try at the Chinese University of Hong Kong in 1996.

He holds part-time professorships at universities in several Chinese cities including Beijing, Nanjing and Fudan and is on the Editorial Boards of several journals including *Spectrochimica Acta* and *Chem. Phys. Letters*.

Prof. Cunhao Zhang is an Associate Editor of *Science (China)*, *Chinese J. Chem. Physics* and *J. Molecular Science (China)* and before 1994, a Standing Council Member of the Chinese Chemical Society. He is also a Member of the Optical Society of America and an Associate Member of the IUPAC Commission on Molecular Structure and Spectroscopy. He was elected Vice-President of the China Association for Science and Technology in 1991 and again in 1996.

---


Mo Williams
Executive Secretary

As a non-General Assembly year, the business of the Union in 1996 was conducted through meetings of the Executive Committee (Oxford, April) and the Bureau (Oxford, September). The membership remained unchanged at 41 NACOs.

Consideration of the future scientific policy of the Union continued through a regional ‘brainstorming’ session in the USA (Belmont, June). Some 12 academic and industrial chemistry leaders from North America participated in an attempt to develop suitable long-term plans. Follow-up sessions are planned for 1997 in Europe (London, February) and in Asia (Singapore, June).

A meeting of the IUPAC Officers with Division Presidents and Vice-Presidents (Frankfurt, March), to consider the recommendations arising from the ‘brainstorming’ sessions and the 1997 Vice-Presidential Critical Assessment.

Having resolved in 1995 to reconsider its earlier decision, by adopting the 1994 recommendations on names and symbols for the transfermium elements as provisional, the Union duly invited public comment during January–May 1996. The submissions were considered by the Commission on Nomenclature of Inorganic Chemistry (Chestertown/Maryland, August) and revised recommendations for elements 104–109 were referred for comment by the three laboratories concerned in the discovery of TFE. Eventually, the revised recommendations will be presented to the IUPAC Council (Geneva, August 1997) for final approval.

IUPAC considered a number of declarations, particularly the Manila Declaration of 1992 and the Melaka Accord of 1994, on the subject of biodiversity. An IUPAC statement drafted by its Medicinal Chemistry Section, *Preservation and Utilization of Natural Biodiversity in Context of Search for Economically Valuable Medicinal Biota*, was approved by the Bureau and published in the IUPAC journal *Pure and Applied Chemistry (PAC)* (December 1996). Several recommendations were made, which should be considered by participants when promulgating declarations and enacting legislation on the topic.

Over the past few years, much concern has been expressed about the effect of chlorine and chlorine-containing compounds on the environment. In its capacity as an international non-governmental organization, IUPAC published a *White Book on Chlorine*. The chapters, prepared by 14 experts from throughout the world, critically evaluated various aspects of the subject and are of interest not only to academic institutions, industry, governmental agencies and environmental organizations, but also to the general public. Publication was as an issue of PAC (September 1996), and bulk copies were made available to the chemical industry through regional chemical manufacturers associations. The White Book attracted considerable attention, and similar analyses are envisaged of other globally important issues, in which IUPAC can play a role, standing firmly on a scientific foundation independent of governments and industry, by calling on its worldwide network of experts from various fields of chemistry.
CHEMRAWN IX—World Conference on The Role of Advanced Materials in Sustainable Development: Sustainable Production, Use, Disposal and Recycling of Materials—was held in Korea (Seoul, September). It was a follow-up to several earlier CHEMRAWN Conferences on related issues, organized to coincide with the 50th anniversary of the Korean Chemical Society. There were over 360 participants from 17 countries, and the Conference was generally held to have been a success. Important global and multinational problems were identified, such as the role of technology in reducing the ecological load, introduction of renewable energy sources, strategies for selection of and research for eco-friendly processes, formulation of criteria for estimation of acceptability of current technologies for material production, and effective ways of international cooperation and information exchanges. Two panels on What New Materials are Needed for Sustainable Development and Zero Emissions and Zero Waste Processing for Sustainable Development focused on problems of primary importance. Proceedings and Perspectives and Recommendations prepared by the Future Actions Committee were published in early 1997.

