Future Mission, Goals and Function of IUPAC

The following article by President Joshua Jortner was published as a Guest Editorial in 'Nachrichten aus Chemie', February 1998, the news magazine of the Gesellschaft Deutscher Chemiker.

The International Union of Pure and Applied Chemistry (IUPAC) serves as a Scientific, international, non-governmental and objective body in addressing the global issues involving the chemical sciences. The future mission and function of IUPAC should rest on the principles of the globalization of the scientific-technological endeavour, the response to current changes in science and technology, the fast expansion of the boundaries of modern chemistry and the mission oriented service of chemistry.

IUPAC was formed in 1919 by chemists from industry and academia. Over nearly eight decades the Union has succeeded in fostering world-wide communications in the chemical sciences and in uniting academic and industrial chemistry in a common language. IUPAC has long been recognized as the world authority on nomenclature, atomic weights and many other critically evaluated data, and it continues to sponsor major international meetings that range from specialized symposia to CHEMRAWN meetings with societal impact. During the Cold War, IUPAC became an important instrument for promoting world-wide collaboration and communication among chemists.

One of the hallmarks of our era is rapid political, economic, technological and scientific change. With the major changes that have occurred world-wide in chemistry and the chemical industry, IUPAC has examined its role as the organization principally responsible for promotion of the chemical sciences globally. Following a series of meetings to obtain input from leaders in chemistry on four continents, IUPAC has redefined its mission and established goals and strategies to guide its approach to the shaping of the chemical sciences in a rapidly changing world.

IUPAC's Mission is to advance the world-wide aspects of the chemical sciences and to contribute to the application of chemistry to the service of Mankind. In so doing, IUPAC promotes the norms, values, standards and ethics of science.

To further its Mission, IUPAC is currently establishing a set of long-range goals and developing strategic thrusts to provide guidance for the kinds of scientific work the Union undertakes. In addition to initiating and continuing major thrusts on the activities listed above,

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IUPAC will represent, when appropriate, the interests of chemistry in international governmental and non-governmental forums. Goals have also been established for the Union's contributions to the advancement of world-wide research in the chemical sciences, the promotion of the service of chemistry to society (with attention to the advancement of the chemical sciences in developing countries), and the facilitation of the development of effective channels of communication in the global chemistry community. The Union feels it is important to promote the chemical aspects of industry in its contributions to sustainable development, wealth creation and improvement in the quality of life.

The improvement of chemical education is another IUPAC goal. The Union recognizes that the needs of the developed countries and the developing countries in this regard are quite different. Scientific literacy is the major concern in the developed world. IUPAC's rôle is to act as a clearinghouse for information about national programs. Less developed countries need help and support at all levels of education and training.

IUPAC strives towards globalization of its activities with the participation of the entire world's chemistry community. The broadening of the geographical base will be accomplished by recruiting new National Adhering Organizations. In addition, new mechanisms need to be set up to insure world-wide dissemination of information about IUPAC's work and the drawing of human capital to its activities. The Internet is seen as an opportunity to greatly improve the Union's efforts in both these areas.

To carry out its scientific work (largely in nomenclature, terminology, critical data evaluation and organiza-

tion of scientific symposia), IUPAC has, over many years, developed a network of 37 Commissions. Although an enormous amount of valuable work has been produced, this relatively static structure has now become an impediment to undertaking projects that are widely regarded as relevant to today's world and are completed in a time-frame consistent with the fast pace of modern research and industrial development. We will soon propose to IUPAC's governing bodies major changes that will consolidate the responsibility for initiation and management of scientific projects, each of which will be conducted by a time-limited working party. We plan to reach out to a broad international community of chemists to help define the needs on which IUPAC projects are based and to recruit the most talented chemists world-wide to work on these projects.

Chemistry historically emerged and developed as an interdisciplinary scientific field, with a broad definition of its borders. Paraphrasing Linus Pauling's definition of the chemical bond 'whatever is convenient to the chemist to define as a bond', chemistry can be defined as a discipline encompassing all areas which are of interest for chemists and where molecular science makes significant contributions. The rich and diverse world of modern chemistry encompasses remarkable intellectual accomplishments, scientific creativity and originality and the generation of new knowledge. The quality, relevance and remarkable scope of modern chemistry should preclude any 'identity crises in chemistry', sometimes manifested in the chemistry science and education community regarding the future of the chemical sciences as a central scientific discipline.

I have discussed changes to the way in which IUPAC operates to fulfil the Union's goals and future mission. The problems with which science and society are faced today are complex and require a reassessment of scientific policy considerations, and an implementation of evolutionary changes in the function and structure of the Union. IUPAC serves the international scientific endeavour in the dual function of a basic science and a mission-oriented Union. The Union is in a unique position to contribute to the central interdisciplinary chemical sciences. Strengthening international chemistry, striving towards inspiring high standards of excellence and relevance in academic and industrial research and promoting the service of chemistry to society and to global issues, these are the visions that shape IUPAC's activities towards the 21st century.

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President of IUPAC

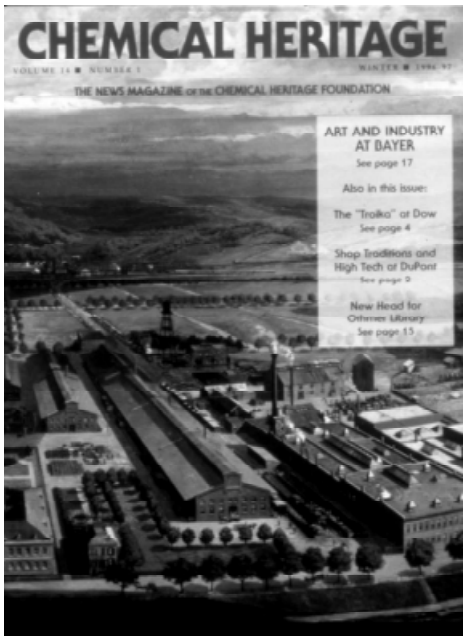
The Chemical Heritage Foundation

A growing resource for the chemical community

The Chemical Heritage Foundation, based in Philadelphia, is rapidly emerging as the chemical community's premier resource for preserving and recording our remarkable heritage, for historical research and scholarship, and for public education.

IUPAC and CHF

The relationship between CHF and IUPAC goes back to 1984, when CHF first received in its archives a number of historical reprints dealing with the International Commission on Atomic Weights of IUPAC. Subsequent years saw further archival deposits, and the establishment of CHF as one of IUPAC's Associated Organizations. In 1996, the Union decided to transfer all of its archival materials to CHF, to prevent further dispersion of historically significant material. In the summer of that year, the Union transferred to CHF 185 boxes of documents dating from 1919 through 1970. The earliest archive box (1919–25) includes such treasures as letters



A recent cover of *Chemical Heritage*, CHF's news magazine. The image on the cover is a painting of the Bayer factory in Albany by Otto Bolhagen of Bremen. *Image courtesy: Bayer AG.*