commission I.2 (Thermodynamics and Thermochemistry).

- (ii) Possible Meeting of Commission I.1, January, 1969. The budget estimates for 1968 had included sums of \$1,800 for travel and \$600 for subsistence re a meeting of Commission I.1 (Physico-Chemical Symbols, Terminology and Units). It might be necessary to defer this meeting until early in 1969. The Bureau agreed that the funds could be re-allocated to 1969 if necessary.

- (iii) Section on Medicinal Chemistry. The suggestion to create a Section on Medicinal Chemistry implied a completely different area of work to that being undertaken by the Section of Clinical Chemistry or envisaged for the proposed Commission on Therapeutic Chemistry.

It was Resolved:

that an ad-hoc Committee be appointed, membership to be determined by the Executive Committee, to study the need for a Section on Medicinal Chemistry and then report back to the Bureau.

- (iv) Soliciting Funds for IUPAC Symposia. Prof. Bartlett had brought to the attention of the Division Presidents in Zurich (see Item 5 of Minutes) that Statute 9.42 seemed to imply that symposium organizers may not solicit financial support from outside IUPAC for their symposium. Dr. Rees pointed out that financial responsibility for the organization of a symposium to be held under IUPAC sponsorship was never carried by IUPAC. Consequently, there was no real conflict with the Statutes because the symposium organizing body was not a constituent body of IUPAC and was therefore free to solicit funds.

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- (v) Regional Meetings of Chemistry Journal Editors. (Dr. A. Perez-Vitoria UNESCO, present). Dr. Perez Vitoria reported on a proposal that regional groups of editors of chemistry journals be established to discuss problems of mutual interest. UNESCO was willing to finance meetings of the groups, whose membership would be drawn up by UNESCO on the advice of IUPAC.

Sir Harold Thompson expressed the view that this matter was primarily one for consideration by the scientific publishing societies in different countries. Prof. West thought that participation of commercial scientific journals in any discussions should also be considered.

In principle the Bureau favoured the proposal and as a first step towards its implementation it was recommended that UNESCO request the advice of a few European chemical publishing societies on the matter.

Minute 36

AGENDA ITEMS NOT DISCUSSED BY THE BUREAU

Due to lack of time, consideration of the following items from the agenda was deferred to meetings of the Division Presidents and of the Executive Committee on 31st October:

16. Proposal of International Atomic Energy Agency re International Analytical Laboratory.
17. Establishment of Physical Property Task Group (Commission I.4).
18. Association between IUPAC and International Conference on Crystal Growth.
24. Any Other Business:
 - (a) IUPAC representative for COWAR
 - (b) Names of Elements 102 and 103
 - (c) Machine Documentation in Chemical Field
 - (e) Tentative Nomenclature in Inorganic Chemistry
 - (g) XXIIInd General Assembly of ICSU

VOTE OF THANKS

In addition to votes of thanks for hospitality to be extended by the Secretary General to Mr. Boisson (Mayor of Monte Carlo) and to Mr. Demange (Minister of State of Monaco), the Secretariat was to write to Mr. Blanchi (Director of Service des Congres) to express our appreciation for the provision of conference facilities.

The meeting closed at 17.30

CHAIRMAN: *V Kondratiev*

DATE: *4 VII 1969*

AMENDED ANNEX Z TO MINUTES OF XXist MEETING OF BUREAU

1968

March 11-14	Symposium on Modern Chemistry in Industry	Eastbourne (U.K.)
May 13-17	International Symposium on the Recovery of Pulping Chemicals	Helsinki (Finland)
June 23-29	IVth International Congress on Catalysis	Moscow (USSR)
July 9-12	IIInd International Symposium on the Chemistry of Organo Silicon Compounds	Bordeaux (France)
July 8-13	Vth International Symposium on the Chemistry of Natural Products	London (U.K.)
August 25-30	VIth International Symposium on the Reactivity of Solids	Schenectady, New York (USA)
September 2-6	IIIrd International Symposium on Fermentation	New Brunswick (USA)
September 3-6	Symposium on Properties of Macromolecular Systems	Toronto (Canada)
September 8-12	XIth International Conference on Co-ordination Chemistry	Haifa (Israel)
September 9-12	Symposium on Valence Isomerization	Karlsruhe (Germany)
September 16-18	XIth International Conference on Co-ordination Chemistry	Jerusalem (Israel)

1969

April 9-12	VIth International Symposium on the Chemistry of Natural Products	Mexico City (Mexico)
July 3-8	XXVth International Conference of Pure and Applied Chemistry including a Symposium	Cortina d'Ampezzo (Italy)
July 14-18	Symposium on Chemical Control of Human Environment	Johannesburg, Pretoria (South Africa)

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August 20-27	XXIInd International Congress of Pure and Applied Chemistry and XIIth International Conference on Co-ordination Chemistry	Sydney (Australia)
	<u>1970</u>	
September 7-11	VIth International Symposium on Microchemistry	Graz (Austria)
	<u>1971</u>	
July	XXVIth International Conference of Pure and Applied Chemistry	Washington D.C., (USA)
	International Congress of Pure and Applied Chemistry	Boston, Mass. (USA)
	Symposium on Macromolecular Chemistry	Boston, Mass. (USA)

INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

MINUTES OF XXIInd MEETING OF BUREAU

HELD AT PALAIS DES CONGRES, MONTE CARLO

on

TUESDAY-WEDNESDAY, 29-30th OCTOBER, 1968 at 9.00

ANNEXES A-F

Report on the activity of the Commissions

COMMISSION I.1 / SYMBOLS, TERMINOLOGY, AND UNITS.

The new version of the "Manual of Symbols and Terminology for Physicochemical Quantities and Units", including all the Prague revisions, was submitted to the Commission members in August 1967, and published in Bulletin n° 32 in August 1968. A large number of detailed comments and suggestions have already arrived from other Commissions, and more can be confidently expected throughout the eight months ending in April 1969.

The best course of action now seems to be as follows :

- 1°. to arrange a two day meeting of the Commission (probably in London or in Exeter) late in December or early in January, to deal with the suggestions received.
2. to deal by correspondence with suggestions arriving between the meeting and April 1969.
3. to meet on the first two days of the Conference at Cortina so as to finalize the Manual for submission to the Division for its approval.

