

## In Memory of Vladimir Mikhailovich Gryaznov

On May 19, 2001, the prominent scientist in the field of catalysis, the member of the Russian Academy of Sciences, the Editor-in-Chief of the *Russian Journal Physical Chemistry* Vladimir Mikhailovich Gryaznov passed away.

Vladimir Mikhailovich Gryaznov was born on July 17, 1922 in Moscow. After finishing a high school in 1939 he entered the Department of Chemistry of the Moscow State University from which he graduated in 1944. In 1941 he served in a Fighter Command battalion but was demobilized because of poor eyesight. In 1941–1942, V.M. Gryaznov worked at the Department of Chemistry in the blowing shop, where he made ampules for tank fire-bombs and continued his study at the department.

In 1944, V.M. Gryaznov became a graduate student. In 1948 he defended his Ph.D. dissertation, which was ranked very high by the reviewers (Academician A.A. Balandin and Professor A.N. Rubenshtein) and by the Scientific Council of the Department of Chemistry at the Moscow State University. Then, he worked as an assistant professor at this department.

In the 1950s, V.M. Gryaznov together with his students carried out the studies of adsorption and catalysis on metal films using the methods of electric conductivity and absorption spectra. He was the first in the Soviet Union to obtain the IR spectrum of carbon adsorbed on a palladium film. This was reported at the Gordon Conference in Maryland in 1958.

In 1962, V.M. Gryaznov founded and headed the Department of Physical and Colloid Chemistry at the University of Peoples' Friendship. At the same time, he defended his Doctoral Dissertation in which he determined the mechanism of hydrogen disproportionation in cyclohexane (the Zelinskii reaction). He showed that this reaction consists of two independent processes of dehydrogenation and hydrogenation on platinum and palladium.

Important scientific achievements of V.M. Gryaznov and his co-workers were related to the study of reaction coupling on membrane catalysts (palladium and its alloys). In 1972, together with L.K. Ivanova, V.S. Smirnov, and A.P. Mishchenko he received an invention diploma. He carried out many studies of various reactions on membrane catalysts and developed numerous variants of these catalysts, which were patented. Together with V.I. Shimulis and V.D. Yagodovskii, V.M. Gryaznov studied the catalytic activity of the two-dimensional vapor of metals. In 1987, he received the invention diploma for the discovery of the ability of

two-dimensional metal vapor to catalyze organic reactions.

In the 1980–1990s, V.M. Gryaznov studied membrane and other catalysts in environmentally important reactions. In 1981, he founded the Research and Development Laboratory, where applied studies were carried out under the supervision of V.M. Gryaznov. The laboratory received various awards for these studies. Specifically, he developed together with Yu.M. Serov and S.F. Gizhevskii high-quality hydrogen, methane, and carbon monoxide sensors. From 1964, V.M. Gryaznov was the head of the Laboratory of Catalysis at the Topchiev Institute of Petrochemical Synthesis. In 1989, he published the monograph *Catalysis by Noble Metals: Dynamic Features* (Moscow, Nauka) in co-authorship with N.V. Orekhova. V.M. Gryaznov is the author of more than 500 scientific papers and patents. His scientific creativity was of a truly pioneering nature since he had a great sense of innovation. He participated at numerous international meetings in Europe, United States, Latin America, and Japan. V.M. Gryaznov was a visiting lecturer at the universities of the Great Britain, GDR, Egypt, Kenya, United States, FRG, and Japan.

V.M. Gryaznov's achievements were recognized by scientific community: in 1981 he became the Corresponding Member of the USSR Academy of Sciences, and 1990 he became the Full Member of the Academy of Sciences. He is a laureate of the Governmental Award in Science and Technology and received orders and academic awards. V.M. Gryaznov was elected an honorary member of the Academy of the Higher School and the Academy of Creation.

From 1962 (for 39 years), V.M. Gryaznov was the Head of the Department of Physical and Colloid Chemistry at the Russian University of Peoples' Friendship. He was the lecturer of the physical chemistry course, developed a number of special courses, and published textbooks *Physical Chemistry* and *The Structure of Substances*. He was a supervisor of 28 graduate students and five Professors at the department became Doctors of Science.

V.M. Gryaznov was a wonderful lecturer, who was held in high regard by the students.

Russian and worldwide science suffers a great loss. We miss a great scientist and a teacher, a hearty man with high moral standards. The blessed memory of Vladimir Mikhailovich Gryaznov will be preserved forever in the hearts of his friends, colleagues, and disciples.