

ORIGIN AND DEVELOPMENT OF THE INTERNATIONAL CONFEDERATION FOR THERMAL ANALYSIS (ICTA)

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The history of ICTA, from its conception at the First International Conference on Thermal Analysis in Aberdeen, Scotland, in 1965 through the subsequent eight Conferences to the 10th ICTA Congress in Hatfield, England, in 1992, is outlined. Brief biographies of Past-Presidents are appended.

The 10th ICTA Congress seems an appropriate time to clothe with some flesh the rather skeletal accounts of the history of the International Confederation for Thermal Analysis (ICTA) that have appeared elsewhere [1–4].

The First International Conference on Thermal Analysis

The reason for the First Conference being held in Aberdeen goes back to 1963. Early in that year, C. B. Murphy, internationally recognised for his encyclopedic knowledge of thermal analysis [5], suggested to me while on a visit to the USA that the time was ripe for an international conference on the subject. Later in that year, in Moscow, the same remark was made, independently, by L.G.(Leo) Berg, the author of two books on thermal analysis [6, 7] and the organizer of three conferences in the Soviet Union [8–10]. Such unanimity commanded respect, as did the comment that a series of conferences would ideally be required. My suggestion that Leo make the next Soviet Conference an international one was, as he explained, impossible under the conditions then prevailing. Shortly thereafter, at a thermal analysis seminar in the north of England, J. P. (John) Redfern, then at Battersea College of Technology, and I were asked by Gunnar Berggren of AB Atomenergi, Sweden, to help in the organization of such a conference in Sweden in 1965. His invitation was readily accepted and a subsequent canvass of opinion in over 30 countries revealed unanimous support: moreover, at least one person in

each country was willing to assist with publicity, etc. (Appendix I). Late in 1964, having heard *nothing* from Gunnar for some months, John and I realised he had encountered some unforeseen difficulties and decided to move the venue to Britain. We chose Aberdeen rather than London partly because it provided a more 'intimate' location and partly because of the excellent meeting facilities available at the recently built Natural Philosophy Building of the University – which was available for 6–9 September 1965.

At this point, John and I were fortunate that five prominent thermal analysts – R. Bárta (Czechoslovakia), L. G. Berg (USSR), L. Erdey (Hungary), C. B. Murphy (USA) and T. Sudo (Japan) – agreed to form, along with us, an Organizing Committee, even although all pre-conference work had to be by correspondence. Practical arrangements were made in Aberdeen, where B. D. (Bruce) Mitchell's help was invaluable, and other aspects, such as obtaining sponsorship, dealing with abstracts and Proceedings, etc., were taken care of in London. Macmillan agreed to publish the Proceedings by offset and to provide at least 300 copies at £1 10 s (\$ 4.50) each before the Conference. These did eventually arrive – but so late that much post-11th-hour work was involved in filling the briefcases! As for finance, my bank in Aberdeen, solely on verbal assurances, provided open-ended credit to us until Registration Fees came in: how one now misses personal contact with one's bank manager! In addition, Bruce and I, relying on the honesty of manufacturers, guaranteed a considerable sum to HM Customs and Excise on the basis that all imported instruments would be re-exported: needless to say, our trust was justified. We also became well-known to visa-issuing bodies by vouching for several eastern European scientists.

Some 2950 copies of the First Circular were distributed mainly through the 'liaison officers' in Appendix I. This gave the theme of the Conference as 'Thermal Techniques and their Applicability' and listed five sections: instrumentation; organic materials, including polymers (note the lowly position of polymers); inorganic materials and metallurgy; physical chemistry and quantitative studies; minerals, ceramics, glasses, etc. The last section was later divided into two – minerals and applied sciences. The official languages were English, French and German. About 650 copies of the Second Circular, which gave full details, were sent out to those who had replied to the First: much to our relief, Registration Fees then began to arrive. The Registration Fee (Table 1), which included the Proceedings but not the Dinner, seems ludicrously low today.

An informal 'Get-together' on the evening of 5 September was followed on the Monday morning by the Opening Ceremony in the Aberdeen Arts Centre. There, welcoming addresses were given by myself on behalf of the Organizing Committee, Lord Provost Norman Hogg on behalf of the City and Prof. R. V. Jones and Dr. R. L. Mitchell on behalf of the University and the Macaulay Institute, respectively. Thereafter, until the Thursday lunchtime, scientific sessions

Table 1 Some statistics relating to Conferences

Conference	Number of				Registration Fee (US\$)	Transmitted to ICTA (US\$)
	Participants*	Countries	Papers	Exhibitors		
First	294	29	130	18	15	940
Second	284	19	95	N/A	40	4380 [†]
Third	362	31	177	14	47	5920 [†]
Fourth	615	30	277	13	65	—
Fifth	199	20	133	16	105	3420 [†]
Sixth	324	32	150	14	200	3140
Seventh	280	32	225	15	275	~32000 [†]
Eighth	415	33	11	17	200	~1800 [†]
Ninth	180	23	130	12	190	3000
Tenth			Final figures not yet available	18	760 ^{††}	

N.B. Some figures are necessarily approximate but are of the right order.

* So far as possible, the number of participants excludes accompanying persons.

[†] Further income accrued from these Conferences because of royalties or sales of additional volumes of Proceedings.

^{††} Inclusive of accommodation, refreshments and meals.

proceeded, each paper being allocated 15 minutes and with two or three sessions running simultaneously. Each Section was introduced by a half-hour review lecture by the principal chairman: these, unfortunately, do not appear in the Proceedings [11]. As the lecture rooms were connected electrically and sonically, a novel light and sound system ensured synchronisation throughout. An Open Forum on the Thursday afternoon saw a spirited discussion of matters relating to standardization, nomenclature, national groups and international relationships.

The lavish evening Civic Reception, given by the Lord Provost and Corporation and attended by about 500, in the Beach Ballroom, where the Aberdeen Ladies Pipe Band were in fine form, seems still to remain in the memory of all present. Of the other social events, an excursion to the Braemar Highland Gathering, attended by the Royal Family, was oversubscribed and the attendance at meetings suffered! But an excursion that included a visit to a whisky distillery was disappointingly patronised! At the Conference Dinner, John proposed the toast to the participants and R. L. (Bob) Stone replied in his inimitable way.

Many long-lasting friendships were made during this Conference and the friendly atmosphere was added to by the fact that USSR delegates were able to visit private homes. Some statistics on this and later Conferences are given in Table 1.

Origin of the Confederation and the Second Conference

As the origin of the Confederation is inextricably connected with both the First and Second Conferences, these two events are best taken together.