A sum of about \$2000 is asked from IUPAC for the two day meeting in late December 1968.

Suggestions for the future

The Commission should turn its attention away from basic principles, as the revised Manual will probably last for several years (up to ten), and aim at adding appendices relating to special fields of physical chemistry. For example : "Standard Thermodynamic Functions", "Electrochemical quantities", "Spectroscopic quantities", "Quantities of Surface and Colloid Chemistry".

COMMISSION I.2 : THERMODYNAMICS and THERMOCHEMISTRY.

- (1) Arrangements are complete for the 1st International Conference on Calorimetry and Thermodynamics, to be held in Warsaw, August 31st - September 4th, 1969. This Conference is sponsored by the Polish Academy of Sciences, in honour of the late W. Swietoslowski ; a request for joint sponsorship by IUPAC has been sent to the Secretary-General.
- (2) The Bulletin of Thermodynamics and Thermochemistry, No. 11, was published in June, 1968 (457pp).
- (3) The first issue of the Journal of Chemical Thermodynamics (Academic Press, London) will appear in January, 1969. A request to allow the phrase "Published by Academic Press, Inc. London, Ltd, by consultation with the Commission on Thermodynamics and Thermochemistry of IUPAC"

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to be printed in the inside cover has been submitted to the Bureau.

- (4) Arrangements to hold a meeting of the "Task Group" on Plasma Chemistry in Brussels in May, 1968 were cancelled. It is now proposed to request formation of a Commission on Plasma Chemistry, and to set up an ad hoc Committee to this end, to meet in Cortina next July.
- (5) Members of the Commission, and of the Thermodynamic Tables Project, contributed to the 1st CODATA Conference, held at Arnoldsheim, Frankfurt, in July, 1968.
- (6) The first publication of the Thermodynamic Tables Project (on properties of carbon dioxide) is expected at the end of this year, or early 1969.

COMMISSION I.3 : ELECTROCHEMISTRY

A.- ACTIVITIES in significant substantive areas are summarized below.

- (1) Electrochemical Thermodynamics. In an effort coordinated with IUPAC Commission V.5 (vide infra), work is in progress on a comprehensive tabulation of electrode potentials and related thermodynamic information. Coverage includes non-aqueous organic solvents and fused salts.
- (2) Electrochemical Kinetics. Prototypes of a questionnaire have been drafted, aimed at facilitating meaningful tabulation of kinetic parameters of electrode processes. An updated compilation of standard rate constants and transfer coefficients is being prepared for publication. Guidelines have been developed for the design of mechanistically significant electrochemical experiments.
- (3) Nomenclature. In cooperation with Commission V.5 (Electroanalytical Chemistry), work has been initiated on submitting to Commission I.1 the draft of an Appendix to their Manual on Physicochemical Symbols and Terminology. The Appendix will include recommended nomenclature in the field of electrochemistry.

B.- INTERCOMMISSION COOPERATION was established as follows.

- (1) The chairmen and secretaries of Commissions I.3 and V.5 held an ad hoc meeting in March 1968 in Paris in order to coordinate complementary endeavors. Several areas of cooperation emerged, viz.:
 - a. Consultation on projects in progress by Professors Charlot (V.5) and Milazzo (I.3) devoted to the compilation and publication of electrode potential data ;
 - b. agreement on jointly sponsoring and arranging a symposium on non-aqueous electrochemistry and future symposia of mutual interest ;

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- c. agreement on exchanging reports submitted by the chairmen of the two commissions to the respective IUPAC Division Presidents ;
 - d. agreement on regular meetings between the chairmen and secretaries of the two commissions during all future biennial IUPAC Conferences.
- (2) The chairmen of Commissions I.1 and I.3 have initiated direct correspondence on matters of mutual interest. Commission I.3 was invited to submit to Commission I.1 for consideration the draft of an "Appendix on Electrochemical Symbols and Nomenclature", for future addition to Commission I.1's authoritative manual. The suggestion emerged that Commissions I.1 and I.3 may hold a joint meeting (or - at the very least - that the two chairmen meet) for discussing subjects of joint concern.

COMMISSION I.4 : DATA AND STANDARDS

- (1) The good office of Dr. R. Morf, General Secretary was utilized to request of the National Adhering Organizations a list of the substances certified with respect to a particular physical property by the national standardizing laboratories of the world. A standard substance is interpreted as one which reproduces a certified value of a physical property within a given accuracy, and may be applied to the following types of measurements :
- i. The calibration and standardization of instruments.
 - ii. The proof of measurement accuracy by a given method.
 - iii. The transfer of measured quantities between laboratories.
 - iv. The comparison of measurements by different laboratories.
- This information has been slow in arriving, but has been compiled and will soon be circulated to the Commission.
- (2) Under date of December 29, 1967, Commission member Dr. Herman Kienitz proposed the establishment of a task group to search for and evaluate reference substances whose physical constants are established with sufficient accuracy for the intended use. Correspondence within the Commission revealed a majority in favor of participating, so on June 26, 1968, a Physical Property Task Group (PPTG) was established with Dr. Herman Kienitz as chairman.
- (3) During July 8,9 and 10, 1968, an editorial panel consisting of Dr. L.A.K. Staveley, Chairman, Dr. E.F.G. Herington, Dr. W.M. Smit, and Dr. D.R. Stull met at Oxford, U.K., to review and consider the manuscript chapters of an IUPAC Monograph entitled, THE CHARACTERIZATION OF CHEMICAL PURITY, ORGANIC COMPOUNDS. It is intended that this monograph will be sent to the printer within six months.

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COMMISSION I.5 : MOLECULAR STRUCTURE AND SPECTROSCOPY

The Commission has held two meetings ; the first was at Madrid (Sept. 9th-10th, 1967) in association with the IXth European Congress on Molecular Spectroscopy, and the second (Aug. 20th, 1968) was at a Gordon Conference on Infrared Spectroscopy at Meriden, New Hampshire, U.S.A. The comments here will be restricted to matters on which material progress has been made during the past year.

