

PREFACE

This volume contains the invited lectures presented at the International Symposium on Ions and Ion Pairs and their Role in Chemical Reactions held in Syracuse, New York from May 30-June 2, 1978.

The conference, jointly sponsored by IUPAC, the National Science Foundation and the State University of New York College of Environmental Science and Forestry, Syracuse, New York was dedicated to Professor Michael Szwarc on the occasion of his retirement from the College, honoring him for his many original and outstanding contributions to a better understanding of ionic solution phenomena.

The lectures cover a significant part of the broad spectrum of ion pairing phenomena. They focus on three main areas. Firstly, the structure, energetics and dynamics of ions and ion pairs and their complexes with solvent molecules and ion coordinating ligands in the liquid, solid and gaseous state are discussed by Grunwald, Kebarle, Persoons, Van Beylen, de Boer and Velthorst. A second emphasis is on some aspects related to the design and properties of neutral ion binding ligands, notably the crown ethers and cryptands, as well as polymers carrying crown ligands as pendent groups (Popov, Smid). The lecture of Dr. Lehn on the design of molecular receptors, believed by many participants to be the highlight of the symposium, is not included in this volume, but a good part of Lehn's presentation may be found in the IUPAC issue *Coordination Chemistry*, Volume 17, 1977.

The third area covers aspects of reactivity and stereochemistry of ions and ion pairs in different types of chemical reactions such as those involving carbocations (Dorfman), enolates (Arnett), carbanions (Hogen Esch), anion-cation combinations (Ritchie), and cationic polymerization (Ledwith).

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