At the first formal meeting of the Organizing Committee of the First Conference (Prof. Erdey, unfortunately, being absent) on 6 September, draft Statutes for a body termed the 'International Conference on Thermal Analysis' were considered in detail. These, which had been drawn up by John and myself and sent out in advance, envisaged a sequence of three-yearly Conferences in different countries, an Executive Committee for inter-Conference liaison and a membership of, initially, those at the First Conference. It was agreed that these Statutes, as modified, be sent to all participants for comment, reconsidered by the Executive Committee at the next Conference and the final version be submitted to the Business Meeting thereat for ratification. Nominations were also made for the Executive Committee and it was agreed to adopt the emblem developed for the First Conference [12] with '1st ICTA' replaced by 'ICTA'. Of the three invitations received for the Second Conference (from C. B. Murphy, P. D. Garn and H. G. McAdie), that from Dr. Murphy for Worcester, Mass., USA, was accepted and he was nominated Chairman of the Organizing Committee. All these recommendations were ratified at the Business Meeting on the Tuesday morning.

The newly elected Executive Committee (Appendix II) meeting on 9 September established, because of opinions expressed at the Open Forum, Sub-Committees to deal with Publications, Standardization and Nomenclature under the Chairmanships of J. P. Redfern, H. G. McAdie and R. C. Mackenzie in conjunction with the British Thermal Analysis Group*, respectively. It was also agreed that 'liaison officers' be encouraged to establish national societies, that D. J. Swaine examine the desirability of affiliation with other bodies and that C. J. Keattch and M. Landau be auditors of the accounts. It was confirmed, as mentioned at the Open Forum, that ICTA, as a body, should not be involved in publication of a thermal analysis journal.

As neither the President nor Secretary could attend the Executive Committee meeting on 18 August 1968, prior to the Second Conference in the USA, they requested the writer and E. L. Charsley, respectively, to deputise: Prof. Erdey also sent an apology. At this meeting the following decisions affecting the Confederation were taken: (a) individual membership be introduced; (b) because of this, 'Conference' in the title be altered to 'Confederation', thus maintaining the abbreviation 'ICTA'; (c) the Executive Committee become the 'Council' and Sub-Committees become 'Committees'; (d) the number of Members of Council be increased from 6 to 8; (e) a Vice-President, who would also be President Elect, be elected; (f) a Newsletter be issued to members at least three times a year as some tangible return for their subscriptions; (g) Statutes incorporating these changes be submitted to the Business Meeting for ratification. To anticipate somewhat, these Statutes were approved at the Business Meeting and the International Confederation for Thermal Analysis formally came into existence on 22 August 1968, with individual, institutional, company and patron memberships (at 11, 22, 44 and 220+ Swiss francs per annum, respectively). Seventy participants joined before the end of the Conference.

The Second Conference, billed on circulars as the 'Second Meeting of the International Conference on Thermal Analysis', took place at Holy Cross College, Worcester, Mass., USA, on 18–23 August 1968, the Organizing Committee comprising C. B. Murphy (Chairman), P. D. Garn, R. F. Schwenker, Jr., and L. C. Hoagland. The Sections were the same as at the First Conference, except that 'calorimetry' was added to Section 4. On registration, participants received a Workbook with one page summaries, the Proceedings (2 vols) [13] being sent out later. Although papers in French and German were acceptable for the Proceedings, only four so appeared.

* The Nomenclature Sub-Committee thus became a Sub-Committee of the Thermal Analysis Group and could, until the 10th ICTA Congress, use the secretarial facilities of the Group free of charge.

Registration and an informal evening social gathering on Sunday 18 August were followed by the Opening Ceremony on the Monday morning, when participants were welcomed by Dr. Murphy on behalf of the Organizing Committee, myself, deputising for Prof. Berg, on behalf of the Executive Committee, the Rev. Fr. S. J. Swords on behalf of Holy Cross College and Mr. J. Casdin, Mayor of Worcester, on behalf of the City. Thereafter, morning and evening scientific sessions (20 min per paper with two parallel sessions) proceeded throughout, except for the Thursday morning which was devoted to the Business Meeting and an Open Forum. Afternoons were left free for discussions, leisure pursuits, etc. All participants being housed in dormitories close to the meeting rooms, a most stimulating Conference resulted – indeed, at the Open Forum several commented that this was the ideal arrangement, although it has been adopted only at the 7th and 10th Conferences. Memorable from this Conference were the two stimulating but unscheduled discussions (on kinetics and on the glass transition) that took the places of missing papers: these led to a request at the Open Forum that panel discussions be considered for future Conferences.

A most disturbing event during the Conference was the Soviet invasion of Czechoslovakia, heard of over the radio at ca. 10.30 p.m. on 20 August. Prof. Bárta was informed immediately and took the news very calmly: he was invaluable in calming the understandably strong reactions of the younger Czechoslovaks present. The USSR delegation of ten were clearly surprised by the event and it was nice to see Prof. Bárta in a quiet and amicable discussion with Dr. E. I. Yarembash the following day. His quiet and gentlemanly behaviour ensured that there was no serious disruption. The International Geological Congress in Prague at the same time was not so fortunate.

The Conference Dinner on the Wednesday evening saw the presentation of the first Mettler Award (Table 2). This annual Award ‘for creative work in and distinguished services to’ thermal analysis was instituted by the Mettler Corporation at the instigation of Dr. Murphy and, although the first was presented at this Conference, it has since been administered by the North American Thermal Analysis Society (NATAS), which itself was founded at a meeting during this Conference.

In addition to the founding of the Confederation, other items agreed by the Executive Committee and ratified, though not without debate, at the Business Meeting included election to the new Council (Appendix II), acceptance of the reports of the Standardization and Nomenclature Committees (which had been particularly active in 1965–68 [14]), acceptance of Dr. Swaine’s report recommending that the Confederation should remain autonomous and acceptance of Switzerland (on the invitation of M. Müller-Vonmoos) as the venue for the next Conference. The new Council, meeting after the Conference, requested the President to examine the possibility of obtaining sponsorship for plenary lectures at future Conferences and to investigate further the possibility of affiliation with IUPAC.