- (1) Specifications for Evaluated Infrared Spectra. About 100,000 infrared spectra are listed in five major collections. A master index, administered in the U.S.A., is currently being reorganized for computer based search.
As the filed spectra are of varied quality and structural reliability, there is a need for internationally acceptable specifications. The draft set of specifications has been approved by the Titular members of the Commission (postal vote). The Commission is ready to submit these for publication as Tentative Recommendations in the next issue of the IUPAC Bulletin, and will circulate them to other chemical Spectroscopists. It hopes that a final version can be prepared at the XXVth conference for formal approval by the Division.
- (2) The S.I. Unit System. As spectroscopy is an interdisciplinary science, the ICSU Joint Commission for spectroscopy assure that actions taken in one of the domains concerned (astronomy, physics, chemistry) are compatible with practice in the others.
The spectroscopic sections of the draft version of the "Manual of Physicochemical Symbols and Terminology" has been discussed by Commission I.5 and reviewed by Commission I.1, then referred to the ICSU Joint Commission. Any outstanding ambiguities ought to be thus resolved, so that Commission I.5 could be able to support acceptance of the Manual. Approval by the Division could then occur at the XXVth Conference.
The Commission's concern has been enhanced by statements in the general scientific literature which indicate that the Editorial Boards of a number of chemistry journals are proposing to institute precipitate and compulsory adoption of the S.I. System before IUPAC has had the opportunity to clarify ambiguities. It recognize that editorial action of this kind is a separate matter from the formal approval of the S.I. System by IUPAC, but it is unfortunate that this situation has arisen to confuse the issue.
- (3) Infrared Wavenumber Calibration below 600 cm^{-1} . The Subcommission I.5.1 is now prepared to extend calibration tables at least to 200 cm^{-1} . Additional measurements are currently made in several laboratories (Prof. R.N. Jones, R.C. Lord, F. Miller). The results will probably be reported at the XXVth Conference.
- (4) Laser Raman Spectroscopy. Prof. Lippincott is heading a U.S. National Bureau of Standards Committee, which is assessing the standards for measurements of Raman intensities and presentation of Raman spectra. A report will be ready for the next technical session.

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- (5) Specifications for the Presentation of N.M.R. Spectra. Initial difficulties have been cleared up. Prof. Sheppard and the British N.M.R. Discussion Group will probably submit the draft recommendations at or before the next Conference.
- (6) Spanish-English Version of the "Multilingual Dictionary of Important Terms in Molecular Spectroscopy." Has now been published in the Instituto de Optica.

COMMISSION I.6 : COLLOID AND SURFACE CHEMISTRY.

At the Prague meeting the Commission on Colloid and Surface Chemistry decided to concentrate on the following efforts in the near future:

1. finalize a tentative nomenclature proposal for publication in the Bulletin;
2. organize a symposium on surface area determination;
3. initiate steps to promote the teaching of colloid and surface chemistry.

The present status of each of these activities is summarized below:

- (1) NOMENCLATURE. The "Proposals for terminology and symbols in colloid and surface chemistry", drafted June 1967, are being modified by Prof. Overbeek to accommodate comments received from members of the Commission, and from the Commission on Physico-Chemical Symbols, Terminology and Units, and from ISO/TC91 and the Comité International des Dérivés-Tensioactifs. An additional section to this draft which will specifically deal with physical adsorption at the gas/solid interface is being prepared by Prof. Everett on the basis of an earlier draft prepared by a subcommittee. Another additional section dealing with chemisorption and catalysis, on which no agreement has been reached yet within the Commission, will not be included in order to expedite publication of the present proposals, which will hopefully be submitted this year or early 1969.
- (2) A SYMPOSIUM on "SURFACE AREA DETERMINATION", jointly sponsored by IUPAC and the British Society of Chemical Industry, will be held at the University in Bristol, England, July 17-19, 1969. The symposium is intended to survey the field and to guide efforts of ISO and national standards organizations in standardizing area determination methods. Representatives of these organizations have been invited to attend and participate in the symposium.
- (3) TEACHING OF COLLOID AND SURFACE CHEMISTRY. The Commission proposes to create a work-text book, to be used in conjunction with Standard Physical Chemistry courses, which would offer attractive theoretical and practical exercises in colloid and surface chemistry, as a specific illustration of the Physical Chemistry course. This approach will be fully discussed at the next Commission meeting.

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INORGANIC CHEMISTRY DIVISION

Report of the Commission
on the Nomenclature of Inorganic Chemistry
1967-68

The meeting planned to take place in Prague during the XXIV conference was cancelled but the Commission met in Copenhagen, August 26-31, 1968. Further, the chairman attended the meeting of the Commission on the Nomenclature of Organic Chemistry in Blakeney, Norfolk, July 1968.

The Commission has now finished the revision of the 1957 rules and hopes that a new edition can be published after the conference in 1969. Section 7 (Coordination Compounds) has been extended considerably and the extended version has already been published as tentative rules. However, it is desired also to include in this section rules for the notation on absolute configuration of optically active coordination compounds and rules for the nomenclature of cyclopentadienyl complexes, which were approved during the meeting in Copenhagen. Further, the sections on Crystalline Phases of Variable Composition and on Iso- and Heteropolyanions have been changed and extended. It is hoped that the above mentioned rules can be published as tentative rules as fast as possible in the Information Bulletin so that they can be included in the new edition of the "Red Book".

The Commission is further finalizing drafts on the nomenclature of organometallic compounds, boron compounds, organosilicon and organophosphorus compounds, which it is intended to publish in collaboration with the commission on the nomenclature of organic chemistry.



K. A. Jensen
Chairman of the Commission
on the Nomenclature of Inorganic Chemistry.

COMMISSION des HAUTES TEMPERATURES

Summary of activities (1967-1968)

1) Task force on Secondary Temperature Standards

Since the last report (1967) two more results for Al_2O_3 have been submitted. This brings the total to six (out of 13) with an average of 2052°C . It is hoped that sufficient results will be available to permit recommending a "best value" for the melting point of Al_2O_3 .

Dr. S.J. Schneider act as a coordinator.

