
Foreword

Sponsored by the University of Padua and the Italian Chemical Society, the International Conference on Environmental and Biological Aspects of Main-Group Organometals (ICEBAMO) was held in Padua, Italy on 15–19 September 1991.

The idea of promoting such a conference emerged three years ago during a trip to England when I had the opportunity to meet Peter Craig of the Leicester Polytechnic, Marcel Gielen of the Vrije Universiteit of Brussels and James Wardell of the University of Aberdeen. On that occasion, we recalled all the past meetings devoted to organometallic and coordination chemistry, mainly characterized by scientific contributions concerning important fields, from synthesis to structure, and from biochemistry to industrial applications, of the organometallics of these three heavier Main-Group 14 elements. From a glance at the details of these conferences, it was evident that there has been an increase of interest in the areas of science termed 'environmental chemistry', 'bioinorganic chemistry' or 'biogeochemistry', in terms of significant developments in fundamental studies of bioactive carbon–metal σ -bonds or other heteroatomic combinations which are formed in polar transport media. Thus, we came to the decision to organize a particular meeting in which diverse interdisciplinary scientific authorities could have the opportunity to gather together and to discuss environmental and biological aspects of Main-Group organometals.

Our efforts were not fruitless since about 100 participants attended, from academic or public institutions, as well as from industrial companies, coming from 14 countries have shown the international character of this meeting. My appreciation and thanks are addressed to all scientists, researchers and students coming from Europe (Belgium, France, Germany, Holland, Latvia, Russia and the UK), from overseas (Australia, Canada, China, Israel, Japan and the USA) and from Italy.

The conference was successful mainly for the scientific reports of high quality presented by the participants. Also, the fruitful social events, in which friendship and informality were always present, gave a particular contribution. The scien-

tific programme, executed through four days, was based on high-level plenary lectures, 22 oral communications and 20 posters. The following subject areas were presented:

- (i) Alkylation of heavy metals, with particular emphasis on the determination, speciation and toxicology of the alkylated materials
- (ii) Toxicology of organometallics
- (iii) Interaction of organometallics with biological systems: chemotherapy and the role of organometallics as antibacterial and antiviral agents
- (iv) Biogeochemistry of the same heavy metals
- (v) Computer modelling of transport, diffusion and chemical transformation of air pollutants
- (vi) Release, pathways and fate of organometallics in the environment.

Organic derivatives of mercury and boron, silicon, germanium, tin and lead, arsenic, antimony and bismuth, together with compounds of sulphur and selenium have been taken into consideration. The final result has been a broad spectrum of the current lines of research, where chemistry, pharmacology, toxicology and medicine have met together. The conference was a useful opportunity to review in detail reaction mechanisms and the biological implications of organometallics in the environment.

Readers of the present special issue of *Applied Organometallic Chemistry*, in which the papers based on the majority of the ICEBAMO contributions is published, may acquire, in my opinion, the current needs for future studies relevant to chemical and biological implications of organometallic chemistry.

I am particularly happy that the efforts of the International Scientific Committee and the staff working in Padua were rewarded on the last day of the ICEBAMO meeting when the decision was taken to hold a further conference. The 2nd ICEBAMO Meeting will be held in Archaçon, France, in 1993. I wish even greater success for this forthcoming Conference.

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