try in the solid state, energy transfer and fast reaction kinetics. In particular, many examples were presented of the reactions of short-lived intermediates, such as biradicals, which exemplified their synthetic utility. The conference concluded with the presentation of the Porter Award to Prof. Noboru Mataga of the Institute of Laser Technology, Osaka, Japan. His lecture presented results from picosecond and femtosecond laser spectroscopy studies on photoinduced transfer phenomena in solutions. Such studies have aided the development of exciplex chemistry. Topics covered included the excited dipolar solute–solvent interactions, solvent and driving force effects on the electronic and geometrical structures of inter- and intra-molecular exciplex systems, energy gap dependencies of charge separation in the fluorescence quenching reactions and charge recombination of product loose ion pairs, non-Marcus type energy gap dependence of charge recombination of compact ion pairs formed by excitation of ground state charge transfer complexes, photoinduced electron transfer coupled with proton transfer or proton shift in benzophenone-amine and some hydrogen bonding exciplex systems, and extensions of exciplex studies to photosynthetic reaction centre models.

**Chemical physics**

The International Conference on Chemical Physics on the Border of the 21st Century was held under the auspices of the Physical Chemistry Division in conjunction with the Russian Academy of Sciences, Moscow State University. The four plenary lectures are presented [69(4), 857–904], including that of the Conference Editor, Alexander E. Shilov of the Emanuel Institute of Biochemical Physics, Russian Academy of Sciences. Prof. Shilov discussed the contribution of N. N. Semenov, the 1956 joint winner of the Nobel Prize for Chemistry, to 20th century chemistry, not only of his discovery of branching chain reactions and the development of the general theory of chain reactions and thermal explosions, but also of his prediction that biology is likely to play a crucial role in future chemistry.

The other three plenary lectures dealt with: the role of...
chemical physics in the science of catalysis and design of new catalytic technologies; non-traditional pathways of solid-phase astrochemical reactions; and the thermodynamics of extreme states of matter. The paper on chemical physics and catalysis was the last scientific communication by Prof. K.I. Zamaraev (immediate Past-President of IUPAC) before his untimely death in June 1996.

Solubility phenomena

The May 1997, 69(5), issue of Pure and Applied Chemistry contains the texts of the plenary and specially invited lectures presented at the 7th International Symposium on Solubility Phenomena, held in Leoben, Austria, on 22–25 July 1996. The symposium was held under the auspices of the IUPAC Commission on Solubility Data, in conjunction with the University of Leoben. Nine lectures are published: Experimental studies in high temperature aqueous chemistry at Oak Ridge National Laboratory; Phase changes and chemical reactions in solid aqueous solutions; Mechanisms of crystallization and transformation of calcium carbonates; Improvement of polymer solubility— influence of shear and of pressure; Solubilities of the common L-α-amino acids as a function of temperature and solution pH; Solubility data in physicochemical data collections and databanks; Use of semi-empirical electrolyte theories for modelling of solution chemical data; Solubility data requirements and new experimental methods in atmospheric aerosol research; and Thermodynamic databases and equilibrium calculations in metallurgical processes.

Excitonic processes

The June 1997, 69(6), issue of Pure and Applied Chemistry contains the texts of nine of the invited lectures presented at EXCON ’96, the 2nd International Conference on Excitonic Processes in Condensed Matter, held in Kurort Gohrisch, Saxonia, Germany, on 14–17 August 1996. As Conference Editor, Michael Schreiber of the Institut für Physik, Technische Universität Chemnitz, points out, 65 years after the first papers on excitons by Frenkel, research on excitons has now developed into a truly multidisciplinary field. Excitons play a key role in excitation and energy transfer processes in many molecules, molecular aggregates and crystals, as well as in macromolecular and biological systems.