2) Task force on Vapor Pressure Standard Reference Materials

Specimens of all the reference materials (Cd, Au, Pt, Ag, W) have been distributed to all who requested them. As an indication of timing, the target date for Cd, Au and Pt is July 31, 1968. The aid of professional statisticians is being sought.

Dr. R.C. Paule act as a coordinator.

3) Bibliography on High Temperature Chemistry.

Both the gas and the condensed state bibliographies have been issued regularly (2350 copies of each issue of the condensed state and 1750 copies of the gas state bibliographies). It is suggested that the elimination of some contents, retaining ~~coverage~~ coverage of only that research of direct relevance to high temperature chemistry would result in substantial savings of time and money.

A meeting of the Commission was held in Elman (Germany) in last April, without any cost from the Treasurer.

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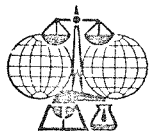
COMMISSION des POIDS ATOMIQUES

Lettre-Rapport du Dr. WICHERS, Président de la Commission

As Dr. Gueron, Secretary of the Commission on Atomic Weights, has already informed you, the Commission is not prepared to make a report that would be of interest to the forthcoming meeting of the Presidents of the Union's Divisions. However, for your information as Secretary of the Inorganic Division, I should like to add a brief outline of the Commission's mode of operation.

The members of the Commission understand their responsibility, as individuals, to maintain a current awareness of the publication of results of research that may be significant to the Commission in its biannual review, and possible revision, of the International Table of Atomic Weights. Members are elected on the basis of special interest in the several areas of chemical and physical research that produce information useful for the derivation of atomic weights. Each member is likely to be aware of developments in his field of special interest. Several months before the scheduled Conference of the Union there is an exchange of correspondence between the Chairman and the Members of the Commission which leads to a preliminary report of possible recommendations concerning revision of atomic weights and related matters in the Commission's jurisdiction. After further discussion by correspondence a draft of the Commission's report is prepared and circulated to the members. If the Commission is scheduled to meet during the Conference of the Union final decisions are deferred until the meeting takes place, thereby gaining the advantage of a general exchange of opinions in the presence of all members. If, as in 1967, the Commission is not scheduled to meet, final agreement is reached by correspondence.

The Commission agreed to omit a meeting in 1967, it was recommended that a meeting be held in 1969. I hope this will be authorized. Dr. Gueron is currently writing to the members to ask whether there are any who would not be able to attend.



*International Union
of Pure and
Applied Chemistry*

ANNEX C

Organic Chemistry Division

President: Prof. P. D. Bartlett
Department of Chemistry
Harvard University
12 Oxford Street
Cambridge
Massachusetts 02138
USA



Secretary: Prof. G. Ourisson
Institut de Chimie
Esplanade
67 Strasbourg
France

REPORT OF THE ORGANIC DIVISION TO THE IUPAC BUREAU, 1968

The Organic Division is aware of having a large and diverse public to serve. To form an estimate of its size, we recently obtained figures from the Chemical Societies in Japan, Australia, Canada, India, Czechoslovakia, France, and the United States as to the distribution of their chemists among the principal fields. (A number of other societies reported that such information was not available from their records since they do not have a sectional organization plan.) In the countries in question organic chemistry is the principal interest of 28%, 16%, "about 50%", 16-25%, about 44%, and 10.8%, respectively, of the member chemists. In the American Chemical Society the divisions concerned with organic chemistry are those of Food Chemistry, Biochemistry, Carbohydrate, Cellulose, Fuel, Medicinal Chemistry, Microbial Chemistry and Technology, Organic Chemistry, Organic Coatings and Plastics, Petroleum, Polymer, and Rubber Chemistry. Their total membership is 22,786 out of a total divisional membership of 47,916, or 47.5% of the whole. By similar methods of counting, only the Applied Chemistry Division has a larger constituency.

In its recent meetings the Organic Divisional Committee has given careful thought to the question of how best to serve its large international community in addition to its traditional and continuing work on the standardization of nomenclature. We are of the opinion that our most important work is the promoting of international contacts among research chemists by organizing symposia and conferences in active fields. We considered and rejected the idea of delegating this work to a special commission, choosing instead to make the planning of symposia our chief item of business at and between our biennial meetings. In the course of this work we have sponsored some very successful symposia, thanks to a good deal of understanding and cooperation on the part of the Bureau and the Executive Committee. This work will be made more effective and easier for all concerned if certain modifications of procedure can be made as recommended later on in this report. First we report a series of actions and recommendations since the last Bureau meeting.

NOMINATIONS

The Divisional committee has approved the nominations of Dr. H. Gr^unewald of Angewandte Chemie, Heidelberg, as associate member of the Organic Nomenclature Commission and of Dr. S. P. Klesney of the Dow Chemical Co., Midland, Michigan, as titular

member and secretary of the commission to succeed Dr. H. S. Nutting, who has retired.

COMMISSIONS

III. 1, Organic Nomenclature - Report of Professor P. E. Verkade, chairman, attached. (By an unaccountable error, the latest IUPAC address list reports Dr. Loening as chairman of this commission.) This commission is active, has accomplished a good deal, and there is a continuing need for its activity. I recommend that it be continued in its exceptional status as a commission without expiration date.

III. 3, Joint Commission on Biochemical Nomenclature - (This Commission is incorrectly listed in Comptes Rendus XXIV with the number III. 2. There was already a Commission III. 2 at the time this Joint Commission was assigned to the Organic Division, and hence the Joint Commission is III. 3.) This commission was assigned to the Organic Division by the Bureau at the time of the dissolution of the Biochemical Division. Its mission differs from that of III. 1 in being more specialized and of great concern to the IUB Commission of Editors of Biochemical Journals, and also in its activity in the area of abbreviations, symbols and trivial terminology. The secretary of the commission, Dr. Waldo E. Cohn of the Oak Ridge National

Laboratory, U.S.A., is also director of the NAS-NRC office of Biochemical Nomenclature.

The interests of these commissions do overlap, and each sends an observer to the meetings of the other. Joint subcommittees of III. 1 and III. 3 have completed reports on cyclitols and steroids and are working on carbohydrates and carotenoids.

