Preface

International Conference on Biological and Environmental Properties of Main Group Elements, Bordeaux, September 1994.

Organometallic compounds now take part in our every-day life under various forms. Synthesis of new organometallic compounds produces bioactive molecules of use in pharmaceutical applications. Organometallic compounds are seeing increasing application in a large variety of industrial processes. They can either be introduced in the environment as a result of direct applications, eg as biocides or slimicides due to the now well recognised toxicity of tri-alkylated tin species, or via indirect inputs resulting from industrial activities. However, organometallic compounds can also be found as natural products following biochemical methylation or transalkylation reactions. These compounds present specific physicochemical properties with regard to stability or polarity that will regulate their fate and impact between the different compartments of the environment. Analytical chemistry is a fundamental prerequisite to correctly address the reaction pathways associated with the transformation and migration of organometallic compounds.

The aim of this third International Conference on Environmental and Biological Aspects of Main Group Organometals (I.C.E.B.A.M.O. 94) held in Bordeaux (France), was to generate cross-fertilisation between the four topics selected for discussion. These topics were: 1—Analytical Chemistry of main-group organometals; 2—Environmental fate; 3—Organic synthesis of bioactive molecules; 4—Biological and pharmaceutical applications of main-group organometals.

The meeting was attended by a total amount of 250 participants originating from 19 different countries. Presentations and discussions held during the four days of the meeting outlined the common links between the topics selected and focused on the need to improve our knowledge with regard to chemical reactivity of the compounds studied. This session was dominated by a large number of contributions from the analytical chemistry and environmental fate sessions. Among the different highlights of the congress, complete overviews of the rate of organoarsenical species formation, fate and toxicological aspects were covered by several lecturers. New questions were raised with regard to the mercury cycle in the environment. Toxicological impacts of organotin compounds have been addressed down to molecular levels. New strategies for non-polluting tin reagents certainly illustrate the profound evolution of environmental concern from the industry. The analytical sessions were well represented and covered a large array of analytical techniques including alternative methods based on mass spectrometry. The accuracy of the analytical methods is only reliable after validation by reference materials. The Measurement and Testing Program (the BCR) demonstrates the different efforts developed by the EC in order to fulfil this basic requirement.

These different topics are presented in this special issue of *Applied Organometallic Chemistry*. We hope that the papers contained in this special issue represent the quality of the exchanges during this meeting. We would like to thank all institutions who made this meeting possible by generous sponsorship, viz the Société Française de Chimie, the Royal Society of Chemistry, the Centre National de Recherche Scientifique, the EC Measurement and Testing Program (BCR), the French Ministry for Environment, the French Ministry of Research and Technology, the University of Bordeaux I & II, I.F.R.E.M.E.R., I.N.R.A., the Conseil Régional d'Aquitaine, the Lyonnaise des Eaux Dumez water company, Thermo Jarell Ash, John Wiley & Sons, Freund Publishing and Elsevier Science Publishers. We would like also to thank the embassies or international agencies that allowed the large international audience: the Canadian Embassy, the French Embassy in Russia, the Department of Industry, Science and Technology (Australia). The international scientific committee was composed of Dr. O. F. X. Donard (Chairman, France), Prof. P. J. Craig (Vice Chairman, UK), Prof. M. Gielen (Belgium), Prof. V. G. Kumar Das (Malaysia), Prof. J. L. Wardell (UK), Prof. E. Lukevics (Lithuania). Dr. K. Francesconi (Australia), Prof. J. H. Weber (USA), Prof. M. Pereyre (France) and Prof. G. Tagliavini (Italy). Finally we would like to thank Miss M. Charbonnel and dedicated students (C. Belin, T. Besson, B. Lalere, R. Lobinski, F. M. Martin, R. Munoz, C. Pecheyran and C. Quétel) for their help during these days.

O. F. X. Donard
P. J. Craig