Table 2 Awards presented at each Conference

Conference	Award	Recipient
Second	Mettler	R. C. Mackenzie (UK)
Third	Mettler	B. Wunderlich (USA)
Fourth	Mettler	J. Šesták (Czechoslovakia)
Fifth	Mettler	H. Kambe (Japan)
	DuPont-ICTA	P.D. Garn (USA)
Sixth*	Mettler	I. Lamprecht (FRG)
	DuPont-ICTA	G. Lombardi (Italy)
	Netzsch-GEFTA	H.R. Oswald (Switzerland)
Seventh	Mettler	J. Chiu (USA)
	DuPont-ICTA	P.K. Gallagher (USA)
	Netzsch-GEFTA	R. C. Mackenzie (UK)
	British TMG	T.J. Taylor (UK)
Eighth [†]	DuPont-ICTA	R. C. Mackenzie (UK)
	ICTA Young Scientist	D. Brandova (Czechoslovakia)
	Netzsch-GEFTA	E. Gmelin (FRG)
Ninth	DuPont-ICTA	D. Dollimore (USA)
	ICTA Young Scientist	J.S. Aronhime (Israel)
	Honorary Membership	R. C. Mackenzie (UK)
	British TMG	M. Reading (UK)
Tenth	TA Instruments-ICTA	J. Šesták (Czechoslovakia)
	ICTA Young Scientist	J. Malek (Czechoslovakia)
	Honorary Membership	C.B. Murphy (USA)
	Netzsch-GEFTA	W.D. Emmerich (FRG)
	British TMG	A.J. Ryan (UK)

* With the establishment of the DuPont-ICTA Award, NATAS decided that the Mettler Award should be presented at ICTA Congresses only when these were held in America. The Mettler Award presented at the Sixth Conference was additional to the normal Award for that year, which was presented to J. H. Flynn.

[†] At this Conference, Prof. V. B. Lazarev presented Kurnakov Medals, awarded by the Kurnakov Institute of General and Inorganic Chemistry of the USSR Academy of Sciences, to 16 scientists for their contributions to thermal analysis – see ICTA News, 18(2) (1985) 11.

Subsequent Conferences

The first two Conferences have been described in some detail, as they set the pattern followed at subsequent ones. Consequently, and to avoid laborious repetition, an integrated account of the later Conferences is presented.

The venues of these Conferences reveal the worldwide activity of the Confederation. The Third Conference was held in the then new Kongresshaus in Davos, Switzerland, on 23–28 August 1971, the Organizing Committee consisting of M. Müller-Vonmoos (Chairman), H. R. Oswald and H. G. Wiedemann. Secretarial facilities were provided by Mettler Instrumente AG. Of the invitations received for the Fourth Conference, only that from the Hungarian Chemical Society met Statutory requirements. This Conference was, therefore, held on 8–13 July 1974 in the Main Hall of the Hungarian Academy of Sciences (Opening Ceremony) and the Technical University of Budapest (scientific sessions). The Organizing Committee consisted of F. Paulik (Chairman), E. Buzágh, E. Zapp, G. Liptay and S. Gál. Both Germany and Japan tendered for the Fifth Conference and Council, mindful of their worldwide responsibility, accepted that from the Society of Calorimetry and Thermal Analysis of Japan. Consequently, this Conference took place in the magnificent International Conference Centre, Kyoto, on 1–6 August 1977. The Organizing Committee comprised S. Seki (Chairman), H. Kambe, R. Otsuka, H. Chihara and Y. Kondo. The first Award directly under the control of the Confederation – namely, the DuPont-ICTA Award – was presented for the first time at this Conference [15] (Table 2).

Of the two invitations to hand for the Sixth Conference (from Germany and Canada), that from the Gesellschaft für Thermische Analyse eV (GEFTA) was accepted and this Conference was held in the Stadthalle, Bayreuth, on 6–12 July 1980, the Organizing Committee being W. D. Emmerich (Chairman), H. J. Seifert (Vice-Chairman), H. R. Oswald, E. Marti, W. Hemminger and H. G. Wiedemann. During a discussion on the most appropriate inter-Conference period, Council agreed at Kyoto that the interval between the Sixth and Seventh Conferences be only two years and recommended Canada as the site for the Seventh Conference, a view supported by the Business Meeting and endorsed by the new Council at their inaugural meeting at the end of the Fifth Conference. Accordingly, under the sponsorship of the Chemical Institute of Canada and NATAS, the Seventh Conference was held at Queen's University, Kingston, Ontario, on 22–27 August 1982. The Organizing Committee comprised D. W. Brazier (Chairman), H. G. McAdie (Vice-Chairman), P. K. Gallagher (Chairman, Scientific Committee) and seven other scientists. At this Conference, the ICTA Banner was presented to the Confederation.

After presentation to Council of invitations for the Eighth Conference from Czechoslovakia, Israel and the UK, that from the Czechoslovak and Slovak

Academies of Sciences (through a letter from A. Blazej, Rector of the Technical University, Bratislava) was accepted provided assurances were received that (a) all intending participants would receive visas, (b) the invitation be confirmed directly by the Academies of Sciences and (c) a minimum of 3000 Swiss francs would be transmitted to ICTA, as required by Statute. These conditions having been met, the Eighth Conference convened in the 'Dom ROH', Bratislava, on 19–23 August 1985, under an Organizing Committee consisting of M. Hucl (Chairman), V. Balek (Vice-Chairman), O. Korab (Secretary), J. Šesták (Chairman, Scientific Committee) and six other scientists. The International Scientific Committee, chaired by Dr. Šesták, met during the Third European Symposium on Thermal Analysis and Calorimetry (ESTAC 3) at Interlaken, Switzerland, in 1984 to determine the programme. At this Conference the name was changed to 'ICTA Congress' to avoid ambiguity about the meaning of ICTA. Also, the first ICTA Young Scientist Award was presented [16] (Table 2).

Of the two requests to host the Ninth Congress (from Israel and the UK), that from the Israeli Group for Thermal Analysis was successful and the Congress was held in the Hyatt Regency Hotel, Jerusalem, on 21–25 August 1988. The Organizing Committee consisted of M. Steinberg (Chairman), S. Shoval (Secretary) and fifteen other scientists. At this Congress, Honorary Membership of ICTA was instituted [17]. Invitations for the Tenth Congress were presented to Council by China, India, the UK and the USA. That from the British Thermal Methods Group was accepted and the Congress took place at the University of Hertfordshire, Hatfield, on 24–28 August 1992, the Organizing Committee consisting of D. V. Nowell (Chairman), C. J. Keatch (Secretary), R. H. Still (Finance), R. S. Whitehouse (Chairman, Scientific Committee) and five other scientists.

Statistics (Table 1) clearly show that Congresses in central Europe attract the highest attendances. While the sizes of those at Budapest and Bratislava were undoubtedly contributed to by ease of access from eastern European countries, attendances at Davos and Bayreuth confirm the trend, probably caused by the propinquity of many countries. Awards presented at Congresses are listed in Table 2.