It is clear that it would be inefficient to try to combine these differently oriented commissions. IUPAC's co-sponsorship of III. 3 is probably a help in promoting the close collaboration of the two nomenclature bodies. I therefore recommend continuance of Commission III. 3 until such time as a more favorable administrative arrangement may be found.

III. 2, Chemical Plant Taxonomy - By a most unusual error, all mention of this commission is omitted from Comptes Rendus XXIV and the latest IUPAC address list. The commission was set up in 1965 and since its official creation it has held only a single meeting (Stockholm, June 28 and 30, 1966). Several small subcommittees appointed at that meeting have apparently not reported. The chairman, Professor Marion, has expressed a wish for a meeting in 1969.

This commission originated in a congenial group which had been meeting informally for several years. Paradoxically, it

seems to have been less active since it became a commission than it was before. Its mission lacks the generality or urgency of the other two commissions of Division III and the case for its continuance appears correspondingly less strong.

SPONSORSHIP

Symposium held:

Valence Isomerization, Karlsruhe, September, 1968

Hard working, very successful, attendance 200.

Already approved:

Terpenes, Mexico City, April, 1969

Conformation Analysis, Brussels, September 9-12, 1969

Carbohydrate Chemistry, France, 1970

Cycloaddition, Munich, 1970

Recommended:

Nonbenzenoid Aromatic Compounds, Sendai, Japan, August, 1970

Third International Symposium on Photochemistry,
St. Moritz, July 12-18, 1970

Symposia Contemplated:

New Synthetic Methods

Organic Reaction Mechanisms

Decision referred to Secretary General:

Pre-symposium on Carotenoids, New Mexico University,
April, 1969

Although several of IUPAC's guiding principles
of sponsorship - two years' notice, avoidance of a

Congress year, for example - operated against approval of this pre-symposium, its quality is endorsed by two members of the Divisional Committee and by IUPAC's editor, Dr. Weedon, all of whom are quite familiar with the field to be covered. No subvention is asked, and it is linked to the already approved Mexico City Symposium.

OUTSIDE PROPOSALS FOR COMMISSIONS

1. Therapeutic Chemistry - proposed at Prague, where it was decided to ask Professor P. A. Plattner to chair an ad hoc study group to report on desirability. Professor Plattner gave his oral opinion on October 21, 1968:

A problem exists in improving standards of therapeutic chemistry, which is best solved through contact and joint action with those bodies (primarily medical) already chiefly concerned with production and publication of research in the field. He cited the World Health Organization (WHO) and FAO, two UNESCO agencies, and proposed that the Secretary General undertake to establish contact with these bodies with the purpose of having one or more qualified therapeutic chemists added to their committees which deal with standards. At the least, this would remind WHO of the availability of needed chemical advice through IUPAC.

2. Organic Photochemistry - At Prague it was decided to ask Professor G. S. Hammond to chair a study group in this field. The group consists of Professor Hammond, Professor G. J. Hoytink,

and Professor G. Quinckert. It is expected that a report will be available for presentation to the Bureau at Cortina d'Ampezzo next summer.

OTHER ACTIVITIES

The Organic Divisional Committee is prepared to work out recommendations on standard practices in the publication of organic research papers. A memorandum by Professor E. A. Shilov has raised questions about the mandatory publication of elementary analyses. This has proved to be too far-reaching a topic to be settled by mail; after several exchanges it is on the docket for our next meeting. The Committee is also rendering a service to the program committee of the forthcoming 1971 International Congress to be held in Boston, by consulting on a number of matters concerned with the organic program.

RECOMMENDATIONS

The ably written Statutes and By-Laws of IUPAC contemplate that most of its work will be done through meetings of Commissions, whose travel expenses constitute a major claim on the Union treasury. It is our experience that an active and interested Divisional Committee can do as much good as a number of Sections and Commissions, and preserve a flexibility and economy in its

program which is impossible with a large collection of specialized groups having many titular members. Yet in the course of such activity some need for funds inevitably arises. We strongly endorse the unanimous recommendation of the Division Presidents, made at Zürich in May of this year, that each Division Committee be given a general budget not restricted to the paying of travel expenses, for the carrying on of its work from one year to the next. Small financial emergencies such as the one which nearly destroyed our Symposium on Valence Isomerization this year should be capable of being handled by a division president from a contingency fund. In most cases it remains true that symposium organizers need only IUPAC's blessing to raise the money that they require. But the exceptional and meritorious cases require informed and decisive action.

There are several cases in which the Union would be better served by a careful interpretation, and in some cases relaxation, of its restrictive rules about sponsorship. Statute IX D 2, which forbids any IUPAC agency to solicit outside funds for its program, should be specifically interpreted not to apply to a Division Committee organizing a symposium for which the Bureau has granted sponsorship but not a subvention. The current rule requiring approval of a sponsored meeting at least two years

before it takes place is very useful for outside proposals, but should be relaxed in the case of a symposium which is part of the overall plan of a Division Committee. Flexibility is especially needed if the principle is to be maintained which excludes sponsored meetings in a Congress year.

Some of the Union rules about publication of sponsored symposia are compatible with a good program only because of the cooperativeness and efficiency for which the Union's Editor is well known.

It would be reassuring to prospective symposium speakers if we had a rule that, whenever a full publication schedule will prevent the appearance of a symposium in print within 9 months after receipt of the manuscripts by the Editor, the symposium organizer is automatically free to arrange publication in a medium of his choice.

BUDGET

Most of the items requested are routine. Of those which are not, the subvention for the Mexico City Symposium has already been approved. The reasons have been explained above why the responsibility and activity of the Divisional Committee requires an annual rather than a biennial meeting, and also why a divisional program-and-contingency fund is needed (larger in the

non-Congress year 1970 than in 1969).

The Soviet Academy of Sciences plans to provide all the expenses of the invited speakers from Moscow to Riga and return, and for a two-week stay in the Soviet Union. The requested amount is to cover the expenses of these guests from their homes to Moscow and return.

The estimate for 1970 assumes that one new commission may be set up, and an existing one terminated.

