

## JUBILEES AND DATES

### 100TH ANNIVERSARY OF THE BIRTH OF VLADIMIR

### VASIL'EVICH CHELINTSEV (1877-1947)

V. G. Karchenko

One hundred years have elapsed since the birth and 30 yr. since the death of Professor Vladimir Vasil'evich Chelintsev, the well-known Soviet chemist, Corresponding-Member of the Academy of Sciences of the USSR (AS USSR), and honored scientist of the RSFSR.

A native of Saratov, he finished high school there but received his higher education at Moscow University, where he graduated from the chemistry department of the physicomathematical faculty. The brilliant talent of the researcher drew the attention of his teachers, and Professor Chelintsev remained at Moscow University, where from 1900 to 1918 he proceeded from a laboratory worker to a professor of the department of organic chemistry.

From 1918 to 1947 Professor Chelintsev headed the Saratov school of chemists and for almost 30 yr. was the permanent head of the department of organic chemistry of N. G. Chernyshevskii Saratov University.

The period of Professor Chelintsev's research at Moscow University was exceptionally fruitful. He was the first to attempt to elucidate the mechanism of Grignard reactions and the role of diethyl ether in them. These classical studies led to a systematic study of the ability of oxygen-, nitrogen-, and sulfur-containing heteroorganic compounds - ethers, esters, aldehydes, ketones, acids, amines, sulfides, and heterocyclic compounds - to display "higher valences." Professor Chelintsev's research on natural complexes - chlorophyll and hemin - was a logical development of his studies in the area of onium complexes. In elucidating the peculiarities of the structure of chlorophyll and the chemical mechanism of the assimilation process, Professor Chelintsev developed methods for the preparation of many pyrrole derivatives: glycols, aldehydes, mono- and dicarboxylic acids, halo-substituted compounds, etc. He also studies the condensation of pyrrole with carbonyl compounds - formaldehyde, acetone, methyl ethyl ketone, cyclohexanone, etc.,. He established that pyrrole tends to form four-ring complex systems similar to those that form the foundation of chlorophyll and that if products of condensation with two heterorings are formed during the reaction, they are readily converted to four-ring pyrrole compounds.

In 1930 Professor Chelintsev began extensive research on furan compounds. He studied the condensation reactions of furfural with aldehydes, ketones, and other organic compounds and methods for the preparation of and properties of alcohols, ketones, and acids of the furan series. He also developed methods for the determination of small amounts of furfural, as well as acetone, formaldehyde, or acetaldehyde, on the basis of color reactions with furfural. He studied the possibility of the preparation of furfural from diverse plant raw materials in order to organize its industrial production.

During the course of his entire creative activity Professor Chelintsev displayed great interest in the natural resources of the land along the Volga and of the entire country and studied the possibilities for their utilization to fulfill the needs of the national economy. He conducted extensive research on lower Volga bituminous shales and natural gas, on the cracking of petroleum of the land along the Volga, etc. He was the initiator of and a consultant in the construction of a petroleum refining plant in Saratov. He was also a member of the committee on chemization of the State Planning Commission of the USSR. His varied activity constitutes an example of a talented and intelligent combination of large-scale theoretical research and the solution of practical problems. He published ~100 scientific papers, 17 monographs, textbooks, pamphlets, and more than 200 papers devoted to the study of the natural resources of the country, the history of chemistry, and various technical problems.

---

Translated from *Khimiya Geterotsiklicheskikh Soedinenii*, No. 4, pp. 560-561, April, 1977.

*This material is protected by copyright registered in the name of Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission of the publisher. A copy of this article is available from the publisher for \$7.50.*

Professor Chelintsev was a brilliant lecturer and teacher, presented inspiring lectures in organic chemistry, knew how to present the most complex problems in a simple manner, and was an active public figure. Thus in 1928 he organized the Saratov branch of the D. I. Mendeleev Chemical Society and headed it until his death, was a member of the Bureau of Mendeleev Chemical Conferences, etc. His native land held his work in high esteem and awarded him two Orders of the Worker's Red Banner.

#### MOST IMPORTANT WORKS OF V. V. CHELINTSEV

1. V. V. Chelintsev, Individual Organomagnesium Compounds and Their Conversions to Oxonium, Ammonium, and Thionium Complexes [in Russian], Izd. MGU (1908).
2. V. V. Chelintsev, Investigation of the Higher Valences of Oxygen-, Sulfur-, and Nitrogen-Containing Organic Compounds [in Russian], Izd. MGU (1912).
3. V. V. Chelintsev, Outstanding Events in the History of the Development of Pyrrole Compounds [in Russian], Izd. MGU (1917).
4. V. V. Chelintsev and E. N. Nikitin, "Condensation of furan compounds. Displacement of aldehydes by other aldehydes from carbonyl-ethylene compounds," Zh. Obshch. Khim., 10, 1453 (1940).
5. V. V. Chelintsev and B. V. Tronov, "Condensation of pyrrole and acetone," Zh. Russk. Fiz.-Khim. Obshestva, 48, 105 (1916).