



Preface

The discovery of macrocyclic crown ethers by C.J. Pedersen opened an interesting field of chemistry, which is called macrocyclic chemistry. There is no doubt that in the past three decades the development of synthetic macrocyclic receptors for cations, anions, and neutral molecules has been an area of active research. Macrocyclic chemistry has recently been elegantly extended into supramolecular chemistry, because it created more sophisticated receptor systems such as cryptands, podands, spherands and calixarenes as well as self-assembly and self-organization systems such as catenanes and rotaxanes. Research activities have probed a variety of important issues especially in molecular recognition and inclusion phenomena, which are also significant in such diverse disciplines as chemistry, biology, physics, and related science and technology.

This special issue is based upon the “Post ISMC Meeting in Saga: From Macrocyclic Chemistry To Supramolecular Chemistry”, which was held on August 10–11, 1997, and was one of the satellite symposia of the XXII International Symposium on Macrocyclic Chemistry (ISMC) in Seoul, Korea. The Post ISMC Meeting featured 9 invited lectures and 34 poster presentations and was organized to give an opportunity for discussion of the present status in macrocyclic and supramolecular chemistry.

Twenty short reviews contributed by the invited lecturers and the selected poster presenters of the Saga meeting are contained in this issue. These reviews include recent progress in the design and synthesis of functional macrocyclic and supramolecular systems such as crown ethers, calixarenes, porphyrins, cyclophanes, podands and rotaxanes. Signal transductions (e.g., guest-induced changes in optical properties, membrane potentials and membrane permeability) and separations (e.g., chromatography, extraction and membrane transport) are also described from a standpoint of molecular recognition. Although it has not been possible to cover entire regions, we hope that this special issue will aid the reader’s understanding of macrocyclic chemistry and supramolecular chemistry.

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TAKASHI HAYASHITA
Department of Chemistry
Graduate School of Science
Tohoku University
Japan

HIROSHI TSUKUBE
Department of Chemistry
Graduate School of Science
Osaka City University
Japan