

PREFACE

This volume contains the plenary lectures presented on the XVIIth International Conference on Coordination Chemistry held in Hamburg from 6 - 10 September, 1976.

Three of the five lectures were chosen to commemorate the 25th anniversaries of significant events in coordination chemistry.

In 1950 Prof. Joseph Chatt invited a group of chemists from the British Isles and the European Continent to discuss problems of coordination chemistry at Welwyn, England. This small but successful symposium stimulated further conferences and established I.C.C.C. as a continuing series of international conferences. In his lecture "Prospects and Retrospects: 25 Years I.C.C.C." Prof. Chatt gives a lively and very personal account of this development, including a projection of coordination chemistry in the future.

Two other important scientific achievements with considerable impact upon chemistry took place a quarter of a century ago. Around 1950 chemists became aware of the usefulness of the older crystal field theory and started to apply these ideas to coordination compounds. One of the most prominent pioneers in this field, Prof. Hermann Hartmann, Frankfurt, describes this development in his lecture "25 Years of Ligand-Field-Theory".

The preparation of ferrocene in 1951 marks the beginning of a new area in organometallic chemistry. Not only is Prof. Peter Pauson one of the discoverers of ferrocene, he is, through continued successful work, one of the most prominent specialists in organometallic chemistry. In his lecture "Aromatic Transition Metal Complexes; the first 25 Years", he traces the various preparative and theoretical aspects of transition metal complexes with a great variety of hydrocarbon ligands, including some of his own recent results.

The lecture by Prof. J.-M. Lehn, Strasbourg, "Cryptates, Macropolycyclic Inclusion Complexes" stresses another field where organic and inorganic chemistry broadly overlap. This rapidly expanding area of compounds with highly specific ligands opens exciting possibilities to both pure and applied chemistry.

Another recent development in coordination chemistry concerns the recognition and study of gaseous complexes. Prof. Harald Schäfer, Münster, describes in his lecture "Koordinationsverbindungen in der Gasphase" the chemistry of volatile dimeric and polymeric halogeno complexes formed by combination of like or different metal chlorides (homo and hetero complexes). Applications of gaseous complexes to chemical transport reactions and other practical purposes are mentioned.

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