All the Congresses had essentially a common framework based on that of the first two. Thus, registration and an evening 'Mixer' on the Sunday were followed, on the Monday morning, by the Opening Ceremony, where participants were welcomed by the Chairman of the Organizing Committee, the President of ICTA and representatives of the host institution/area: the remarks of one ICTA President have come down to us [18]. Major Awards were also presented during the Opening Ceremony and sometimes, as at Budapest, a short musical recital was included. Thereafter, scientific sessions (usually parallel, with 20 min per paper) occupied the rest of the period, principal Award lectures being delivered immediately after the Opening Ceremony. Introduction of poster sessions at the Sixth

Conference in 1980 reduced the need for so many parallel sessions (five at some Conferences) and the Eighth and Tenth Congresses were all-poster, only Award and plenary lectures, together with rapporteurs' reports at the Eighth and selected papers at the Tenth, being presented orally. Sponsored plenary lectures were arranged for the Third and subsequent Conferences (except for the Fourth) and Workshops, or discussion groups on special topics, for the Eighth and all following, thus satisfying the request made at the Second Conference for more discussions. Reports on Workshops have appeared in the final volumes of the Proceedings of the Eighth and Ninth Congresses [19, 20]. These two Congresses were also sponsored by IUPAC, thus ensuring that all intending participants would receive visas: this, however, necessitated the plenary lectures being published in Pure and Applied Chemistry rather than in the Proceedings. Business Meetings were usually scheduled for Thursday afternoons. All Congresses included well-supported equipment exhibitions (Table 1).

The scientific content of each Congress can be assessed from the texts of papers that appear in the various Proceedings [13, 19–25], although those published before the Congress [19, 20, 23, 24] contain many papers that were never delivered. The Proceedings of the first seven Conferences were published in book form, but those of the Eighth and Ninth [19, 20] appeared as volumes of a journal. Perusal of these Proceedings reveals that sectionalisation of papers has differed little over the years, apart from the periodic addition of applications (such as biology, pharmaceuticals, hazards, superconductors, etc.) that have come into prominence. Not until 1980 did polymers warrant a section on their own. The large number of sections at the Ninth Congress represented essentially fine tuning.

Evening social events invariably included an orchestral concert or organ recital of high quality, the Conference Dinner (on any evening from Tuesday to Friday) and, usually, a national cultural occasion: indeed, at the Sixth Conference, a Bavarian Evening replaced the Dinner. Among the memorable cultural events, one of the most striking was undoubtedly the dragon dance at Kyoto. At the Fourth and later Conferences, either the afternoon or the whole of the Wednesday has been devoted to an excursion for all participants: excursions have also been available for accompanying persons and pre- and post-Conference tours could be joined.

The Registration Fee (Table 1) normally covered the Conference Workbook, the Proceedings, (but only 3 of the 4 volumes at the Ninth Congress), evening social events and refreshments during the day: the Conference Dinner was also included at the Third, Sixth and Seventh. The inclusive Fee for the Tenth Congress covered, in addition to the above, accommodation, lunch and evening meal.

Reports of the Fourth and subsequent Congresses have been published [26–31].

Extra-Conference Developments

The status of the Confederation and its international reputation, as well as its development, have been greatly enhanced by the activities of the specialist Committees (renamed Standing Committees in 1977) mentioned above. Reports of these will be found in the relevant Proceedings [13, 21–25] and need not be repeated here. Suffice it to say that the recommendations for reporting thermal analysis data, drawn up by the Standardization Committee in 1967–74 [32], were quickly appreciated internationally and were translated into many other languages [4]. Moreover, the testing scheme devised by that Committee for selecting materials for the temperature calibration of DTA instruments was sufficiently strict to be accepted by the US National Bureau of Standards (now the US National Institute of Standards and Technology) and in 1971 the materials were (and still are) marketed by the NBS under an NBS-ICTA (now NIST-ICTA) label – as are reference materials for other techniques developed later [4]. The comprehensive nomenclature system, covering techniques, apparatus, curves and symbols, developed by the Nomenclature Committee over 1969–81 [33] was also of a sufficiently high standard to be issued later as IUPAC recommendations [34]. The Publications Committee was responsible in 1972 for instituting Thermal Analysis Abstracts (from 1989, Thermal Analysis Reviews and Abstracts) [4]. Although, apart from ICTA News, the only official ICTA periodical, it ceased publication in 1991 because of lack of support. This Committee also liaised with Organizing Committees on the publication of Proceedings and supervised the ICTA Newsletter (from 1983, ICTA News) as well as compiling a bibliography of thermoanalytical books for 1937–1979 [2]. It was disbanded by Council in 1985 but was reinstated in 1992.

Ad hoc Committees of Council also had a considerable bearing on the development of the Confederation. For example, in 1971, a Plenary Lectures Committee (C. B. Murphy, Chairman), with the remit of arranging for plenary lectures at future Conferences, and a Committee on the Affiliation of National Groups (O. T. Sørensen, Chairman) were constituted. The former, as the Awards Committee, became a Standing Committee in 1977 and the latter was disbanded on the same date, its recommendations having been accepted in 1974. The Awards Committee was responsible for instituting and administering the DuPont-ICTA (now TA Instruments-ICTA), Young Scientist and Honorary Membership Awards. Many other *ad hoc* Committees have been appointed and, having performed their tasks, disbanded over the years.

In 1985, Council reviewed Committee organization and formed a Scientific Committee (renamed Scientific Commission in 1988) to comprise existing Standing Committees (Standardization, Nomenclature, Awards and Organizing) as well as new Subject Committees. Committees on Calorimetry (G. Della Gatta, Chair-

man), Kinetics (J. H. Flynn) and Education (E. A. Turi) were formed in 1985, one on Geosciences (W. Smykatz-Kloss) was approved in 1988 and formally established in 1990 [35], and others on polymers, materials science, etc., are under consideration. The terms of reference of Committees existing in 1991 have been published [4]. Whereas, before 1985, all Committee Chairmen were, *ex officio*, members of Council, only the Chairman of the Scientific Commission now is (Appendix II).

The even tenor of Council changes was upset in 1971 when Prof. Bárta, President-Elect (Appendix II), informed Council he would be unable to assume the Presidency because of his inability to travel abroad. It was therefore agreed that Prof. Bárta be Honorary President for 1971–74 and that H. R. Oswald be President. A major reorganization of Council occurred in 1977, subsequent to the introduction of Affiliated Societies in 1974, when each such Society was given the right to designate one member (but not more than one for any one country) of Council. Four Councillors-at-Large cover areas where there is no Affiliated Society. These and other changes in constitution, procedure and terminology necessitated changes in the Statutes in 1974, 1977, 1980, 1985 and 1988 – yet the present Statutes still bear a resemblance to those approved in 1968.

Two matters much discussed by Council over many years were the interval between Conferences and relationships with regional bodies, such as ESTAC. These issues are closely interrelated, because any clash in meeting dates would be more than unfortunate. Early Conferences (the First to the Sixth) were separated by three years, but a two-year interval was tried experimentally between the Sixth and Seventh. The interval reverted to three years for the Seventh and Eighth Congresses but a four-year interval was adopted in 1988 and the Tenth Congress was held in 1992. This will continue into the future, as it permits regional bodies to meet in the centre of the inter-Congress period. Relationships between ICTA and ESTAC are now such that Council envisages meeting at each ESTAC, thus reducing the amount of business to be attended to at each meeting. Only once has an Extraordinary Meeting of Council had to be called. That was in 1987, when the Treasurer was 'considered to have failed to have carried out his duties effectively' (Appendix IV to Council Minutes 22 of 19–21 August 1988) and his appointment was 'terminated from 1.9.87'. An acting Treasurer was appointed until the Ninth Congress.

