

Frontiers of Chemical Sciences

Research and Education in the Middle East

by John M. Malin

In regions where political and cultural conflicts are overwhelming, can science improve the quality of life? This basic question has been addressed recently by a group of 57 scientists from 15 nations, including 35 chemists and chemical engineers from Middle Eastern countries who all met in neutral ground to discuss and share common problems. This first-of-its-kind meeting, held 6–11 December 2003 in Malta, aimed to foster relationships among chemical scientists from throughout the Middle East who otherwise might not have the opportunity to interact with one another. Attendees included six Egyptians, three Iranians, seven Israelis, five Jordanians, and eight from the Palestinian Authority. The rest of the participants were chemists and chemical engineers from Kuwait, Lebanon, Turkey, United Arab Emirates, Saudi Arabia, the United Kingdom, France, Germany, South Africa, Taiwan, and the United States.

In his letter of welcome, Guido de Marco, president of Malta, succinctly framed the issues that conference participants faced: "Depletion of resources, environmental degradation, a widening gap in technology, and shrinking water supplies are an indication of the mammoth challenges facing this region . . ." But, de Marco added, "Collaboration and sharing of information among scientists of this region can make a world of difference . . . you can lead the change, you can be successful where politicians seem to be failing. Improving the standards of living of the peoples in this region is after all the best way to fight terrorism. . . . You are putting science to the service of humanity by seeking how to, through research and education in the troubled region of the Middle East, convert frontiers into bridges; how to use science to improve the standards of living in this part of our world . . ."

Meeting Planning and Organization

The American Chemical Society's (ACS's) Subcommittee on Scientific Freedom and Human Rights, chaired by Dr. Zafra M. Lerman, provided the impetus for the project. In 2002, the subcommittee brought the idea for a conference on chemistry in the

Middle East to the ACS's International Activities Committee and, subsequently, to the ACS Board of Directors, chaired by Dr. Nina I. McClelland. In the end, the conference was organized by ACS's International Activities Committee and co-sponsored by the Royal Society of Chemistry (RSC) and IUPAC.

Wanting to also attract the attention of national governments, the organizing committee invited some of the best chemical scientists from the region along with six Nobel Laureates: Dr. Claude Cohen-Tannoudji spoke on "Cooling Atoms with Light: A Recent Application of Molecular Physics"; Dr. Dudley Herschbach's lecture on chemical education and research was entitled "The Impossible Takes a Little Longer"; Dr. Roald Hoffmann discussed "Protochemistries for Antiquity—Teaching Tools for Today"; Dr. Yuan T. Lee spoke on "Dynamics of Chemical Reactions and Photochemical Processes"; Dr. Jean-Marie Lehn discussed "From Molecular to Supramolecular Chemistry—Chemistry Beyond the Molecule"; and Dr. Rudolph A. Marcus lectured on "Unusual Isotope Effects in the Upper and Lower Atmosphere."

The organizers structured the conference to allow plenty of time for informal discussions among the participants. Each morning and afternoon session began with a lecture by a Nobel Laureate, followed by a discussion session and a special follow-up lecture or a working group meeting. The working groups, which had open, rotating memberships, discussed applications of chemical sciences in the Middle East. Working group meetings were scheduled so that each attendee had an opportunity to participate in every group. Each working group developed a set of recommendations that were presented in a plenary working session at the end of the conference.

Many of the conferees were members or presidents of their national academies of science and/or their



Conferees at dinner, Ann Nalley, Sultan Abu-Orabi, Afsaneh Safavi, John Malin, Zafra Lerman, Hanan Malkawi, Boshra Awad, Isa Khubeis