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Foreword

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FOREWORD

Photochromism has become popular because of the worldwide use of photochromic glasses. The common sense of the term is "a reversible change of color", but the following definition is more scientific: "*Photochromism* is a *reversible transformation* of a single chemical species being induced in one or both directions by electromagnetic radiation between two states having different absorption spectra."

Photochromism is, therefore, a branch of photochemistry encompassing organic, inorganic, bio- and polymer chemistry and physics. The specificity of the field lies in the reversibility of the reaction which induces actual and potential applications. Several million inorganic glasses and, now, organic lenses are produced worldwide. Many research efforts are being made for applications in windows, windscreens, garment decoration, toys, computer memories, information storage, reversible nonlinear optical materials, membranes, polymers, optical switches, etc.

The "renaissance" of photochromism since 1980 (mainly due to the development of spirooxazines) in industry and academic laboratories and during the present time which became apparent in several journals, reviews and books, suggested that the organization of an international meeting would be timely.

This four day symposium is indeed the first important international conference on this topic, except the American meeting in Dayton (USA, 1967 - Reversible Photochemical Processes Symposium) and the one day workshop in Interlaken (Switzerland, 1984).

The participation of 31 representatives of 14 companies worldwide points to the driving force of this type of meeting. It does not mean at all that fundamental research is neglected, as can be seen in the scientific programme, but the whole field is driven by research on improving the established materials and finding new systems and devices for applications. Among the 140 active participants, the main delegations were from France, Germany, Italy, Japan, Russia, United Kingdom and USA.

The scientific programme included 23 lectures (5 plenary, 18 invited) and 18 oral presentations, as well as 56 posters. Many systems were covered, namely spiropyrans, spirooxazines, chromenes, dihydro spiroindolizines, fulgides, aryl- or heterocycloethenes, azobenzenes, p-anthraquinones, anthracenes, polyaromatic hydrocarbons/singlet oxygen, anils and bacteriorhodopsins.

There was a good balance between applications and fundamental research. The discussions were lively. It was indeed the first time in the history of photochromism that so many scientists, including those from industrial companies, had the opportunity to meet and to feel that they belonged to a scientific community. The

presence of a significant number of young researchers was particularly noteworthy.

Therefore, the International Scientific Committee decided unanimously to organize another symposium of this kind. A three year time period was considered reasonable by all the members. In addition, it was considered desirable to extend the field to inorganic photochromism; this does not oblige us to change the logo ISOP, which will mean International Symposium On Photochromism. The next chairman will be Dr. John Crano (PPG Industries, Pittsburgh), who will organize ISOP 2 in the USA in September 1996.

Let us hope that the next meeting also will be a great success, well focussed on the latest developments concerning the synthesis of new photochromic systems and the expansion of the field to material sciences and life sciences (environmental effects, mechanisms of photodegradation, polymers, biological photoresponsive systems, and molecular recognition, etc.).

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