A reconstituted Committee on Affiliate Membership was assigned the task of considering replacement of the Affiliate Membership Programme as such with elements of priority as identified by the Bureau and Council (Guildford, 1995), including a critical evaluation of the overheads and Secretariat staff costs. It met (Oxford, September) for extensive discussions, with the intention to finalise its recommendations for presentation to the Executive Committee (April 1997). A final proposal will then be submitted to the Council (Geneva, August 1997).

The retirement of the Executive Secretary (March 1997) and other senior staff provided a unique opportunity to move the IUPAC Secretariat elsewhere. After carefully evaluating several possibilities, it was decided to accept an offer to relocate the Secretariat at Research Triangle Park, North Carolina, during 1997 for at least the next ten years, and then to review the location every ten years. A significant financial investment in future information technology equipment and other facilities is required. The opportunity is being taken to update the History of IUPAC with a supplement covering 1987–1997 before the Secretariat is relocated.

Meanwhile, an IUPAC Home Page was launched in early 1996 on the Internet (WWW) as a subagent of the UK Royal Society of Chemistry's home page. It provides comprehensive information on the work of the Union, and includes directories of all IUPAC bodies. Chemists will be kept up to date with the Union's meetings and initiatives, training for safety and environmental protection. Also, they can visit chemical industrial WWW sites via hypertext links to the IUPAC Company Associates, and check on publications via the Union's publisher, Blackwell Science. The contents of the home page are being expanded to cover other IUPAC activities, and the possibility of developing IUPAC provisional recommendations via the page is under consideration.

ICSU funding was provided for three IUPAC projects in 1996. A main part of the Education Training project consisted of The Design and Field Testing of An Environmental Package by the Committee on Teaching of Chemistry: steady progress has been accomplished, and completion of the work is expected early in 1998. The Quality Control in Trace and Process Analysis grant was used by the Commission on General Aspects of Analytical Chemistry to organize a meeting (Bologna, August) to discuss the first draft report. A final report is expected in mid-1997. The Water/Aqueous Chemistry grant was used in part to fund a meeting of the Commission on Equilibrium Data (Budapest, July), at which the project on Complexation Processes in Seawater was considered. Part I of the report was published (see technical report 5 in Appendix hereto), and a first draft of Part II is expected by mid-1997.

APPENDIX

The following reports on nomenclature, symbols, terminology, and conventions (IUPAC Recommendations 1996) were published during the year:


The following technical reports were published during the year:

11 Commission on Thermodynamics. *International Thermodynamic Tables of the Fluid State—Vol. 13: Meth-
5 27–31 May 1996. 9th International IUPAC Symposium on Mycotoxins and Phycotoxins, Rome, Italy.
7 25–29 June 1996. 11th International Conference on Surface Forces, Moscow, Russia.
11 7–12 July 1996. 17th International Conference on Organometallic Chemistry, Brisbane, Australia.
13 14–19 July 1996. 14th International Conference on Chemical Education—Chemistry: Expanding the Boundaries, Brisbane, Australia.
28 1–7 September 1996. EUROANALYSIS IX, Bologna, Italy.
34 30 September–4 October 1996. 7th International Conference on Multiphoton Processes, Garmisch-Partenkirchen, Germany.
An extraordinary scientist, talented teacher and statesman, Professor Zamaraev was the Director of the Boreskov Institute of Catalysis (1984-1995), and the President of the International Union of Pure and Applied Chemistry (1994-1995). Professor Kirill Ilyich Zamaraev was one of the pre-eminent physical chemists. His main field of interest was the application of new physicochemical techniques to the investigation of mechanisms of homogeneous and heterogeneous catalytic reactions.