Although the Statutes state that 'all service as Officers or Members of Council or Committee . . . shall be entirely voluntary' (Para. 22 of 1988 Statutes), Council were well aware that inability of one of the Officers to attend an important Council meeting because of lack of travel finance might have unfortunate consequences. In 1980, a small Officers' Travel Fund was therefore set up, strictly governed by regulations and under Trustees appointed by Council, to assist with

partial financing of travel to a Council meeting should the Officer be unable to find any other support.

Annual subscriptions to ICTA have remained remarkably stable over the years. Thus, the individual subscription of 11 Swiss francs (sFr.) in 1968 was reduced to sFr. 10 in 1974 for members of Affiliated Societies and increased to sFr. 15 for non-members. Concessionary rates for Conference Fees were also introduced. Not until 1988 did individual subscriptions increase to sFr. 15 for members of Affiliated Societies and sFr. 20 for non-members. In US dollars, the increase over 20 years was thus only about fourfold – from \$ 2.50 in 1968 to \$ 10.50 in 1988 – surely modest in view of inflation. Affiliation Fees have increased by only 10%. Although Council in 1985 decreed that, in future, membership subscriptions for the period to the next Congress be included in the Registration Fee (thus making all participants members until the next Congress), this proved impracticable at both the Ninth and Tenth Congresses because of difficulties with taxation, etc. Whether this scheme is workable, therefore, remains to be seen. It is interesting that GEFTA, on becoming an Affiliated Society in 1974, included ICTA membership in its own subscription, thus making all GEFTA members automatically members of ICTA. This practice recently ceased because of difficulties over the three- or four-year period.

Contacts with IUPAC have already been mentioned in connection with the Second Conference. Discussions on the same subject took place at later Council meetings and, in 1974, it was recommended that the new Council arrange Affiliation (Council Minute 7 of 8–11 July 1974), subject to certain conditions. These conditions having been met, the President informed Council in 1977 that 'ICTA had been accepted as an Affiliated Organization of IUPAC at their Madrid Meeting in 1975' (Council Minute 8* of 31 July–2 August 1977). Subsequently, Councillors have, from time to time, been nominated to represent ICTA at IUPAC meetings. As already noted, this Affiliation was of value in connection with both the Eighth and Ninth Congresses.

Brief biographies of all Past-Presidents are given in Appendix III.

Conclusion

This necessarily brief account may help the reader to envisage how ICTA has grown and developed. Admittedly, certain aspects have been only sketchily dealt

* There is a some confusion in the numbering of Minutes around this time, there being Minutes numbered 8 and 9 for both the Budapest and Kyoto meetings.

with and deserve more detailed description. This particularly applies to the various Committees, each of which warrants an article on its own: perhaps present or ex-Chairmen will oblige? In a way, the Tenth Congress represents the end of an era, in that the Confederation has now added Calorimetry to its title to become ICTAC. Perhaps, therefore, we may expect as much progress over the next quarter of a century as we have seen in the past.

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The author wishes to thank Council for permitting him access to Council Minutes and various friends and colleagues, both on and off Council, for refreshing his memory on relevant matters.

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Zusammenfassung — Diese Arbeit enthält einen Überblick über die Geschichte der ICTA, beginnend mit den Anfängen auf der Ersten Internationalen Konferenz für Thermoanalyse in Aberdeen, Schottland im Jahre 1965 über die acht vorangehenden Konferenzen bis hin zum 10 ICTA-Kongreß in Hatfield, England im Jahre 1992. Es wurden Kurzbiographien der früheren Präsidenten beigefügt.

APPENDIX I. 'LIAISON OFFICERS' FOR THE FIRST CONFERENCE

In view of the services provided by these contacts in various countries in publicising the First Conference and in other ways, it is fitting that their names be recorded, as ICTA sprang from their labours.

Country	Liaison Officer	Country	Liaison Officer
Australia	D. J. Swaine	Japan	T. Sudo
Austria	J. Schedling	Netherlands	H. W. van der Marel
Belgium	W. Dekeyser	New Zealand	M. Fieldes
Bulgaria	A. I. Bekhar	Pakistan	M. Safdar
	I. Kostov		
Canada	T. R. Ingraham	Poland	A. Langier-Kuzniarowa
Czechoslovakia	R. Bárta	Portugal	J. Coteló Neiva
Egypt	H. Hamdi	Romania	G. Gata
Finland	U. Soveri	South Africa	T. L. Webb
France	S. Caillère	S. & C. America	A. Bhaskara Rao
	C. Duval		
GDR	J. Wiegmann	Scandinavia	G. Berggren
FRG	H. Lehmann	Spain	J. L. Martin Vivaldi
Hungary	L. Erdey	Switzerland	T. Peters
India	S. K. Bhattacharyya	Turkey	A. Irmak
Ireland	T. Walsh	U.S.A.	C. B. Murphy
Israel	L. Heller	USSR	L. G. Berg
Italy	P. Gallitelli	West Indies	W. G. Bartley
		Yugoslavia	M. Karsulin

APPENDIX II. COMPOSITION OF COUNCIL

	1965-1968	1968-1971	1971-1974
<i>Honorary President</i>	-	-	R. Barta (Czech.)
<i>President</i>	L. G. Berg (USSR)	C. B. Murphy (USA)	H. R. Oswald (Switz.)
<i>Vice-President</i>	-	R. Barta (Czech.)	H. Kambe (Japan)
<i>Secretary</i>	J. P. Redfern (UK)	J. A. Hill (USA)	G. Lombardi (Italy)
<i>Treasurer</i>	R. C. Mackenzie (UK)	R. C. Mackenzie (UK)	R. C. Mackenzie (UK)
<i>Membership Secretary</i>	-	-	-
<i>Past-President</i>	-	L. G. Berg (USSR)	C. B. Murphy (USA)
<i>Councillors</i>	R. Barta (Czech.)	S. K. Bhattacharyya (India)	P. K. Gallagher (USA)
	S. K. Bhattacharyya (India)	C. Duval (France)	M. Harmelin (France)
	C. Duval (France)	H. Kambe (Japan)	M. D. Karkhanavala (India)
	L. Erdey (Hungary)	G. Krien (FRG)	G. Krien (FRG)
	T. Sudo (Japan)	G. Lombardi (Italy)	O. T. Sprensen (Denmark)
	D. J. Swaine (Australia)	D. J. Swaine (Australia)	S. St. J. Warne (Australia)
		T. L. Webb (South Africa)	T. L. Webb (South Africa)
	E. I. Yarembash (USSR)		

