# SPECIAL CORRESPONDENCE

## THE SIXTH MENDELEEV CONGRESS AT KHARKOV

ONE of the largest gatherings of chemists that have ever taken place was witnessed recently at Kharkov, capital of the Ukraine Soviet Republic, where some 3,000 chemists, from different parts of the U. S. S. R., and several foreign guests met at the sixth Mendeleev Congress. Since the death of the great chemist, the congress bearing his name has been held on an average of every three years. The last one met in Kazan in 1928, and the next in 1934 will coincide with the centenary of the work of the famous founder of the periodic table of elements. It will take place in Leningrad at the same time as the proposed international congress of pure and applied chemistry and will give an opportunity to many European chemists to become acquainted with their Russian colleagues.

The Kharkov Congress differs from similar gatherings in the division of its organizations into "columns" and "brigades," each studying some special problem in connection with the second Five Year Plan. Side by side with classical divisions into biochemistry, electrochemistry, colloid chemistry, there were special sections dealing with catalysis, raw materials (organic and mineral), chemical equipment, plant control, etc.

The first three days were devoted to general surveys in the more important subjects and to a review of the relations between chemistry and socialist reconstruction by Zatonski, formerly professor of physical chemistry and now an important figure in the Ukrainian government. Later the congress divided into columns and brigades. The outcome of their discussion was embodied in a number of resolutions, which were organized and coordinated by another smaller conference to be convened in Moscow on December 1 and will serve as a basis for development of the chemical program of the second Five Year Plan.

There were upward of five hundred reports presented at the congress, which makes it impossible to deal even superficially with their subject-matter. The titles of the papers read at the general meetings will indicate the range of the subjects covered: "The Application of Wave Mechanics to Chemical Problems, Including Recent Theories of the 'Spinning' Electrons," by George Roumer; "Electrostatic Theories of Valence," by G. K. Carkin; "The Structure of Complex Compounds," by T. A. Kazarnovski; "The Theories of Catalysis," by B. Roginski; "The Theories of Adsorption," by A. Frumkin; "Chemistry and Metallurgy," by E. I. Orlov; "Utilization of Raw Materials," by A. C. Fersman; "Chemistry and the Harvest Problem," by K. N. Sokolovski, and "Chemical Equipments," by S. L. Schipkin.

As examples of specific discoveries in the field of applied chemistry, one may mention the interesting researches of Madame Yermolyeva, of the Bach Institute of Biochemistry (Moscow), who found that traces of certain ferments obtained from decomposing bacteria will act as preservatives for caviar. These ferments have certain or all the properties of the bacteriophage, since they are able to destroy bacteria and to liberate more ferments in so doing.

A new process in aluminium technology, depending upon the special condition existing in the U. S. S. R., where petroleum refining and aluminium metallurgy can be developed side by side upon a large scale, has been worked out by E. A. Kazanovski (Moscow). It depends upon the production of aluminium chloride by the action of chlorine on impure bauxite or upon kaolin; the resulting chloride is used as a catalyst in the cracking of petroleum. From the residue on the cracking process one may recover hydrochloric acid and eventually regenerate chlorine, while the remaining bauxite is electrolized to give metallic aluminium.

An achievement to which Russian chemists point with pride is the manufacture of synthetic rubber from alcohol, the latter being obtainable from sawdust. An exhibition of chemical products, which was held at Kharkov at the time of the congress, included many objects from synthetic rubber (tires, goloshes, tubing, etc.) side by side with others made from the usual natural rubber and from rubber obtained from the roots of the Caucasian plant Tau-Saghiz (*Scrozonea Saghiz*). There were other exhibits showing various raw materials and also dyestuffs and pharmaceuticals, indicating a distinct advance in Russian fine-chemicals manufacture.

The congress was mainly remarkable because of the great interest shown in its proceedings not only by the participating chemists but also by the general public. This was due largely to the publicity given to technical matters in the Soviet press.

A number of foreign guests attended the conference. These included Dr. R. E. Liesegang, of Frankfurt, Professors Kurt Hess, Pitch and Klages, of Berlin, Dr. Giacomo Fauser, of Italy, Professor N. C. Greenwood, of Melbourne, Australia, Dr. V. Cofman and J. G. Crowther, London. The guests were presented with a beautiful set of photographs of eminent chemists, excursions were organized to the newly built dam on the Dnieper and the extensive electrochemical plants for the manufacture of aluminum, steel, etc., which are nearing completion, and most of the foreign chemists remained to witness the brilliant November celebration in Moscow.

VICTOR COFMAN

LONDON