

Foreword

IUPAC Commission I.2 on Thermodynamics (formerly, Commission on Thermodynamics and Thermochemistry) has been arranging international conferences on Chemical Thermodynamics since 1969. These conferences are usually held every second year (alternating, nowadays, with the IUPAC General Assemblies) and take place in the Summer. Prior to 1969 there had been, however, five other conferences on Chemical Thermodynamics, but not emanating directly from Commission I.2. This has led to some confusion in the numbering of these conferences, with the result that we jumped from the sixth Conference, which took place in Merseburg in 1980, to the twelfth, which took place in London two years later. The 1984 Conference, which preceded the present one, was held at McMaster University in Hamilton (Canada) jointly with the Calorimetry Conference and took no number.

At its last meeting in Lyon in August of 1985, Commission I.2 decided to resume the old numbering of these Conferences, starting with the first one in Warsaw, in 1969. The present Conference is, thus the ninth in the series, and will be followed by the tenth in Prague, Czechoslovakia in 1988 (29 August-2 September).

Scientific gatherings, even big international conferences like the present one, tend to become parochial in the sense that they are condemned to attract the same crowd again and again. Although I like to think of thermodynamicists as a big family, we all develop our attachments to particular types of conferences, to the exclusion of others. I and my co-chairmen made a special effort to encourage the participation of many of those who are not usually associated with the IUPAC Conferences on Chemical Thermodynamics.

The Lisbon Conference was organized in nine Sections on Symposia:

1. Thermodynamics of Mixtures; 2. Thermodynamics of Interfaces; 3. Theoretical and Simulation Studies of Solutions; 4. Solubilities in Supercritical-Fluid Mixtures; 5. Energetics of Chemical Bonds; 6. Planetary Thermodynamics; 7. Modern Techniques; 8. Biothermodynamics (Interactions between Water and Biochemical Compounds, Including Simple Model Substances); 9. General.

Another of our preoccupations was to introduce a certain interdisciplinarity into the various symposia or sections which constitute the Conference. Although some themes had to be fairly wide in scope to accommodate the contributions of those who would have been unable to attend otherwise, others were deliberately selected to invite the participation of non-thermodynamicists working in related areas. To the former belong Sections 1 and 9. To the latter belong the Symposia 3,6,7 and 8. We welcome this interaction with our colleagues working in statistical mechanics, kinetics, spectroscopy, astrophysics, etc. because we believe that a problem stands a better chance of being solved if it is looked upon from several angles.

There were four plenary lectures and fifty-two invited lectures. Since it would not be feasible to publish them all in a single issue of Pure and Applied Chemistry, we decided to select for publication the four plenary lectures (including the Rossini Lecture) and the lectures of the the chairmen of the different sections or symposia. The exception is Section 8 which is not represented in this issue because its chairman, Professor I. Wadsö had already given one of the main lectures at the London Conference in 1982 and declined to be another major speaker a mere four years later.

Finally, a word of thanks. Anyone who has ever been involved in the organization of a conference of this magnitude knows that such tasks are only possible through common ideals and team work. I am very grateful to Commission I.2, under the chairmanships of Professors G.M. Schneider and G. Somsen, for the support and advice that they have given me during the past two years. And I hope I share with my collaborators, the named and the anonymous, the joy of bringing together, under the banner of thermodynamics, so many people from so many countries.

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