CHAIRMEN OF COMMITTEES

<i>Standardization</i>	H. G. McAdie (Canada)	H. G. McAdie (Canada)	H. G. McAdie (Canada)
<i>Nomenclature</i>	R. C. Mackenzie (UK)	R. C. Mackenzie (UK)	R. C. Mackenzie (UK)
<i>Publications</i>	J. P. Redfern (UK)	J. P. Redfern (UK)	J. P. Redfern (UK)
<i>Organizing</i>	C. B. Murphy (USA)	M. Müller-Vonmoos (Switz.)	F. Paulik (Hungary)
<i>Awards</i>	-	-	-

APPENDIX II. COMPOSITION OF COUNCIL (Continued)

	1974-1977	Affiliated Society	1977-1980	1980-1982
<i>Honorary President</i>	-		-	-
<i>President</i>	H. Kambe (Japan)		H. G. McAdie (Canada)	G. Lombardi (Italy)
<i>Vice-President</i>	H. G. McAdie (Canada)		G. Lombardi (Italy)	P. K. Gallagher (USA)
<i>Secretary</i>	G. Lombardi (Italy)		O. T. Sørensen (Denmark)	O. T. Sørensen (Denmark)
<i>Treasurer</i>	R. C. Mackenzie (UK)		R. C. Mackenzie (UK)	R. H. Still (UK)
<i>Membership Secretary</i>	-		-	-
<i>Past-President</i>	H. R. Oswald (Switz.)		H. Kambe (Japan)	H. G. McAdie
<i>Councillors</i>	P. K. Gallagher (USA)	ATAS	S. St. J. Warne	S. St. J. Warne
	M. Harmelin (France)	AFCAT/GTE	P. C. Gravelle	P. C. Gravelle
	M. D. Karkhanavala (India)	GEFTA	H. J. Seifert	H. J. Seifert
	V. B. Lazarev (USSR)	ITAS	A. K. Sundaram	A. K. Sundaram
	H. Lehmann (FRG)	AICAT	G. Della Gatta	G. Della Gatta
	F. Paulik (Hungary)	SCTA	R. Otsuka	Y. Saito
	O. T. Sørensen (Denmark)	TAWN	J. J. G. M. van Bokhoven	T. Pijpers
	S. St. J. Warne (Australia)	NATAS	J. Chiu	R. B. Prime
		NOSTA	J. L. Holm	J. L. Holm
		TMG	C. J. Keattch	C. J. Keattch
		SUNCTA	V. B. Lazarev	V. B. Lazarev
		IGTA		S. Yariv
		SGTK		E. Marti
		SATAS		
		CWGTA		
		HUNGTA		
		SECAT		
			COUNCILLORS-AT-LARGE	
			D. T. Y. Chen (Hong Kong)	D. T. Y. Chen (Hong Kong)
			J. E. Krüger (S. Africa)	K. Heide (GDR)
			F. Paulik (Hungary)	F. Paulik (Hungary)
			J. Šesták (Czech.)	J. Šesták (Czech.)
			CHAIRMEN OF COMMITTEES	
<i>Standardization</i>	P. D. Garn (USA)		P. D. Garn (USA)	P. D. Garn (USA)
<i>Nomenclature</i>	R. C. Mackenzie (UK)		R. C. Mackenzie (UK)	R. C. Mackenzie (UK)
<i>Publications</i>	J. P. Redfern (UK)		J. P. Redfern (UK)	J. P. Redfern (UK)
<i>Organizing</i>	S. Seki (Japan)		V. D. Emmerich (FRG)	D. W. Brazier (Canada)
<i>Awards</i>	C. B. Murphy (USA)		C. B. Murphy (USA)	C. B. Murphy (USA)

APPENDIX II. COMPOSITION OF COUNCIL (Continued)

Affiliated Society	1982-1985	1985-1988	1988-1993
<i>Honorary President</i>	-	-	-
<i>President</i>	P. K. Gallagher (USA)	H. J. Seifert (FRG)	S. St. J. Warne (Australia)
<i>Vice-President</i>	H. J. Seifert (FRG)	S. St. J. Warne (Austral.)	T. Ozawa (Japan)
<i>Secretary</i>	S. Yariv (Israel)	S. Yariv (Israel)	S. Yariv (Israel)
<i>Treasurer</i>	J. S. Crighton (UK)	J. S. Crighton (UK)/P. K. Gallagher	P. K. Gallagher (USA)
<i>Membership Secretary</i>	-	H. G. McAdie (Canada)	H. G. McAdie (Canada)
<i>Past-President</i>	G. Lombardi (Italy)	P. K. Gallagher (USA)	H. J. Seifert (FRG)
<i>Councillors</i>			
ATAS	J. O. Hill	J. O. Hill	J. G. Dunn
AFCAT/GTE	H. Tachoire	P. C. Gravelle	J. P. E. Grolier
GEFTA	W. Eysel	W. Eysel	W. Smykatz-Kloss
ITAS	A. K. Sundaram	V. N. Krishnamurthy	V. N. Krishnamurthy
AICAT	G. Della Gatta	R. Riccardi	R. Riccardi
SCTA	Y. Saito	T. Ozawa	M. Todoki
TAWN	T. Pijpers	G. Hakvoort	G. Hakvoort
NATAS	J. H. Flynn	J. H. Flynn	J. P. Elder/A. R. McGhie
NOSTA	T. Wadsten	T. Wadsten	M. Leskela
TMG	E. L. Charsley	E. L. Charsley	F. W. Wilburn
SUNCTA	V. B. Lazarev	V. V. Boldyrev	V. V. Boldyrev
IGTA	M. Steinberg	Y. Kirsh	Y. Kirsh
SGTK	E. E. Marti	M. Müller-Vonmoos	M. Müller-Vonmoos
SATAS	M. E. Brown	M. E. Brown	P. A. B. Carstens
CWGTA		V. Balek	V. Balek
HUNGTAG		F. Paulik	F. Paulik/J. Simon
SECAT			J. M. Criado
COUNCILLORS-AT-LARGE			
	Hu Ri-heng (China)	Hu Ri-heng (China)	A. Langier-Kuzniarowa (Poland)
	K. Heide (GDR)	W. Ludwig (GDR)	C. A. Martin (Argentina)
	F. Paulik (Hungary)	A. Langier-Kuzniarowa (Poland)	W. Ludwig (GDR)/E. Segal (Rom.)
	V. Balek (Czech.)	C. A. Martin (Argentina)	Qi Mingbi (China)
CHAIRMEN OF COMMITTEES		CHAIRMAN, SCIENTIFIC COMMISSION	
<i>Standardization</i>	P. D. Garn (USA)	J. Rouquerol (France)	J. Rouquerol (France)
<i>Nomenclature</i>	J. H. Sharp (UK)		
<i>Publications</i>	J. J. Maurer (USA)		
<i>Organizing</i>	M. Hucl (Czech.)		
<i>Awards</i>	S. St. J. Warne (Austral.)		