1969

Conference, Cortina d'Ampezzo

Division Committee, 10 titular members	3,960
Commission III. 1 (Heidelberg), 7 titular members	2,284
Nomenclature Commission III. 3,	2,522
Taxonomy Commission III. 2, 8 members, 3 duplications	2,837
Administrative expenses	100
Divisional program fund	2,000
Symposium on Terpenes, Mexico City, April, 1969	4,000
<hr/>	
TOTAL	17,703

1970 (Rough Estimate)

Natural Products Symposium and pre-symposia, Riga	7,500
Photochemistry Symposium, St. Moritz	2,000
Divisional Committee	3,960
Commission III. 1	2,284
Commission III. 3	2,522
Possible new commission	2,500
Administrative	100
Divisional program fund	3,000
<hr/>	
TOTAL	23,766

Prof. Paul D. Bartlett,
 Department of Chemistry,
 Harvard University,
 12, Oxford Street,
 Cambridge (Mass. 02138), U.S.A.

Dear Professor Bartlett,

Complying with the wish expressed in your letter of October 1st I have the pleasure of giving you the following short survey of the work of the IUPAC Commission on the Nomenclature of Organic Chemistry.

This work can be divided in a) work on general organic chemical nomenclature and b) work on nomenclature for special fields of organic chemistry.

a) General organic chemical nomenclature

Since about 1949 the Commission is engaged in the preparation of a set of Rules for the nomenclature of the whole of organic chemistry. It was the first time that this very extensive, difficult and time-consuming work was taken up; the predecessors of IUPAC nomenclature, Geneva Nomenclature (1922) and Liège nomenclature (1930) dealt practically only with the nomenclature of acyclic compounds.

This work will, when finished, consist of five sections, as mentioned below:

Section A, Hydrocarbons, and Section B, Fundamental heterocyclic systems, have been published in their "definitive" form in 1958 - they are known as the I.U.P.A.C. 1957 Rules - and have been reprinted in 1966.

Section C, Characteristic groups containing carbon, hydrogen, oxygen, nitrogen, halogen, sulfur, selenium, and/or tellurium, - known as the I.U.P.A.C. 1955 Rules -, has been published in its "definitive" form in 1966.

Section D is in course of preparation, where necessary in cooperation with the IUPAC Commission on the Nomenclature of Inorganic Chemistry. It will deal with coordination compounds, organometallic compounds, chains and rings containing heteroatoms, organosilicon compounds, organic derivations of phosphorus, arsenic, antimony and bismuth, and organoboron compounds. A few parts of this Section have already been published in tentative form in the IUPAC Information Bulletin. It may be expected that the whole Section will be available for publication in a tentative form within a few years from now.

Prof. Paul D. Bartlett,
Cambridge, U.S.A.

's-Gravenhage October 9th, 1968.

Section E, Fundamental stereochemistry, is ready. It is now being prepared for printing and it may therefore be hoped that it will appear in tentative form in the course of 1969.

As you know, after the publication of a tentative document every chemist has during two years the possibility of bringing forward remarks and comments. On the basis of the remarks and comments received, the Commission has then to convert the tentative document into the "definitive" one.

b) Nomenclature for special fields

Work on the nomenclature of the following groups of natural products and related compounds is in progress in cooperation with the IUPAC/IUB Commission on the Nomenclature of Biological Chemistry.

Cyclitols. A tentative document on this matter has been published in August 1968 in the IUPAC Information Bulletin and has appeared also in biochemical journals.

Steroids. A new set of Rules for the nomenclature in this field - an extension of that published in 1958 - is ready and in the hands of Dr. Norf for publication on a tentative basis.

Saccharides. A set of Rules for the nomenclature in this field has been prepared and is now being brought in good form for publication on a tentative basis.

Carotenoids. [It is hoped that work on the nomenclature of porphyrins and chlorophylls will start soon.

The above includes already a lot of future work. Moreover the Commission has started work on the revision (but only where strictly necessary) and extension of the material contained in Sections A, B, and C of the I.U.P.A.C. Nomenclature and also a study on the possibility of the creation of a new and more systematic nomenclature of organic chemistry, of course not forgetting the evident fact that a fundamental difference between new and existing nomenclature seems hardly possible. In this connection it is worthwhile to mention that a new method for naming polycyclic systems has already been worked out.

There are of course several other topics with which the Commission is engaged, but I see no reason to mention these as they are as a whole of minor importance.

As you know, the Commission meets yearly for about a week.

Prof. Paul D. Bartlett,
Cambridge, U.S.A.

's-Gravenhage October 9th, 1968.

In between these meetings much work is done by correspondence. The next meeting will take place in Western Germany in the end of May 1969, thanks to the fact that Dr. Grünewald has joined the Commission as an associate member; since the death of Dr. Richter, the editor of Beilstein's Handbuch, Germany had unfortunately not been represented in the Commission, notwithstanding the attempts from our side to arrive at such a representation

It will be necessary that the nominations made by the Commission after its Blakeney meeting in July 1968 be ratified soon.

On November 4th I will leave the Netherlands for a trip by ship around the world. I hope to be home again in the middle of April. From the middle of December until the end of February I can be reached at the following address: P.O. Box 18, Petaling Jaya (Selangor), Malaysia.

With best wishes

Sincerely yours,

B. E. Verkade



INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY
MACROMOLECULAR DIVISION

President: Prof. O. WICHTERLE
Institute of Macromolecular Chemistry
Czechoslovak Academy of Sciences
Prague 6 - Petřín (Czechoslovakia)
Cable: Macro Prague, Phone: 353351
Telex: Macro 064/0298 Prague

ANNEX D

Report on Commissions

As decided by the Committee of the new Division, no Commissions were established during the first period of the Division's activity. In order to examine whether the status of a Commission is suitable for a given specific activity, working groups have been formed in this first stage.

Samples

The Division has decided to continue the programme on standard samples, originated by the former Macromolecular Commission and by Polymer and Plastic Section. Two Working Parties, on "The Relationship of Performance Characteristics to Basic Parameters of Polymers", headed by J.A.BARRET and on "Molecular Characterisation of Commercial Polymers" headed by H.BENOIT are developing now in close cooperation this activity with a very promising response from industrial and academic laboratories. Until now, no necessity is felt to create a special Commission to support this activity.

