



## OPENING ADDRESS

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As chairman of the Szeged Branch of Hungarian Chemical Society I offer a very hearty welcome to you. It is encouraging to see such a gathering of Hungarian chemists and we are grateful to you for contributing to the success of this conference by your lectures or by taking part in the discussions.

The fact that such a number of us gathered here - I think - convincingly emphasizes the stress which lays upon the research in complex chemistry. Ours is an age the speedy development of reborn inorganic chemistry and in this progress the complex chemistry plays a great part. The interest in complex chemistry has a number of reasons.

The researches in complex chemistry emerged new problems concerning a basic problem in chemistry; that of the chemical bond - but at the same time these examinations were a considerable contribution to a better knowing of the nature of chemical bond. There had been prepared compounds containing ions of unfamiliar valency-state among these compounds with central metal atom of zero oxidation number. The role of  $\pi$  electrons in the chemical bond was for a long time treated only by organic chemistry. I think it is not going too far to assert that inorganic chemistry - and mainly complex chemistry - helped in revealing the nature of  $\pi$  electrons and their bond-forming abilities.

After a longer pause the complex chemical view helped a better and more exhaustive knowing of electrolytic solutions. The complex compounds are transitional in many aspects between organic and inorganic compounds. This transition rendered possible - and will do in the future - the experimental methods developed in organic chemistry being applied in examining this group of compounds.

But complex chemistry is not confined only to organic or inorganic chemistry. In living processes many complex bonded metal ions have a decisive role. I think it is sufficient to point only to hemoglobine, catalase or  $B_{12}$  vitamine. The study of metal complex models is one of the best methods to solve the problem of mechanism of enzyme-action.

Efforts in complex chemistry are not only of theoretical importance. We know that the application of complexes as catalysts is in certain organic syntheses today indispensable. The separation of rare earth elements, their industry-scale production by ion exchange resins - all happen by means of their complex compounds. The role of researches in complex chemistry is most striking in the advance of analytical chemistry. The masking and the complexometry - what is the most versatile among volumetric methods - all are based on the researches in complex chemistry.

The straight consequence of this enormous progress is that lectures on complex chemical researches are frequently read at different

congresses and from 1950 there have been held several congresses dealing only with problems of complex chemistry.

The present symposium, convened under the auspices of The University of Szeged and The Szeged Branch of Hungarian Chemical Society aims to survey today's inland researches in complex chemistry.

In Hungary complex chemistry had been evolved in a relatively smaller degree than other fields of chemistry. In the second half of the last century Károly Than and his school examined several complex systems. However, these researches were rather isolated ones. After First World War numerous drifts of complex chemistry to light in our country, too. So Gyula Gróh started examinations on metal complexes of proteins which is carried on nowadays by his associates and their results will be heard at this symposium. Árpád Kiss and his school were pioneers in the spectroscopy of complex compounds. Absorption curves taken up from the thirties are the starting points of a good deal of theoretical works. At the same time in Szeged we also carried out electrochemical investigations in order to determine the stability of Cu(I) complexes. In present time, too, a systematic and intensive research in complex chemistry goes on in Szeged and therefore it was reasonable to organize this symposium at our University.

On glancing at the program of this symposium from which analytical works are intentionally left, we may state that present researches in complex chemistry in Hungary are dealing just with problems standing in centre of general interest, too, and we may hope this symposium means not only a survey of results reached so far but the starting of a new evolution, the raising of new problems.

As a close I wish thank the Council of University and The Hungarian Chemical Society for their moral and financial support which rendered possible this symposium to be organized. We hope their efforts helped the development of chemical sciences in this country.