APPENDIX III. BRIEF BIOGRAPHIES OF PAST-PRESIDENTS

The notes below are necessarily very sketchy: where further information is available, references are given.



Lev Germanovich (Leo) Berg, son of the Professor of German at Kazan University, Russia, was born there in 1896 and, after graduating at Kazan Veterinary Institute, proceeded to study the oxyacids of chlorine at Kazan University. In 1930, at the invitation of N. S. Kurnakov, he moved to Leningrad, accompanying Kurnakov and his school to Moscow in 1934. There, he was awarded the degree of Candidate in 1942, that of Doctor of Chemical Sciences in 1943 and that of Professor in 1947. Returning to the Arbuzov Chemical Institute in Kazan in 1950, he was appointed to the Chair of Inorganic Chemistry in Kazan University in the mid 1960s, a post he held until his death on 30 March 1974. His main interests were the theory and instrumentation of DTA and its application in phase analysis, particular-

ly in relation to the salt minerals. He and his research students also constructed an accurate EG instrument in the early 1950s. Inspired by Kurnakov, he aimed to make Kazan a USSR centre for thermal analysis and organized several 'All-Union' Conferences on the subject. He published over 200 papers and books, but his only visit outside the Soviet Bloc was to 1st ICTA in 1965. Beside science, he found relaxation in music. His honours included the Kucherov Prize of the Russian Physics Society for his early work and the Lenin Prize in 1953.

(See *Thermochim. Acta*, 11 (1975) 1)



Cornelius Bernard (Connie) Murphy was born, of Irish stock, on 10 December 1918 and, after graduating B. S. and M. S. in Chemistry at Holy Cross College, Worcester, Mass., USA, in 1941 and 1942, respectively, he saw service with the US Naval Reserve in the Pacific Theatre of War from 1942 to 1945. Returning to Holy Cross College as Assistant Professor (1945-1952), he graduated Ph. D. from Clark University, Worcester, in 1952. After a period at the Stanford, Connecticut, Research Laboratories of American Cyanamid (1953-1955), he moved to the General Engineering Laboratory of General Electric at Schenectady, New York, where he managed an analytical group, and, finally, in 1965, to the Xerox Corporation in Webster, New York, where he not only managed an analytical group but also had responsibilities relating

to colour copying and to magnetic copying research. Due to retire in 1985, he took early retirement in 1982. His name will always be associated with the monumental biennial reviews of thermal analysis that appeared in *Analytical Chemistry* from 1958, which greatly stimulated interest in the techniques, and his services to ICTA, for which he instituted both the Mettler and the DuPont-ICTA Awards.

Scientifically, he was one of the pioneers in demonstrating the applicability of thermal analysis to polymers – now probably its main application. His honours include the Kurnakov Medal of the USSR (1985) and the Outstanding Service Award of NATAS (1988).

(See *Honorary Member Citation, ICTAC News, 25 (2) (1992) in press*)



Rudolf Bárta, the son of a cement and lime manufacturer, was born in Prague, Bohemia, on 30 January 1897. After two years at Prague Technical University, he moved to Brno Technical University, where he graduated M. Eng. in 1918 and Ph. D. in 1919. From 1919 to 1938 he held numerous industrial posts, eventually becoming Director of a large concern. He also, however, retained his academic interests, being appointed Assistant Professor of Glass and Ceramic Engineering at Prague Technical University in 1930 and Professor in 1938. During this period, he was also very active on various Committees connected with his industrial and scientific interests. In 1941, he was interned in a Concentration Camp, an experience from which his health suffered. On release after the War, he was appointed Professor at the Institute of Chemical Engineering,

Prague, where he built up a renowned thermal analysis school, the effects of which are still apparent in Czech and Slovakia. Although he retired in 1958, he maintained his scientific activities until 1974, when ill-health forced a halt. He died on 1 March 1985. In addition to all his other activities, he also established two scientific journals – *Stavivo* in 1920 and *Silikaty* in 1957. His honours included Honorary Membership of the American Ceramic Society.

(See *ICTA Newsletter, 6(1) (1973) 2; ICTA News, 18(2) (1985) 8*)



Hans Rudolf Oswald, the son of Swiss parents, was born in Amsterdam, Netherlands, on 30 November 1930. Having obtained his Diploma in Chemistry (1956) and his Ph. D. (1960) at the University of Berne, Switzerland, he was appointed by W. Feitknecht to head a small research group studying the application of X-ray crystallography and electron microscopy in inorganic chemistry: Feitknecht also brought thermoanalytical techniques to his attention. In 1961–1962, he worked on electron microscopy at the Cavendish Laboratory, Cambridge, England, on a post-doctoral Fellowship. Returning to Berne, he became Privatdozent in 1965 and, in 1966, moved to Zürich, where he was appointed full Professor and Director of the Institute of Inorganic Chemistry at the University.

This post he still holds. In Zürich, he has established an internationally recognized centre for solid-state chemistry and the reactivity of solids, where thermoanalytical techniques are used discerningly. His hobbies include the cultivation of orchids and philately. His honours include the Netzsch-GEFTA Award (1980) and the Kurnakov Medal of the USSR (1985).

(See *ICTA Newsletter, 6(1) (1973) 2; Solid State Ionics, 43 (1990) vii*)



Hirotaro Kambe, who was born in Tokyo, Japan, on 13 May 1920, studied Chemistry at the University of Tokyo, from which he graduated B. Sc. in 1943 and D. Sc. in 1962. Returning as a post-graduate student after two year's service as a Naval Technical Officer, he was appointed Research Associate in 1946, Instructor in 1952, Associate Professor in 1956 and full Professor in 1962, all in the Materials Division of the Institute of Science and Technology (renamed the Institute of Space and Aeronautical Science in 1964) of the University of Tokyo. He retired from that post in 1981 as Emeritus Professor and moved to Gunma University, from which he finally retired in 1986. Although his early studies were on metallic soaps (which gave him a lifelong interest in rheology), most of his

work was on polymers, particularly on their thermal stability and the properties of interest in space and aeronautical applications. He served on many Committees and published more than 200 papers and books, a large proportion of which related to thermoanalytical investigations. He is also the author of a Japanese text-book on thermal analysis, which is now in its second edition. His hobbies are photography and travel – indeed, while President of ICTA, he succeeded in visiting all Councillors in their own countries. His honours include the Mettler Award (1977).

