

Lasers in Chemistry

Foreword

The laser as a radiation source, with its high intensity, sharp frequency and short pulse duration, has revolutionized chemistry, in many diverse research areas, e.g. molecular spectroscopy, molecular dynamics, linear and non linear photochemistry, photobiology, radiative and non-radiative molecular processes, dynamics of ultrafast processes, structure and dynamics of the liquid state etc. The present volume contains a presentation of the many interesting research areas in which lasers have been used in chemistry. This volume is a result of contributions from a majority of the invited speakers at, as well as the contributors to, the Conference on Lasers in Chemistry that was held on June 11–15, 1990, at Miramare, Trieste, Italy. This conference was the first activity of the newly formed International Centre for Pure and Applied Chemistry (ICC). ICC has been established in Trieste as an international project implemented by the United Nations Industrial Development Organization (UNIDO) in co-operation with the Third World Academy of Sciences and with the financial support of the Italian Government. This Centre belongs to the broader institution, the International Centre for Science and High Technology (ICS). Since the Centre was then just two years old, the conference was generously hosted by the well-established International Centre for Theoretical Physics (ICTP).

The contents of this volume are organized as follows. First, the contributions of the invited speakers are given in the order in which they were presented at the conference. The contributed articles resulting from the poster sessions are then arranged and grouped by fields, as far as possible.

We would like to thank the authors who came to the conference from the many different countries, near and far, and for their contributions to both the meeting and to this volume. We wish to thank Professor Abdus Salam for his efforts in putting this new Centre together, so that chemists can communicate their findings in the relaxed and enjoyable atmosphere of Trieste, just as theoretical physicists have successfully done over the past few decades. We wish to thank the Italian Government for its financial support and the staff of ICTP and ICS, in particular Ms. Joanna Lacey, for their hospitality and efficiency and for making the meeting a success and this volume a reality. The efforts of Professor CNR Rao in the quick publication of this volume are greatly appreciated.

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