Nomenclature

In continuation of the work of the Nomenclature subcommittee of the former Macromolecular Commission, a new group was set up by Dr. Kurt L.Loening which held its first session in Toronto, September 1-2. In order to clear the extremely confused situation in macromolecular nomenclature this first meeting was concentrated to basic definitions. It appears to be very important to develop on this basis an internationally accepted system of nomenclature in cooperation with national representatives and with the Chemical Abstract Service. In agreement with other members of the Division Committee I would like to recommend to the Bureau to give to this group the status of a Commission.

The proposed members of this Commission are:

Dr. K.L.Loening, Chairman, Chemical Abstracts Service, The Ohio State University, Columbus, Ohio 43210

Prof. P.Corradini, Istituto di Chimica Generale dell'Università, Via Mezzocannone 4, Naples, Italy

Dr. L.C.Cross, The Chemical Society, Burlington House, Piccadilly, London, W.1., England

Dr. R.B.Fox, Department of the Navy, U.S.Naval Research Laboratory, Washington, D.C. 20390

Prof. Teiji Tsuruta, Dep. of Synthetic Chemistry, Faculty of Engineering,
University of Tokyo, Bunkyo-Ku, Tokyo, Japan

Prof. G.J. Smets, Laboratoire de Chimie Macromoléculaire, Université de Louvain, 96, rue de Namur, Louvain, Belgium

Dr. C. Suhr, Badische Anilin and Soda Fabrik AG, Ludwigshafen am Rhein, Germany

Dr. Loening was asked by the Division Committee to consider attentively from the Unions point of view problems connected with unified documentation systems and with translations into a machine language. Several experts in this field have been invited to create a subcommittee:

Dr. H.K. Livingston, Chairman, of Subcommittee, Wayne State University, Detroit, Michigan 48202

Dr. J. Maynard, Elastomer Chemicals Department, Experimental Station, E.I. du Pont de Nemours and Co., Inc. Wilmington, Delaware 19898

Dr. R.E. Stobaugh, Department Head, Chemical Information Procedures, Chemical Abstracts Service, The Ohio State University, Columbus, Ohio 43210

Dr. D.C. Veal, ARIC, The Chemical Society Research Unit, The University, Nottingham, England, NG7 2RD

This group will be asked to propose a programme to the Division Committee.

ANALYTICAL CHEMISTRY DIVISIONReport of the Division President

Since the XXIVth Conference of IUPAC, held in Prague in 1967, six reports have been submitted to the Scientific Editor for publication in Pure and Applied Chemistry. Two further reports are in the final stages of processing by the Division.

The Division was represented at a meeting of a group from IUPAC, ILO, FAO and IAEA to discuss the influence of analytical chemistry on economic and social development and the possibilities of setting up an International Laboratory for Analytical Chemistry. A joint meeting of the officers of Commissions I.3 and V.5 has been held and Commissions V.3 and V.7 have met.

Commission V.1 has been reorganized to deal with the program, on behalf of CEE, on the production of standard methods of analysis for the control of the purity of food additives. The initial series of 12 methods have been put into a standard format and are being assessed by the Commission members. A second series of proposed methods for consideration is expected shortly.

Commission V.2, dealing with Microchemical Techniques and Trace Analysis, is studying five aspects of organic elemental analysis which are of special interest in microanalysis. These projects involve a considerable effort in organizing experimental work and in interpretation of data. Working parties have also been set up to study mass absorption coefficients for electron beam microanalysis and the purification of reagents used in micro and trace analysis.

The Nomenclature Commission, V.3, is finalizing its report on liquid-liquid distribution and is progressing with its work on the regularization of terminology associated with automatic analysis, contamination phenomena

in analytical precipitation and, in collaboration with Commission V.2, scales of working. Nomenclature connected with ion exchange and chromatography is being studied and an attempt is being made to produce terms that are common to these two types of separation process and to gas chromatography, for which IUPAC recommendations have already been made. The Commission is also compiling a list of trivial names of reagents, on behalf of the Interdivisional Committee on Nomenclature and Symbols, and is studying the need for further primary standards.

The Commission on Spectrochemical and Other Optical Procedures for Analysis, V.4, has revised its report on nomenclature, symbols and usage in spectrochemical analysis, dealing with atomic emission spectroscopy, and the report is now being finalized within the Division. The Commission is currently working on a second report where the terminology and symbols associated with flame atomic absorption and fluorescence, X-ray spectroscopy, excitation sources, and determination of detection limits.

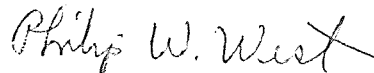
Commission V.5 on Electroanalytical Chemistry has a continuing project on the purity and purification of solvents and a further report is expected early next year. Tables of dissociation constants of acids in certain non-aqueous solvents are being compiled and a start has been made on a revision of tables of oxidation-reduction potentials. Studies on the purification, and determination of purity, of reagents used in polarography and stripping methods have been started. Work on the compilation of inorganic half-wave potentials is under way as is another program of collecting and evaluating data on voltammetry and related systems, excluding inorganic polarography.

Commission V.6 on Equilibrium Data has revised tables of stability constants and the new compilation should soon be available. Work on

distribution and heterogeneous equilibrium constants is proceeding; chelate extraction systems and various solvent systems are being studied. Critical surveys of stability constants of selected ligands and metal ions are being prepared, some of which are now being circulated within the Commission. A grant of \$4000 has been provided by the United States National Bureau of Standards to help in the compilation of distribution equilibrium standards. The support is for two years beginning in June 1968.

Commission V.7 on Analytical Radiochemistry and Nuclear Materials has prepared draft reports on: 1) Purity of labelled preparations, 2) Publicity for Radiochemical methods, 3) Intercomparison of some analytical methods for uranium, 4) Reference materials for activations analysis, and 5) Analysis of nuclear materials such as beryllium.

Respectfully submitted,



Philip W. West

October 17, 1968

IUPACDIVISION OF APPLIED CHEMISTRYSUMMARY REPORT ON SECTION AND COMMISSION ACTIVITIES

This report is essentially a brief appraisal of the activities of the various Sections and Commissions in the Division, carried out in the first instance by the President of the Division, and then discussed at some length at a recent meeting of the Officers and Elected Members of the Division.