(See *ICTA Newsletter*, 7(1) (1974) 2)



Henry George (Harry) McAdie was born in Montreal, Quebec, Canada, on 12 May 1930 and graduated B. Sc. in Chemistry from McGill University, Montreal, in 1951. Moving to Queen's University, Kingston, Ontario, he graduated M. A. and Ph. D. in Physical Chemistry in 1953 and 1956, respectively. From 1956 to 1984 he worked, in various capacities, at the Ontario Research Foundation, Mississauga, Ontario, becoming Assistant Director and Acting Director of the Department of Physical Chemistry in 1970–1972, Director of the Department of Environmental Chemistry in 1973, Associate Director of the Division of Environmental and Chemical Engineering in 1983 and Director of Educational and Professional Programs in 1984. In the same year he left the Foundation to set up a Consultancy Service dealing with environmental and chemical

topics. His attendance at a thermal analysis workshop in 1963 raised his interest in standardization in the field and led, essentially, to his appointment as Chairman of the ICTA Standardization Committee from 1965 to 1974. He first applied the techniques to clathrates and coordination compounds and subsequently to many other materials and systems – particularly as TG/DTA. He organized three Toronto Symposia on Thermal Analysis in 1965–1969 and was instrumental in founding NATAS in 1968. Outside science he is interested in choral music. His honours include the Queen's Silver Jubilee Medal (1977), the J. Charles Honey Award of the Chemical Institute of Canada (1978), the Kurnakov Medal of the USSR (1985) and the Outstanding Service Award of NATAS (1986).

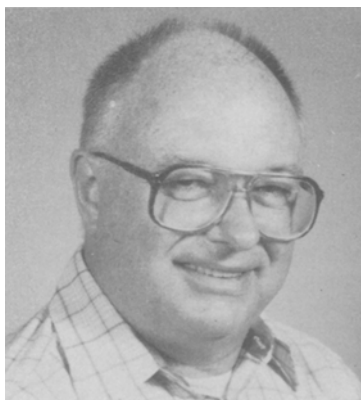
(See *ICTA Newsletter*, 7(2) (1974) 2)



Gianni Lombardi was born in Rome, Italy, in 1939. After graduating from the University of Rome in Geological Sciences in 1962, he joined the Consiglio Nazionale delle Ricerche (CNR) but, in 1964, he returned to the University of Rome, first as Assistant Professor (1964–1971), then as Associate Professor and, in 1981, as full Professor of Sedimentary Petrology in the Department of Earth Sciences. He has also studied in several scientific institutions outside Italy and in 1980–1981, as Visiting Professor, he gave a course on igneous petrology at Indiana University, USA. His scientific work has been mainly on the alteration products of magmatic rocks and on the thermal analysis of clays and minerals generally, on which he has published over 65 papers. He is also interested in

the deterioration of pyroclastic rocks used as monuments and in forensic geology. Although he resigned from ICTA in 1985 because of the impossibility of continuing active research in thermal analysis, he will always be remembered for the zest with which he tackled all his commitments and for the institution of 'For Better Thermal Analysis', of which he compiled two editions. Outside science, he has wide interests ranging from classical music and opera to sailing and even farming. His honours include the DuPont-ICTA Award (1980) and the Kurnakov Medal of the USSR (1985).

(See *ICTA Newsletter*, 7(2) (1974) 2)



Patrick Kent Gallagher was born in Waukegan, Illinois, USA, on 12 March 1931. After graduating B. S. in Chemistry (1951) and M. S. in Inorganic Chemistry (1954) from the University of Wisconsin, he was on active duty with the US Marine Corps in 1954–1957, gaining the rank of First Lieutenant and finally Captain while on reserve duty in 1957–1959. On obtaining his Ph. D. degree from the University of Wisconsin in 1959, he joined the Technical Staff of Bell Laboratories, Murray Hill, New Jersey, where he remained until 1989. In that year, he was appointed to the newly established Dow Professorship of Materials Chemistry and Engineering at Ohio State University, Columbus, Ohio, a post he still holds. His main scientific interests have been in the field of materials science, where he has applied thermoanalytical techniques extensively, particularly to materials likely to be of value in electronic engineering. Author of over 220 papers, he has also been Principal Editor of the *Journal of Materials Research* since 1990. He has served on many Committees concerned with chemistry, ceramics and materials generally. Apart from the Presidency, he has served ICTA in several capacities, being at present Treasurer. His honours include the Mettler Award (1976), the DuPont-ICTA Award (1982), the Outstanding Service Award of NATAS (1985) and the Kurnakov Medal of the USSR (1985).

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Hans-Joachim Seifert, the eldest son of a weaver, was born in Guben, Germany, on 9 November 1930. Although his schooling was interrupted by the War, he gained his Diploma in Chemistry at the Justus-Liebig University, Giessen, in 1955, his Dr.rer.nat. in 1957 and his Dr.rer.nat.habil. in 1963. Because of the illness of his supervisor (P. Ehrlich), he had much teaching responsibility at this time. In 1963, he was appointed Lecturer and, in 1969, Associate Professor of Inorganic Chemistry at Giessen, becoming full Professor in 1970 and Head of the Chemistry Department in 1972. In 1973, he moved to the University of Kassel as Professor of Inorganic Chemistry, a post he still holds. Virtually all his work has been in the field of halide chemistry, where he has extensively used thermoanalytical, calorimetric and electrochemical methods in phase studies and to determine thermodynamic functions. He has also developed specialized equipment and techniques and has published about 100 papers. Because of a recent heart-bypass operation, he was unable to attend the Ninth ICTA Congress in Jerusalem, where his place was taken by the Vice-President. His honours include the Kurnakov Medal of the USSR (1985) and the Netzsch-GEFTA Award (1987).

(See *ICTA News*, 20(2) (1987) 29)



Slade St. John Warne was born in Perth, Western Australia, in 1931 and graduated B. Sc. in Geology from the University of Western Australia in 1954. After experience as a Petroleum Geologist and as a Coal Petrologist with CSIRO, he held a Senior Research Fellowship of the Joint Coal Board at the Department of Geology of the University of New South Wales, from which he obtained his Ph. D. degree in 1963. In the same year, he joined the academic staff of the University of Newcastle, NSW, becoming Professor of Geology in 1973 and Professorial Fellow in Geology in 1989. He has also worked and held Visiting Professorships in institutions in Brazil, Canada, Czechoslovakia, the UK and the USA. His studies have been mainly concerned with carbonate rocks and with the inorganic constituents of solid hydrocarbon fossil fuels, fields where atmosphere control in thermal analysis is particularly important; currently, he is involved with environmental aspects of waste products. He has published over 110 papers and articles and was, with W. Smykatz-Kloss, joint editor of 'Thermal Analysis in the Geosciences', the volume that resulted from the first meeting of the Geosciences Committee of ICTA. His honours include the Kurnakov Medal of the USSR (1985).

(See *ICTA News*, 20(2) (1987) 29)