

Foreword

Preamble:

For three days, November 10th to 12th, 1986, nearly 300 chemists and other scientists from ten nations, North, South, East and West, gathered in the city of Kyoto, the beautiful ancient capital of Japan to participate in this important International Symposium on New Sensors and Methods for Environmental Characterization (SMEC). We have heard lectures on and have discussed a broad range of subjects of particular interest to chemists but also of importance to other natural and social scientists working to better understand and protect the environment of this planet, Earth.

Environmental problem cannot be solved without the effort of environmental chemists. Environmental chemists provide knowledge of the make-up of our surroundings, the reactions occurring therein and of the changes brought about by human activity. This information can be used by other scientists to identify potential damage of environmental resources, such as the vitality of ecosystem and of public health. Then appropriate regulatory actions, when, can be taken by governmental bodies.

Realizations:

As a result of hearing the lectures and discussions, we have become aware of and reconfirm the following points:

- Local environmental conditions cannot be readily generalized to represent larger regional, national and certainly not global conditions.
- Chemical sensors are essential for global monitoring, but they are as yet insufficient for that purpose.
- The work of chemists must be made more readily understandable to those in the other natural sciences, as well as to social scientists and ultimately to the layman. The public is very important!
- The technology of sensors is developing very rapidly as are the methods of environmental characterization, both in chemistry and in the other sciences.

Proposals:

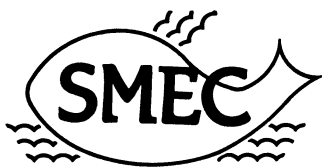
With these realizations in mind, we propose the following:

1. In order for chemists to better understand the environment, we need to nurture our relationship with other fields of natural science, especially biology, pedology, geology, meteorology and ecology, among others.
2. In order to be able to better communicate our research objectives, methods and results to the layman, we should cultivate our relationship with social scientists, and politicians and government etc, as well as be more concerned about not only present environmental problems but possible future ones as well.
3. In order to be in a better position to achieve the previously mentioned proposals, we endorse the idea of establishing the field of "environmental chemistry" as a basis for the education and training of future chemists as well as a means of broadening the view of today's chemists.
4. In order to expand the usefulness and applicability of sensors and monitoring systems, we propose that a global monitoring system be developed; It should include not only chemical indices but also a broad range of biological indicators, be based on internationally comparable data, and make the fullest possible use of computer-aided information management and environmental modeling, among others. Especially sampling of environmental materials for analysis has to be considered and improved in future. Also, we propose quality control parameters be associated with all data entering the computers.
5. In order to build upon the achievements of this 1st SMEC Symposium, we affirm the need to hold future international symposia of this type at frequent intervals, perhaps every 2 or 3 years, to keep ourselves up to date on the latest developments in the field, directly exchange information and views, and strengthen the elements of the previously proposed global monitoring network.

Adoption:

We, the participants in this 1st SMEC International symposium, agree to adopt the above proposals and work for their implimentation in the interest of preserving, and where necessary restoring, the quality of the environment of this planet for the good of all mankind and the life-support systems upon which man depends.

November 12, 1986
Kyoto, Japan



Taitiro Fujinaga
SMEC Organizing Committee