Included is a selective personal perspective on exciton research, presented by R.S. Knox of the Department of Physics and Astronomy and Rochester Theory Center for Optical Science and Engineering, University of Rochester, New York state. Exciton studies have progressed through many stages that correspond to those in atomic studies, including electronic structure, interactions with other particles, determination of oscillator strengths and ionization rates, bonding into excitonic molecules, condensation and thermal equilibration. Driven by huge advances in computation and experimental techniques, exciton research has essentially evolved from a study of structures to a study of dynamics, Prof. Knox told delegates. ‘After 65 years, the exciton survives as neither a museum piece for textbooks nor a purely spectrographic detail. It continues to challenge both theorists and experimentalists, it has attained considerable technological significance, and it participates decisively at the very beginning of earth’s food chain’, he concludes.

The other published lectures include: Dynamics and instabilities of an exciton in the phonon field and the correlated absorption–emission spectra; Excitons in semiconductor nanostructures with disorder; Spin splittings in nanostructures without inversion symmetry; Hawking process in solids—quantum generation of phonon bursts by a strongly excited mode; Non-linear phenomena in organic multilayers; Photosynthetic light-harvesting; Relaxation processes and self-trapping of excitons in rare gas solids; and Parity-broken and -unbroken self-trapped excitons in alkali halides.

News

Measurement technologies in atmospheric chemistry

A workshop and short course on ‘Instrumentation and Measurement Methodologies in Atmospheric Chemistry’ was conducted during the two weeks 4–15 November 1996 at the Laboratory of Environmental Analytical Chemistry of the Federal University of Bahia, in Salvador (Bahia), Brazil. The course was organized and coordinated by Prof. Tania Tavares, Head of the Laboratory and a Titular Member of the IUPAC Commission VI.2, Atmospheric Chemistry. Several other members of the Commission also took part by serving as lecturers and/ or demonstrators.

The objective of the workshop was to broaden theo-
Chemical and practical knowledge in atmospheric measurement techniques among professionals of different scientific backgrounds in Third World countries, especially those that are to some extent connected with WMO Global Atmospheric Watch (GAW) stations. The syllabus included morning lectures and afternoon laboratory practice, as well as a field measurement campaign at the site of the Brazilian GAW station. Subjects taught included the behaviour and reactions of atmospheric constituents, gas phase, particulate and liquid phase sampling and measurement techniques, spectroscopy, chromatography, fundamentals of quality assurance and control, and meteorological concepts required for data interpretation.

This was the first course of its kind, which offered laboratory instruction in addition to lectures. The course was open to anyone who had a good command of English and who was engaged in work related to chemical analysis of components in the air. Twenty-six persons from eight different countries attended: Argentina, Brazil (four different states), Chile, Costa Rica, Indonesia, Kenya, Mexico, Puerto Rico. The lecturers, who were either analytical or atmospheric chemists, aside from two meteorologists, came from Brazil, Croatia, Germany, The Netherlands and the USA.

Sponsors of the workshop, in addition to IUPAC's Chemistry of the Environment Division, included the American Geophysical Union (AGU), the Atmospheric Chemistry and Environment Education Committee of the International Global Atmospheric Chemistry Programme (IGAG), the Inter American Institute for Global Change Research (IAI) and the Global Change System for Analysis, Research and Training (START).

Judging from the comments of the participants, the workshop has been highly successful and fully met all the objectives. Prof. Tavares is to be thanked for a very substantial effort that made this project a success.

Peter Warneck
Chairman, Commission VI.2, Atmospheric Chemistry

CHEMRAWN in Montevideo

Prof. Patrick Moyna of the University of Montevideo writes:

As a result of extensive discussion in the CHEMRAWN Committee and with all the Chemical Societies in Latin America, there is considerable support for a CHEMRAWN-style conference to be held in Montevideo. The conference, proposed for 15–20 March 1998 under the title 'Chemical Studies Applied to Environmental Evaluations', will be aimed at improving the evaluation and understanding of changes to the environment and the implementation of sensible measures to conserve it. Montevideo is at the heart of the recently established Mercosur economic region (which includes Argentina, Brazil, Paraguay and Uruguay, and will shortly be extended to include Bolivia; there is an initial association with Chile and negotiations have begun with Peru, Ecuador, Columbia and Venezuela).

The conference goals are to enable experts in Latin America to analyse the present situation and to exchange experiences and help foster use of best practices and to prepare recommendations for future work, establish monitoring networks and build up the concepts and practice of quality assurance and control. Emphasis will be placed on the need for collaboration between government, environmental agencies, industry and academic institutions.