The appraisal was made within the framework of the commonly accepted functions of IUPAC, viz. (1) to study topics of international importance in pure and applied chemistry which require regulation, standardization and codification and to seek international agreement on these matters, (2) to promote the study and application of chemistry internationally by bringing together chemists from various fields and from different countries, to facilitate exchange of information through symposia and conferences, (3) to co-operate with other international organizations which deal with topics involving chemistry, and (4) generally to contribute to the advancement of chemistry in its various aspects, including the training of chemists.

No attempt will be made in this report to deal with the details of the activities involved; this will be left to a succeeding report to the Council at the 1969 Conference.

SECTION VI.I - FOOD

This Section does not undertake any specific work outside the work of its two Commissions, other than co-ordination between its Commissions or with other Sections. All the members of the Section serve on one or other of its Commissions.

Commission on Trace Substances - VI.I.I.

This Commission operates under two Sub-Commissions, viz. (1) Mycotoxins and (2) Smoke Constituents. The first of these is engaged on a collaborative exercise in aflatoxin analysis and its statistical appraisal. The second is engaged essentially in the determination of benzo-pyrene in smoked foods.

Commission on Food Additives and Contaminants
VI.I.2.

This Commission is working on analytical methods and specifications for solvents used in food technology, and also on analytical methods for several food additives.

Appraisal of the Food Section

The programme of work being pursued is a good one, and is relatively long-term in view of the scope involved and the opportunities of collaborating with other International Agencies. I shall be asking for definite plans with regard to future endeavours after further detailed reports are received in the next several months.

SECTION VI.2 - FERMENTATION INDUSTRIES

This Section covers an important field in chemistry and has carried out valuable work in the past in analytical features and standards of quality. There seems to me some indication now that this Section has a program for the future which is too indefinite and lacking in substance. Discussions will be held with the Chairman of this Section with a view to emphasizing the importance of the production of chemicals other than ethyl alcohol by fermentation methods. This Section has no Commissions and it is possible that, if the above change in scope is accepted, some changes in the membership of the Section might be desirable.

The Quadrennial International Fermentation Symposia, which this Section arranges with other bodies, are very important and should be continued.

Appraisal of the Fermentation Section

The future program of work of this Section needs strengthening and greater broadness in scope and this will be discussed firmly with the Section.

SECTION VI.3 - OILS AND FATS

This Section is engaged in a series of studies of methods of analysis in oils and fats. There is some collaboration with the International Standards Organization.

Appraisal of the Oils and Fats Section

This Section is an active one, and deals with an important field in chemistry.

SECTION VI.4 - TOXICOLOGY AND INDUSTRIAL HYGIENE

This Section deals with a variety of analytical methods for a wide range of substances in environmental air and in the biological materials of subjects exposed to various toxins. There is a great deal of collaboration with a number of international agencies.

Appraisal of the Toxicology and Industrial Hygiene Section

This is a very active Section carrying out important work in a field of intense international interest.

SECTION VI.6 - PESTICIDES

The work of this Section is carried on through two Commissions, which deal respectively with the analysis and the chemistry of pesticide residues. Members of the Commissions are essentially the same as those of the Section.

This Section has made very good progress and is very active in a continually broadening long-range endeavour. Close contact is maintained with various international agencies, and good Symposia are arranged.

Elsewhere a recommendation is being made for the addition of two more titular members to these Commissions in view of the growing volume of work.

Appraisal of the Pesticides Section

This is a very active Section, forging ahead well in an important field.

SECTION VI.6 - ORGANIC COATINGS

This Section has been engaged in some analytical studies, chiefly in alkyd resins together with some studies in rheology hardness and adhesion.

It seems to me that the program of this Section has now become weaker, and some increased scope and breadth of programme is required to strengthen this Section to a desirable level.

The Section has just held a meeting (Sept. 30-Oct. 1) at which possible new activities were to be discussed among other topics, and at the time of writing I am awaiting the minutes of this meeting.

Appraisal of the Organic Coatings Section

I regard this Section as weak in programme at this stage, and would recommend that its continuance be probationary pending strengthening of the programme. If this does not come about, I shall recommend the dissolution of the Section.

SECTION VI.7 - PULP, PAPER & BOARD

The work of this Section in the past has included some activities in analysis and in nomenclature and definitions. It formerly had a Commission on Cellulose Analysis attached to it. Several very successful Symposia have been held over the past seven years.

At present however, there is very little in the way of a formal programme and discussion with the Chairman of the Section has not produced any hopeful results.

Appraisal of the Pulp, Paper and Board Section

This Section has not been able to formulate a programme of any consequence. I am entirely convinced that this is so not through any negligence or lack of devotion to their task of the Chairman or members of the Section, but rather because they have not been able to find suitable activities which are now not covered by other organizations.

My recommendation is that this Section be dissolved, until such time as might be considered opportune for its revival.

SECTION VI.8 - WATER, SEWAGE AND INDUSTRIAL WASTES

You will recall that a complete change in personnel of this Section was organized about a year ago. The new Section has become well organized and has formulated a good active programme of work in this important field. It is particularly interesting to note that each member has an individual specific assignment. They have already suggested an authoritative review on one topic, and a Symposium for 1970.

Appraisal of the Water, Sewage and
Industrial Wastes Section

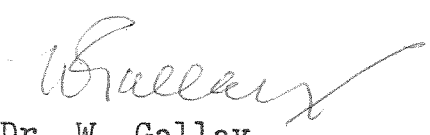
This Section has made a very good beginning and promises to be an active, valuable Section covering this important field.

COMMENTS

In summary, out of the eight Sections in the Applied Chemistry Division, I have reported very favorably on five, one should broaden its scope, one is weak and is regarded as on probation, and one is recommended for dissolution.

Two of the Sections have two Commissions each. The work of each is long term, and I have not attempted to define any length of tenure to complete their task.

Specific problems relating to Division and Section matters will be brought up elsewhere for consideration by the Bureau.


Dr. W. Gallay,
President.