

New Strategies for Chemical Education in the New Century

A Report on the 17th International Conference on Chemical Education Held in Beijing

by Xibai Qiu

From 6–10 August 2002, more than 400 university, college, and secondary school chemistry teachers; education researchers; chemistry researchers; chemical engineers; and publishers from 40 countries and regions gathered in Beijing for the 17th International Conference on Chemical Education (ICCE) to discuss new ideas, thoughts, approaches, and techniques for chemical education in the new century. The theme of the conference, which was sponsored by IUPAC and organized by the Chinese Chemical Society, was “New Strategies for Chemical Education in the New Century.” This conference, the first ICCE in the new century, was held at the Fragrant Hill Hotel, located in a famous scenic spot.

At the opening ceremony on 7 August, Professor Chunli Bai—academician and vice president of the Chinese Academy of Sciences, executive president of the Chinese Chemical Society, and IUPAC Bureau Member—delivered the welcoming address. Professor Peter Atkins, chairman of the IUPAC Committee on Chemistry Education (CCE) and IUPAC conference representative, Professor Changgen Feng, representative of the China Association of Sciences and Technology, and Professor Eli M. Pearce, president of the American Chemical Society, also made addresses. In addition, the vice minister of education, Professor Guiren Yuan, and the representative of UNESCO, Dr. A. Pokrovsky, also attended the opening ceremony.

Three hundred sixty-three papers covering a wide range of chemical education issues were accepted. Ten eminent professors were invited to give the plenary lectures at the conference. Topics of their lectures were as follows:

- “Chemistry: Teaching It, Enjoying It, and Spreading It,” by Peter Atkins
- “Nanoscience and Nanotechnology,” by Chunli Bai
- “Chemical Education: Higher Level and Wider Scope,” by Kui Wang
- “The Graduate Education System in the United States,” by Eli Pearce

- “Could or Should Chemical Education be Globalized by Internet,” by Yoshito Takeuchi
- “Electrochemistry Remediation of the Environment: Fundamentals and Micro-Scale Laboratory Experiments,” by Jorge G. Ibanez
- “Using Dance, Drama, and Animation in Chemical Education for the Global Population,” by Z. M. Lerman
- “The Art of Doing Research in Chemistry Education,” by Hans-Jurgen Schmidt
- “Chemistry for Sustainable Developing: Greening the Curriculum,” by Sylvia A. Ware
- “Multimedia Computer Coursewares for Chemistry Teaching in Universities,” by Panwen Shen.

Twenty-one more invited lectures and 162 oral lectures were arranged into six sessions, each of which highlighted a different special topic: 1) public education and chemical literacy education, chemistry and society, and environment-oriented chemical education; 2) chemistry experiments, green chemistry, and environment-friendly chemistry experiments; 3) Internet, computer, and chemistry; modern technologies used for chemistry education; 4) teaching university chemistry; 5) teaching chemistry in secondary schools; 6) theoretical basis of chemical education, chemistry Olympiad, chemical education, and frontiers of chemistry research.

One hundred seventy more papers were presented as posters and displayed the recent chemical teaching research of chemistry teachers from different types of schools from all over the world.

At the four workshops, the organizers highlighted their recent research results, which mainly concerned micro-scale chemistry, low-cost chemical instruments, and greening chemistry experiments. The speakers’ vivid explanations and interesting experiments made the workshops exciting.

After the conference, a number of participants attended a Seminar on Chemical Education held in Xi’an, including Professor John Bradley, chairman of the CCE Subcommittee for Chemistry Education Development; Professor Xinqi Song, president of Chinese Chemical Society; as well as three other chemists from abroad and China. More than 40 chemical teachers from the western part of China attended the seminar. The topics included chemical education, advances in chemistry, and micro-experiments. Participants expressed hope that more seminars like this would be organized. 🌐

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