Support from and collaboration with other relevant IUPAC Divisions and also UNESCO, IOCD and RAQAL are considered essential for the success of the conference.

For further information, please contact: Prof. Patrick Moyna, Facultad de Quimica, University of Montevideo, CP 11800 Montevideo, Uruguay. Tel.: +598 2 94 1884. Fax: +598 2 94 1906.

COSPAR scientific assembly

The 32nd COSPAR (Committee on Space Research established by the International Council of Scientific Unions) Scientific Assembly is scheduled to be held on 12–19 July 1998 in Nagoya, Japan. The programme is intended to cover around 80 meetings and symposia, on topics including:

- The Earth’s surface, meteorology and climate
- The Earth–Moon system, planets and small bodies of the Solar System
- The upper atmospheres of the Earth and planets, including reference atmospheres
- Space plasmas in the Solar System, including planetary magnetospheres
- Research in Astrophysics
Abstracts are invited by 9 January 1998, and papers will be published in *Advances in Space Research*. For more information, please contact: COSPAR Secretariat, 51 bd de Montmorency, 75016 Paris, France. Tel.: +33 1 45 25 06 79. Fax: +33 1 40 50 98 27. E-mail: COSPAR@paris7.jussieu.fr. Information is also available on the WWW at http://www.mpae.gwdg.de/COSPAR/COSPAR.html.

**IFCC/Roche establish Human Genomics Conferences**

The International Federation of Clinical Chemistry (IFCC), an Associated Organization of IUPAC, and Roche Diagnostics have agreed to establish a series of conferences ‘Human Genomics: the Basis of the Medicine of Tomorrow’. They aim to highlight progress in molecular genetics and its potential in diagnosis and therapy. The first conference, entitled ‘Recent Progress in Molecular Biology Technology’, is to be held in Singapore on 15–18 March 1998. This will focus on improved DNA diagnostics and define the role of the clinical chemistry laboratory of the future. The organizers wish to bring together scientists specialized in the field of molecular diagnostics for discussion and preparation of recommendations for better clinical use of these new technologies. They also plan to offer interested clinical chemists a high level course in molecular diagnostics after the Conference.

For further information, please contact: Ursula Steeb, IFCC-Roche Conference Secretary, Roche Diagnostics, Bau 223/315, Postfach, CH-4070 Basel, Switzerland. Tel.: +41 61 6872516. Fax: +41 61 687 25 10. E-mail: Ursula.Steeb@Roche.com

**‘Dictionary of Substances’ goes online**

The *Dictionary of Substances and their Effects*, produced by the UK’s Royal Society of Chemistry (RSC), is now available as an online file (file 307) on Dialog, an online service of Knight-Ridder Information Inc. The online file provides a pay-as-you-go access option, complementing the print and CD-ROM versions already available from the RSC. The dictionary is a specialist reference source of toxicological and environmental data on over 4000 chemicals, updated twice a year.

**Names and Addresses**

Full details (names, addresses, telephone/telex/Fax numbers and E-mail) of the officers of IUPAC bodies were published in *The IUPAC Handbook 1996–1997*. The IUPAC Secretariat has been notified of the following changes:

- **Dr David L. Berner** (Secretary, Commission on Oils, Fats, and Derivatives), 10 East Pointe, Fairport, New York 14450, USA. Tel. and Fax: +1 (716) 223 9388. E-mail: aberner@ix.netcom.com
- **Dr Patrick T. Holland** (Secretary, Commission on Agrochemicals and the Environment), HortResearch, Private Bag 3123, Hamilton, New Zealand. Tel.: +64 (7) 838 5045. E-mail: hollandp@hort.cri.nz
- **Prof. Waldfried Plieth** (Chairman, Commission on Electrochemistry), Inst. für Physikalische Chemie und Elektrochemie, Technische Universität Dresden, Mommensenstraße 13, D-01062 Dresden, FRG.
- **Prof. Rolf D. Schmid** (Chairman, Commission on Biotechnology), E-mail: itbrsc@po.uni-stuttgart.de

**IUPAC colleagues deceased**